# Location Restrictions Documentation

*Chesapeake Energy Center*
*Bottom Ash Pond*

Submitted to:

**Virginia Electric and Power Company d/b/a Dominion Energy Virginia**
5000 Dominion Boulevard
Glen Allen, VA 23060

Submitted by:

**Golder Associates Inc.**
2108 West Laburnum Ave, Suite 200
Richmond, Virginia 23227

Project No. 1913-5754
April 16, 2020

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**APPENDICES**

## 1.0 CERTIFICATION

I certify that the information contained within this Location Restriction Demonstration Report was prepared by me or under my direct supervision, and meets the requirements of Sections §257.60 through §257.64 of the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule (40 CFR 257; the *CCR rule*). The document and Certification/Statement of Professional Opinion are based on and limited to information that Golder has relied on from Dominion Energy (Dominion) and others, but not independently verified, as well as work products produced by Golder.

As used herein, the word “certification” and/or “certify” shall mean an expression of the Engineer’s professional opinion to the best of his or her information, knowledge, and belief, and does not constitute a warranty or guarantee by the Engineer.

| Daniel McGrath, P.E. | Associate and Senior Consultant |
|---|---|
| Print Name | Title |
| Daniel McGrath | 4/13/2020 |
| Signature | Date |

## 2.0 INTRODUCTION

This Location Restriction Demonstration was prepared for the Chesapeake Energy Center (CEC) Bottom Ash Pond (BA Pond) located in the City of Chesapeake, Virginia, in accordance with 40 CFR §257.60 through §257.64 (collectively – the *Location Restrictions*). The BA Pond is an *Inactive CCR Surface Impoundment* as defined in 40 CFR §257.53. This report documents each condition in the CCR Rule and how the BA Pond complies or does not comply with the requirement.

## 2.1 BA Pond Background

The BA Pond at CEC was established in 1984, when the former ash sluice pond was reclaimed by constructing a dry ash landfill on top of the southern portion of the consolidated former pond ash under the Virginia Solid Waste Regulations (VSWMR), Solid Waste Permit (SWP) No. 440. An inner perimeter dike was constructed to form the landfill containment berm. As part of the landfill construction, an approximate 4.5-acre section of the southernmost portion of the former sluice pond was designated for sluiced bottom ash.

The BA Pond was formed after construction of the inner perimeter dike by dredging a portion of the former sluiced ash pond. The original design plans (Appendix B - GAI, 1984) show isolation embankments on the north and west sides of the bottom ash pond, both to be constructed of bottom ash. The bottom of the BA Pond contains a sand drainage blanket; however, it does not have a bottom liner system meeting the requirements of 40 CFR §257.71.

The existing western embankment is constructed of limestone-injected multistage burner (LIMB) ash, which has self-cementing properties and is significantly more durable than soil or ash alone. It was installed in early 2002 to provide separation and enhanced decanting of the bottom ash sluice water. The existing 30-inch diameter outlet culvert was installed in the western embankment in 2011.

While in operation, bottom ash sluice water was pumped into the northeast corner of the BA Pond, where it was routed through a meandering path at a slow velocity to promote settling of the sluiced bottom ash. Bottom ash was routinely excavated from the pond, dewatered, and deposited in the landfill or beneficially reused off-site. The decant water continued through the pond and exited into the adjacent sedimentation basin through the 30-inch diameter culvert installed in the western embankment. In addition to ash sluice water, approximately 60% of the stormwater runoff from the landfill enters the BA Pond in the northeast corner. This water is routed through the BA Pond and exits into the sedimentation basin through the 30-inch culvert.

Placement of CCR into the BA Pond ceased in 2014 when the CEC ceased coal-fired electric generating activities. Since that time, the adjacent solid waste landfill has been under an intermediate cover condition and does not have exposed CCR. The BA Pond continues to receive surface water runoff from a portion of the landfill's intermediate cover, which discharges to the sedimentation basin. The BA Pond and sediment pond are currently licensed for operation under the Virginia Impounding Structure Regulations (4 VAC 50-20; Inventory Number 550002), as well as Virginia Department of Environmental Quality (DEQ) Virginia Pollutant Discharge Elimination System (VPDES) Permit No.VA0004081.

