APPENDIX D –
CCR MANAGEMENT UNIT
CROSS SECTIONS

Exhibit No.

D-1

Title

Cross-section Transect Map

Client/Project

Tennessee Valley Authority
John Sevier Fossil (JSF) Plant TDEC Order

Project Location

Rogersville, Tennessee

175568225
Prepared by DMB on 2023-06-15
Technical Review by MT on 2023-06-15

0 400 800 1,200 1,600 Feet

1:4,800 (At original document size of 22x34)

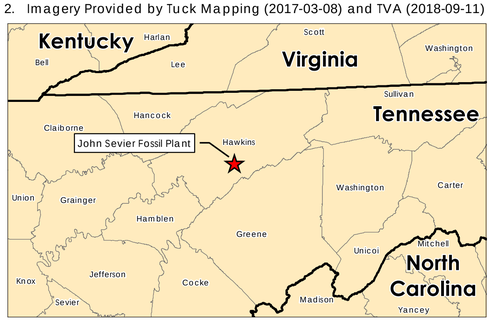
Legend

- Cross Section Alignment
- Existing Boring
- Abandoned Monitoring Well/Piezometer
- Groundwater Investigation Monitoring Well
- Other Monitoring Well
- Piezometer
- Pore Water Piezometer in CCR Material
- Temporary Well within CCR Material
- Holston River Gauge
- CCR Unit Area (Approximate)
- Consolidated & Capped CCR Area (Approximate)

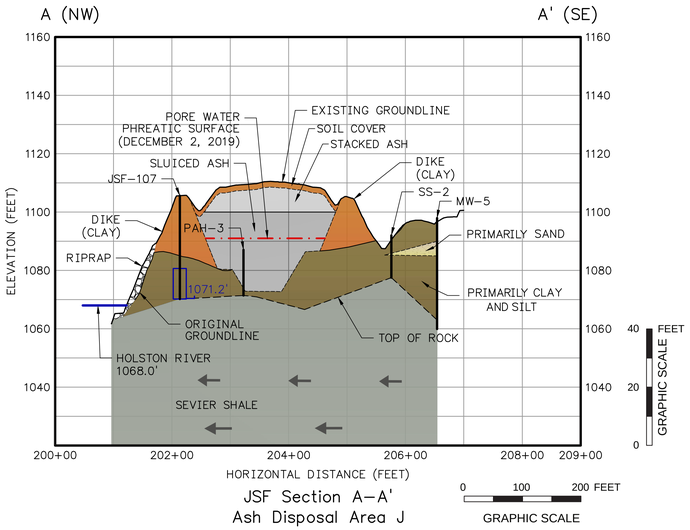
CCR: Coal combustion residuals

Notes

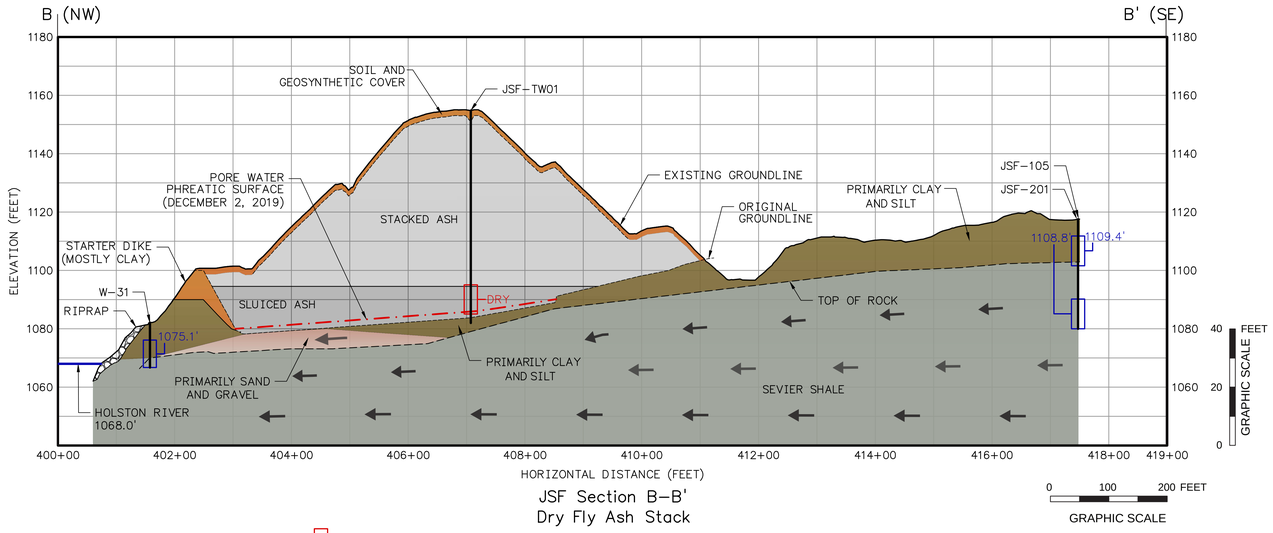
1. Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet
2. Imagery Provided by Tuck Mapping (2017-03-08) and TVA (2018-09-11)



