

**INITIAL SAFETY FACTOR ASSESSMENT**  
**40 C.F.R § 257.100(f)(2)(iv) and 40 C.F.R. § 257.73(e)**  
**PLANT ARKWRIGHT ASH POND 3 (AP-3)**  
**GEORGIA POWER COMPANY**

A rule amendment to the Federal CCR Rule became effective on November 8, 2024. See Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Legacy CCR Surface Impoundments, 89 Fed. Reg. 38950 (“Legacy Rule”). The Legacy Rule defines the term “legacy CCR surface impoundment” and establishes regulatory requirements for units that meet the definition of a legacy CCR surface impoundment. The Legacy Rule requires the owner or operator of a legacy CCR impoundment to conduct an initial and periodic safety factor assessment for each CCR unit and document whether the calculated factors of safety for each unit achieve the minimum safety factors specified in § 257.73(e)(1)(i) through (iv) for the critical section of the dam. See 40 C.F.R. Part 257, §257.100(f)(2)(iv) and §257.73(e). In addition, the Rules require a subsequent assessment be performed within 5 years of the previous assessment. See 40 C.F.R. § 257.73(f)(3).

The legacy CCR unit known as Plant Arkwright Ash Pond 3 (AP-3) is located in Bibb County, Georgia, approximately six (6) miles northwest of the city of Macon. Plant Arkwright began operation in 1941 and was retired in 2002. Plant Arkwright was decommissioned in 2003, and demolition of the plant was completed in 2003. AP-3 was constructed as a surface impoundment in the late 1970’s and began to receive and store CCR produced during the electric generating process at Plant Arkwright from construction completion until 2002. There is a man-made pond north of the unit preventing surface runoff from a small drainage channel from entering AP-3. Discharge from this small pond is routed around AP-3 through a constructed diversion channel.

AP-3 was created by construction of the main dam across the existing valley. The remaining portions of the impoundment are contained by natural ground. The man-made pond north of the unit was later subdivided from AP-3 by adding a small earthen berm.

The AP-3 unit has been closed in place in accordance with Georgia Solid Waste Rules 391.3-4. A Closure Certificate was issued by GA EPD for AP-3 on August 19, 2010. AP-3 has been capped and no longer impounds water or receives waste. Closure construction activities completed on AP-3 have rendered the former surface impoundment incapable of receiving, discharging or impounding water.

The critical slope stability cross section of the AP-3 unit is located at the southern end of the unit (Section M-M'). The analysis used to determine the minimum safety factor for the critical section resulted in the following minimum safety factors:

Facility	Critical Cross Section	EPA Final CCR Rule Loading Condition	EPA Final CCR Rule Required Factor of Safety	Calculated Factor of Safety
AP-3	M-M'	Long-term maximum storage pool	1.50	2.34
		Maximum surcharge pool	1.40	N/A
		Seismic	1.00	1.15
		Liquefaction	1.20	1.51

Since AP-3 has been closed and is no longer capable of impounding water, the maximum surcharge pool load conditions are not applicable at AP-3.

This assessment is supported by appropriate engineering calculations, presented in Attachment A.

I hereby certify that the safety factor assessment was conducted in accordance with 40 C.F.R. § 257.100(f)(2)(iv) and 40 C.F.R. § 257.73.

Jeffrey S. Dingrando  
 Jeffrey S. Dingrando, P.E.



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**ATTACHMENT A  
ENGINEERING CALCULATIONS**

