Emergency Action Plan

Chesapeake Energy Center Bottom Ash and Sediment Pond Dam

Department of Conservation and Recreation (DCR)
Inventory No. 550002

Submitted to:

Dominion Energy
5000 Dominion Boulevard
Glen Allen, VA 23060

Submitted by:

WSP USA Inc.
1100 Boulders Parkway, Suite 503
Richmond, Virginia 23225

Project No. GL21466315

January 2024

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Tables

Appendices

1.0 BASIC INFORMATION

Table 1: Chesapeake Energy Center Unit Hazard Potential Classification

Unit	Inventory Number	Hazard Potential Classification		Acreage	
		CCR Regulations	Virginia Dam Safety	CCR Unit	DCR Unit
Bottom Ash and Sediment Pond	550002	Significant	High	5	40

Name of Co-Owner: Mohammed Alfayyoumi – Director Power Generation Station II
Address: 600 E. Canal Street, Richmond, VA 23219
Telephone: (Mobile) 804-380-1066

Name of Co-Owner: Michael Kubincanek – TransCanada Corporation
Address: 455 Racetrack Road, Washington, PA 15301
Telephone: (Control Room) 757-799-4215

Name of Dam Operator: Mohammed Alfayyoumi – Director Power Generation Station II
Address: 600 E. Canal Street, Richmond, VA 23219
Telephone: (Mobile) 804-380-1066

Name of Dam Operator: Michael Glagola – Project Manager
Address: 600 E. Canal Street, Richmond, VA 23219
Telephone: (Mobile) 804-217-1507

Name of Alternate Dam Operator: Warren Deal – Project Manager
Address: 2701 Vepco Street Chesapeake, VA 23323
Telephone: (Mobile) 804-400-8965

Name of EAP Coordinator: Jessica Kelly – Sr. Environmental Compliance Coordinator
Address: 600 E. Canal Street, Richmond, VA 23219
Telephone: (Mobile) 757-778-7337

Name of Dam Engineer: Shaikh Rahman, P.E. – Engineer III
Address: 600 E. Canal Street, Richmond, VA 23219
Telephone: (Mobile) 804-387-8263

City of Chesapeake Emergency Management Coordinator: Bobby Gelormine – Senior Planner
Address: 2130 S. Military Highway Chesapeake, VA 23320
Telephone: (Office) 757-382-1778 (24hr) 757-382-6161

2.0 EMERGENCY ACTION PLAN OVERVIEW

Three emergency stages, ranked by severity, have been established for the Bottom Ash and Sediment Pond Dam.

Emergency Stage Definitions

Stage 1: Non-Emergency – failure is unlikely, and storm development or operational malfunction is slow in advancing to a potential emergency. This stage indicates a situation is developing such that the dam is not in danger of failing, but if it continues failure may be possible.

Stage 2: Potential Failure – storm development or operational malfunction that could result in failure of the dam is quickly accelerating. This stage indicates that a situation is developing that could result in a dam failure. Declaration of Stage 2 represents a safety emergency and would be considered an activation of the EAP under the CCR Rule.

Stage 3: Imminent Failure – storm development or operational malfunction has reached a point that the failure of the dam has started or is imminent. This stage indicates dam failure is expected or occurring and may result in flooding that will threaten life and/or property downstream of the dam. Declaration of Stage 3 represents a safety emergency and would be considered an activation of the EAP under the CCR Rule.

Stage 2 conditions include Stage 1 conditions and responsibilities, and Stage 3 conditions include both Stage 1 and Stage 2 conditions and responsibilities.

The Dam Owner, Dam Operator, EAP Coordinator or Assignee may use Table 2 to assess weather conditions and operational conditions at the dam to determine the appropriate actions for notifying emergency personnel during potential and actual emergencies.