Stantec TVA



JSF Section A–A'
Ash Disposal Area J



JSF Section B–B'
Dry Fly Ash Stack

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

Holston River stage (December 2, 2019)

General Groundwater flow direction

Screen interval showing pore water pressure expressed in feet of elevation (December 2, 2019)

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

Holston River stage (December 2, 2019)

General Groundwater flow direction

Exhibit No.
D-2

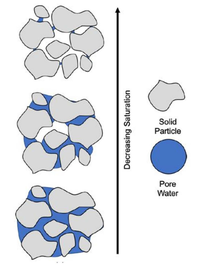
Title
ASH DISPOSAL AREA J, DRY FLY ASH STACK CROSS-SECTIONS

Client/Project
Tennessee Valley Authority
John Sevier Fossil (JSF) Plant TDEC Order

Project Location
Rogersville, Tennessee

175568225

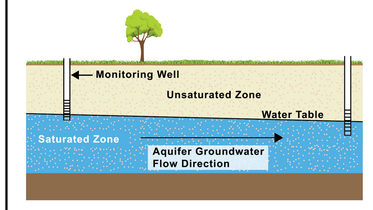
Prepared by JM on 2022-05-04
Technical Review by VS on 2022-05-04



This figure depicts how subsurface water occurs in the pore spaces in CCR material (referred to as 'pore water' in this EAR), and how saturation varies within the CCR material. The phreatic surface is the surface of pore water at which pressure is atmospheric and below which CCR material may be saturated with pore water.

Groundwater is subsurface water that occurs in pore spaces in soil or bedrock. Groundwater generally flows much more slowly than in surface stream or river water.

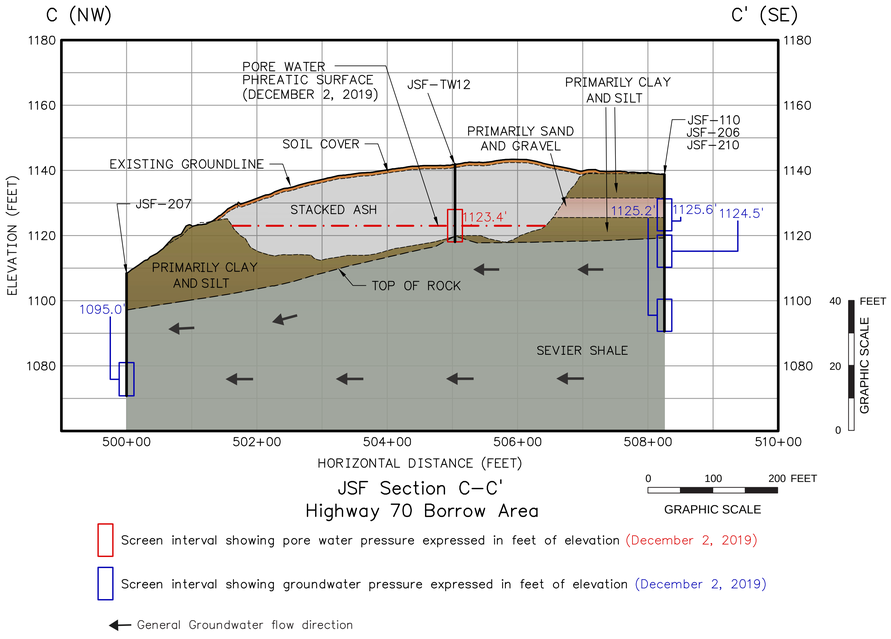
Figure Reference: Benson, C., Water Flow in Coal Combustion Products and Drainage of Free Water, Report No. 3002021963, Electric Power Research Institute , Palo Alto, CA.



