

SEISMIC IMPACT ZONES

CCR LANDFILL: Independence Steam Electric Station

CCR UNIT: Cell 16

Promus Engineering, LLC ("Consultant") has been retained by Entergy Arkansas, LLC (Entergy) to evaluate whether the above-referenced coal combustion residuals ("CCR") landfill unit meets the location restriction for seismic impact zones requirements set out in 40 C.F.R. § 257.63(a). Presented below are the project background, summary of findings, limitations, and certification.

1.0 BACKGROUND

Pursuant to 40 C.F.R. § 257.63(a), new CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of a CCR unit must not be located in seismic impact zones unless the owner or operator demonstrates that all structural components including liners, leachate collection and removal systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

Pursuant to 40 C.F.R. § 257.63(b) and (c)(2), for a new CCR landfill, new CCR surface impoundment, or any lateral expansion, the owner or operator must obtain, no later than the date of initial receipt of CCR in the CCR unit, a certification from a qualified professional engineer stating that the owner or operator has demonstrated that the CCR unit meets the seismic impact zone requirements.

According to 40 CFR §257.53, a seismic impact zone is an area having a 10 percent or greater probability that the maximum expected horizontal acceleration in lithified earth material, expressed as a percentage of the acceleration of gravity (g), will be exceeded in 250 years. For this evaluation, the site seismic setting was characterized using the 2014 United States Geological Survey (USGS) National Seismic Hazard Map included as Attachment A, which places the site at approximately 0.35g peak ground acceleration.

Because the site is located within a seismic impact zone, representative static and pseudostatic slope stability analyses were performed for Cell 16 to evaluate whether the CCR unit has been designed to resist the applicable seismic loading.

2.0 ASSESSMENT

Consultant reviewed the 2014 USGS National Seismic Hazard Map for the Entergy Independence Plant Class 3N Landfill, included as Attachment A, to identify the maximum horizontal acceleration applicable to the site. The approximate site location shown on Attachment A falls within the contour corresponding to about 35 percent gravitational acceleration (0.35g).

Consultant also reviewed the slope stability analyses provided in Attachment B for representative Cell 16 cross-sections designated as Section A and Section B. The analyses were completed using the Spencer and GLE/Morgenstern-Price methods. Static analyses were performed for both sections, and pseudostatic seismic analyses were performed using a horizontal seismic load coefficient of 0.1764. For Section A, the minimum calculated factors of safety were 3.083 (GLE/Morgenstern-Price) and 3.124 (Spencer) for static conditions, and 1.609 (GLE/Morgenstern-Price) and 1.652 (Spencer) for seismic conditions. For Section B, the minimum calculated factors of safety were 3.509 (GLE/Morgenstern-Price) and 3.520 (Spencer) for static conditions, and 1.752 (GLE/Morgenstern-Price) and 1.794 (Spencer) for seismic conditions.



Based on the seismic hazard mapping and the results of the representative stability analyses, Consultant concludes that Cell 16 has been designed to withstand the maximum horizontal acceleration applicable to the site without failure of the evaluated structural components. Accordingly, Consultant concludes as follows:

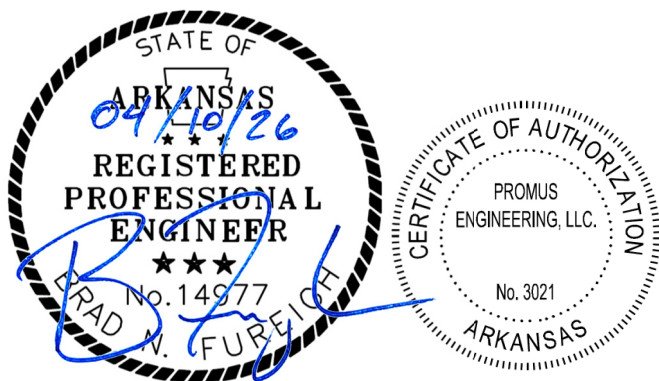
CCR Unit	Seismic Impact Zones
Cell 16	Meets the requirements of 40 C.F.R. § 257.63(a)

3.0 LIMITATIONS

The signature of Consultant's authorized representative on this document represents that, to the best of Consultant's knowledge, information, and belief in the exercise of its professional judgment, the information presented herein is accurate as of the date of such signature. Any opinion or decisions by Consultant are based on Consultant's experience, qualifications, and professional judgment and are not to be construed as warranties or guarantees. Opinions relating to environmental, geologic, and geotechnical conditions, or other estimates, are based on available data, and actual conditions may differ from those encountered at the times and locations where data were obtained, despite the use of due care.

4.0 CERTIFICATION

I, Brad N. Fureigh, PE, of Promus Engineering, LLC. (Promus), being a Registered Professional Engineer in the State of Arkansas, do hereby certify, to the best of my knowledge, information, and belief, that the CCR unit that is the subject of this report, dated April 10, 2026 meets the location restriction requirements for seismic impact zones pursuant to 40 C.F.R. § 257.63(a), and that this report is true and correct and has been prepared in accordance with generally accepted good engineering practices.



Brad N. Fureigh, PE
AR Registered Professional Engineer No.: 14977

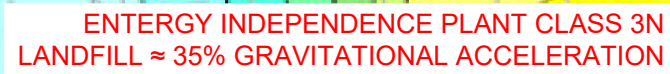
April 10, 2026

Date



ATTACHMENT A

National Seismic Hazard Map



EXPLANATION
Acceleration expressed as a percent of gravity (%g)

%g**PREPARED BY:**

ENERGY INDEPENDENCE PLANT
CLASS 3N LANDFILL
NEWARK ARKANSAS



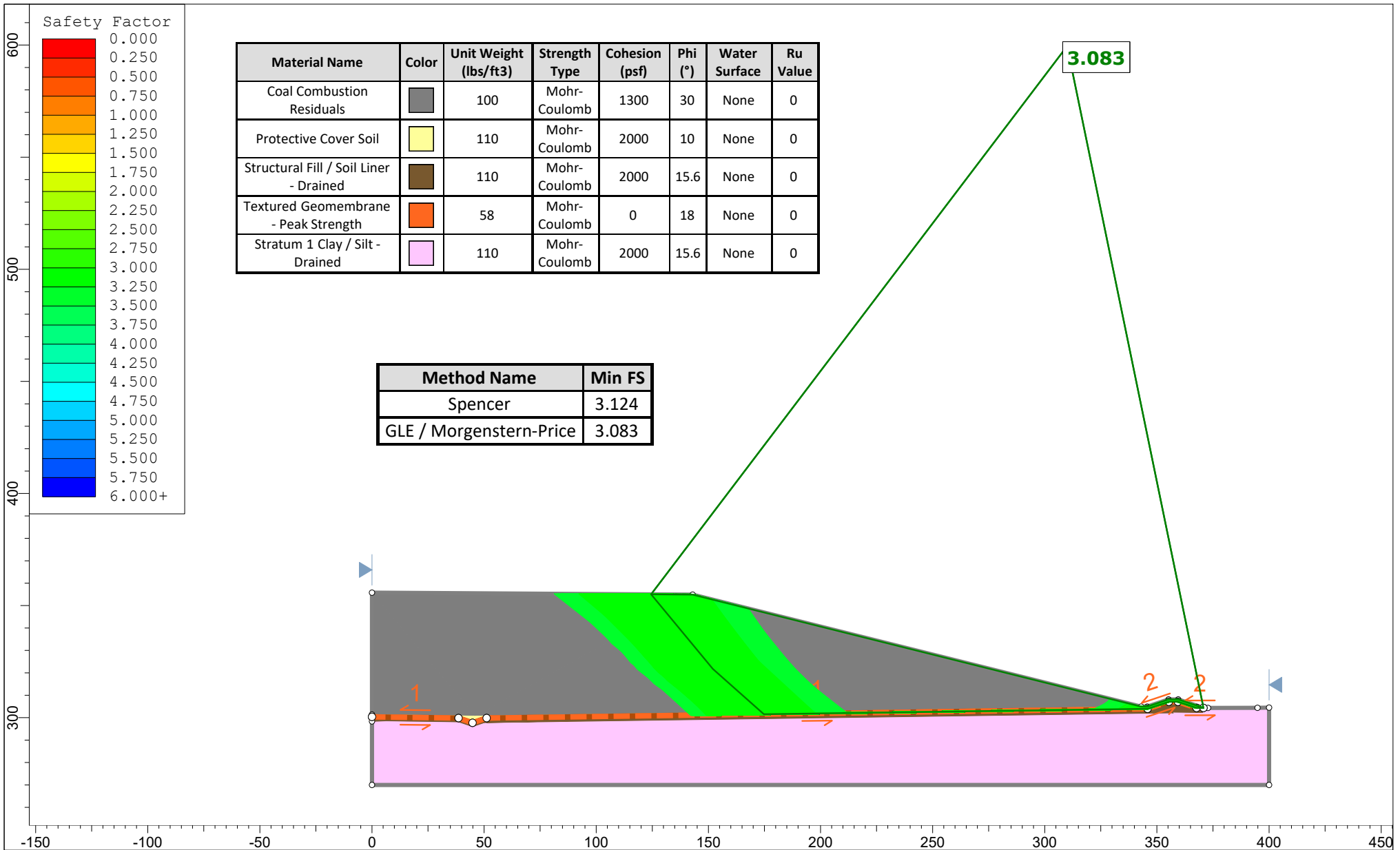
PROMUS
ENGINEERING

19 RYELAND DRIVE, SUITE B CABOT, ARKANSAS 72023
www.promusengineering.com

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ATTACHMENT B

Slope Stability Analyses



Project		Entergy - Independence Plant Class 3N Landfill	
Analysis Description			
Drawn By	John David Young	Company	Promus Engineering
Date	4/2/2026	File Name	Section-A-STATIC.slmd

Slide2 Analysis Information

Section-A-STATIC

Project Summary

File Name:	Section-A-STATIC.slmd
Slide2 Modeler Version:	9.041
Compute Time:	00h:00m:02.875s
Project Title:	Entergy - White Bluff Class 3N Landfill
Author:	John David Young
Company:	Promus Engineering
Date Created:	4/18/2022, 4:59:20 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	centimeters/second
Data Output:	Standard
Failure Direction:	Left to Right

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	GLE/Morgenstern-Price with interslice force function (Half Sine)
	Spencer
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Surface Options

Search Method:	Cuckoo Search
Initial # of Surface Vertices:	8
Maximum Iterations:	500
Number of Nests:	50
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined
Convex Surfaces Only:	Enabled
Optimize Surfaces:	Enabled

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Materials

Coal Combustion Residuals

Color	
Strength Type	Mohr-Coulomb
Unit Weight	100 lbs/ft ³
Cohesion	1300 psf
Phi	30 °
Water Surface	None
Ru Value	0

Protective Cover Soil

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Structural Fill / Soil Liner - Drained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2000 psf
Phi	15.6 °
Water Surface	None
Ru Value	0

Stratum 1 Clay / Silt - Drained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2000 psf
Phi	15.6 °
Water Surface	None
Ru Value	0

Global Minimums

Method: spencer

FS	3.124070
Axis Location:	300.643, 581.708
Left Slip Surface Endpoint:	123.987, 355.009
Right Slip Surface Endpoint:	370.793, 304.351
Resisting Moment:	8.52134e+07 lb-ft
Driving Moment:	2.72764e+07 lb-ft
Resisting Horizontal Force:	251473 lb
Driving Horizontal Force:	80495.3 lb
Total Slice Area:	5203.7 ft ²
Surface Horizontal Width:	246.806 ft
Surface Average Height:	21.0842 ft

Method: gle/morgenstern-price

FS	3.083080
Axis Location:	309.946, 599.540
Left Slip Surface Endpoint:	124.434, 355.006
Right Slip Surface Endpoint:	370.793, 304.351
Resisting Moment:	8.91544e+07 lb-ft
Driving Moment:	2.89174e+07 lb-ft
Resisting Horizontal Force:	245619 lb
Driving Horizontal Force:	79666.8 lb
Total Slice Area:	5247.62 ft ²
Surface Horizontal Width:	246.359 ft
Surface Average Height:	21.3007 ft

Slice Data

Global Minimum Query (spencer) - Safety Factor: 3.12407

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	6.24575	2433.65	-51.4239	Coal Combustion Residuals	1300	30	407.873	1274.22	-44.6471	0	-44.6471	466.724	466.724
2	4.6856	4912.51	-49.1086	Coal Combustion Residuals	1300	30	501.772	1567.57	463.444	0	463.444	1042.88	1042.88
3	4.6856	7434.59	-49.1086	Coal Combustion Residuals	1300	30	574.14	1793.65	855.03	0	855.03	1518.04	1518.04
4	4.23305	8812.83	-47.3096	Coal Combustion Residuals	1300	30	648.881	2027.15	1259.46	0	1259.46	1962.88	1962.88
5	4.23305	10447.1	-47.3096	Coal Combustion Residuals	1300	30	701.743	2192.29	1545.5	0	1545.5	2306.22	2306.22
6	6.72101	19348.3	-43.4404	Coal Combustion Residuals	1300	30	778.718	2432.77	1962.02	0	1962.02	2699.46	2699.46
7	4.88123	15943.7	-41.2872	Coal Combustion Residuals	1300	30	845.791	2642.31	2324.96	0	2324.96	3067.67	3067.67
8	4.88123	17440.5	-41.2872	Coal Combustion Residuals	1300	30	890.15	2780.89	2564.98	0	2564.98	3346.64	3346.64
9	4.80632	18551.7	-38.8595	Coal Combustion Residuals	1300	30	946.56	2957.12	2870.23	0	2870.23	3632.9	3632.9
10	4.80632	19835.6	-38.8595	Coal Combustion Residuals	1300	30	985.989	3080.3	3083.57	0	3083.57	3878.01	3878.01
11	2.62593	11354.7	-36.2645	Coal Combustion Residuals	1300	30	1031.96	3223.9	3332.3	0	3332.3	4089.36	4089.36
12	1.33879	5924.05	-36.2645	Protective Cover Soil	2000	10	838.858	2620.65	3519.89	0	3519.89	4135.29	4135.29
13	5.24149	23026.5	0.807422	Textured Geomembrane - Peak Strength	0	18	466.75	1458.16	4487.77	0	4487.77	4481.19	4481.19
14	5.24149	22301.2	0.807422	Textured Geomembrane - Peak Strength	0	18	452.048	1412.23	4346.39	0	4346.39	4340.02	4340.02
15	5.24149	21575.8	0.807422	Textured Geomembrane - Peak Strength	0	18	437.343	1366.29	4205.03	0	4205.03	4198.87	4198.87
16	5.24149	20850.4	0.807422	Textured Geomembrane - Peak Strength	0	18	422.641	1320.36	4063.65	0	4063.65	4057.7	4057.7