Table 2: Emergency Stage Table

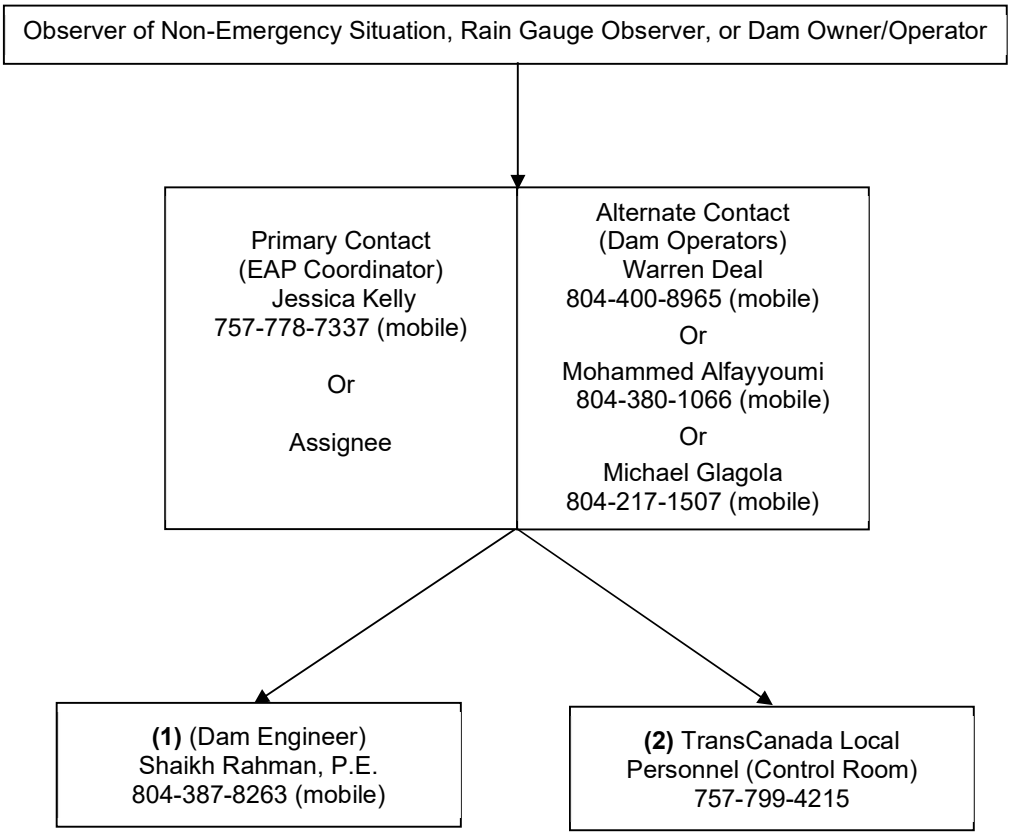
Step 1: Condition Detection	Event Detection: See Section 6		
Step 2: Stage Level	**Stage 1**	**Stage 2**	**Stage 3**
	Non-Emergency Situation ■ Slowly Developing Situation ■ See Definition Above	Potential Emergency Situation ■ Quickly Developing Situation ■ See Definition Above	Urgent Emergency Situation ■ Dam Failure is Imminent or In Progress ■ See Definition Above
Step 3: Notification and Communication	Notification List See Section 3.1	Notification List See Section 3.2	Notification List See Section 3.3
Step 4: Expected Action	■ Inspect Dam, Spillway, and Elevation at Outfall **every 8 hours** ■ Monitor and Listen to Weather Forecasts	■ Inspect Dam, Spillway, and Elevation at Outfall **every 2 hours** ■ Notify Emergency Responders	■ **Continuous** Inspection of Dam, Spillway, and Elevation at Outfall ■ Continuous Contact with Emergency Responders
Step 5: Termination and Follow Up	Termination of Monitoring Conditions at the Dam and Proceed to Evaluate Damages and Plans for Repairs		

Normal methods of detecting potential emergency situations at the dam consist of surveillance monitoring and observing readings. For conditions beyond the normal range of operations, contact the City of Chesapeake Emergency Management Coordinator for assistance with evaluation of the conditions.

3.0 NOTIFICATION

3.1 Stage 1 Notification

The following flow chart is to be utilized upon determination of Stage 1 Conditions at the dam:



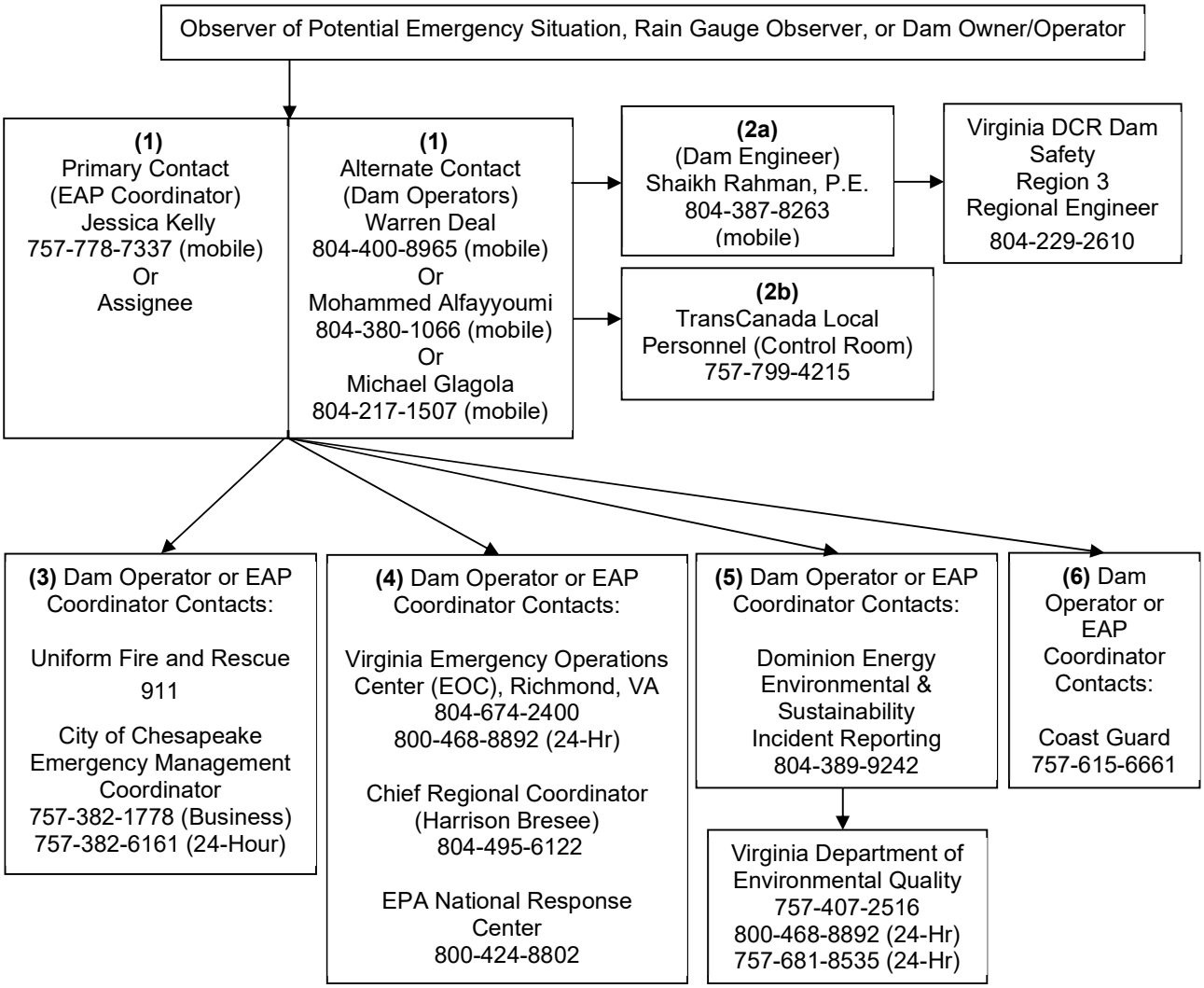
***Note: Please use Appendix C as a reference and log for Stage Notification.**

Message from the dam operator to the EAP Coordinator:

I am at [or I have been in contact with the observer at] the Chesapeake Energy Center, and conditions at the Bottom Ash and Sediment Pond Dam warrant observation as recommended in the Emergency Action Plan. We are currently at Stage 1. If conditions change, we may move to Stage 2 and perform more frequent evaluations. Otherwise, we will visit and make observations every 8 hours.

3.2 Stage 2 Notification

The following flow chart is to be utilized upon determination of Stage 2 Conditions at the dam:



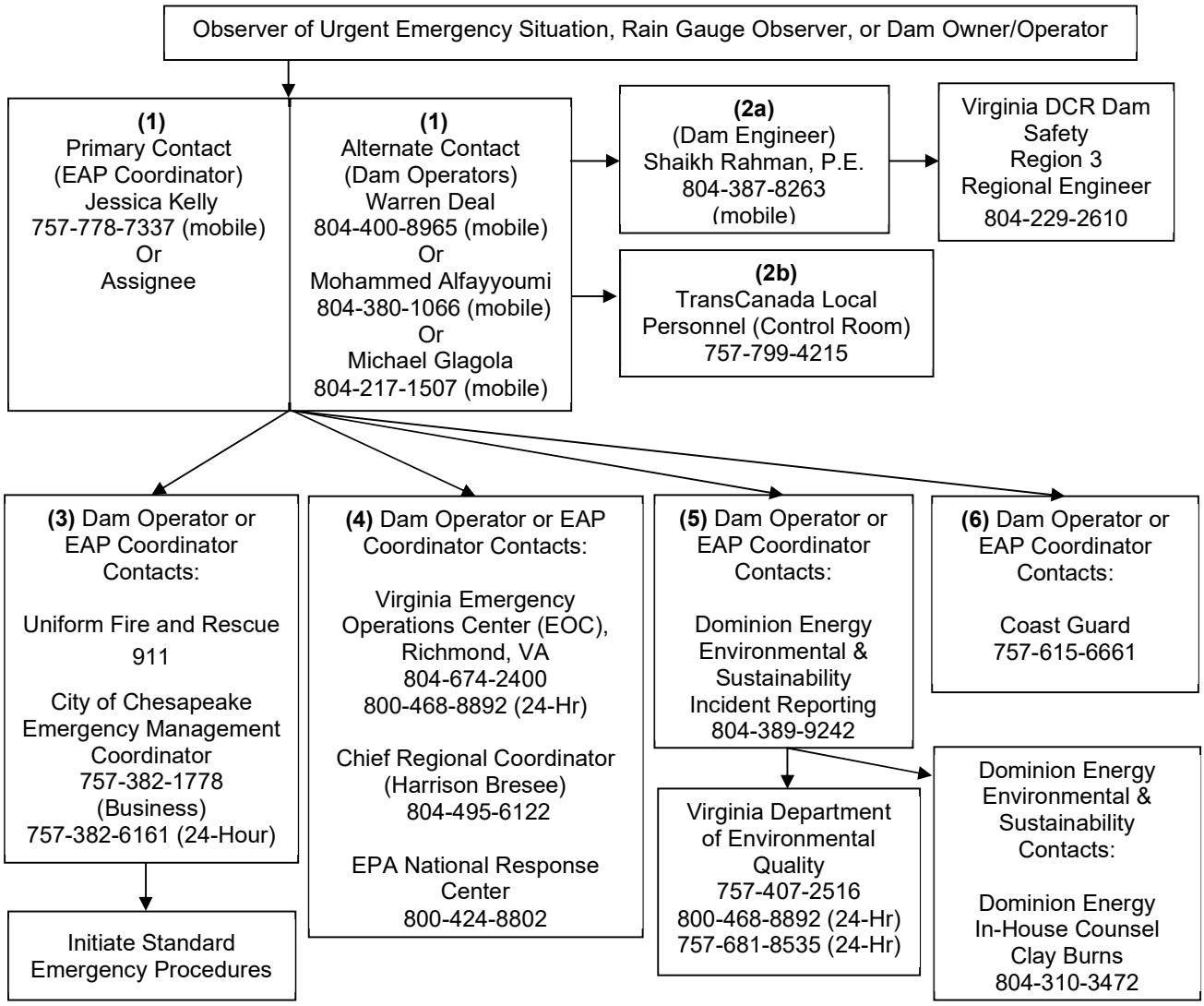
***Note: Please use Appendix C as a reference and log for Stage Notification.**

Message from the dam operator to the EAP Coordinator:

I am at [or I have been in contact with the observer at] the Chesapeake Energy Center, and conditions at the Bottom Ash and Sediment Pond Dam have reached the threshold established in the Emergency Action Plan at which to move to the Stage 2 Emergency Level. Please prepare your personnel in case an evacuation is necessary and continue to initiate your standard operating procedures. Someone will be observing the dam every 2 hours.

3.3 Stage 3 Notification

The following flow chart is to be utilized upon determination of Stage 3 Conditions at the dam:



***Note: Please use Appendix C as a reference and log for Stage Notification.**

Message from the dam operator to the EAP Coordinator:

I am at [or I have been in contact with the observer at] the Chesapeake Energy Center, and conditions at the Bottom Ash and Sediment Pond Dam have reached the threshold established in the Emergency Action Plan to move to the Stage 3 Emergency level. Please proceed with the Standard Emergency Procedures. Someone will remain at the dam to monitor continuously until the dam breaks or the water level recedes to safe levels and the Emergency Services Coordinator directs us to terminate our responsibilities.