Groundwater is subsurface water that occurs in pore spaces in soil or bedrock. Groundwater level measurements taken in a well screened near the water table in an unconfined aquifer represent the water level in the aquifer. Groundwater level measurements are used to estimate directions of groundwater movement. Groundwater generally flows much more slowly than water in a surface stream or river.

1. Elevations are in feet amsl
2. Groundwater and pore water elevation data are from the JSF Plant Groundwater Investigation SAR, Event #3.

Stantec TVA



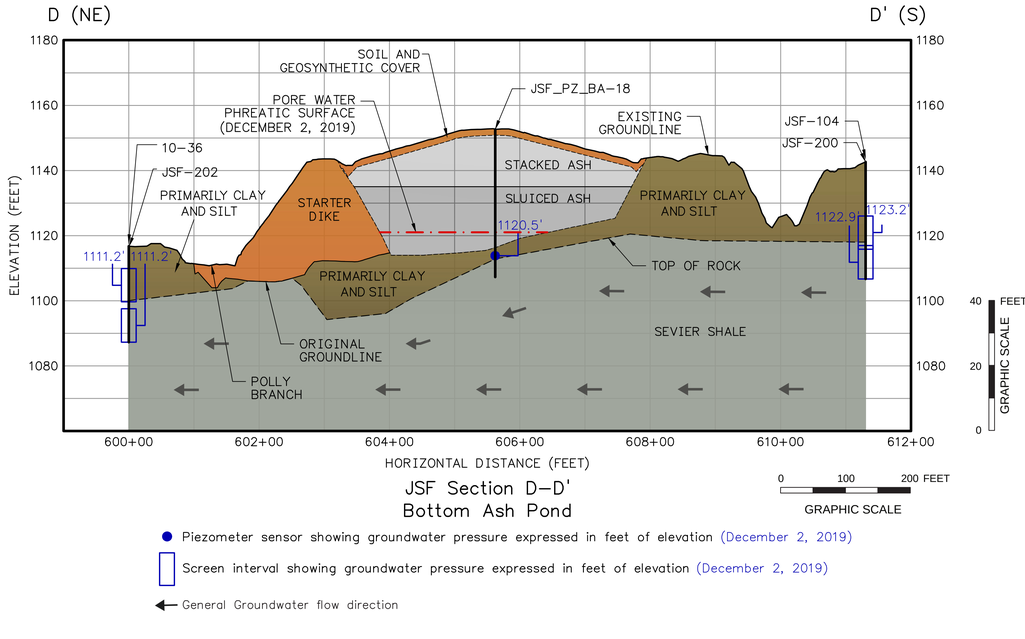
JSF Section C–C'
Highway 70 Borrow Area

0 100 200 FEET
GRAPHIC SCALE

Screen interval showing pore water pressure expressed in feet of elevation (December 2, 2019)

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

General Groundwater flow direction



JSF Section D–D'
Bottom Ash Pond

0 100 200 FEET
GRAPHIC SCALE

Piezometer sensor showing groundwater pressure expressed in feet of elevation (December 2, 2019)

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

General Groundwater flow direction

Exhibit No.
D-3

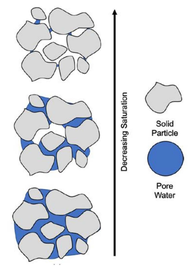
Title
HIGHWAY 70 BORROW AREA, & BOTTOM ASH POND CROSS-SECTIONS