17	5.24149	20125.1	0.807422	Textured Geomembrane - Peak Strength	0	18	407.939	1274.43	3922.28	0	3922.28	3916.53	3916.53
18	5.24149	19399.7	0.807422	Textured Geomembrane - Peak Strength	0	18	393.234	1228.49	3780.9	0	3780.9	3775.36	3775.36
19	5.24149	18674.3	0.807422	Textured Geomembrane - Peak Strength	0	18	378.532	1182.56	3639.54	0	3639.54	3634.21	3634.21
20	5.24149	17948.9	0.807422	Textured Geomembrane - Peak Strength	0	18	363.827	1136.62	3498.16	0	3498.16	3493.04	3493.04
21	5.24149	17223.6	0.807422	Textured Geomembrane - Peak Strength	0	18	349.125	1090.69	3356.79	0	3356.79	3351.87	3351.87
22	5.24149	16498.2	0.807422	Textured Geomembrane - Peak Strength	0	18	334.42	1044.75	3215.43	0	3215.43	3210.72	3210.72
23	5.24149	15772.8	0.807422	Textured Geomembrane - Peak Strength	0	18	319.717	998.819	3074.05	0	3074.05	3069.55	3069.55
24	5.24149	15047.5	0.807422	Textured Geomembrane - Peak Strength	0	18	305.014	952.885	2932.67	0	2932.67	2928.38	2928.38
25	5.24149	14322.1	0.807422	Textured Geomembrane - Peak Strength	0	18	290.31	906.95	2791.3	0	2791.3	2787.21	2787.21
26	5.24149	13596.7	0.807422	Textured Geomembrane - Peak Strength	0	18	275.607	861.016	2649.94	0	2649.94	2646.05	2646.05
27	5.24149	12871.3	0.807422	Textured Geomembrane - Peak Strength	0	18	260.904	815.081	2508.56	0	2508.56	2504.89	2504.89
28	5.24149	12146	0.807422	Textured Geomembrane - Peak Strength	0	18	246.2	769.147	2367.18	0	2367.18	2363.72	2363.72
29	5.24149	11420.6	0.807422	Textured Geomembrane - Peak Strength	0	18	231.497	723.213	2225.83	0	2225.83	2222.56	2222.56
30	5.24149	10695.2	0.807422	Textured Geomembrane - Peak Strength	0	18	216.793	677.278	2084.45	0	2084.45	2081.39	2081.39
31	5.24149	9969.85	0.807422	Textured Geomembrane - Peak Strength	0	18	202.09	631.344	1943.07	0	1943.07	1940.22	1940.22
32	5.24149	9244.47	0.807422	Textured Geomembrane - Peak Strength	0	18	187.387	585.409	1801.7	0	1801.7	1799.06	1799.06
33	5.24149	8519.1	0.807422	Textured Geomembrane - Peak Strength	0	18	172.683	539.475	1660.33	0	1660.33	1657.9	1657.9
34	5.24149	7793.73	0.807422	Textured Geomembrane - Peak Strength	0	18	157.98	493.54	1518.96	0	1518.96	1516.74	1516.74
35	5.24149	7068.36	0.807422	Textured Geomembrane - Peak Strength	0	18	143.277	447.606	1377.59	0	1377.59	1375.57	1375.57

36	5.24149	6342.99	0.807422	Textured Geomembrane - Peak Strength	0	18	128.573	401.672	1236.22	0	1236.22	1234.41	1234.41
37	5.24149	5617.61	0.807422	Textured Geomembrane - Peak Strength	0	18	113.87	355.737	1094.85	0	1094.85	1093.24	1093.24
38	5.24149	4892.24	0.807422	Textured Geomembrane - Peak Strength	0	18	99.1665	309.803	953.474	0	953.474	952.077	952.077
39	5.24149	4166.87	0.807422	Textured Geomembrane - Peak Strength	0	18	84.4629	263.868	812.103	0	812.103	810.913	810.913
40	5.24149	3441.5	0.807422	Textured Geomembrane - Peak Strength	0	18	69.7596	217.934	670.732	0	670.732	669.748	669.748
41	5.24149	2716.13	0.807422	Textured Geomembrane - Peak Strength	0	18	55.0561	171.999	529.36	0	529.36	528.584	528.584
42	5.24149	1990.75	0.807422	Textured Geomembrane - Peak Strength	0	18	40.3528	126.065	387.989	0	387.989	387.42	387.42
43	5.24149	1265.38	0.807422	Textured Geomembrane - Peak Strength	0	18	25.6495	80.1307	246.617	0	246.617	246.256	246.256
44	5.24149	651.065	0.807422	Textured Geomembrane - Peak Strength	0	18	13.1972	41.2289	126.89	0	126.89	126.704	126.704
45	4.74265	549.915	18.4354	Textured Geomembrane - Peak Strength	0	18	13.5095	42.2046	129.892	0	129.892	125.389	125.389
46	4.74265	549.433	18.4354	Textured Geomembrane - Peak Strength	0	18	13.4976	42.1675	129.778	0	129.778	125.279	125.279
47	4.00001	440.001	0.000494324	Textured Geomembrane - Peak Strength	0	18	11.6418	36.3697	111.934	0	111.934	111.934	111.934
48	4.16572	482.537	-18.4345	Textured Geomembrane - Peak Strength	0	18	11.2303	35.0841	107.978	0	107.978	111.721	111.721
49	4.16572	483.019	-18.4345	Textured Geomembrane - Peak Strength	0	18	11.2415	35.1192	108.086	0	108.086	111.833	111.833
50	3.11768	180.749	0.273868	Textured Geomembrane - Peak Strength	0	18	6.14384	19.1938	59.0724	0	59.0724	59.0431	59.0431

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 3.08308

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	5.50492	1823.01	-50.4088	Coal Combustion Residuals	1300	30	395.647	1219.81	-138.892	0	-138.892	339.513	339.513
2	5.50492	5469.04	-50.4088	Coal Combustion Residuals	1300	30	496.828	1531.76	401.418	0	401.418	1002.17	1002.17
3	5.50492	9115.07	-50.4088	Coal Combustion Residuals	1300	30	594.589	1833.17	923.471	0	923.471	1642.43	1642.43
4	5.50492	12614.7	-50.4088	Coal Combustion Residuals	1300	30	685.284	2112.78	1407.79	0	1407.79	2236.41	2236.41
5	5.50492	15572.3	-50.4088	Coal Combustion Residuals	1300	30	758.972	2339.97	1801.28	0	1801.28	2719.01	2719.01
6	5.41359	17676.2	-41.5609	Coal Combustion Residuals	1300	30	864.94	2666.68	2367.16	0	2367.16	3134.04	3134.04
7	5.41359	19542.1	-41.5609	Coal Combustion Residuals	1300	30	912.86	2814.42	2623.06	0	2623.06	3432.42	3432.42
8	5.41359	21408	-41.5609	Coal Combustion Residuals	1300	30	960.105	2960.08	2875.35	0	2875.35	3726.6	3726.6
9	5.41359	23274	-41.5609	Coal Combustion Residuals	1300	30	1006.82	3104.1	3124.8	0	3124.8	4017.47	4017.47
10	1.11134	5014.26	-41.5609	Protective Cover Soil	2000	10	843.865	2601.7	3412.42	0	3412.42	4160.61	4160.61
11	5.03337	22578.9	0.807422	Textured Geomembrane - Peak Strength	0	18	470.653	1451.06	4465.91	0	4465.91	4459.28	4459.28
12	5.03337	21909.9	0.807422	Textured Geomembrane - Peak Strength	0	18	458.022	1412.12	4346.06	0	4346.06	4339.61	4339.61
13	5.03337	21241	0.807422	Textured Geomembrane - Peak Strength	0	18	445.295	1372.88	4225.28	0	4225.28	4219	4219
14	5.03337	20572.1	0.807422	Textured Geomembrane - Peak Strength	0	18	432.46	1333.31	4103.5	0	4103.5	4097.41	4097.41
15	5.03337	19903.2	0.807422	Textured Geomembrane - Peak Strength	0	18	419.516	1293.4	3980.68	0	3980.68	3974.76	3974.76
16	5.03337	19234.3	0.807422	Textured Geomembrane - Peak Strength	0	18	406.457	1253.14	3856.78	0	3856.78	3851.05	3851.05
17	5.03337	18565.4	0.807422	Textured Geomembrane - Peak Strength	0	18	393.285	1212.53	3731.78	0	3731.78	3726.24	3726.24
18	5.03337	17896.5	0.807422	Textured Geomembrane - Peak Strength	0	18	379.997	1171.56	3605.7	0	3605.7	3600.34	3600.34

19	5.03337	17227.6	0.807422	Textured Geomembrane - Peak Strength	0	18	366.591	1130.23	3478.5	0	3478.5	3473.33	3473.33
20	5.03337	16558.6	0.807422	Textured Geomembrane - Peak Strength	0	18	353.072	1088.55	3350.23	0	3350.23	3345.25	3345.25
21	5.03337	15889.7	0.807422	Textured Geomembrane - Peak Strength	0	18	339.443	1046.53	3220.88	0	3220.88	3216.1	3216.1
22	5.03337	15220.8	0.807422	Textured Geomembrane - Peak Strength	0	18	325.7	1004.16	3090.49	0	3090.49	3085.9	3085.9
23	5.03337	14551.9	0.807422	Textured Geomembrane - Peak Strength	0	18	311.856	961.478	2959.12	0	2959.12	2954.72	2954.72
24	5.03337	13883	0.807422	Textured Geomembrane - Peak Strength	0	18	297.912	918.488	2826.81	0	2826.81	2822.61	2822.61
25	5.03337	13214.1	0.807422	Textured Geomembrane - Peak Strength	0	18	283.876	875.212	2693.63	0	2693.63	2689.63	2689.63
26	5.03337	12545.2	0.807422	Textured Geomembrane - Peak Strength	0	18	269.753	831.671	2559.62	0	2559.62	2555.82	2555.82
27	5.03337	11876.3	0.807422	Textured Geomembrane - Peak Strength	0	18	255.553	787.89	2424.87	0	2424.87	2421.27	2421.27
28	5.03337	11207.3	0.807422	Textured Geomembrane - Peak Strength	0	18	241.282	743.893	2289.47	0	2289.47	2286.07	2286.07
29	5.03337	10538.4	0.807422	Textured Geomembrane - Peak Strength	0	18	226.951	699.707	2153.47	0	2153.47	2150.27	2150.27
30	5.03337	9869.51	0.807422	Textured Geomembrane - Peak Strength	0	18	212.567	655.361	2017	0	2017	2014	2014
31	5.03337	9200.6	0.807422	Textured Geomembrane - Peak Strength	0	18	198.14	610.883	1880.1	0	1880.1	1877.31	1877.31
32	5.03337	8531.69	0.807422	Textured Geomembrane - Peak Strength	0	18	183.681	566.302	1742.9	0	1742.9	1740.31	1740.31
33	5.03337	7862.78	0.807422	Textured Geomembrane - Peak Strength	0	18	169.197	521.647	1605.47	0	1605.47	1603.08	1603.08
34	5.03337	7193.86	0.807422	Textured Geomembrane - Peak Strength	0	18	154.699	476.949	1467.9	0	1467.9	1465.72	1465.72
35	5.03337	6524.95	0.807422	Textured Geomembrane - Peak Strength	0	18	140.196	432.235	1330.28	0	1330.28	1328.31	1328.31
36	5.03337	5856.04	0.807422	Textured Geomembrane - Peak Strength	0	18	125.697	387.534	1192.71	0	1192.71	1190.94	1190.94
37	5.03337	5187.13	0.807422	Textured Geomembrane - Peak Strength	0	18	111.211	342.872	1055.25	0	1055.25	1053.68	1053.68

38	5.03337	4518.21	0.807422	Textured Geomembrane - Peak Strength	0	18	96.7458	298.275	917.996	0	917.996	916.632	916.632
39	5.03337	3849.3	0.807422	Textured Geomembrane - Peak Strength	0	18	82.3092	253.766	781.012	0	781.012	779.852	779.852
40	5.03337	3180.39	0.807422	Textured Geomembrane - Peak Strength	0	18	67.9087	209.368	644.369	0	644.369	643.412	643.412
41	5.03337	2511.48	0.807422	Textured Geomembrane - Peak Strength	0	18	53.5503	165.1	508.126	0	508.126	507.371	507.371
42	5.03337	1842.56	0.807422	Textured Geomembrane - Peak Strength	0	18	39.24	120.98	372.338	0	372.338	371.785	371.785
43	5.03337	1173.65	0.807422	Textured Geomembrane - Peak Strength	0	18	24.9823	77.0223	237.05	0	237.05	236.698	236.698
44	5.03337	615.794	0.807422	Textured Geomembrane - Peak Strength	0	18	13.1278	40.4742	124.567	0	124.567	124.382	124.382
45	4.74265	549.915	18.4354	Textured Geomembrane - Peak Strength	0	18	13.0704	40.2972	124.022	0	124.022	119.665	119.665
46	4.74265	549.433	18.4354	Textured Geomembrane - Peak Strength	0	18	12.9185	39.8287	122.58	0	122.58	118.274	118.274
47	4.00001	440.001	0.000494324	Textured Geomembrane - Peak Strength	0	18	11.5954	35.7495	110.026	0	110.026	110.025	110.025
48	4.16572	482.537	-18.4345	Textured Geomembrane - Peak Strength	0	18	11.702	36.0783	111.037	0	111.037	114.938	114.938
49	4.16572	483.019	-18.4345	Textured Geomembrane - Peak Strength	0	18	11.7681	36.2821	111.665	0	111.665	115.587	115.587
50	3.11768	180.749	0.273868	Textured Geomembrane - Peak Strength	0	18	6.12407	18.881	58.1099	0	58.1099	58.0806	58.0806