## 2.2 Location Restrictions

The location restrictions in the CCR Rule, Sections §257.60 through §257.64, require a demonstration to show compliance with each restriction. The following sections in this report address each restriction individually, and supporting documentation is included as attachments as required.

- §257.60 – Placement above the uppermost aquifer
- §257.61 – Wetlands
- §257.62 – Fault Areas
- §257.63 – Seismic Impact Zones
- §257.64 – Unstable Areas

# 3.0 PLACEMENT ABOVE THE UPPERMOST AQUIFER

## 3.1 Requirement

§257.60 (a): *New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).*

## 3.2 Demonstration

The BA Pond, being constructed on top of a former sluiced ash pond, has been found to have locations with CCR material at elevations less than 0 feet Mean Sea Level (MSL). Based on groundwater elevations obtained during the performance of semi-annual groundwater monitoring events in 2018 and 2019, it appears portions of the bottom of the BA Pond are less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer and therefore, the BA Pond does not meet the requirement in §257.60. Figure 3 in Appendix B shows the groundwater surface contour map from September 2019.

# 4.0 WETLANDS

## 4.1 Requirement

§257.61 (a): *New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in wetlands, as defined in § 232.2 of this chapter, unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that the CCR unit meets the requirements of paragraphs (a)(1) through (5) of this section.*

## 4.2 Demonstration

The BA Pond and surrounding areas were evaluated for the presence of wetlands in 2010 by MAP Environmental, Inc. of Virginia Beach, Virginia. Certification of the identified wetland areas on the property was provided by the U.S. Army Corps of Engineers (USCOE) on October 15, 2010. The USCOE has also further designated that any areas within the boundary of an existing CCR impoundment will not be considered jurisdictional wetlands, as the impoundments are considered “treatment units” and not subject to USCOE jurisdiction (40 CFR §232.2). In compliance with requirements in the Virginia Impounding Structure Regulations, Dominion maintains the vegetation on the outer slopes of the BA Pond. This maintenance activity prevents the migration of wetland vegetation into the CCR impoundment.

The BA Pond is not located in a wetland area, per the 2010 MAP Environmental study and subsequent USCOE certification. Figure 4 in Appendix B shows the BA Pond boundary with respect to the 2010 mapped wetland area.

# 5.0 FAULT AREAS

## 5.1 Requirement

§257.62 (a): *New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the CCR unit.*

## 5.2 Demonstration

The closest area known to have evidence of displacement in the Holocene Epoch, i.e. 12,000 years ago to present, is the Central Virginia seismic zone and is over 100 miles from the site (see red hatched area in figure below). The BA Pond is not located within 60 meters (200 feet) of the outermost damage zone of the fault system. The site location of the BA Pond location meets the requirements of §257.62 (a).


**Figure 1 - Areas of Quaternary Deformation and Liquefaction, Virginia (https://viewer.nationalmap.gov/advanced-viewer/)**

# 6.0 SEISMIC IMPACT ZONES

## 6.1 Requirement

§257.63 (a): *New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in seismic impact zones unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section 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.*

## 6.2 Demonstration

A seismic impact zone, as defined in the CCR Rule, means *an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g) will exceed 0.10 g in 50 years.*

The maximum anticipated horizontal acceleration for the site, based on coordinates of 36.7628° north and 76.3015° west, is **0.0401 g**. Figure 2 shows the mapped peak ground acceleration (pga) for the CEC site. The site location of the BA Pond is not located within a seismic impact zone.