Client/Project
Tennessee Valley Authority
John Sevier Fossil (JSF) Plant TDEC Order

Project Location
Rogersville, Tennessee

175568225

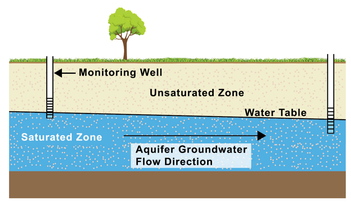
Prepared by JM on 2022-05-04
Technical Review by VS on 2022-05-04



This figure depicts how subsurface water occurs in the pore spaces in CCR material (referred to as 'pore water' in this EAR), and how saturation varies within the CCR material. The phreatic surface is the surface of pore water at which pressure is atmospheric and below which CCR material may be saturated with pore water.

Groundwater is subsurface water that occurs in pore spaces in soil or bedrock. Groundwater generally flows much more slowly than in surface stream or river water.

Figure Reference: Benson, C., Water Flow in Coal Combustion Products and Drainage of Free Water, Report No. 3002021963, Electric Power Research Institute , Palo Alto, CA.

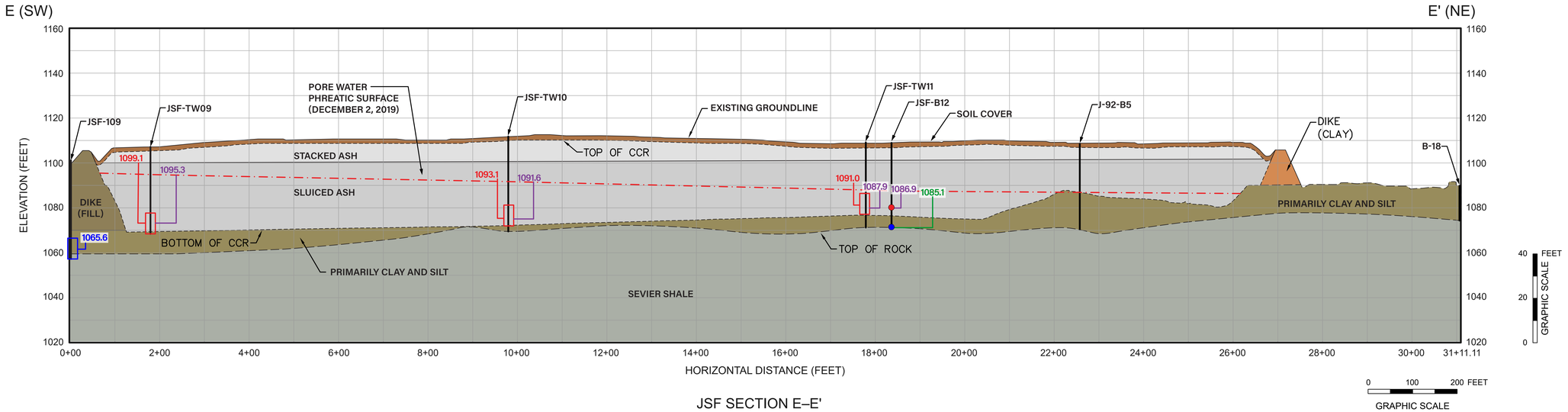


Groundwater is subsurface water that occurs in pore spaces in soil or bedrock. Groundwater level measurements taken in a well screened near the water table in an unconfined aquifer represent the water level in the aquifer. Groundwater level measurements are used to estimate directions of groundwater movement. Groundwater generally flows much more slowly than water in a surface stream or river.

1. Elevations are in feet amsl
2. Groundwater and pore water elevation data are from the JSF Plant Groundwater Investigation SAR, Event #3.