Note: Standard Emergency Procedures (SEPs) shall include notification of the evacuation team, contacting the National Weather Service (NWS) for rainfall projections, and contacting the Virginia Department of Emergency Management.

4.0 STATEMENT OF PURPOSE

The Bottom Ash and Sediment Pond Dam is designed and operated pursuant to Virginia Department of Conservation and Recreation Dam Safety, the U.S. Environmental Protection Agency, and generally accepted engineering practices. The purpose of this Emergency Action Plan (EAP) is to provide critical information and a plan of action in the event of an emergency situation at the Chesapeake Energy Center (CEC) Bottom Ash and Sediment Pond Dam. The plan addresses the following:

- Delineation of inundation areas downstream of the dam;
- Procedures for determining when to initiate various emergency response levels;
- Provisions for notification of emergency responders and owners of potentially affected downstream residences and structures;
- Emergency preparedness and exercises; and
- Documentation of evacuation routes.

This plan is intended to meet the requirements of 4VAC50-20-10 et seq. of the Virginia Department of Conservation and Recreation Dam Safety regulations and 40 CFR 257.73(a)(3) of the Federal Disposal of Coal Combustion Residuals from Electric Utilities Final Rule (CCR Rule). Pursuant to 40 CFR 257.73(a)(2) of the CCR Rule, a hazard potential classification assessment was performed for this surface impoundment in April 2018. The assessment of the Bottom Ash and Sediment Pond Dam resulted in a hazard potential classification of “significant hazard” under the CCR Rule and remains a “high hazard” under the Virginia Dam Safety regulations.

5.0 PROJECT DESCRIPTION

5.1 General Vicinity

The CEC Bottom Ash and Sediment Pond Dam is located about ½ mile south of the decommissioned Chesapeake Energy Center located at 2701 Vepco Street off of South Military Highway in the City of Chesapeake. The dam encompasses a peninsula of land bounded to the east by the Southern Branch of the Elizabeth River, to the west by the CEC’s historic discharge canal, and to the south by Deep Creek. The coordinates for the dam are 36°45’43.4” N and 78°18’13.5” W.

5.2 General Description of Dam

The CEC Bottom Ash and Sediment Pond Dam was originally constructed in 1955 to impound bottom ash and stormwater runoff from the adjacent ash disposal facility. Stability and shoreline erosion improvements have been made to the downstream slopes of the east and west embankments.

The dam’s principal spillway system consists of a 4-foot by 4-foot concrete and wooden riser structure with stop logs, a 50-inch weir, and a 42-inch drop inlet, which discharges into Deep Creek through a 24-inch diameter HDPE discharge pipe. The principal spillway invert elevation is 10.45 feet. An emergency spillway, with a bottom width of 10 ft and an invert elevation of 15.5 ft, was constructed on the western dam embankment in 2021 to allow the Sediment Pond to pass the Probable Maximum Flood (PMF). The Sediment Pond has a capacity of 2.06 acre-feet at normal pool, 23.11 acre-feet at the invert of the emergency spillway, and a total maximum storage capacity of 53 acre-feet at the top of the embankment. Under normal conditions, the Bottom Ash Pond drains into the Sediment Pond through a 30-inch CHDPE culvert and does not impound water. The upstream slopes of the embankment vary from 2H:1V to 4H:1V and downstream slopes are about 2H:1V. The crest of the embankment is at El. 20 feet, and it also serves as the perimeter gravel access road around the ash storage facility.

The dam is regulated by both the Virginia DCR and by the CCR Rule. The DCR regulates the embankment dam surrounding the entire CEC peninsula, a crest length of approximately 8,500 feet impounding 1,686 acre-ft of coal ash and water.

The CCR Rule regulates a 5-acre subsection of the larger DCR dam, encompassing only the Bottom Ash Pond and Sediment Pond. The CEC Bottom Ash and Sediment Pond Dam, as defined for CCR purposes, is a three-sided earthen embankment dam with a crest length of about 2,100 feet, an average crest width of 20 feet, and a maximum height of about 20 feet.

Other than length and impounded volume, the other descriptions of the embankment are not different for DCR or CCR Dam Safety purposes. The additional embankment length and impounded volume considered for DCR does not change the emergency evaluation and response sections of this Emergency Action Plan.

