APPENDIX F
Slope Stability Analysis

2010 Report of Waste Discharge, Bishop Mill Project

Bishop Mill WMU - Summary of Slope Stability Analyses and Results

Scenario 1 - Blend TP-1/TP-3

Material	Parameters		
	Unit Weight (pcf)	Cohesion (psf)	Friction angle (degree)
Native Soil	90	74	26
Tailings	115	0	0

Scenario 2 - Blend TP-1/TP-2

Material	Parameters		
	Unit Weight (pcf)	Cohesion (psf)	Friction angle (degree)
Native Soil	106	119	35
Tailings	115	0	0

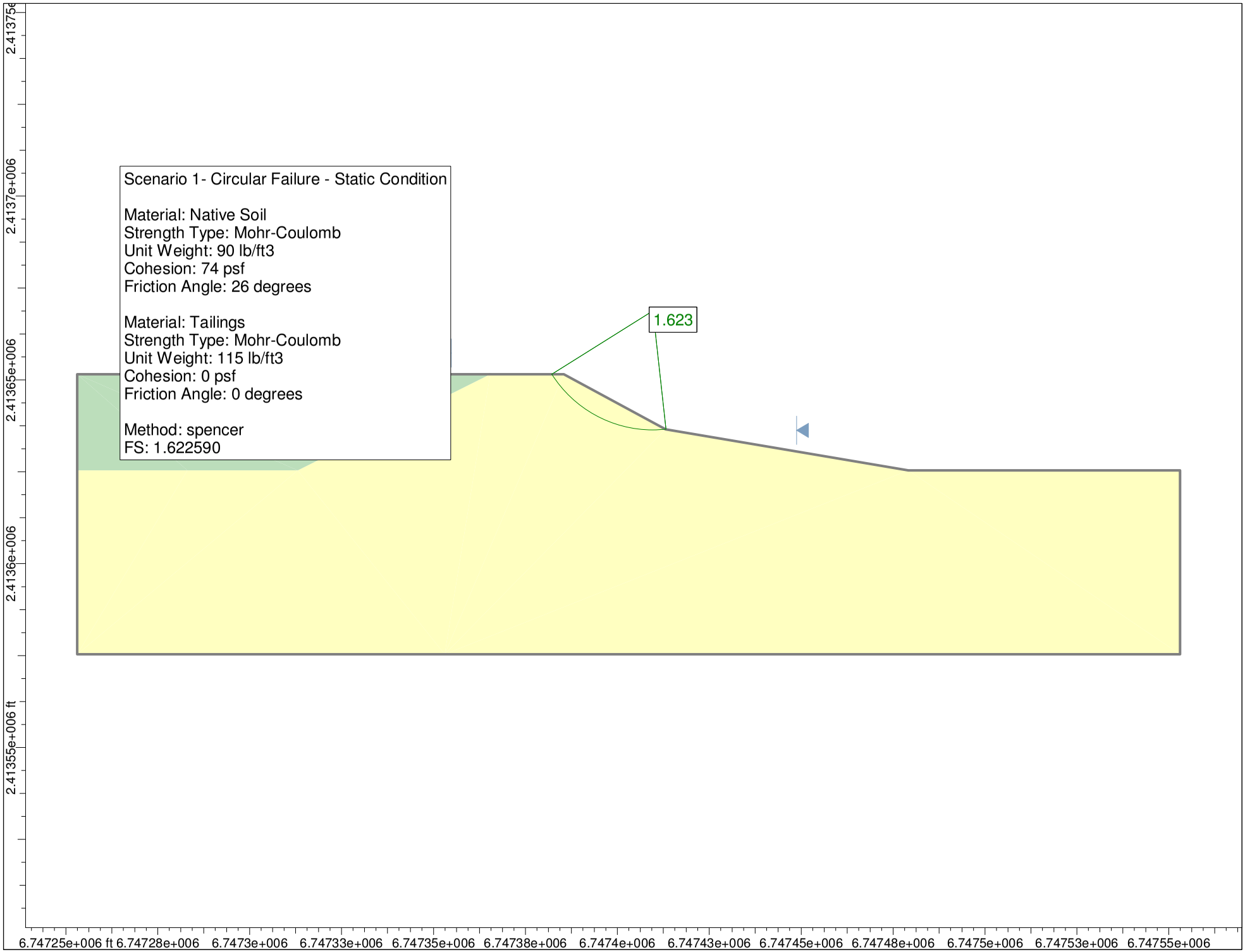
Seismic Coefficient

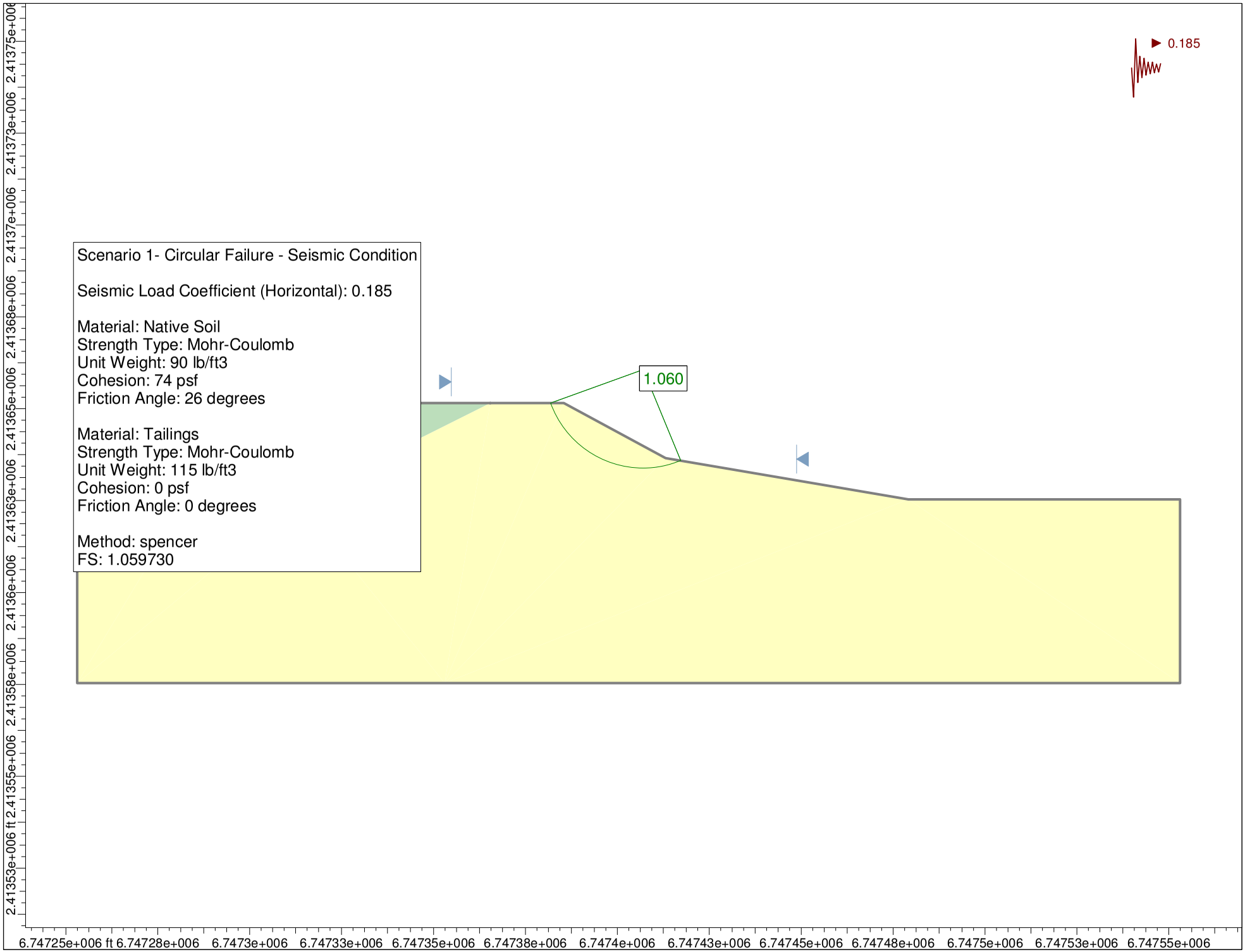
PGA = 0.37 g

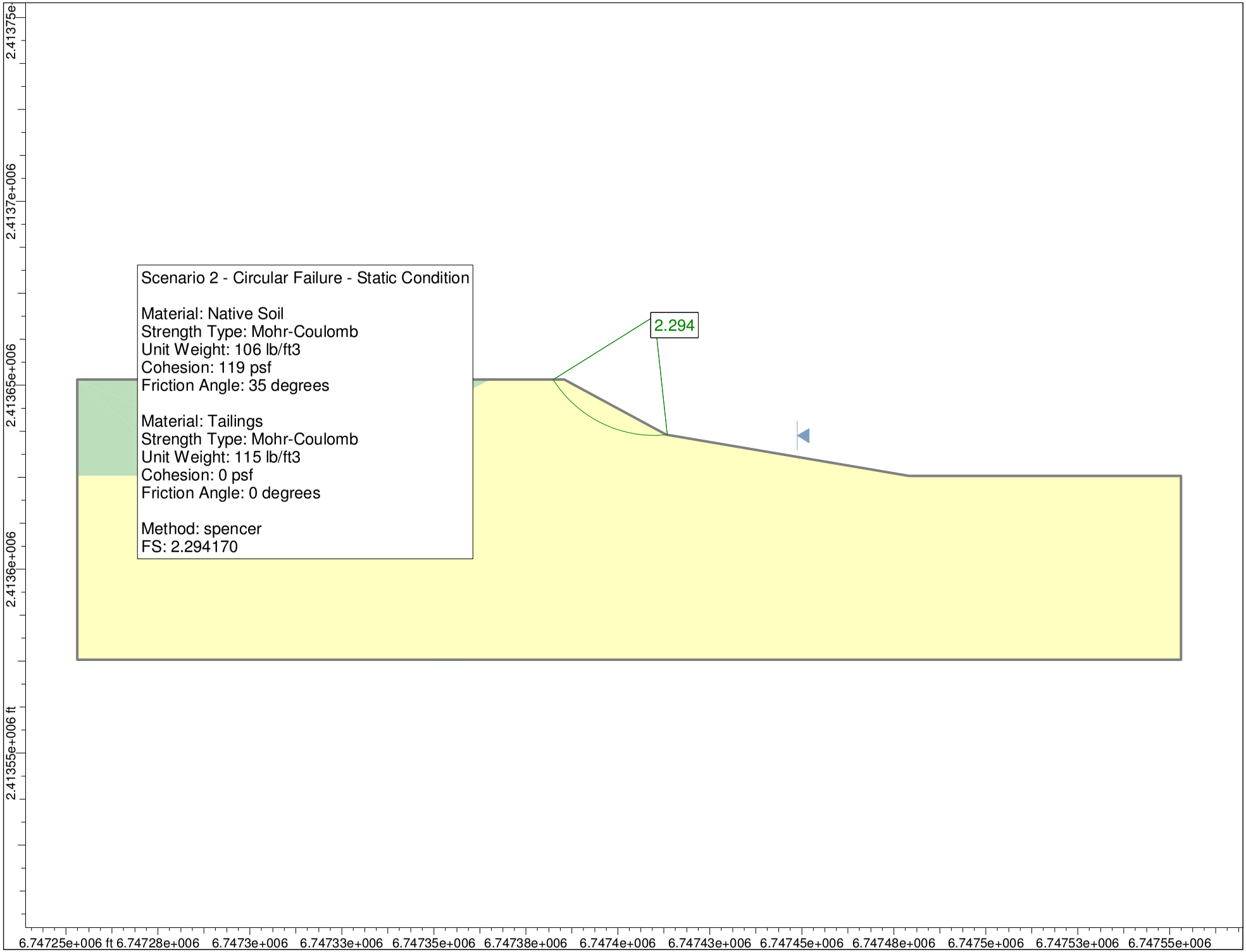