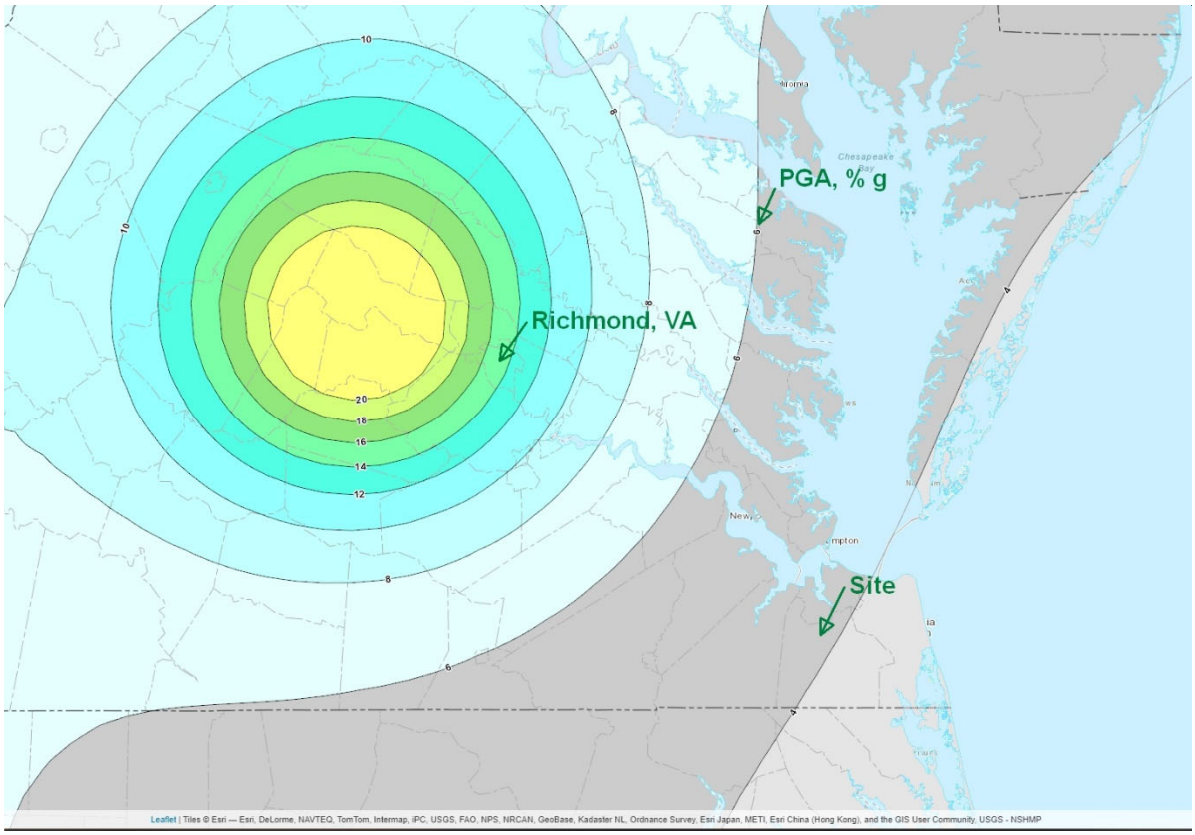


**Figure 2 – Peak Ground Acceleration (% g, 2014 mapping, v4.2.0) (https://earthquake.usgs.gov/hazards/interactive/)**

# 7.0 UNSTABLE AREAS EVALUATION

## 7.1 Requirement

§257.64 (a): *An existing or new CCR landfill, existing or new CCR surface impoundment, or any lateral expansion of a CCR unit must not be located in an unstable area unless the owner or operator demonstrates by the dates specified in paragraph (d) of this section that recognized and generally accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted*.

## 7.2 Demonstration

Assessment of unstable areas includes an evaluation of the soil conditions at the site, which may result in significant differential settling, a review of site geologic or geomorphologic features, and consideration of human-made features on site that may cause unstable conditions. A summary of the unstable area evaluation is presented in this section.