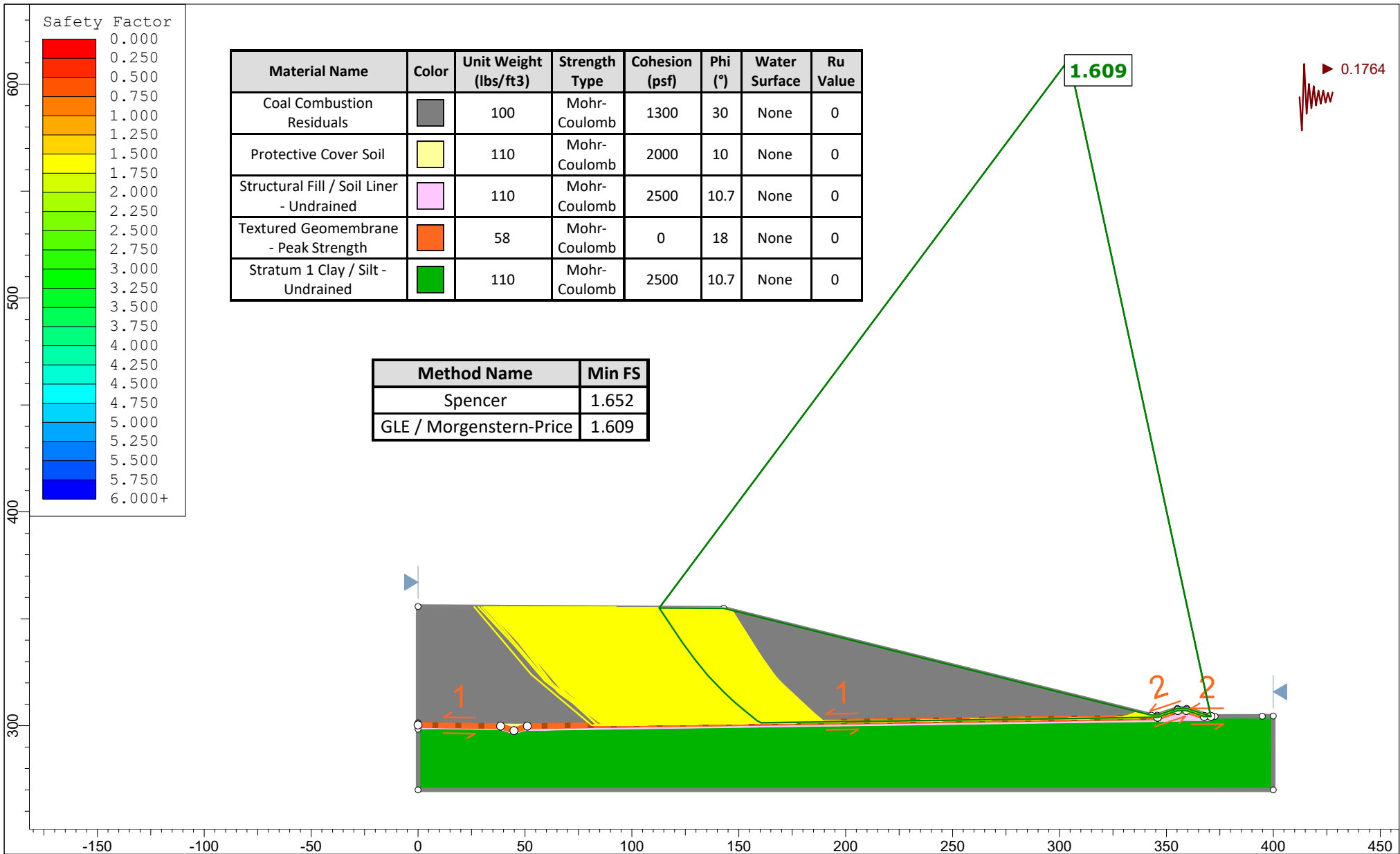
Interslice Data

Global Minimum Query (spencer) - Safety Factor: 3.12407

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	123.987	355.009	0	0	0
2	130.233	347.178	-2897.07	-481.325	9.43307
3	134.919	341.767	-2740.54	-455.317	9.43303
4	139.604	336.356	-804.276	-133.624	9.43307
5	143.837	331.768	2228.46	370.239	9.43303
6	148.071	327.179	6350	1055	9.43306
7	154.792	320.814	13604	2260.18	9.43301
8	159.673	316.528	19441	3229.96	9.43305
9	164.554	312.241	26090.3	4334.69	9.43306
10	169.36	308.369	32656.1	5425.53	9.43304
11	174.167	304.496	39858.6	6622.17	9.43305
12	176.793	302.57	43568.2	7238.48	9.43304
13	178.131	301.588	45902.2	7626.27	9.43305
14	183.373	301.662	43124.2	7164.73	9.43306
15	188.614	301.735	40433.8	6717.73	9.43304
16	193.856	301.809	37830.8	6285.28	9.43306
17	199.097	301.883	35315.4	5867.36	9.43305
18	204.339	301.957	32887.5	5463.98	9.43305
19	209.58	302.031	30547.1	5075.14	9.43304
20	214.822	302.105	28294.2	4700.84	9.43304
21	220.063	302.179	26128.8	4341.07	9.43303
22	225.305	302.252	24050.9	3995.85	9.43304
23	230.546	302.326	22060.5	3665.17	9.43306
24	235.788	302.4	20157.6	3349.02	9.43306
25	241.029	302.474	18342.3	3047.41	9.43302
26	246.271	302.548	16614.4	2760.35	9.43307
27	251.512	302.622	14974.1	2487.82	9.43305
28	256.754	302.696	13421.3	2229.83	9.43302
29	261.995	302.77	11956	1986.38	9.43301
30	267.237	302.843	10578.2	1757.47	9.433
31	272.478	302.917	9287.87	1543.1	9.43304
32	277.72	302.991	8085.08	1343.27	9.43306
33	282.961	303.065	6969.81	1157.98	9.43309
34	288.203	303.139	5942.05	987.222	9.43305
35	293.444	303.213	5001.8	831.007	9.43305
36	298.686	303.287	4149.06	689.331	9.43304
37	303.927	303.36	3383.83	562.195	9.43305
38	309.168	303.434	2706.11	449.597	9.43304
39	314.41	303.508	2115.9	351.539	9.43305
40	319.651	303.582	1613.2	268.02	9.43306
41	324.893	303.656	1198.01	199.039	9.43303
42	330.134	303.73	870.332	144.598	9.43303
43	335.376	303.804	630.163	104.696	9.43302
44	340.617	303.878	477.505	79.3335	9.43306
45	345.859	303.951	398.959	66.2837	9.43305
46	350.602	305.532	129.539	21.5218	9.43304
47	355.344	307.113	-139.645	-23.2009	9.43307
48	359.344	307.113	-186.216	-30.9382	9.43304
49	363.51	305.725	-83.0669	-13.8009	9.43307
50	367.676	304.336	20.1854	3.35363	9.43304
51	370.793	304.351	0	0	0

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 3.08308

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	124.434	355.006	0	0	0
2	129.939	348.35	-3100.43	-43.4937	0.803709
3	135.444	341.693	-3160.79	-88.4628	1.60315
4	140.949	335.037	-283.829	-11.8666	2.39408
5	146.454	328.381	5318.14	294.754	3.17233
6	151.959	321.724	13134.1	903.19	3.93385
7	157.372	316.924	19818.1	1616.32	4.6626
8	162.786	312.125	27471.2	2581.2	5.36776
9	168.199	307.325	36079.7	3821.38	6.04594
10	173.613	302.525	45632.8	5355.71	6.69392
11	174.724	301.54	48058.3	5750.11	6.82293
12	179.758	301.611	45374.8	5884.28	7.38898
13	184.791	301.681	42763.4	5951.84	7.92357
14	189.824	301.752	40224.5	5957.51	8.42463
15	194.858	301.823	37758.8	5906.32	8.8903
16	199.891	301.894	35366.8	5803.5	9.31888
17	204.925	301.965	33049.4	5654.42	9.70873
18	209.958	302.036	30807	5464.59	10.0586
19	214.991	302.107	28640.4	5239.54	10.3672
20	220.025	302.178	26550.2	4984.8	10.6335
21	225.058	302.249	24537.1	4705.82	10.8566
22	230.091	302.32	22601.8	4407.98	11.0357
23	235.125	302.391	20744.8	4096.45	11.1704
24	240.158	302.462	18966.7	3776.2	11.2601
25	245.192	302.533	17268.1	3451.97	11.3047
26	250.225	302.604	15649.5	3128.17	11.3038
27	255.258	302.675	14111.5	2808.9	11.2576
28	260.292	302.746	12654.4	2497.89	11.1662
29	265.325	302.816	11278.7	2198.46	11.0299
30	270.358	302.887	9984.76	1913.54	10.849
31	275.392	302.958	8772.78	1645.62	10.6242
32	280.425	303.029	7643.06	1396.75	10.3564
33	285.458	303.1	6595.79	1168.5	10.0462
34	290.492	303.171	5631.09	962.016	9.69482
35	295.525	303.242	4749.06	777.982	9.30345
36	300.559	303.313	3949.71	616.636	8.87349
37	305.592	303.384	3233.04	477.786	8.40646
38	310.625	303.455	2598.96	360.824	7.90408
39	315.659	303.526	2047.35	264.752	7.36828
40	320.692	303.597	1578.05	188.202	6.80111
41	325.725	303.668	1190.86	129.469	6.20476
42	330.759	303.739	885.541	86.5411	5.58161
43	335.792	303.81	661.81	57.136	4.93428
44	340.826	303.881	519.371	38.7365	4.26542
45	345.859	303.951	444.521	27.7946	3.57788
46	350.602	305.532	186.523	9.49965	2.91557
47	355.344	307.113	-68.476	-2.68065	2.24183
48	359.344	307.113	-114.817	-3.34075	1.66663
49	363.51	305.725	-9.33761	-0.173203	1.06266
50	367.676	304.336	96.7374	0.768993	0.455451
51	370.793	304.351	0	0	0



Project		Entergy - Independence Plant Class 3N Landfill	
Analysis Description			
Drawn By	John David Young	Company	Promus Engineering
Date	4/2/2026	File Name	Section-A-SEISMIC.slmd

Slide2 Analysis Information

Section-A-SEISMIC

Project Summary

File Name:	Section-A-SEISMIC.slmd
Slide2 Modeler Version:	9.041
Compute Time:	00h:00m:06.29s
Project Title:	Entergy - White Bluff Class 3N Landfill
Author:	John David Young
Company:	Promus Engineering
Date Created:	4/18/2022, 4:59:20 PM

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Imperial Units

days

centimeters/second

Standard

Left to Right

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	GLE/Morgenstern-Price with interslice force function (Half Sine)
	Spencer
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Surface Options

Search Method:	Cuckoo Search
Initial # of Surface Vertices:	8
Maximum Iterations:	500
Number of Nests:	50
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined
Convex Surfaces Only:	Enabled
Optimize Surfaces:	Enabled

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.1764

Materials

Coal Combustion Residuals

Color	
Strength Type	Mohr-Coulomb
Unit Weight	100 lbs/ft ³
Cohesion	1300 psf
Phi	30 °
Water Surface	None
Ru Value	0

Protective Cover Soil

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Structural Fill / Soil Liner - Undrained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2500 psf
Phi	10.7 °
Water Surface	None
Ru Value	0

Stratum 1 Clay / Silt - Undrained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft ³
Cohesion	2500 psf
Phi	10.7 °
Water Surface	None
Ru Value	0

Global Minimums

Method: spencer

FS	1.651730
Axis Location:	295.245, 612.148
Left Slip Surface Endpoint:	103.307, 355.133
Right Slip Surface Endpoint:	370.793, 304.351
Resisting Moment:	9.87492e+07 lb-ft
Driving Moment:	5.97854e+07 lb-ft
Resisting Horizontal Force:	271172 lb
Driving Horizontal Force:	164175 lb
Total Slice Area:	6333 ft ²
Surface Horizontal Width:	267.487 ft
Surface Average Height:	23.6759 ft

Method: gle/morgenstern-price

FS	1.608890
Axis Location:	304.431, 611.748
Left Slip Surface Endpoint:	112.764, 355.076
Right Slip Surface Endpoint:	370.793, 304.351
Resisting Moment:	9.34997e+07 lb-ft
Driving Moment:	5.81144e+07 lb-ft
Resisting Horizontal Force:	252849 lb
Driving Horizontal Force:	157157 lb
Total Slice Area:	6024.18 ft ²
Surface Horizontal Width:	258.03 ft
Surface Average Height:	23.3468 ft

Slice Data

Global Minimum Query (spencer) - Safety Factor: 1.65173

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	5.29009	1710.96	-50.8611	Coal Combustion Residuals	1300	30	724.882	1197.31	-177.866	0	-177.866	712.864	712.864
2	5.29009	5132.89	-50.8611	Coal Combustion Residuals	1300	30	831.914	1374.1	128.341	0	128.341	1150.59	1150.59
3	5.29009	8554.81	-50.8611	Coal Combustion Residuals	1300	30	938.946	1550.89	434.546	0	434.546	1588.32	1588.32
4	5.29009	11976.7	-50.8611	Coal Combustion Residuals	1300	30	1045.98	1727.67	740.753	0	740.753	2026.05	2026.05
5	6.10524	17426	-41.3544	Coal Combustion Residuals	1300	30	1257.43	2076.94	1345.7	0	1345.7	2452.49	2452.49
6	6.10524	20684.5	-41.3544	Coal Combustion Residuals	1300	30	1349.29	2228.67	1608.5	0	1608.5	2796.16	2796.16
7	6.10524	23942.9	-41.3544	Coal Combustion Residuals	1300	30	1441.16	2380.41	1871.32	0	1871.32	3139.83	3139.83
8	6.10524	26776.8	-41.3544	Coal Combustion Residuals	1300	30	1521.05	2512.37	2099.89	0	2099.89	3438.73	3438.73
9	6.10524	29126.6	-41.3544	Coal Combustion Residuals	1300	30	1587.31	2621.8	2289.42	0	2289.42	3686.57	3686.57
10	1.11916	5599.64	-41.3544	Protective Cover Soil	2000	10	1512.49	2498.23	2825.58	0	2825.58	4156.88	4156.88
11	5.58078	27736.6	0.807422	Textured Geomembrane - Peak Strength	0	18	1025.55	1693.93	5213.37	0	5213.37	5198.92	5198.92
12	5.58078	26914.3	0.807422	Textured Geomembrane - Peak Strength	0	18	995.144	1643.71	5058.8	0	5058.8	5044.78	5044.78
13	5.58078	26092	0.807422	Textured Geomembrane - Peak Strength	0	18	964.74	1593.49	4904.24	0	4904.24	4890.64	4890.64
14	5.58078	25269.6	0.807422	Textured Geomembrane - Peak Strength	0	18	934.329	1543.26	4749.69	0	4749.69	4736.52	4736.52
15	5.58078	24447.3	0.807422	Textured Geomembrane - Peak Strength	0	18	903.925	1493.04	4595.12	0	4595.12	4582.38	4582.38
16	5.58078	23625	0.807422	Textured Geomembrane - Peak Strength	0	18	873.52	1442.82	4440.55	0	4440.55	4428.24	4428.24