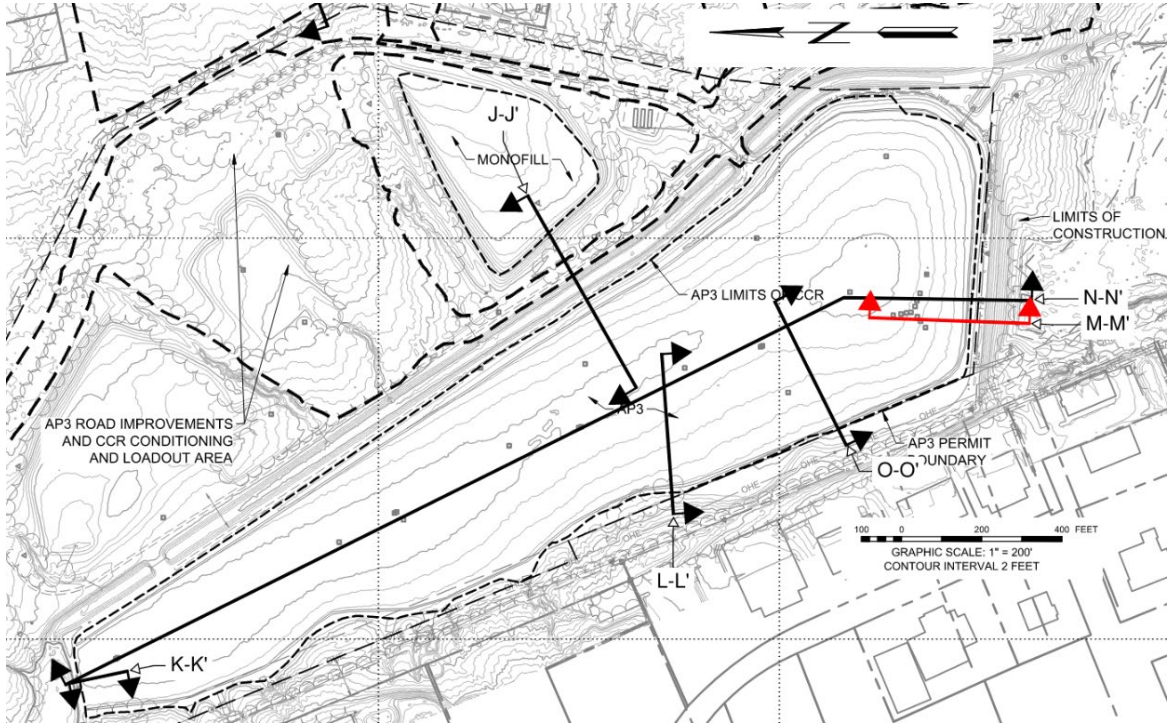
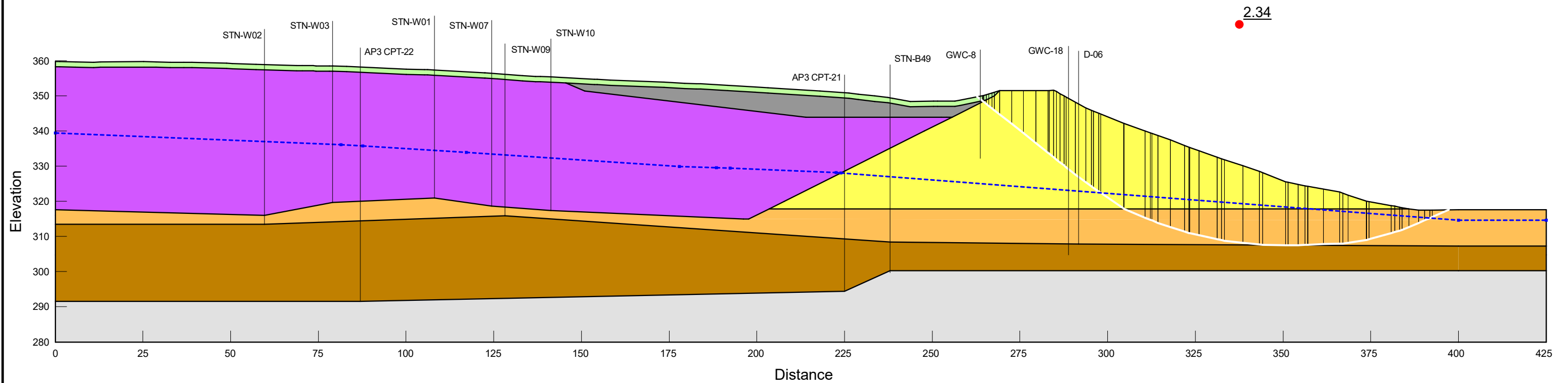