Seismic Coefficient = 0.185 g

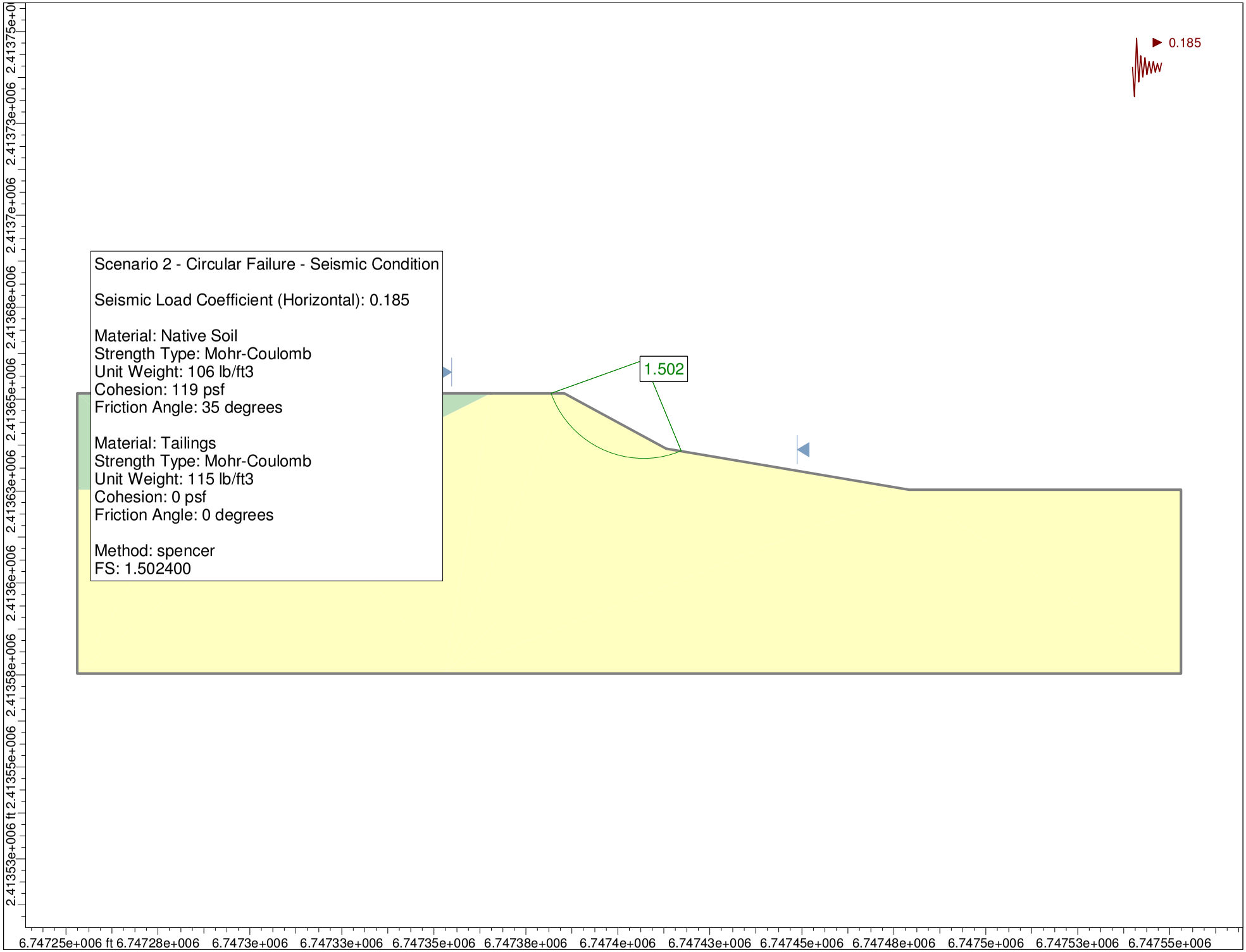
Factor of Safety

Scenario	Circular Failure	
	Static Condition	Seismic Condition
1	1.623	1.06
2	2.29	1.50