### 7.2.1 *Soil Conditions*

Based on the soil boring records and geotechnical testing of soils encountered, the subsurface conditions at the BA Pond are expected to adequately support the earthen embankments and retained materials without significant differential settlement. The site investigations did not identify features that suggest recent landslide activities or other indicators of unstable soil conditions, such as sinkholes or significant unconsolidated materials. Neither the embankment materials nor the embankment subgrade materials are subject to liquefaction (Golder, 2018. Ref #11).

Several subsurface investigations of the CEC landfill and BA Pond site have been conducted by various engineering firms between 1985 and 2017. Subsurface site investigations by Golder and others show the site is underlain by recent coarse-grained and fine-grained alluvium deposits of silty sand ranging from approximately 8 to 16 feet thick [to approximate elevation -7 feet above mean sea level (ft-msl)]. Under the alluvium layers is generally considered the Norfolk formation of coarse-grained and fine-grained clayey sands, which extend to depths greater than elevation -30 feet. Top of bedrock is over 300 feet below grade, per the published geologic mapping for the area.

### 7.2.2 *Differential Settlement*

Significant differential settlement is not anticipated to occur at the BA Pond embankment or within the impoundment area. In addition to a review of previous exploration work by others, Golder completed two rounds of Cone Penetrometer Testing (CPT) during 2016 and 2017 geotechnical exploration programs. A total of 14 soundings were made through and near the BA Pond dikes to assess the material strength in the dike and below. Soundings were made to depths up to 100 feet below ground surface (bgs). The dike fill soil contains variations of fine-grained and coarse-grained soils and exhibit sufficient compaction and density to withstand the anticipated range of loading conditions.

Construction of the outer soil embankment was completed in the 1950's, and no records of significant settlement or cracking due to settlement of the embankment since that time have been discovered. Long-term settlement of the embankment has likely occurred, and additional settlement is not anticipated. In 2010, a sheet pile wall was installed along the outside toe of the eastern slope of the BA Pond to increase stability of the slope.

The water / CCR level in the pond was historically maintained at approximately elevation 15, providing for uniform long-term subgrade loading. As CCR materials were hydraulically sluiced into the pond, the material would be

expected to slowly consolidate. This material consolidation within the pond is not anticipated to influence or cause differential settlement in the subgrade.

### 7.2.3 *Site Geology and Geomorphology*

The BA Pond is located on layers of coarse-grained and fine-grained marine soils as indicated in the boring logs. The BA Pond is not located in an area of karst topography as indicated by the presence of deep marine deposits of sand and clay, with depth to bedrock over 300 feet. No active seismic faults are located within 100 miles. The closest active fault area is the Central Virginia Seismic Zone, located over 100 miles away. The Seismic Activity Map in Section 5.2 shows the location of the site relative to the Central Virginia Seismic Zone.

The east and south slope faces are adjacent to Deep Creek and the Southern Branch of the Elizabeth River. The top elevation of the embankment is 20 feet MSL. The 100-year flood elevation of 8 feet MSL; therefore, overtopping during the 100-year storm event is not anticipated. Hurricane storm surge maps indicate the BA Pond will not be overtopped from the exterior by the storm surge anticipated from a category 4 hurricane event. The 100-Year flood map for the area is included in Appendix A.

### 7.2.4 *Human-Made Features*

An evaluation of the site's history does not reveal, nor has evidence been found of, human-made conditions on site that could cause unstable conditions. The common embankment between the solid waste landfill and the BA Pond is monitored for movement using two slope inclinometers that were installed in 2018 to monitor the slope stability of the landfill during material excavation from the BA Pond for beneficiation. No indications of slope instability have been identified by the instruments. There are no known impounding structures upstream or downstream of the site that pose inundation threat due to structure failure.

## 8.0 CONCLUSIONS

Golder Associates Inc. has performed an evaluation of site conditions and historical documentation in relation to requirements established in 40 CFR 257.60-64. Our evaluation shows that the Chesapeake Energy Center Bottom Ash Pond, as designed, constructed, and operated, meets the requirements of this regulation with one exception. Based upon the evaluation of the BA Pond groundwater elevations obtained during background groundwater monitoring events, it appears portions of the base of the BA Pond are less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer and therefore, the BA Pond does not meet the requirement in §257.60.