17	5.58078	22802.7	0.807422	Textured Geomembrane - Peak Strength	0	18	843.116	1392.6	4286	0	4286	4274.12	4274.12
18	5.58078	21980.4	0.807422	Textured Geomembrane - Peak Strength	0	18	812.712	1342.38	4131.43	0	4131.43	4119.98	4119.98
19	5.58078	21158	0.807422	Textured Geomembrane - Peak Strength	0	18	782.307	1292.16	3976.86	0	3976.86	3965.83	3965.83
20	5.58078	20335.7	0.807422	Textured Geomembrane - Peak Strength	0	18	751.903	1241.94	3822.29	0	3822.29	3811.69	3811.69
21	5.58078	19513.4	0.807422	Textured Geomembrane - Peak Strength	0	18	721.498	1191.72	3667.74	0	3667.74	3657.57	3657.57
22	5.58078	18691.1	0.807422	Textured Geomembrane - Peak Strength	0	18	691.094	1141.5	3513.17	0	3513.17	3503.43	3503.43
23	5.58078	17868.7	0.807422	Textured Geomembrane - Peak Strength	0	18	660.689	1091.28	3358.6	0	3358.6	3349.29	3349.29
24	5.58078	17046.4	0.807422	Textured Geomembrane - Peak Strength	0	18	630.285	1041.06	3204.03	0	3204.03	3195.15	3195.15
25	5.58078	16224.1	0.807422	Textured Geomembrane - Peak Strength	0	18	599.878	990.836	3049.48	0	3049.48	3041.03	3041.03
26	5.58078	15401.8	0.807422	Textured Geomembrane - Peak Strength	0	18	569.473	940.615	2894.92	0	2894.92	2886.89	2886.89
27	5.58078	14579.4	0.807422	Textured Geomembrane - Peak Strength	0	18	539.068	890.394	2740.35	0	2740.35	2732.75	2732.75
28	5.58078	13757.1	0.807422	Textured Geomembrane - Peak Strength	0	18	508.663	840.174	2585.8	0	2585.8	2578.63	2578.63
29	5.58078	12934.8	0.807422	Textured Geomembrane - Peak Strength	0	18	478.258	789.953	2431.23	0	2431.23	2424.49	2424.49
30	5.58078	12112.5	0.807422	Textured Geomembrane - Peak Strength	0	18	447.853	739.732	2276.66	0	2276.66	2270.35	2270.35
31	5.58078	11290.2	0.807422	Textured Geomembrane - Peak Strength	0	18	417.448	689.511	2122.09	0	2122.09	2116.21	2116.21
32	5.58078	10467.8	0.807422	Textured Geomembrane - Peak Strength	0	18	387.043	639.29	1967.54	0	1967.54	1962.08	1962.08
33	5.58078	9645.51	0.807422	Textured Geomembrane - Peak Strength	0	18	356.638	589.07	1812.97	0	1812.97	1807.94	1807.94
34	5.58078	8823.19	0.807422	Textured Geomembrane - Peak Strength	0	18	326.233	538.849	1658.41	0	1658.41	1653.81	1653.81
35	5.58078	8000.87	0.807422	Textured Geomembrane - Peak Strength	0	18	295.828	488.628	1503.84	0	1503.84	1499.67	1499.67

36	5.58078	7178.54	0.807422	Textured Geomembrane - Peak Strength	0	18	265.423	438.407	1349.28	0	1349.28	1345.54	1345.54
37	5.58078	6356.22	0.807422	Textured Geomembrane - Peak Strength	0	18	235.018	388.186	1194.72	0	1194.72	1191.4	1191.4
38	5.58078	5533.9	0.807422	Textured Geomembrane - Peak Strength	0	18	204.613	337.966	1040.15	0	1040.15	1037.27	1037.27
39	5.58078	4711.58	0.807422	Textured Geomembrane - Peak Strength	0	18	174.208	287.745	885.587	0	885.587	883.132	883.132
40	5.58078	3889.25	0.807422	Textured Geomembrane - Peak Strength	0	18	143.803	237.524	731.024	0	731.024	728.997	728.997
41	5.58078	3066.93	0.807422	Textured Geomembrane - Peak Strength	0	18	113.398	187.303	576.46	0	576.46	574.862	574.862
42	5.58078	2244.61	0.807422	Textured Geomembrane - Peak Strength	0	18	82.993	137.082	421.897	0	421.897	420.727	420.727
43	5.58078	1422.29	0.807422	Textured Geomembrane - Peak Strength	0	18	52.5883	86.8617	267.332	0	267.332	266.591	266.591
44	5.58078	711.019	0.807422	Textured Geomembrane - Peak Strength	0	18	26.2896	43.4233	133.643	0	133.643	133.273	133.273
45	4.74265	549.915	18.4354	Textured Geomembrane - Peak Strength	0	18	39.6418	65.4776	201.52	0	201.52	188.306	188.306
46	4.74265	549.433	18.4354	Textured Geomembrane - Peak Strength	0	18	39.607	65.4201	201.342	0	201.342	188.139	188.139
47	4.00011	440.02	0	Textured Geomembrane - Peak Strength	0	18	22.2392	36.7331	113.053	0	113.053	113.053	113.053
48	4.16567	482.531	-18.4345	Textured Geomembrane - Peak Strength	0	18	15.6757	25.892	79.6875	0	79.6875	84.9126	84.9126
49	4.16567	483.013	-18.4345	Textured Geomembrane - Peak Strength	0	18	15.6914	25.9179	79.7672	0	79.7672	84.9975	84.9975
50	3.11768	180.749	0.273868	Textured Geomembrane - Peak Strength	0	18	11.2329	18.5537	57.1024	0	57.1024	57.0487	57.0487

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 1.60889

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	6.67955	3324.74	-56.2462	Coal Combustion Residuals	1300	30	669.04	1076.41	-387.267	0	-387.267	613.879	613.879
2	4.03422	5228.84	-56.2462	Coal Combustion Residuals	1300	30	868.401	1397.16	168.288	0	168.288	1467.76	1467.76
3	6.13007	12316.1	-53.5011	Coal Combustion Residuals	1300	30	1046.51	1683.73	664.633	0	664.633	2078.97	2078.97
4	6.13014	17128.3	-50.6974	Coal Combustion Residuals	1300	30	1224.09	1969.42	1159.47	0	1159.47	2654.87	2654.87
5	7.29417	25850.1	-46.1333	Coal Combustion Residuals	1300	30	1411.96	2271.69	1683.01	0	1683.01	3151.96	3151.96
6	5.02819	20576	-43.0514	Coal Combustion Residuals	1300	30	1540.89	2479.13	2042.31	0	2042.31	3481.8	3481.8
7	5.01563	22117.7	-39.7075	Coal Combustion Residuals	1300	30	1638.81	2636.67	2315.19	0	2315.19	3676.12	3676.12
8	5.47228	25779.2	-39.2982	Coal Combustion Residuals	1300	30	1680.19	2703.24	2430.49	0	2430.49	3805.62	3805.62
9	1.84261	9025.94	-28.5741	Protective Cover Soil	2000	10	1589.61	2557.5	3161.74	0	3161.74	4027.49	4027.49
10	5.2991	25757.7	0.807422	Textured Geomembrane - Peak Strength	0	18	954.919	1536.36	4728.43	0	4728.43	4714.97	4714.97
11	5.2991	25016.3	0.807422	Textured Geomembrane - Peak Strength	0	18	934.035	1502.76	4625.01	0	4625.01	4611.85	4611.85
12	5.2991	24274.9	0.807422	Textured Geomembrane - Peak Strength	0	18	913.015	1468.94	4520.93	0	4520.93	4508.06	4508.06
13	5.2991	23533.5	0.807422	Textured Geomembrane - Peak Strength	0	18	891.77	1434.76	4415.73	0	4415.73	4403.16	4403.16
14	5.2991	22792.1	0.807422	Textured Geomembrane - Peak Strength	0	18	870.215	1400.08	4309.01	0	4309.01	4296.74	4296.74
15	5.2991	22050.7	0.807422	Textured Geomembrane - Peak Strength	0	18	848.274	1364.78	4200.37	0	4200.37	4188.42	4188.42
16	5.2991	21309.3	0.807422	Textured Geomembrane - Peak Strength	0	18	825.88	1328.75	4089.46	0	4089.46	4077.82	4077.82
17	5.2991	20567.9	0.807422	Textured Geomembrane - Peak Strength	0	18	802.964	1291.88	3975.98	0	3975.98	3964.67	3964.67
18	5.2991	19826.5	0.807422	Textured Geomembrane - Peak Strength	0	18	779.469	1254.08	3859.67	0	3859.67	3848.69	3848.69

19	5.2991	19085.1	0.807422	Textured Geomembrane - Peak Strength	0	18	755.366	1215.3	3740.32	0	3740.32	3729.68	3729.68
20	5.2991	18343.7	0.807422	Textured Geomembrane - Peak Strength	0	18	730.622	1175.49	3617.79	0	3617.79	3607.49	3607.49
21	5.2991	17602.3	0.807422	Textured Geomembrane - Peak Strength	0	18	705.213	1134.61	3491.98	0	3491.98	3482.05	3482.05
22	5.2991	16860.9	0.807422	Textured Geomembrane - Peak Strength	0	18	679.139	1092.66	3362.88	0	3362.88	3353.31	3353.31
23	5.2991	16119.5	0.807422	Textured Geomembrane - Peak Strength	0	18	652.406	1049.65	3230.48	0	3230.48	3221.28	3221.28
24	5.2991	15378.1	0.807422	Textured Geomembrane - Peak Strength	0	18	625.021	1005.59	3094.9	0	3094.9	3086.09	3086.09
25	5.2991	14636.7	0.807422	Textured Geomembrane - Peak Strength	0	18	597.025	960.547	2956.27	0	2956.27	2947.85	2947.85
26	5.2991	13895.3	0.807422	Textured Geomembrane - Peak Strength	0	18	568.445	914.565	2814.75	0	2814.75	2806.74	2806.74
27	5.2991	13153.9	0.807422	Textured Geomembrane - Peak Strength	0	18	539.331	867.724	2670.59	0	2670.59	2662.99	2662.99
28	5.2991	12412.5	0.807422	Textured Geomembrane - Peak Strength	0	18	509.737	820.11	2524.05	0	2524.05	2516.86	2516.86
29	5.2991	11671	0.807422	Textured Geomembrane - Peak Strength	0	18	479.721	771.818	2375.41	0	2375.41	2368.65	2368.65
30	5.2991	10929.6	0.807422	Textured Geomembrane - Peak Strength	0	18	449.349	722.953	2225.03	0	2225.03	2218.69	2218.69
31	5.2991	10188.2	0.807422	Textured Geomembrane - Peak Strength	0	18	418.689	673.624	2073.2	0	2073.2	2067.3	2067.3
32	5.2991	9446.83	0.807422	Textured Geomembrane - Peak Strength	0	18	387.81	623.944	1920.31	0	1920.31	1914.84	1914.84
33	5.2991	8705.43	0.807422	Textured Geomembrane - Peak Strength	0	18	356.783	574.025	1766.67	0	1766.67	1761.64	1761.64
34	5.2991	7964.02	0.807422	Textured Geomembrane - Peak Strength	0	18	325.676	523.977	1612.64	0	1612.64	1608.05	1608.05
35	5.2991	7222.62	0.807422	Textured Geomembrane - Peak Strength	0	18	294.556	473.908	1458.54	0	1458.54	1454.39	1454.39
36	5.2991	6481.21	0.807422	Textured Geomembrane - Peak Strength	0	18	263.485	423.919	1304.69	0	1304.69	1300.98	1300.98
37	5.2991	5739.81	0.807422	Textured Geomembrane - Peak Strength	0	18	232.522	374.102	1151.37	0	1151.37	1148.09	1148.09

38	5.2991	4998.4	0.807422	Textured Geomembrane - Peak Strength	0	18	201.717	324.541	998.835	0	998.835	995.993	995.993
39	5.2991	4257	0.807422	Textured Geomembrane - Peak Strength	0	18	171.117	275.308	847.311	0	847.311	844.9	844.9
40	5.2991	3515.59	0.807422	Textured Geomembrane - Peak Strength	0	18	140.758	226.464	696.984	0	696.984	695	695
41	5.2991	2774.19	0.807422	Textured Geomembrane - Peak Strength	0	18	110.67	178.056	548.001	0	548.001	546.442	546.442
42	5.2991	2032.78	0.807422	Textured Geomembrane - Peak Strength	0	18	80.8769	130.122	400.474	0	400.474	399.334	399.334
43	5.2991	1291.38	0.807422	Textured Geomembrane - Peak Strength	0	18	51.3911	82.6826	254.471	0	254.471	253.747	253.747
44	5.2991	661.03	0.807422	Textured Geomembrane - Peak Strength	0	18	26.5343	42.6907	131.388	0	131.388	131.014	131.014
45	4.74265	549.915	18.4354	Textured Geomembrane - Peak Strength	0	18	29.546	47.5362	146.301	0	146.301	136.452	136.452
46	4.74265	549.433	18.4354	Textured Geomembrane - Peak Strength	0	18	27.6407	44.4709	136.867	0	136.867	127.654	127.654
47	4.00011	440.02	0	Textured Geomembrane - Peak Strength	0	18	21.4788	34.557	106.356	0	106.356	106.356	106.356
48	4.16567	482.531	-18.4345	Textured Geomembrane - Peak Strength	0	18	20.4235	32.8592	101.13	0	101.13	107.938	107.938
49	4.16567	483.013	-18.4345	Textured Geomembrane - Peak Strength	0	18	21.2409	34.1742	105.177	0	105.177	112.257	112.257
50	3.11768	180.749	0.273868	Textured Geomembrane - Peak Strength	0	18	11.7368	18.8832	58.1163	0	58.1163	58.0602	58.0602