Scenario 1- Circular Failure - Static Condition
Material: Native Soil
Strength Type: Mohr-Coulomb
Unit Weight: 90 lb/ft3
Cohesion: 74 psf
Friction Angle: 26 degrees
Material: Tailings
Strength Type: Mohr-Coulomb
Unit Weight: 115 lb/ft3
Cohesion: 0 psf
Friction Angle: 0 degrees
Method: spencer
FS: 1.622590
1.623
2.41375e
2.4137e+006
2.41365e+006
2.4136e+006
2.41355e+006 ft
6.74725e+006 ft
6.74728e+006
6.7473e+006
6.74733e+006
6.74735e+006
6.74738e+006
6.7474e+006
6.74743e+006
6.74745e+006
6.74748e+006
6.7475e+006
6.74753e+006
6.74755e+006


Scenario 1- Circular Failure - Seismic Condition
Seismic Load Coefficient (Horizontal): 0.185
Material: Native Soil
Strength Type: Mohr-Coulomb
Unit Weight: 90 lb/ft3
Cohesion: 74 psf
Friction Angle: 26 degrees
Material: Tailings
Strength Type: Mohr-Coulomb
Unit Weight: 115 lb/ft3
Cohesion: 0 psf
Friction Angle: 0 degrees
Method: spencer
FS: 1.059730
1.060
0.185
2.41375e+006
2.41373e+006
2.4137e+006
2.41368e+006
2.41365e+006
2.41363e+006
2.4136e+006
2.41358e+006
2.41355e+006
2.41353e+006 ft
6.74725e+006 ft
6.74728e+006
6.7473e+006
6.74733e+006
6.74735e+006
6.74738e+006
6.7474e+006
6.74743e+006
6.74745e+006
6.74748e+006
6.7475e+006
6.74753e+006
6.74755e+006


Scenario 2 - Circular Failure - Static Condition
Material: Native Soil
Strength Type: Mohr-Coulomb
Unit Weight: 106 lb/ft3
Cohesion: 119 psf
Friction Angle: 35 degrees
Material: Tailings
Strength Type: Mohr-Coulomb
Unit Weight: 115 lb/ft3
Cohesion: 0 psf
Friction Angle: 0 degrees
Method: spencer
FS: 2.294170
2.294
2.41375e+006
2.4137e+006
2.41365e+006
2.4136e+006
2.41355e+006 ft
6.74725e+006 ft
6.74728e+006
6.7473e+006
6.74733e+006
6.74735e+006
6.74738e+006
6.7474e+006
6.74743e+006
6.74745e+006
6.74748e+006
6.7475e+006
6.74753e+006
6.74755e+006


0.185
Scenario 2 - Circular Failure - Seismic Condition
Seismic Load Coefficient (Horizontal): 0.185
Material: Native Soil
Strength Type: Mohr-Coulomb
Unit Weight: 106 lb/ft3
Cohesion: 119 psf
Friction Angle: 35 degrees
Material: Tailings
Strength Type: Mohr-Coulomb
Unit Weight: 115 lb/ft3
Cohesion: 0 psf
Friction Angle: 0 degrees
Method: spencer
FS: 1.502400
1.502
2.41375e+006
2.41373e+006
2.4137e+006
2.41368e+006
2.41365e+006
2.41363e+006
2.4136e+006
2.41358e+006
2.41355e+006
2.41353e+006 ft
6.74725e+006 ft
6.74728e+006
6.7473e+006
6.74733e+006
6.74735e+006
6.74738e+006
6.7474e+006
6.74743e+006
6.74745e+006
6.74748e+006
6.7475e+006
6.74753e+006
6.74755e+006