Stantec

TVA



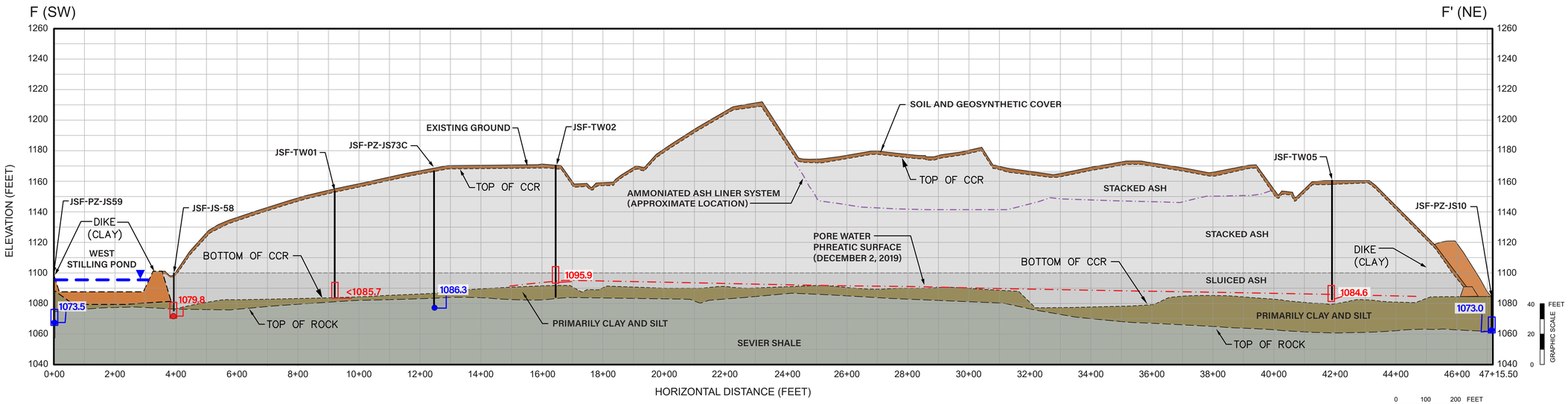
JSF SECTION E–E'
ASH DISPOSAL AREA J

Screen interval showing pore water pressure expressed in feet of elevation (December 2, 2019) / (August 28, 2022)

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

Piezometer sensor showing pore water pressure expressed in feet of elevation (August 28, 2022)

Piezometer sensor showing groundwater pressure expressed in feet of elevation (August 28, 2022)



JSF SECTION F–F'
DRY FLY ASH STACK

Piezometer sensor showing pore water pressure expressed in feet of elevation (December 2, 2019)

Piezometer sensor showing groundwater pressure expressed in feet of elevation (December 2, 2019)

Screen interval showing pore water pressure expressed in feet of elevation (December 2, 2019)

Screen interval showing groundwater pressure expressed in feet of elevation (December 2, 2019)

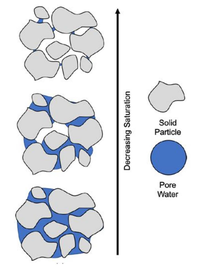
Exhibit No.
D-4

Title
ASH DISPOSAL AREA J, DRY FLY ASH STACK CROSS-SECTION

Client/Project
Tennessee Valley Authority
John Sevier Fossil (JSF) Plant TDEC Order

Project Location
Rogersville, Tennessee

175568225
Prepared by KB on 2023-06-12
Technical Review by MD on 2023-05-18



This figure depicts how subsurface water occurs in the pore spaces in CCR material (referred to as 'pore water' in this EAR), and how saturation varies within the CCR material. The phreatic surface is the surface of pore water at which pressure is atmospheric and below which CCR material may be saturated with pore water.

Groundwater is subsurface water that occurs in pore spaces in soil or bedrock. Groundwater generally flows much more slowly than in surface stream or river water.