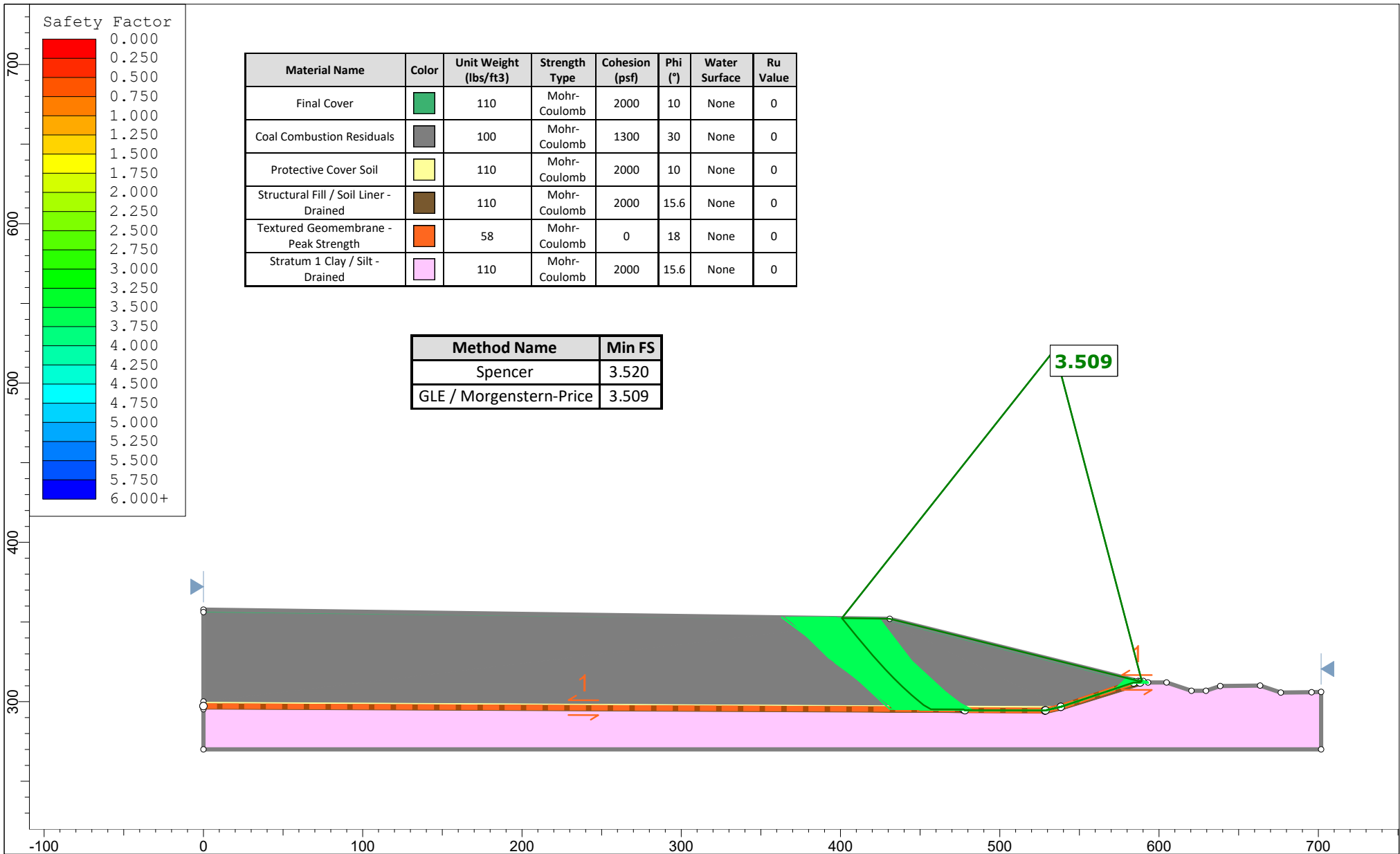
Interslice Data

Global Minimum Query (spencer) - Safety Factor: 1.65173

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	103.307	355.133	0	0	0
2	108.597	348.633	-4686.42	-4686.42	45
3	113.887	342.133	-7344.57	-7344.57	45
4	119.177	335.632	-7974.43	-7974.43	45
5	124.467	329.132	-6576	-6576	45
6	130.572	323.758	-3942.08	-3942.08	45
7	136.677	318.384	118.474	118.474	45
8	142.783	313.01	5605.66	5605.66	45
9	148.888	307.636	12333.6	12333.6	45
10	154.993	302.262	20090.4	20090.4	45
11	156.112	301.277	22170.1	22170.1	45
12	161.693	301.356	20933.4	20933.4	45
13	167.274	301.435	19733.4	19733.4	45
14	172.855	301.513	18570	18570	45
15	178.435	301.592	17443.4	17443.4	45
16	184.016	301.671	16353.3	16353.3	45
17	189.597	301.749	15300	15300	45
18	195.178	301.828	14283.3	14283.3	45
19	200.759	301.907	13303.2	13303.2	45
20	206.339	301.985	12359.9	12359.9	45
21	211.92	302.064	11453.2	11453.2	45
22	217.501	302.142	10583.1	10583.1	45
23	223.082	302.221	9749.74	9749.74	45
24	228.662	302.3	8953.03	8953.03	45
25	234.243	302.378	8192.99	8192.99	45
26	239.824	302.457	7469.61	7469.61	45
27	245.405	302.536	6782.89	6782.89	45
28	250.986	302.614	6132.84	6132.84	45
29	256.566	302.693	5519.45	5519.45	45
30	262.147	302.772	4942.73	4942.73	45
31	267.728	302.85	4402.67	4402.67	45
32	273.309	302.929	3899.28	3899.28	45
33	278.889	303.008	3432.55	3432.55	45
34	284.47	303.086	3002.49	3002.49	45
35	290.051	303.165	2609.09	2609.09	45
36	295.632	303.244	2252.36	2252.36	45
37	301.213	303.322	1932.29	1932.29	45
38	306.793	303.401	1648.89	1648.89	45
39	312.374	303.48	1402.15	1402.15	45
40	317.955	303.558	1192.08	1192.08	45
41	323.536	303.637	1018.67	1018.67	45
42	329.117	303.715	881.922	881.922	45
43	334.697	303.794	781.842	781.842	45
44	340.278	303.873	718.427	718.427	45
45	345.859	303.951	686.725	686.725	45
46	350.602	305.532	277.266	277.266	45
47	355.344	307.113	-131.832	-131.832	45
48	359.344	307.113	-143.11	-143.11	45
49	363.51	305.725	-12.5987	-12.5987	45
50	367.676	304.336	118.043	118.043	45
51	370.793	304.351	0	0	0

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 1.60889

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	112.764	355.076	0	0	0
2	119.443	345.081	-7753.22	-783.778	5.77246
3	123.477	339.044	-9318.25	-1508.3	9.19444
4	129.608	330.76	-8054.64	-2041.18	14.2203
5	135.738	323.271	-3853.91	-1324.04	18.9605
6	143.032	315.682	3178.66	1424.94	24.1459
7	148.06	310.985	8653.73	4486.68	27.4053
8	153.076	306.82	13978.7	8199.09	30.3934
9	158.548	302.341	20217.2	13309.2	33.3573
10	160.391	301.338	22053.3	15036.6	34.2873
11	165.69	301.412	21183.6	15835.4	36.7793
12	170.989	301.487	20301.6	16446.6	39.0114
13	176.288	301.562	19407.9	16871.9	41.0015
14	181.587	301.636	18503.9	17114.8	42.7666
15	186.886	301.711	17591.3	17181	44.324
16	192.185	301.786	16672.2	17078.4	45.6895
17	197.484	301.86	15749.4	16817	46.8776
18	202.783	301.935	14825.7	16408.6	47.9012
19	208.082	302.01	13904.3	15866.8	48.7715
20	213.382	302.084	12988.8	15206.9	49.4981
21	218.681	302.159	12082.8	14445.3	50.0891
22	223.98	302.234	11190.1	13599.3	50.551
23	229.279	302.308	10314.4	12686.9	50.889
24	234.578	302.383	9459.45	11726.2	51.1071
25	239.877	302.458	8628.95	10735.1	51.2074
26	245.176	302.533	7826.4	9730.89	51.1908
27	250.475	302.607	7055.07	8730.21	51.0576
28	255.774	302.682	6318.01	7748.3	50.806
29	261.073	302.757	5617.93	6798.96	50.4333
30	266.372	302.831	4957.22	5894.3	49.9355
31	271.672	302.906	4337.9	5044.51	49.3069
32	276.971	302.981	3761.6	4257.81	48.5407
33	282.27	303.055	3229.57	3540.33	47.6282
34	287.569	303.13	2742.65	2896.16	46.5594
35	292.868	303.205	2301.28	2327.35	45.3227
36	298.167	303.279	1905.55	1834.04	43.9045
37	303.466	303.354	1555.16	1414.6	42.2902
38	308.765	303.429	1249.53	1065.81	40.4631
39	314.064	303.503	987.732	783.051	38.4066
40	319.363	303.578	768.625	560.547	36.1027
41	324.663	303.653	590.837	391.582	33.5347
42	329.962	303.727	452.827	268.741	30.688
43	335.261	303.802	352.929	184.13	27.5519
44	340.56	303.877	289.398	129.591	24.1226
45	345.859	303.951	255.584	95.079	20.4055
46	350.602	305.532	-18.8279	-5.70212	16.8492
47	355.344	307.113	-269.376	-62.6817	13.0992
48	359.344	307.113	-277.674	-48.0107	9.80963
49	363.51	305.725	-137.211	-15.1215	6.28897
50	367.676	304.336	5.55047	0.26212	2.70377
51	370.793	304.351	0	0	0



Project

Entergy - Independence Plant Class 3N Landfill

Analysis Description

Drawn By

John David Young

Company

Promus Engineering

Date

4/2/2026

File Name

Section-B-STATIC.slmd

Slide2 Analysis Information

Section-B-STATIC

Project Summary

File Name:	Section-B-STATIC.slmd
Slide2 Modeler Version:	9.041
Compute Time:	00h:00m:04.297s
Project Title:	Entergy - White Bluff Class 3N Landfill
Author:	John David Young
Company:	Promus Engineering
Date Created:	4/18/2022, 4:59:20 PM

General Settings

Units of Measurement:

Time Units:

Permeability Units:

Data Output:

Failure Direction:

Imperial Units

days

centimeters/second

Standard

Left to Right

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	GLE/Morgenstern-Price with interslice force function (Half Sine)
	Spencer
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Surface Options

Search Method:	Cuckoo Search
Initial # of Surface Vertices:	8
Maximum Iterations:	500
Number of Nests:	50
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined
Convex Surfaces Only:	Enabled
Optimize Surfaces:	Enabled

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

Materials

Final Cover

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Coal Combustion Residuals

Color	
Strength Type	Mohr-Coulomb
Unit Weight	100 lbs/ft3
Cohesion	1300 psf
Phi	30 °
Water Surface	None
Ru Value	0

Protective Cover Soil

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Structural Fill / Soil Liner - Drained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	15.6 °
Water Surface	None
Ru Value	0

Stratum 1 Clay / Silt - Drained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	15.6 °
Water Surface	None
Ru Value	0

Global Minimums

Method: spencer

FS	3.520340
Axis Location:	533.749, 519.094
Left Slip Surface Endpoint:	401.151, 352.400
Right Slip Surface Endpoint:	587.546, 313.000
Resisting Moment:	7.31545e+07 lb-ft
Driving Moment:	2.07805e+07 lb-ft
Resisting Horizontal Force:	278298 lb
Driving Horizontal Force:	79054.3 lb
Total Slice Area:	5564.54 ft ²
Surface Horizontal Width:	186.394 ft
Surface Average Height:	29.8536 ft

Method: gle/morgenstern-price

FS	3.509390
Axis Location:	534.416, 520.963
Left Slip Surface Endpoint:	400.883, 352.404
Right Slip Surface Endpoint:	589.143, 313.000
Resisting Moment:	7.34758e+07 lb-ft
Driving Moment:	2.09369e+07 lb-ft
Resisting Horizontal Force:	275183 lb
Driving Horizontal Force:	78413.5 lb
Total Slice Area:	5661.57 ft ²
Surface Horizontal Width:	188.261 ft
Surface Average Height:	30.073 ft

Slice Data

Global Minimum Query (spencer) - Safety Factor: 3.52034

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	0.715627	34.5814	-51.1418	Final Cover	2000	10	544.098	1915.41	-479.739	0	-479.739	195.577	195.577
2	5.1333	2113.49	-51.1418	Coal Combustion Residuals	1300	30	369.417	1300.47	0.817232	0	0.817232	459.325	459.325
3	2.92446	2615.07	-49.1992	Coal Combustion Residuals	1300	30	433.232	1525.13	389.928	0	389.928	891.817	891.817
4	2.92446	3594.23	-49.1992	Coal Combustion Residuals	1300	30	474.879	1671.74	643.868	0	643.868	1194	1194
5	5.84892	10020.4	-47.6429	Coal Combustion Residuals	1300	30	540.286	1901.99	1042.68	0	1042.68	1635.25	1635.25
6	5.84892	13677.5	-46.8957	Coal Combustion Residuals	1300	30	622.077	2189.92	1541.4	0	1541.4	2206.06	2206.06
7	4.00879	11417.2	-45.4606	Coal Combustion Residuals	1300	30	693.044	2439.75	1974.12	0	1974.12	2678.4	2678.4
8	4.00873	13018.3	-45.4606	Coal Combustion Residuals	1300	30	744.354	2620.38	2286.97	0	2286.97	3043.39	3043.39
9	3.97326	14119.5	-42.7856	Coal Combustion Residuals	1300	30	796.883	2805.3	2607.26	0	2607.26	3344.81	3344.81
10	3.97326	15186	-42.7856	Coal Combustion Residuals	1300	30	832.093	2929.25	2821.95	0	2821.95	3592.08	3592.08
11	3.94912	16073.4	-39.5813	Coal Combustion Residuals	1300	30	881.293	3102.45	3121.94	0	3121.94	3850.52	3850.52
12	3.94912	16972.9	-39.5813	Coal Combustion Residuals	1300	30	911.878	3210.12	3308.44	0	3308.44	4062.31	4062.31
13	3.66384	16532.9	-38.6516	Coal Combustion Residuals	1300	30	945.764	3329.41	3515.05	0	3515.05	4271.44	4271.44
14	3.66384	17270.9	-38.6516	Coal Combustion Residuals	1300	30	972.991	3425.26	3681.07	0	3681.07	4459.24	4459.24
15	4.49143	22019	-30.2922	Protective Cover Soil	2000	10	779.922	2745.59	4228.44	0	4228.44	4684.05	4684.05
16	4.2495	20985.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	460.836	1622.3	4992.91	0	4992.91	4994.97	4994.97

17	4.2495	20541.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	451.096	1588.01	4887.39	0	4887.39	4889.41	4889.41
18	4.2495	20098.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	441.358	1553.73	4781.88	0	4781.88	4783.85	4783.85
19	4.2495	19654.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	431.617	1519.44	4676.36	0	4676.36	4678.29	4678.29
20	0.909099	4169.72	-26.564	Textured Geomembrane - Peak Strength	0	18	385.267	1356.27	4174.16	0	4174.16	4366.78	4366.78
21	3.85812	17566	-0.285195	Textured Geomembrane - Peak Strength	0	18	424.831	1495.55	4602.83	0	4602.83	4604.94	4604.94
22	3.85812	17201.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	416.008	1464.49	4507.24	0	4507.24	4509.31	4509.31
23	3.85812	16836.6	-0.285195	Textured Geomembrane - Peak Strength	0	18	407.188	1433.44	4411.67	0	4411.67	4413.7	4413.7
24	3.85812	16471.9	-0.285195	Textured Geomembrane - Peak Strength	0	18	398.368	1402.39	4316.11	0	4316.11	4318.09	4318.09
25	3.85812	16107.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	389.548	1371.34	4220.55	0	4220.55	4222.49	4222.49
26	3.85812	15742.4	-0.285195	Textured Geomembrane - Peak Strength	0	18	380.727	1340.29	4124.98	0	4124.98	4126.88	4126.88
27	3.85812	15377.7	-0.285195	Textured Geomembrane - Peak Strength	0	18	371.904	1309.23	4029.4	0	4029.4	4031.25	4031.25
28	3.85812	15013	-0.285195	Textured Geomembrane - Peak Strength	0	18	363.084	1278.18	3933.83	0	3933.83	3935.64	3935.64
29	3.85812	14648.2	-0.285195	Textured Geomembrane - Peak Strength	0	18	354.264	1247.13	3838.27	0	3838.27	3840.03	3840.03
30	3.85812	14283.5	-0.285195	Textured Geomembrane - Peak Strength	0	18	345.444	1216.08	3742.7	0	3742.7	3744.42	3744.42
31	3.85812	13918.8	-0.285195	Textured Geomembrane - Peak Strength	0	18	336.621	1185.02	3647.14	0	3647.14	3648.82	3648.82
32	3.85812	13554.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	327.801	1153.97	3551.55	0	3551.55	3553.18	3553.18
33	3.85812	13189.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	318.981	1122.92	3455.99	0	3455.99	3457.58	3457.58
34	0.45455	1527.34	12.4432	Textured Geomembrane - Peak Strength	0	18	330.21	1162.45	3577.63	0	3577.63	3504.77	3504.77
35	4.78151	15432.1	13.1767	Textured Geomembrane - Peak Strength	0	18	318.179	1120.1	3447.34	0	3447.34	3372.85	3372.85