## 9.0 REFERENCES

Sources evaluated for this report include the following:


1. United States Geological Service (USGS) National Map Viewer – USGS Earthquake faults (https://viewer.nationalmap.gov/advanced-viewer/)
2. USGS Earthquake Hazards Program – Unified Hazard Tool (https://earthquake.usgs.gov/hazards/interactive/)
3. Schnabel Engineering "Chesapeake Energy Center Shoreline Erosion Repairs, Priority Areas 2 & 3 and South Dike of Bottom Ash Pond" construction plans, July 16, 2014
4. Schnabel Engineering Geotechnical Engineering Study "Chesapeake Energy Center, Stability Evaluation of the Bottom Ash and Sedimentation Pond Dikes" February 5, 2010
5. Soil boring logs, test pit logs, and well installation logs from Golder Associates, Inc., GAI Consultants, and Schnabel Engineering, various investigation dates
6. Golder Associates Inc., Potentiometric Surface Map – Chesapeake Energy Center, September 16, 2019
7. GAI Consultants, Inc. "Site Preparation Construction Plans – Reclamation of Existing Ash Pond", construction plans, March 30, 1984
8. GAI Consultants, Inc. "Dry Disposal Area Operation Plans – Reclamation of Existing Ash Pond", March 30, 1984
9. Golder Associates Inc. History of Construction – Chesapeake Energy Center CCR Surface Impoundment: Bottom Ash Pond, April 12, 2018
10. Golder Associates Inc. Initial Structural Stability Assessment – Chesapeake Energy Center CCR Surface Impoundment: Bottom Ash Pond, April 12, 2018
11. Golder Associates Inc. Initial Safety Factor Assessment – Chesapeake Energy Center CCR Surface Impoundment: Bottom Ash Pond, April 12, 2018
12. USGS Historical Aerial Imagery (https://earthexplorer.usgs.gov/)
13. Google Earth (https://www.google.com/earth/)
14. Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) Viewer (https://www.fema.gov/national-flood-hazard-layer-nfhl)
15. City of Chesapeake Storm Surge Zones ("SLOSH" maps) (http://gisweb.cityofchesapeake.net/slosh/)

# Appendix A

## Site Location Map
## 100-Year Flood Map (FIRM)


## LEGEND

- 100 YEAR FLOOD PLAIN BOUNDARY (ZONE AE)
- PROPERTY LINE
- BOTTOM ASH POND LIMITS

## NOTES

1. THE PROPERTY BOUNDARY SHOWN ON THIS DRAWING IS AS SUBMITTED BY H & B SURVEYING AND MAPPING, LLC., DECEMBER 19, 2014.
2. 100 YEAR FLOOD PLAIN BOUNDARY TAKEN FROM PHOTOGRAMMETRIC AERIAL SURVEY PERFORMED ON 07/10/2015 BY MCKENZIE SNYDER, INC.
3. BASE MAP CONSISTS OF GOOGLE EARTH AERIAL IMAGE DATED 11/05/2016 RETRIEVED ON 01/24/2018.

N

300 0 300 FEET
SCALE

YYYY-MM-DD 2020-02-20
DESIGNED DPM
PREPARED ABR
REVIEWED
APPROVED

GOLDER

CLIENT
DOMINION ENERGY

CONSULTANT

PROJECT
CHESAPEAKE ENERGY CENTER
DCR INVENTORY #550002
CHESAPEAKE, VIRGINIA

TITLE
**BOTTOM ASH POND**
**SITE LOCATION MAP**

PROJECT NO.
1913-5754

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FIGURE
1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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# National Flood Hazard Layer FIRMette