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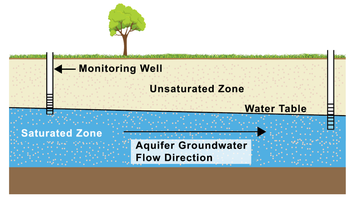

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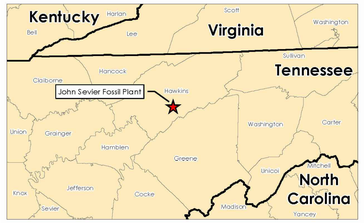
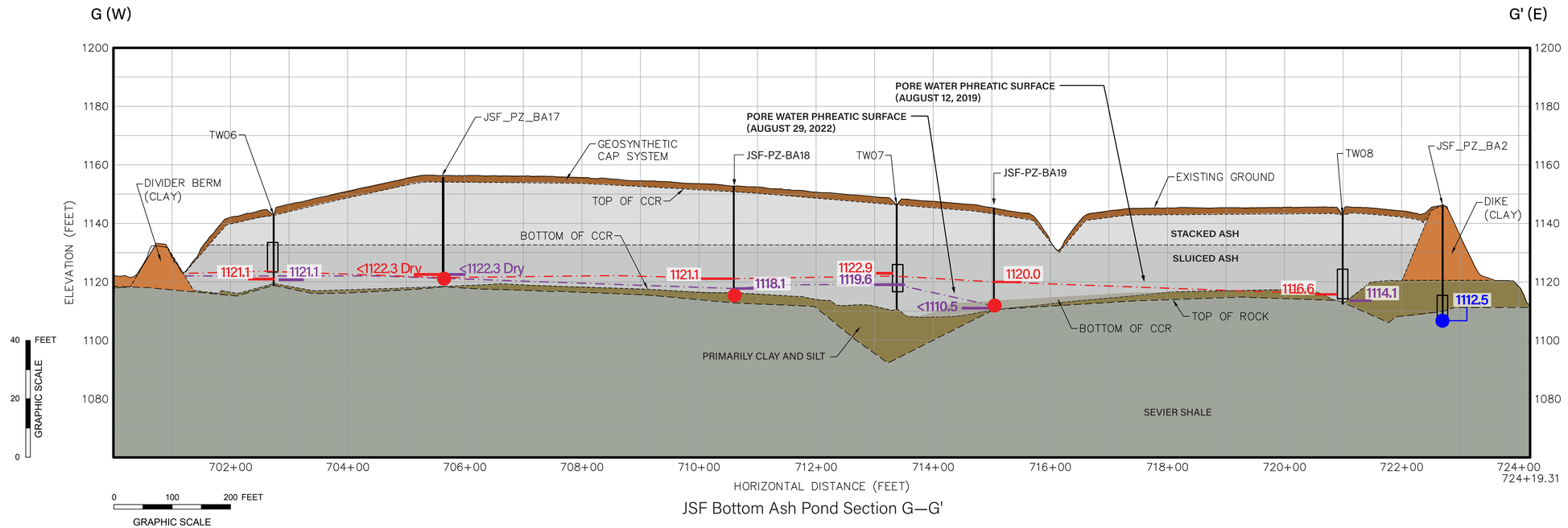
2. Groundwater and pore water elevation data are from the JSF Plant Groundwater Investigation SAR, Event #3.



Stantec

TVA



JSF Bottom Ash Pond Section G—G'

- Piezometer sensor showing pore water pressure expressed in feet of elevation (August 12, 2019) (August 29, 2022)
- Piezometer sensor showing groundwater pressure expressed in feet of elevation (August 29, 2022)
- Screen interval showing pore water pressure expressed in feet of elevation (August 12, 2019) (August 29, 2022)

Exhibit No.
D-5

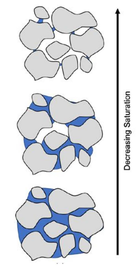
Title
BOTTOM ASH POND CROSS-SECTION

Client/Project
Tennessee Valley Authority
John Sevier Fossil (JSF) Plant TDEC Order

Project Location
Rogersville, Tennessee

175568225

Prepared by KB on 2023-06-15
Technical Review by MD on 2023-06-15



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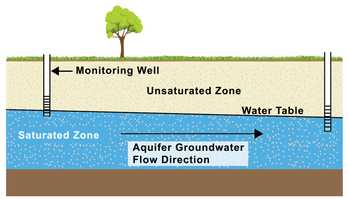

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Stantec TVA