36	4.78151	14273.2	13.1767	Textured Geomembrane - Peak Strength	0	18	294.287	1035.99	3188.46	0	3188.46	3119.56	3119.56
37	3.81422	10512.3	18.4349	Textured Geomembrane - Peak Strength	0	18	278.242	979.507	3014.62	0	3014.62	2921.87	2921.87
38	3.81422	9663.65	18.4349	Textured Geomembrane - Peak Strength	0	18	255.78	900.432	2771.24	0	2771.24	2685.98	2685.98
39	3.81422	8815	18.4349	Textured Geomembrane - Peak Strength	0	18	233.318	821.358	2527.87	0	2527.87	2450.1	2450.1
40	3.81422	7966.35	18.4349	Textured Geomembrane - Peak Strength	0	18	210.855	742.283	2284.51	0	2284.51	2214.23	2214.23
41	3.81422	7117.7	18.4349	Textured Geomembrane - Peak Strength	0	18	188.393	663.208	2041.14	0	2041.14	1978.35	1978.35
42	3.81422	6269.05	18.4349	Textured Geomembrane - Peak Strength	0	18	165.931	584.133	1797.78	0	1797.78	1742.47	1742.47
43	3.81422	5420.4	18.4349	Textured Geomembrane - Peak Strength	0	18	143.469	505.058	1554.41	0	1554.41	1506.59	1506.59
44	3.81422	4571.75	18.4349	Textured Geomembrane - Peak Strength	0	18	121.006	425.983	1311.04	0	1311.04	1270.71	1270.71
45	3.81422	3723.1	18.4349	Textured Geomembrane - Peak Strength	0	18	98.5442	346.909	1067.67	0	1067.67	1034.83	1034.83
46	3.81422	2874.45	18.4349	Textured Geomembrane - Peak Strength	0	18	76.0819	267.834	824.307	0	824.307	798.946	798.946
47	3.81422	2025.8	18.4349	Textured Geomembrane - Peak Strength	0	18	53.6195	188.759	580.941	0	580.941	563.068	563.068
48	3.81422	1170.42	18.4349	Textured Geomembrane - Peak Strength	0	18	30.9788	109.056	335.641	0	335.641	325.315	325.315
49	2.33765	365.53	0	Textured Geomembrane - Peak Strength	0	18	14.6064	51.4196	158.253	0	158.253	158.253	158.253
50	1.12871	65.7574	41.5398	Protective Cover Soil	2000	10	606.233	2134.14	760.775	0	760.775	223.674	223.674

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 3.50939

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	0.713426	34.4927	-51.2413	Final Cover	2000	10	538.735	1890.63	-620.27	0	-620.27	50.7703	50.7703
2	3.93248	1332.85	-51.2413	Coal Combustion Residuals	1300	30	354.82	1245.2	-94.9159	0	-94.9159	347.042	347.042
3	4.6459	4014.73	-50.9284	Coal Combustion Residuals	1300	30	427.219	1499.28	345.16	0	345.16	871.386	871.386
4	4.6459	6616.46	-50.3393	Coal Combustion Residuals	1300	30	503.266	1766.16	807.405	0	807.405	1414.44	1414.44
5	4.6459	9143.42	-49.2966	Coal Combustion Residuals	1300	30	577.193	2025.6	1256.77	0	1256.77	1927.74	1927.74
6	2.90146	6946.51	-48.0094	Coal Combustion Residuals	1300	30	636.235	2232.8	1615.65	0	1615.65	2322.49	2322.49
7	2.90146	7870.34	-48.0094	Coal Combustion Residuals	1300	30	676.326	2373.49	1859.33	0	1859.33	2610.72	2610.72
8	2.98186	9040.62	-47.397	Coal Combustion Residuals	1300	30	718.632	2521.96	2116.5	0	2116.5	2897.93	2897.93
9	2.98186	10007	-47.397	Coal Combustion Residuals	1300	30	758.565	2662.1	2359.23	0	2359.23	3184.08	3184.08
10	5.77321	21537.3	-45.1836	Coal Combustion Residuals	1300	30	814.236	2857.47	2697.61	0	2697.61	3517.08	3517.08
11	5.76069	23889.9	-43.1643	Coal Combustion Residuals	1300	30	874.155	3067.75	3061.84	0	3061.84	3881.7	3881.7
12	4.61199	20683.1	-40.519	Coal Combustion Residuals	1300	30	928.68	3259.1	3393.25	0	3393.25	4186.95	4186.95
13	4.78106	22773	-39.7579	Coal Combustion Residuals	1300	30	966.863	3393.1	3625.34	0	3625.34	4429.7	4429.7
14	4.58999	22899.5	-29.7726	Protective Cover Soil	2000	10	782.715	2746.85	4235.62	0	4235.62	4683.39	4683.39
15	4.09536	20581.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	460.898	1617.47	4978.05	0	4978.05	4980.11	4980.11
16	4.09536	20169.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	452.896	1589.39	4891.64	0	4891.64	4893.66	4893.66
17	4.09536	19758	-0.255976	Textured Geomembrane - Peak Strength	0	18	444.847	1561.14	4804.71	0	4804.71	4806.7	4806.7
18	4.09536	19346.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	436.745	1532.71	4717.2	0	4717.2	4719.15	4719.15

19	4.09536	18934.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	428.584	1504.07	4629.05	0	4629.05	4630.96	4630.96
20	0.909099	4169.72	-26.564	Textured Geomembrane - Peak Strength	0	18	379.815	1332.92	4102.31	0	4102.31	4292.21	4292.21
21	3.85812	17566	-0.285195	Textured Geomembrane - Peak Strength	0	18	423.256	1485.37	4571.49	0	4571.49	4573.6	4573.6
22	3.85812	17201.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	415.482	1458.09	4487.57	0	4487.57	4489.63	4489.63
23	3.85812	16836.6	-0.285195	Textured Geomembrane - Peak Strength	0	18	407.649	1430.6	4402.94	0	4402.94	4404.97	4404.97
24	3.85812	16471.9	-0.285195	Textured Geomembrane - Peak Strength	0	18	399.75	1402.88	4317.64	0	4317.64	4319.63	4319.63
25	3.85812	16107.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	391.786	1374.93	4231.62	0	4231.62	4233.57	4233.57
26	3.85812	15742.4	-0.285195	Textured Geomembrane - Peak Strength	0	18	383.753	1346.74	4144.84	0	4144.84	4146.75	4146.75
27	3.85812	15377.7	-0.285195	Textured Geomembrane - Peak Strength	0	18	375.655	1318.32	4057.36	0	4057.36	4059.23	4059.23
28	3.85812	15013	-0.285195	Textured Geomembrane - Peak Strength	0	18	367.486	1289.65	3969.13	0	3969.13	3970.96	3970.96
29	3.85812	14648.2	-0.285195	Textured Geomembrane - Peak Strength	0	18	359.25	1260.75	3880.18	0	3880.18	3881.97	3881.97
30	3.85812	14283.5	-0.285195	Textured Geomembrane - Peak Strength	0	18	350.947	1231.61	3790.5	0	3790.5	3792.25	3792.25
31	3.85812	13918.8	-0.285195	Textured Geomembrane - Peak Strength	0	18	342.578	1202.24	3700.12	0	3700.12	3701.83	3701.83
32	3.85812	13554.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	334.146	1172.65	3609.04	0	3609.04	3610.7	3610.7
33	3.85812	13189.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	325.652	1142.84	3517.29	0	3517.29	3518.91	3518.91
34	0.45455	1527.34	12.4432	Textured Geomembrane - Peak Strength	0	18	337.594	1184.75	3646.29	0	3646.29	3571.8	3571.8
35	4.78151	15432.1	13.1767	Textured Geomembrane - Peak Strength	0	18	325.099	1140.9	3511.32	0	3511.32	3435.21	3435.21
36	4.78151	14273.2	13.1767	Textured Geomembrane - Peak Strength	0	18	300.192	1053.49	3242.32	0	3242.32	3172.04	3172.04
37	3.81422	10512.3	18.4349	Textured Geomembrane - Peak Strength	0	18	282.663	991.976	3053	0	3053	2958.77	2958.77

38	3.81422	9663.65	18.4349	Textured Geomembrane - Peak Strength	0	18	258.924	908.664	2796.59	0	2796.59	2710.28	2710.28
39	3.81422	8815	18.4349	Textured Geomembrane - Peak Strength	0	18	235.246	825.57	2540.85	0	2540.85	2462.44	2462.44
40	3.81422	7966.35	18.4349	Textured Geomembrane - Peak Strength	0	18	211.669	742.828	2286.19	0	2286.19	2215.63	2215.63
41	3.81422	7117.7	18.4349	Textured Geomembrane - Peak Strength	0	18	188.227	660.561	2033	0	2033	1970.26	1970.26
42	3.81422	6269.05	18.4349	Textured Geomembrane - Peak Strength	0	18	164.953	578.883	1781.62	0	1781.62	1726.63	1726.63
43	3.81422	5420.4	18.4349	Textured Geomembrane - Peak Strength	0	18	141.874	497.891	1532.35	0	1532.35	1485.06	1485.06
44	3.81422	4571.75	18.4349	Textured Geomembrane - Peak Strength	0	18	119.015	417.669	1285.45	0	1285.45	1245.78	1245.78
45	3.81422	3723.1	18.4349	Textured Geomembrane - Peak Strength	0	18	96.3948	338.287	1041.14	0	1041.14	1009.01	1009.01
46	3.81422	2874.45	18.4349	Textured Geomembrane - Peak Strength	0	18	74.0305	259.802	799.589	0	799.589	774.912	774.912
47	3.81422	2025.8	18.4349	Textured Geomembrane - Peak Strength	0	18	51.933	182.253	560.917	0	560.917	543.606	543.606
48	3.81422	1170.42	18.4349	Textured Geomembrane - Peak Strength	0	18	29.94	105.071	323.377	0	323.377	313.397	313.397
49	3.99958	552.019	0	Textured Geomembrane - Peak Strength	0	18	13.097	45.9626	141.458	0	141.458	141.458	141.458
50	1.06439	58.5415	43.2135	Protective Cover Soil	2000	10	601.207	2109.87	623.11	0	623.11	58.273	58.273