FEMA


Feet
0 250 500 1,000 1,500 2,000

1:6,241.13

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

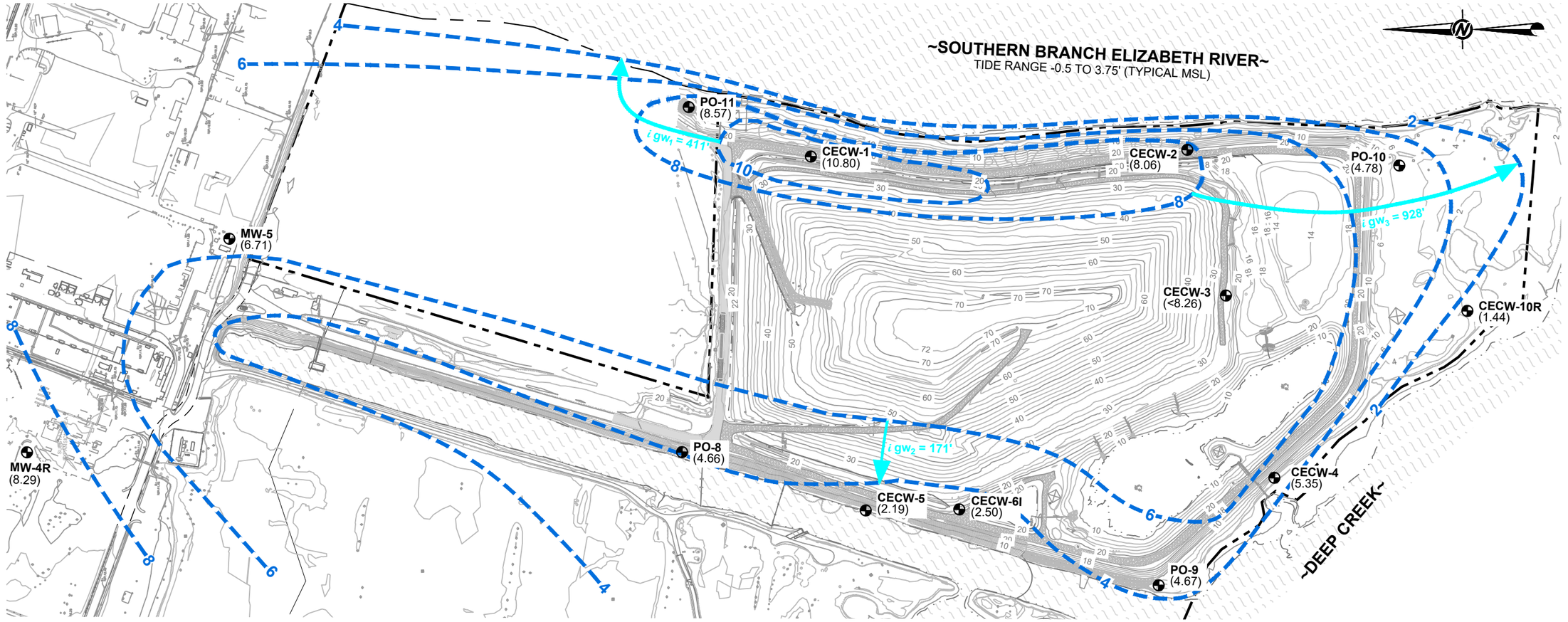
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/7/2018 at 11:26:11 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

**Figure 2**

# Appendix B

## Groundwater Surface Contour Map
## 2011 Wetland Mapping




## LEGEND

| | |
|---|---|
| ——— - - ——— | PROPERTY LINE |
| ——— - - ——— | ADJACENT PARCEL PROPERTY LINE |
| 50 | MAJOR TOPOGRAPHIC CONTOUR |
| 48 | MINOR TOPOGRAPHIC CONTOUR |
| 10 - - - - - | GROUNDWATER SURFACE CONTOUR [FEET ABOVE MEAN SEA LEVEL (AMSL)] |
| → | APPROXIMATE GROUNDWATER FLOW LINE |
| $i\ gw_1 = 796'$ | GROUNDWATER FLOW PATH LENGTH (FEET) |
| PO-8 | MONITORING WELL LOCATION AND IDENTIFICATION |
| (7.23) | STATIC WATER LEVEL ELEVATION (FEET AMSL) |
| (NM) | NOT MEASURED |