Figure 1. AP-3 Plan View of Cross Sections (Stantec 2025a)

Color	Name	Slope Stability Material Model	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Constant Unit Wt. Above Piezometric Surface (pcf)	Piezometric Surface
Grey	Bedrock	Bedrock (Impenetrable)					1
Light Green	Cover Soil	Mohr-Coulomb	125	0	28	122	1
Yellow	Dike Fill (AP3)	Mohr-Coulomb	120	0	39	120	1
Brown	Residual Sand & Gravel	Mohr-Coulomb	123	0	37	117	1
Orange	Residual Silty Sand	Mohr-Coulomb	120	0	35	115	1
Purple	Sluiced CCR (AP3)	Mohr-Coulomb	113	0	33	113	1
Dark Grey	Stacked CCR (AP3)	Mohr-Coulomb	111	0	33	106	1



Note: The results of the analysis shown here are based on available subsurface information, laboratory test results and approximate soil properties. The drawing depicts approximate subsurface conditions based on historical drawings or specific borings at the time of drilling. No warranties can be made regarding the continuity of subsurface conditions.

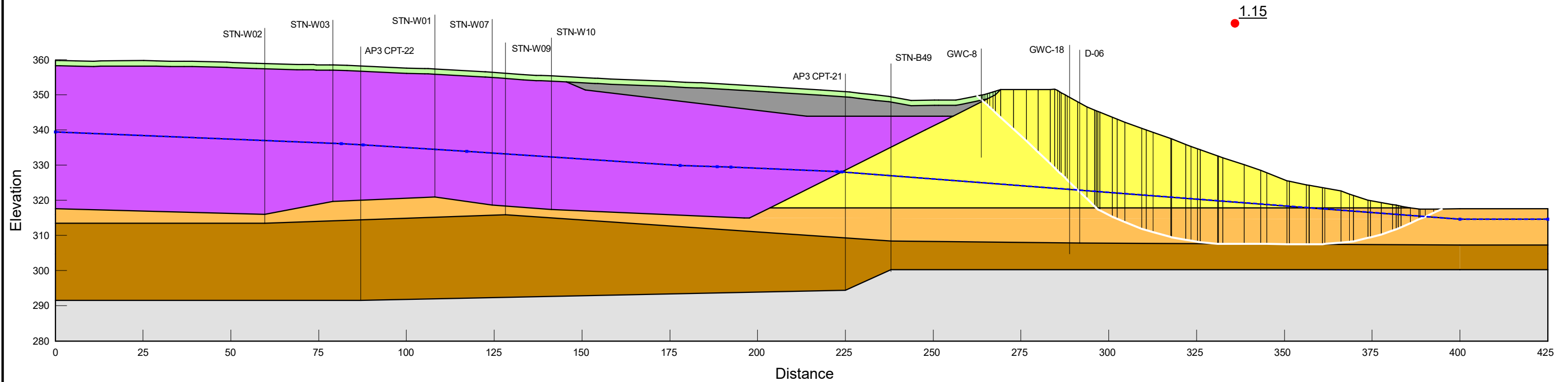
Safety Factor Outboard (Normal Pool), Drained

AP3\_section\_MM.gsz

12/01/2025

Color	Name	Slope Stability Material Model	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Constant Unit Wt. Above Piezometric Surface (pcf)	Piezometric Surface	Phi 1 (°)	Phi 2 (°)	Normal Effective Stress (psf)
Grey	Bedrock	Bedrock (Impenetrable)					1			
Light Green	Cover Soil	Mohr-Coulomb	125	0	28	122	1			
Yellow	Dike Fill (AP3)	Mohr-Coulomb	120	0	39	120	1			
Yellow	Dike Fill (AP3) (Seismic)	Mohr-Coulomb	120	0	28	120	1			
Brown	Residual Sand & Gravel	Mohr-Coulomb	123	0	37	117	1			
Orange	Residual Silty Sand	Mohr-Coulomb	120	0	35	115	1			
Orange	Residual Silty Sand (Seismic)	Bilinear	120	0		115	1	35	15	370.149
Purple	Sluiced CCR (AP3)	Mohr-Coulomb	113	0	33	113	1			
Purple	Sluiced CCR (AP3) (Seismic)	Mohr-Coulomb	113	0	22	113	1			
Grey	Stacked CCR (AP3)	Mohr-Coulomb	111	0	33	106	1			