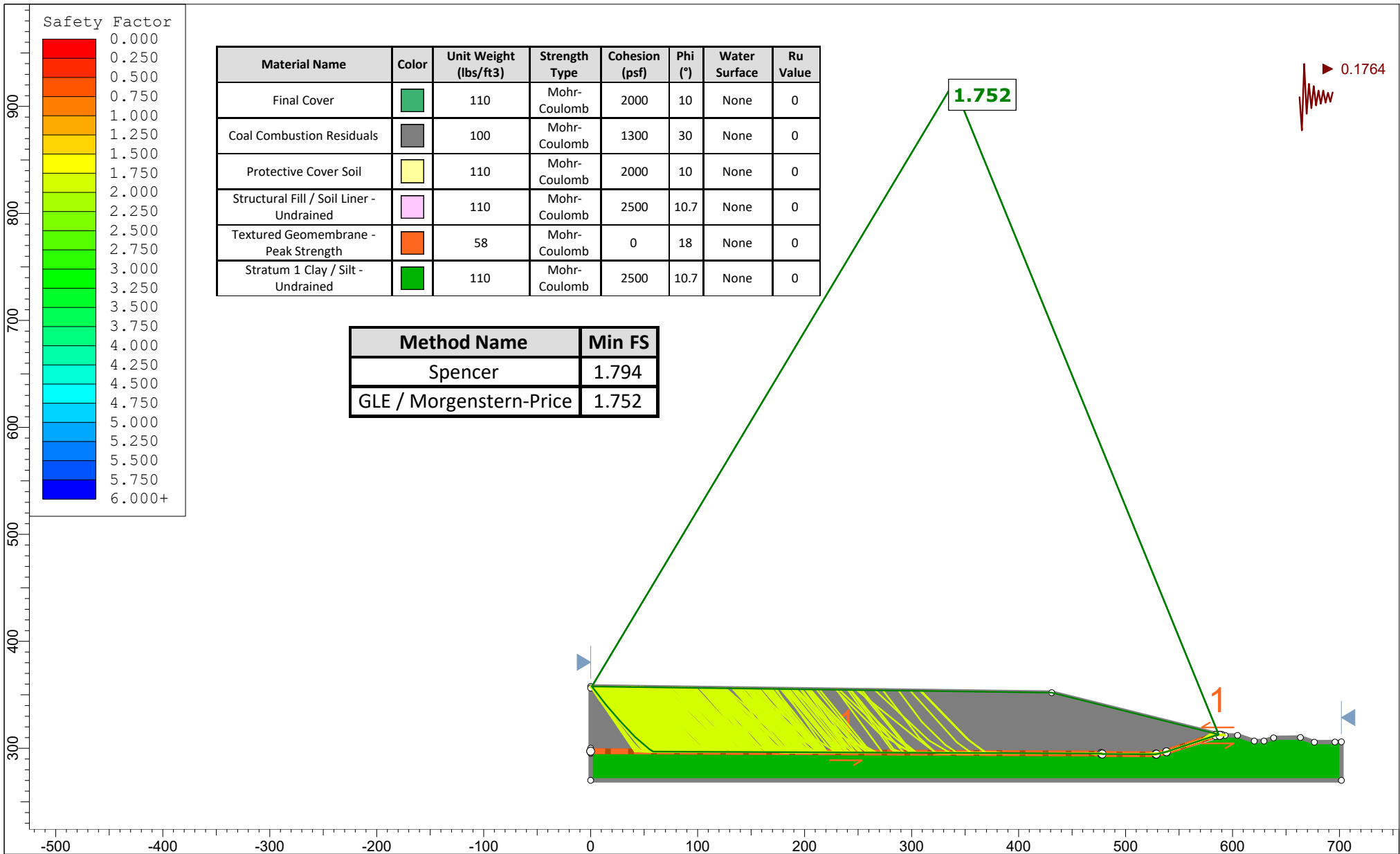
Interslice Data

Global Minimum Query (spencer) - Safety Factor: 3.52034

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	401.151	352.4	0	0	0
2	401.867	351.512	-815.481	-105.366	7.36224
3	407	345.14	-2706.6	-349.713	7.36225
4	409.925	341.752	-2652.52	-342.727	7.36229
5	412.849	338.365	-1859.92	-240.315	7.36224
6	418.698	331.95	1668.79	215.62	7.36225
7	424.547	325.7	7663	990.119	7.36227
8	428.556	321.626	12926.8	1670.24	7.36226
9	432.565	317.553	19259.3	2488.45	7.36227
10	436.538	313.875	25681.1	3318.19	7.36225
11	440.511	310.198	32752.4	4231.87	7.36228
12	444.46	306.933	39464.6	5099.14	7.36228
13	448.409	303.668	46665	6029.48	7.36227
14	452.073	300.738	53499.7	6912.57	7.36226
15	455.737	297.808	60721.1	7845.63	7.36226
16	460.228	295.184	68312.5	8826.51	7.36227
17	464.478	295.165	66449	8585.72	7.36226
18	468.728	295.146	64624.9	8350.03	7.36226
19	472.977	295.127	62840.1	8119.43	7.36227
20	477.227	295.108	61094.7	7893.91	7.36227
21	478.136	294.654	62641.7	8093.8	7.36228
22	481.994	294.634	61091.1	7893.44	7.36227
23	485.852	294.615	59572.6	7697.25	7.36228
24	489.71	294.596	58086.4	7505.21	7.36227
25	493.568	294.577	56632.3	7317.33	7.36227
26	497.426	294.558	55210.5	7133.62	7.36226
27	501.284	294.538	53820.8	6954.06	7.36226
28	505.142	294.519	52463.3	6778.67	7.36227
29	509.001	294.5	51138	6607.43	7.36227
30	512.859	294.481	49845	6440.35	7.36226
31	516.717	294.462	48584.1	6277.44	7.36227
32	520.575	294.442	47355.4	6118.68	7.36226
33	524.433	294.423	46158.9	5964.09	7.36227
34	528.291	294.404	44994.6	5813.65	7.36227
35	528.746	294.504	44485.7	5747.89	7.36226
36	533.527	295.624	39105.2	5052.69	7.36226
37	538.309	296.743	34128.7	4409.7	7.36228
38	542.123	298.015	29234.7	3777.35	7.36227
39	545.937	299.286	24735.7	3196.04	7.36226
40	549.751	300.557	20631.8	2665.79	7.36227
41	553.566	301.829	16923	2186.59	7.36229
42	557.38	303.1	13609.3	1758.43	7.36228
43	561.194	304.372	10690.7	1381.32	7.36226
44	565.008	305.643	8167.22	1055.27	7.36228
45	568.823	306.914	6038.81	780.261	7.36227
46	572.637	308.186	4305.49	556.303	7.36227
47	576.451	309.457	2967.27	383.395	7.36228
48	580.265	310.729	2024.14	261.535	7.36228
49	584.079	312	1479.25	191.13	7.36225
50	586.417	312	1445.1	186.719	7.3623
51	587.546	313	0	0	0

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 3.50939

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	400.883	352.404	0	0	0
2	401.596	351.515	-935.54	-1.72897	0.105888
3	405.528	346.617	-2795.78	-33.6143	0.688847
4	410.174	340.894	-2805.4	-67.2571	1.37335
5	414.82	335.29	-618.956	-22.1469	2.04923
6	419.466	329.89	3486.91	165.186	2.71226
7	422.368	326.666	6848.87	373.075	3.11796
8	425.269	323.443	10880	668.515	3.51608
9	428.251	320.2	15599.7	1067.94	3.9163
10	431.233	316.958	20987.4	1580.44	4.30649
11	437.006	311.147	31960.6	2812.94	5.0298
12	442.767	305.745	43467.7	4341.57	5.70381
13	447.379	301.803	52559.7	5714.38	6.20492
14	452.16	297.825	62356.8	7308.67	6.68498
15	456.75	295.2	69886	8711.47	7.10542
16	460.845	295.181	68089.6	8897.92	7.4452
17	464.94	295.163	66324.3	9026.52	7.75015
18	469.036	295.145	64590.4	9099.39	8.01896
19	473.131	295.126	62888.1	9118.91	8.25051
20	477.227	295.108	61217.6	9087.7	8.44384
21	478.136	294.654	62736.9	9355.38	8.4815
22	481.994	294.634	61191.7	9275.92	8.61972
23	485.852	294.615	59674.9	9155.72	8.72268
24	489.71	294.596	58186.7	8997.39	8.79001
25	493.568	294.577	56727.3	8803.63	8.82148
26	497.426	294.558	55297	8577.19	8.81696
27	501.284	294.538	53896.1	8320.89	8.77647
28	505.142	294.519	52524.6	8037.56	8.70018
29	509.001	294.5	51183.1	7730.04	8.58832
30	512.859	294.481	49871.5	7401.15	8.44134
31	516.717	294.462	48590.3	7053.68	8.25973
32	520.575	294.442	47339.7	6690.36	8.04415
33	524.433	294.423	46119.8	6313.88	7.79543
34	528.291	294.404	44931	5926.81	7.51445
35	528.746	294.504	44411.8	5830.58	7.47927
36	533.527	295.624	38926.6	4837.17	7.08348
37	538.309	296.743	33861.6	3943.26	6.64231
38	542.123	298.015	28901.9	3170.17	6.25959
39	545.937	299.286	24358.7	2496.23	5.85113
40	549.751	300.557	20231	1918.98	5.41849
41	553.566	301.829	16517	1434.41	4.96337
42	557.38	303.1	13214.3	1037.11	4.4876
43	561.194	304.372	10319.9	720.397	3.99315
44	565.008	305.643	7830.56	476.454	3.4819
45	568.823	306.914	5742.28	296.521	2.95603
46	572.637	308.186	4050.89	171.036	2.4177
47	576.451	309.457	2751.92	89.8076	1.86916
48	580.265	310.729	1840.68	42.1792	1.3127
49	584.079	312	1315.34	17.2345	0.750686
50	588.079	312	1262.96	3.48219	0.157974
51	589.143	313	0	0	0



Slide2 Analysis Information

Section-B-SEISMIC

Project Summary

File Name:	Section-B-SEISMIC.slmd
Slide2 Modeler Version:	9.041
Compute Time:	00h:00m:05.235s
Project Title:	Entergy - White Bluff Class 3N Landfill
Author:	John David Young
Company:	Promus Engineering
Date Created:	4/18/2022, 4:59:20 PM

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	centimeters/second
Data Output:	Standard
Failure Direction:	Left to Right

Analysis Options

Slices Type:	Vertical
Analysis Methods Used	
	GLE/Morgenstern-Price with interslice force function (Half Sine)
	Spencer
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	75
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Surface Options

Search Method:	Cuckoo Search
Initial # of Surface Vertices:	8
Maximum Iterations:	500
Number of Nests:	50
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined
Convex Surfaces Only:	Enabled
Optimize Surfaces:	Enabled

Seismic Loading

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.1764

Materials

Final Cover

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Coal Combustion Residuals

Color	
Strength Type	Mohr-Coulomb
Unit Weight	100 lbs/ft3
Cohesion	1300 psf
Phi	30 °
Water Surface	None
Ru Value	0

Protective Cover Soil

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2000 psf
Phi	10 °
Water Surface	None
Ru Value	0

Structural Fill / Soil Liner - Undrained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2500 psf
Phi	10.7 °
Water Surface	None
Ru Value	0

Stratum 1 Clay / Silt - Undrained

Color	
Strength Type	Mohr-Coulomb
Unit Weight	110 lbs/ft3
Cohesion	2500 psf
Phi	10.7 °
Water Surface	None
Ru Value	0

Global Minimums

Method: spencer

FS	1.793530
Axis Location:	340.263, 925.910
Left Slip Surface Endpoint:	0.000, 357.786
Right Slip Surface Endpoint:	590.604, 312.825
Resisting Moment:	6.96703e+08 lb-ft
Driving Moment:	3.88453e+08 lb-ft
Resisting Horizontal Force:	1.04171e+06 lb
Driving Horizontal Force:	580815 lb
Total Slice Area:	28984 ft ²
Surface Horizontal Width:	590.604 ft
Surface Average Height:	49.0751 ft

Method: gle/morgenstern-price

FS	1.751780
Axis Location:	338.789, 921.220
Left Slip Surface Endpoint:	1.101, 357.772
Right Slip Surface Endpoint:	586.934, 313.000
Resisting Moment:	6.82096e+08 lb-ft
Driving Moment:	3.89374e+08 lb-ft
Resisting Horizontal Force:	1.02608e+06 lb
Driving Horizontal Force:	585737 lb
Total Slice Area:	29010.4 ft ²
Surface Horizontal Width:	585.834 ft
Surface Average Height:	49.5199 ft

Slice Data

Global Minimum Query (spencer) - Safety Factor: 1.79353

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.00442	85.3244	-57.1911	Final Cover	2000	10	1062.92	1906.38	-530.923	0	-530.923	1117.85	1117.85
2	7.63883	5783.83	-57.1911	Coal Combustion Residuals	1300	30	718.708	1289.02	-19.0105	0	-19.0105	1095.83	1095.83
3	16.0235	34670.8	-46.0197	Coal Combustion Residuals	1300	30	1023.35	1835.41	927.365	0	927.365	1987.81	1987.81
4	16.0634	58810.6	-40.6251	Coal Combustion Residuals	1300	30	1356.34	2432.64	1961.78	0	1961.78	3125.34	3125.34
5	18.0448	90856.4	-38.1237	Coal Combustion Residuals	1300	30	1659.21	2975.84	2902.64	0	2902.64	4204.73	4204.73
6	6.33533	37280.1	-24.4795	Protective Cover Soil	2000	10	1544.28	2769.7	4365.22	0	4365.22	5068.32	5068.32
7	13.2941	80197.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1092.09	1958.69	6028.22	0	6028.22	6033.1	6033.1
8	13.2941	80034.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	1089.88	1954.73	6016.03	0	6016.03	6020.9	6020.9
9	13.2941	79872.6	-0.255976	Textured Geomembrane - Peak Strength	0	18	1087.67	1950.76	6003.83	0	6003.83	6008.69	6008.69
10	13.2941	79710.3	-0.255976	Textured Geomembrane - Peak Strength	0	18	1085.46	1946.8	5991.63	0	5991.63	5996.48	5996.48
11	13.2941	79548	-0.255976	Textured Geomembrane - Peak Strength	0	18	1083.25	1942.84	5979.43	0	5979.43	5984.27	5984.27
12	13.2941	79385.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1081.04	1938.87	5967.24	0	5967.24	5972.07	5972.07
13	13.2941	79223.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1078.83	1934.91	5955.04	0	5955.04	5959.86	5959.86
14	13.2941	79061.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1076.62	1930.95	5942.84	0	5942.84	5947.65	5947.65
15	13.2941	78899	-0.255976	Textured Geomembrane - Peak Strength	0	18	1074.41	1926.98	5930.64	0	5930.64	5935.45	5935.45
16	13.2941	78736.7	-0.255976	Textured Geomembrane - Peak Strength	0	18	1072.2	1923.02	5918.44	0	5918.44	5923.23	5923.23

17	13.2941	78574.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	1069.99	1919.06	5906.25	0	5906.25	5911.03	5911.03
18	13.2941	78412.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1067.78	1915.09	5894.05	0	5894.05	5898.82	5898.82
19	13.2941	78249.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	1065.57	1911.13	5881.86	0	5881.86	5886.62	5886.62
20	13.2941	78087.6	-0.255976	Textured Geomembrane - Peak Strength	0	18	1063.36	1907.17	5869.66	0	5869.66	5874.41	5874.41
21	13.2941	77925.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	1061.15	1903.2	5857.46	0	5857.46	5862.2	5862.2
22	13.2941	77763.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1058.94	1899.24	5845.26	0	5845.26	5849.99	5849.99
23	13.2941	77600.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1056.73	1895.28	5833.07	0	5833.07	5837.79	5837.79
24	13.2941	77438.6	-0.255976	Textured Geomembrane - Peak Strength	0	18	1054.52	1891.31	5820.87	0	5820.87	5825.58	5825.58
25	13.2941	77276.3	-0.255976	Textured Geomembrane - Peak Strength	0	18	1052.31	1887.35	5808.67	0	5808.67	5813.38	5813.38
26	13.2941	77114	-0.255976	Textured Geomembrane - Peak Strength	0	18	1050.1	1883.39	5796.47	0	5796.47	5801.17	5801.17
27	13.2941	76951.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1047.89	1879.43	5784.28	0	5784.28	5788.96	5788.96
28	13.2941	76789.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1045.68	1875.46	5772.08	0	5772.08	5776.75	5776.75
29	13.2941	76627.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1043.47	1871.5	5759.88	0	5759.88	5764.54	5764.54
30	13.2941	76465	-0.255976	Textured Geomembrane - Peak Strength	0	18	1041.26	1867.54	5747.69	0	5747.69	5752.34	5752.34
31	13.2941	76302.7	-0.255976	Textured Geomembrane - Peak Strength	0	18	1039.05	1863.57	5735.48	0	5735.48	5740.13	5740.13
32	13.2941	76140.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	1036.84	1859.61	5723.29	0	5723.29	5727.92	5727.92
33	13.2941	75978.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1034.64	1855.65	5711.09	0	5711.09	5715.71	5715.71
34	13.2941	75386.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1026.58	1841.2	5666.64	0	5666.64	5671.23	5671.23
35	13.2941	71645.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	975.629	1749.82	5385.39	0	5385.39	5389.75	5389.75

36	13.2941	67304.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	916.522	1643.81	5059.14	0	5059.14	5063.24	5063.24
37	13.2941	62964.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	857.421	1537.81	4732.89	0	4732.89	4736.72	4736.72
38	0.909099	4169.72	-26.564	Textured Geomembrane - Peak Strength	0	18	592.429	1062.54	3270.17	0	3270.17	3566.37	3566.37
39	12.5389	55756.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	804.653	1443.17	4441.62	0	4441.62	4445.63	4445.63
40	12.5389	51903.7	-0.285195	Textured Geomembrane - Peak Strength	0	18	749.059	1343.46	4134.74	0	4134.74	4138.46	4138.46
41	12.5389	48051.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	693.459	1243.74	3827.85	0	3827.85	3831.3	3831.3
42	12.5389	44198.9	-0.285195	Textured Geomembrane - Peak Strength	0	18	637.865	1144.03	3520.96	0	3520.96	3524.13	3524.13
43	0.45455	1527.34	12.4432	Textured Geomembrane - Peak Strength	0	18	744.03	1334.44	4106.99	0	4106.99	3942.82	3942.82
44	9.56302	29705.3	13.1767	Textured Geomembrane - Peak Strength	0	18	697.128	1250.32	3848.09	0	3848.09	3684.87	3684.87
45	11.4427	28990.9	18.4349	Textured Geomembrane - Peak Strength	0	18	631.553	1132.71	3486.12	0	3486.12	3275.6	3275.6
46	11.4427	21353.1	18.4349	Textured Geomembrane - Peak Strength	0	18	465.167	834.291	2567.68	0	2567.68	2412.62	2412.62
47	11.4427	13715.3	18.4349	Textured Geomembrane - Peak Strength	0	18	298.78	535.871	1649.24	0	1649.24	1549.65	1549.65
48	11.4427	6070.67	18.4349	Textured Geomembrane - Peak Strength	0	18	132.246	237.188	729.991	0	729.991	685.909	685.909
49	3.99958	552.019	0	Textured Geomembrane - Peak Strength	0	18	25.0767	44.9759	138.422	0	138.422	138.422	138.422
50	2.52515	158.127	18.0948	Protective Cover Soil	2000	10	1253.86	2248.84	1411.23	0	1411.23	1001.53	1001.53