## NOTES

1. EXISTING TOPOGRAPHY SHOWN IN THIS DRAWING SET IS PREPARED BY PHOTOGRAMMETRIC METHODS BASED ON AERIAL PHOTOGRAPHY PREPARED BY MCKENZIE & SNYDER INC., FOR H&B SURVEYING, DATED APRIL, 2016. BOTTOM ASH GRADES SHOWN ARE FROM FIELD SURVEY COMPLETED ON JANUARY 15, 2018 BY D & M SURVEYORS, P.C.
2. NORTH SHOWN IN REFERENCE TO VIRGINIA STATE PLANE, NAD27 DATUM, VIRGINIA SOUTH ZONE. VERTICAL DATUM IS NGVD 29.
3. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATUM, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL GROUNDWATER CONDITIONS.
4. GROUNDWATER CONTOUR LINES SHOW THE WATER TABLE SHAPE AND ELEVATION. THESE CONTOURS ARE INFERRED LINES FOLLOWING THE GROUNDWATER SURFACE AT A CONSTANT ELEVATION ABOVE SEA LEVEL. THE GROUNDWATER FLOW DIRECTION IS GENERALLY PERPENDICULAR TO THE GROUNDWATER SURFACE CONTOURS, SIMILAR TO THE RELATIONSHIP BETWEEN SURFACE WATER FLOW AND TOPOGRAPHIC CONTOURS.

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DOMINION ENERGY

CONSULTANT
GOLDER

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| DESIGNED | RIP | |
| PREPARED | RIP | |
| REVIEWED | MGW | |
| APPROVED | MGW | |

PROJECT
CHESAPEAKE ENERGY CENTER
CHESAPEAKE, VIRGINIA

TITLE
**SITE MAP**
**POTENTIOMETRIC SURFACE MAP**
**SEPTEMBER 16, 2019**

PROJECT NO.
19117210

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FIGURE
3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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BOTTOM
ASH POND

~SOUTHERN BRANCH ELIZABETH RIVER~

WU 24
WU 25
WU 26
WU 27
WU 28
WU 29
WU 30
WU 31
WU 32
WU 33
WU 34
WU 35
WU 36
WU 37
WU 38
WU 39
WU 40
WU 41
WU 42

WL
9.2

N

60 0 60 FEET
SCALE

## LEGEND:

- PROPERTY BOUNDARY
- 65 EXISTING MAJOR CONTOUR (5' INTERVAL)
- 64 EXISTING MINOR CONTOUR (1' INTERVAL)
- OVERHEAD UTILITY LINE
- EDGE OF WATER
- BOTTOM ASH POND BOUNDARY
- EXISTING FENCE
- ASPHALT ROAD
- GRAVEL ROAD
- POWER POLE
- MANHOLE
- WU 26 WETLAND BOUNDARY

WETLANDS SHOWN ON SOUTH DIKE SITE WERE FLAGGED BY MAP ENVIRONMENTAL, INC. OF VIRGINIA BEACH, VA ON SEPTEMBER 17, 2010 AND SURVEYED BY D&M SURVEYORS IN OCTOBER 2010. NOTIFICATION OF PRELIMINARY JURISDICTIONAL DETERMINATION WAS ISSUED ON OCTOBER 15, 2010.

YYYY-MM-DD 2020-02-25
DESIGNED DPM
PREPARED SIB
REVIEWED
APPROVED

CLIENT
DOMINION ENERGY

CONSULTANT
GOLDER

PROJECT
CHESAPEAKE ENERGY CENTER
DCR INVENTORY #550002
CHESAPEAKE, VIRGINIA

TITLE
**BOTTOM ASH POND**
**WETLANDS MAP**

PROJECT NO.
130-0193

REV.
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FIGURE
4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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