Horz Seismic Coef.: 0.069



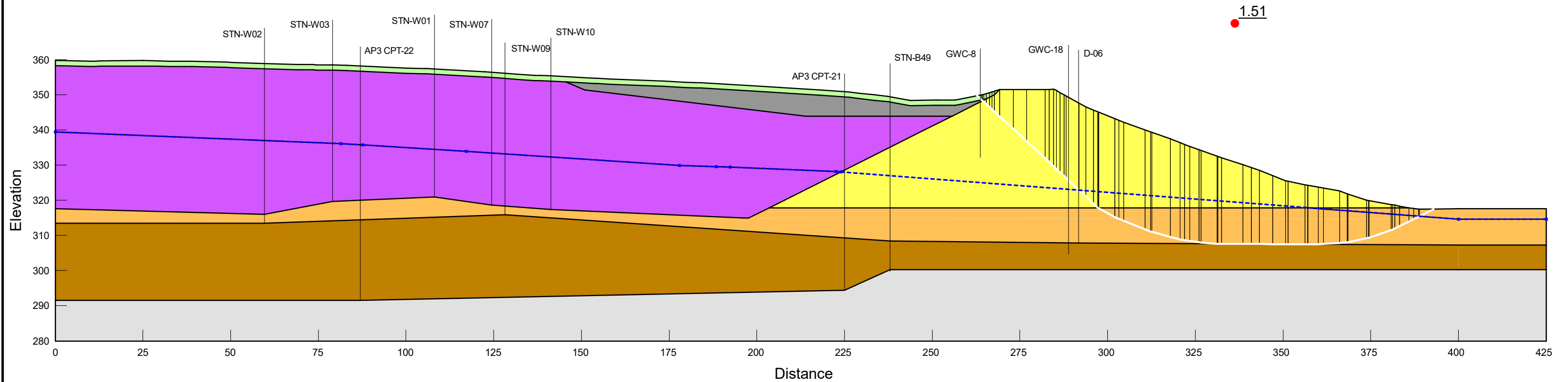
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Safety Factor Outboard (Normal Pool), Seismic

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01/06/2026

Color	Name	Slope Stability Material Model	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)	Constant Unit Wt. Above Piezometric Surface (pcf)	Piezometric Surface	Phi 1 (°)	Phi 2 (°)	Normal Effective Stress (psf)
Grey	Bedrock	Bedrock (Impenetrable)					1			
Light Green	Cover Soil	Mohr-Coulomb	125	0	28	122	1			
Yellow	Dike Fill (AP3)	Mohr-Coulomb	120	0	39	120	1			
Brown	Residual Sand & Gravel	Mohr-Coulomb	123	0	37	117	1			
Orange	Residual Silty Sand	Mohr-Coulomb	120	0	35	115	1			
Light Orange	Residual Silty Sand (Seismic)	Bilinear	120	0		115	1	35	15	370.149
Purple	Sluiced CCR (AP3)	Mohr-Coulomb	113	0	33	113	1			
Purple	Sluiced CCR (AP3) (Seismic)	Mohr-Coulomb	113	0	22	113	1			
Dark Grey	Stacked CCR (AP3)	Mohr-Coulomb	111	0	33	106	1			



Note: The results of the analysis shown here are based on available subsurface information, laboratory test results and approximate soil properties. The drawing depicts approximate subsurface conditions based on historical drawings or specific borings at the time of drilling. No warranties can be made regarding the continuity of subsurface conditions.

Safety Factor Outboard (Normal Pool), Post-EQ

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12/01/2025