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 1.75178

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.20266	102.022	-52.3438	Final Cover	2000	10	1018.67	1784.48	-1222.28	0	-1222.28	97.8061	97.8061
2	12.2798	11751.5	-52.3438	Coal Combustion Residuals	1300	30	751.104	1315.77	27.3111	0	27.3111	1000.66	1000.66
3	13.4824	33795.1	-48.8526	Coal Combustion Residuals	1300	30	1130.75	1980.83	1179.23	0	1179.23	2473.27	2473.27
4	13.4645	53521.7	-46.7341	Coal Combustion Residuals	1300	30	1457.58	2553.36	2170.89	0	2170.89	3719.48	3719.48
5	12.5745	65521.2	-40.5554	Coal Combustion Residuals	1300	30	1793.61	3142.01	3190.45	0	3190.45	4725.34	4725.34
6	0.889971	5145.25	-40.5554	Protective Cover Soil	2000	10	1515.79	2655.34	3716.59	0	3716.59	5013.73	5013.73
7	3.34709	19860.8	-31.6505	Protective Cover Soil	2000	10	1573.02	2755.59	4285.15	0	4285.15	5254.8	5254.8
8	13.5124	81597	-0.255976	Textured Geomembrane - Peak Strength	0	18	1080.15	1892.18	5823.52	0	5823.52	5828.35	5828.35
9	13.5124	81429.3	-0.255976	Textured Geomembrane - Peak Strength	0	18	1078.78	1889.79	5816.18	0	5816.18	5821	5821
10	13.5124	81261.7	-0.255976	Textured Geomembrane - Peak Strength	0	18	1077.67	1887.84	5810.17	0	5810.17	5814.99	5814.99
11	13.5124	81094	-0.255976	Textured Geomembrane - Peak Strength	0	18	1076.81	1886.33	5805.52	0	5805.52	5810.33	5810.33
12	13.5124	80926.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	1076.19	1885.25	5802.21	0	5802.21	5807.02	5807.02
13	13.5124	80758.7	-0.255976	Textured Geomembrane - Peak Strength	0	18	1075.83	1884.61	5800.23	0	5800.23	5805.04	5805.04
14	13.5124	80591.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1075.7	1884.39	5799.55	0	5799.55	5804.36	5804.36
15	13.5124	80423.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1075.8	1884.57	5800.1	0	5800.1	5804.91	5804.91
16	13.5124	80255.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1076.12	1885.12	5801.81	0	5801.81	5806.62	5806.62
17	13.5124	80088.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1076.63	1886.02	5804.58	0	5804.58	5809.39	5809.39
18	13.5124	79920.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1077.32	1887.23	5808.29	0	5808.29	5813.11	5813.11
19	13.5124	79752.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	1078.16	1888.7	5812.81	0	5812.81	5817.63	5817.63

20	13.5124	79585.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1079.12	1890.38	5817.99	0	5817.99	5822.81	5822.81
21	13.5124	79417.6	-0.255976	Textured Geomembrane - Peak Strength	0	18	1080.17	1892.22	5823.65	0	5823.65	5828.48	5828.48
22	13.5124	79250	-0.255976	Textured Geomembrane - Peak Strength	0	18	1081.28	1894.16	5829.62	0	5829.62	5834.45	5834.45
23	13.5124	79082.3	-0.255976	Textured Geomembrane - Peak Strength	0	18	1082.41	1896.14	5835.72	0	5835.72	5840.56	5840.56
24	13.5124	78914.7	-0.255976	Textured Geomembrane - Peak Strength	0	18	1083.53	1898.1	5841.75	0	5841.75	5846.59	5846.59
25	13.5124	78747	-0.255976	Textured Geomembrane - Peak Strength	0	18	1084.6	1899.98	5847.52	0	5847.52	5852.37	5852.37
26	13.5124	78579.4	-0.255976	Textured Geomembrane - Peak Strength	0	18	1085.59	1901.71	5852.86	0	5852.86	5857.71	5857.71
27	13.5124	78411.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1086.46	1903.24	5857.57	0	5857.57	5862.42	5862.42
28	13.5124	78244.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1087.19	1904.51	5861.49	0	5861.49	5866.35	5866.35
29	13.5124	78076.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1087.74	1905.48	5864.46	0	5864.46	5869.32	5869.32
30	13.5124	77908.8	-0.255976	Textured Geomembrane - Peak Strength	0	18	1088.09	1906.1	5866.37	0	5866.37	5871.23	5871.23
31	13.5124	77741.2	-0.255976	Textured Geomembrane - Peak Strength	0	18	1088.22	1906.33	5867.08	0	5867.08	5871.95	5871.95
32	13.5124	77573.5	-0.255976	Textured Geomembrane - Peak Strength	0	18	1088.12	1906.14	5866.51	0	5866.51	5871.37	5871.37
33	13.5124	77405.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	1087.76	1905.52	5864.58	0	5864.58	5869.43	5869.43
34	13.5124	77238.3	-0.255976	Textured Geomembrane - Peak Strength	0	18	1087.14	1904.43	5861.24	0	5861.24	5866.1	5866.1
35	13.5124	76731.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1081.59	1894.7	5831.3	0	5831.3	5836.13	5836.13
36	13.5124	73003.1	-0.255976	Textured Geomembrane - Peak Strength	0	18	1031.48	1806.93	5561.16	0	5561.16	5565.77	5565.77
37	13.5124	68519	-0.255976	Textured Geomembrane - Peak Strength	0	18	970.755	1700.55	5233.75	0	5233.75	5238.09	5238.09
38	13.5124	64034.9	-0.255976	Textured Geomembrane - Peak Strength	0	18	909.812	1593.79	4905.19	0	4905.19	4909.26	4909.26

39	0.909099	4169.72	-26.564	Textured Geomembrane - Peak Strength	0	18	663.331	1162.01	3576.29	0	3576.29	3907.94	3907.94
40	12.5389	55756.1	-0.285195	Textured Geomembrane - Peak Strength	0	18	857.031	1501.33	4620.63	0	4620.63	4624.9	4624.9
41	12.5389	51903.7	-0.285195	Textured Geomembrane - Peak Strength	0	18	800.34	1402.02	4314.96	0	4314.96	4318.94	4318.94
42	12.5389	48051.3	-0.285195	Textured Geomembrane - Peak Strength	0	18	743.478	1302.41	4008.4	0	4008.4	4012.1	4012.1
43	12.5389	44198.9	-0.285195	Textured Geomembrane - Peak Strength	0	18	686.467	1202.54	3701.04	0	3701.04	3704.45	3704.45
44	0.45455	1527.34	12.4432	Textured Geomembrane - Peak Strength	0	18	728.625	1276.39	3928.34	0	3928.34	3767.57	3767.57
45	9.56302	29705.3	13.1767	Textured Geomembrane - Peak Strength	0	18	672.67	1178.37	3626.64	0	3626.64	3469.15	3469.15
46	15.2569	36957.3	18.4349	Textured Geomembrane - Peak Strength	0	18	534.345	936.055	2880.88	0	2880.88	2702.76	2702.76
47	15.2569	23378.9	18.4349	Textured Geomembrane - Peak Strength	0	18	325.85	570.818	1756.8	0	1756.8	1648.18	1648.18
48	15.2569	9793.78	18.4349	Textured Geomembrane - Peak Strength	0	18	132.919	232.844	716.62	0	716.62	672.314	672.314
49	1.74772	287.46	0	Textured Geomembrane - Peak Strength	0	18	32.5338	56.9921	175.404	0	175.404	175.404	175.404
50	1.10715	77.7475	42.089	Protective Cover Soil	2000	10	1264.85	2215.75	1223.55	0	1223.55	81.1072	81.1072

Interslice Data

Global Minimum Query (spencer) - Safety Factor: 1.79353

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	0	357.786	0	0	0
2	1.00442	356.228	-1879.75	-1035.76	28.8552
3	8.64325	344.379	-6574.79	-3622.77	28.8552
4	24.6668	327.775	-1458.27	-803.522	28.8552
5	40.7301	313.995	14162.4	7803.62	28.8552
6	58.775	299.834	41353.8	22786.3	28.8551
7	65.1103	296.949	50737.9	27957	28.8551
8	78.4044	296.89	50724.5	27949.7	28.8552
9	91.6985	296.831	50711.2	27942.3	28.8551
10	104.993	296.771	50697.9	27935	28.8552
11	118.287	296.712	50684.6	27927.7	28.8552
12	131.581	296.652	50671.3	27920.4	28.8552
13	144.875	296.593	50658.1	27913.1	28.8552
14	158.169	296.534	50644.9	27905.8	28.8552
15	171.463	296.474	50631.8	27898.6	28.8552
16	184.757	296.415	50618.6	27891.3	28.8552
17	198.051	296.355	50605.5	27884.1	28.8552
18	211.345	296.296	50592.4	27876.9	28.8552
19	224.639	296.237	50579.4	27869.7	28.8552
20	237.933	296.177	50566.3	27862.5	28.8552
21	251.227	296.118	50553.3	27855.4	28.8552
22	264.521	296.058	50540.4	27848.2	28.8551
23	277.815	295.999	50527.4	27841.1	28.8552
24	291.11	295.94	50514.5	27833.9	28.8551
25	304.404	295.88	50501.6	27826.8	28.8551
26	317.698	295.821	50488.7	27819.8	28.8552
27	330.992	295.761	50475.9	27812.7	28.8552
28	344.286	295.702	50463.1	27805.6	28.8551
29	357.58	295.643	50450.3	27798.6	28.8552
30	370.874	295.583	50437.5	27791.5	28.8551
31	384.168	295.524	50424.8	27784.5	28.8551
32	397.462	295.464	50412.1	27777.5	28.8551
33	410.756	295.405	50399.4	27770.5	28.8551
34	424.05	295.346	50386.8	27763.6	28.8552
35	437.344	295.286	50374.2	27756.6	28.8551
36	450.638	295.227	50362.3	27750.1	28.8552
37	463.932	295.168	50351.1	27743.9	28.8552
38	477.227	295.108	50340.6	27738.1	28.8551
39	478.136	294.654	52023.9	28665.7	28.8552
40	490.675	294.591	52047.1	28678.4	28.8551
41	503.213	294.529	52068.7	28690.3	28.8551
42	515.752	294.466	52088.7	28701.3	28.8551
43	528.291	294.404	52107.1	28711.5	28.8552
44	528.746	294.504	51626.4	28446.6	28.8552
45	538.309	296.743	41584.4	22913.4	28.8552
46	549.751	300.557	26174.9	14422.6	28.8552
47	561.194	304.372	14825.2	8168.82	28.8552
48	572.637	308.186	7535.18	4151.95	28.8551
49	584.079	312	4308.46	2374	28.8552
50	588.079	312	4305.54	2372.39	28.8551
51	590.604	312.825	0	0	0

Global Minimum Query (gle/morgenstern-price) - Safety Factor: 1.75178

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	1.1005	357.772	0	0	0
2	2.30316	356.213	-3112.07	-15.6076	0.287346
3	14.5829	340.3	-9827.88	-552.072	3.21516
4	28.0653	324.87	-916.929	-102.746	6.39358
5	41.5298	310.565	19953.7	3337.79	9.49633
6	54.1044	299.804	43289.3	9439.98	12.3018
7	54.9944	299.043	45678.4	10123.6	12.4963
8	58.3414	296.98	52758	12396.5	13.2229
9	71.8539	296.919	52907.9	15238.5	16.0674
10	85.3663	296.859	53046.1	18012.3	18.7554
11	98.8787	296.798	53169.5	20699.7	21.2717
12	112.391	296.738	53274.7	23282.6	23.6067
13	125.904	296.678	53358.3	25742.7	25.755
14	139.416	296.617	53417.3	28062.1	27.7146
15	152.928	296.557	53448.3	30223.3	29.4868
16	166.441	296.497	53448.5	32209.7	31.0745
17	179.953	296.436	53414.9	34005.5	32.482
18	193.466	296.376	53344.9	35596.5	33.7148
19	206.978	296.316	53236.3	36969.7	34.7779
20	220.491	296.255	53087	38114.2	35.6767
21	234.003	296.195	52895.6	39021.1	36.4162
22	247.515	296.134	52660.7	39683.6	37.0006
23	261.028	296.074	52381.6	40097.6	37.4337
24	274.54	296.014	52058	40261.1	37.718
25	288.053	295.953	51690.1	40175.1	37.8554
26	301.565	295.893	51278.5	39842.9	37.8469
27	315.077	295.833	50824.4	39270.6	37.6923
28	328.59	295.772	50329.1	38466.5	37.3907
29	342.102	295.712	49794.6	37441.4	36.9401
30	355.615	295.651	49223.3	36208	36.3377
31	369.127	295.591	48617.8	34781	35.5798
32	382.64	295.531	47980.9	33176.4	34.6619
33	396.152	295.47	47315.9	31411.9	33.5792
34	409.664	295.41	46626.1	29505.8	32.3263
35	423.177	295.35	45914.8	27477.1	30.8978
36	436.689	295.289	45187.3	25346.3	29.2888
37	450.202	295.229	44462.9	23140.8	27.4948
38	463.714	295.168	43748.3	20879.1	25.513
39	477.227	295.108	43046.4	18576.9	23.3429
40	478.136	294.654	44804.4	19194	23.1901
41	490.675	294.591	44181.9	16958	20.9979
42	503.213	294.529	43571.6	14706	18.6502
43	515.752	294.466	42975.6	12449.2	16.1553
44	528.291	294.404	42395.8	10197.7	13.5247
45	528.746	294.504	41940	10012.5	13.4271
46	538.309	296.743	32627.6	6541.29	11.3366
47	553.566	301.829	16343.3	2262.07	7.88022
48	568.823	306.914	6561.5	494.797	4.31246
49	584.079	312	2616.74	31.1513	0.682052
50	585.827	312	2610.59	12.0528	0.264526
51	586.934	313	0	0	0