6.0 EMERGENCY DETECTION, EVALUATION, AND CLASSIFICATION

The dam owner and/or operator is responsible for operation and maintenance of this dam. The dam operator and the field observer are responsible for monitoring conditions at the dam, spillway, and elevation on outfall structure and notifying the City of Chesapeake Emergency Management Coordinator when emergency stage conditions are activated.

The dam owner/operator may initiate this EAP based on the issuance of a flood watch or warning in the area, or if conditions at the dam indicate that water levels in the impoundment will rise to within four feet of the dam crest. Embankment erosion, appurtenant malfunction, or any of the other conditions described in this section may also dictate initiation of the emergency action. While it is the dam owner's responsibility to initiate this process, the City of Chesapeake Emergency Management Coordinator may contact the dam owner to inform the team that an event is imminent and team members would initiate their duties as required in this EAP.

Depth of water in the sediment pond is the best indication of flood conditions and should be used as an indicator of the potential impacts downstream. In the absence of actual depth data, measured rainfall depths in inches monitored in the contributing watershed may be used to determine the emergency level. The observer of the emergency situation should be able to provide accurate and up to date information to the EAP Coordinator. An observer can be any person who has the ability to monitor and report observations of the dam at the time of a stage triggering event.

6.1 Reservoir Pool Level

Reservoir pool level is the prime indicator of flooding conditions at the Bottom Ash and Sediment Pond Dam. Reservoir pool elevations shall be obtained by direct measurements from the principal spillway riser structure that has a top elevation at 21.3 feet.

Initiate a Stage 1 Condition when the reservoir pool level is at elevation 13.5 feet. This is two (2) feet below the level of the emergency spillway and 3.05 feet above the principal spillway and would provide for increased monitoring as pool levels begin approaching the emergency spillway elevation.

Initiate a Stage 2 Condition when the reservoir pool level is at elevation 15.5 feet. This is the invert elevation of the emergency spillway and the spillway flow depth would therefore be zero (0) feet, but the spillway would be on the verge of discharging.

Initiate a Stage 3 Condition when the reservoir pool level is at elevation 19 feet. This would occur when the pool level is one foot below the dam crest and would indicate that overtopping of the dam embankment could soon occur.

6.2 Rainfall Depths

Rainfall depths for various storm durations are another indicator of potential flooding conditions.

Initiate a Stage 1 condition for the following rainfall depth:
9.3 inches in 24 hours (100-Year Event)

Initiate a Stage 2 condition for the following rainfall depth:
14.6 inches in 24 hours (1,000-Year Event)

Initiate a Stage 3 condition for the following rainfall depth:
27 inches in 24 hours (~0.7 x 24-hr PMP Event)

6.3 Observation Frequency

Dam, spillway, and elevations at the outfall observations shall occur at frequencies determined by the Emergency Stage condition:

- Stage 1 conditions – observations shall occur at eight-hour intervals (every 8 hours)
- Stage 2 conditions – observations shall occur at two-hour intervals (every 2 hours)
- Stage 3 conditions – continuous observation

Observers should use caution and be aware of the potential for flooded roads along the route to the dam. Monitoring and surveillance of conditions at the dam will continue under emergency conditions as long as safety is not in question. An inspection form is included in Appendix C.

Note: In the event that conditions are considered unsafe (i.e., wind speed greater than 40 mph, lightning, tornado etc.) conditions will be documented and dam observations will be postponed until conditions improve.

6.4 Public Roads Downstream of the Dam

No public roads are located downstream of the dam within the dam break inundation zone. The only road in the vicinity of the site is Dominion's private access road that runs along the crest of the dam.

6.5 Additional Emergency Conditions

The following table describes additional events that could occur independent of a precipitation event or reservoir pool levels. If any of these conditions are observed, Dominion's Power Generation Engineering group, applicable Dominion department, or qualified consultant, should be contacted for further discussion, observation, and/or technical direction.

Table 3: Emergency Conditions Examples

Event	Situation
Emergency Spillway and Channel	Visual displacement or movement of the spillway channel with no flow
	Spillway is flowing and erosion/head cutting is observed
Seepage	New seepage areas on or near the dam
	New seepage areas with cloudy discharge or increasing flow rate
Sinkholes	Observation of new sinkhole on embankment
	Rapidly enlarging sinkhole
Embankment Cracking	New cracks in embankment greater than ¼ inch wide without seepage
	Cracks in embankment with seepage
	Cracks in embankment with rapidly increasing seepage
Embankment Movement	Visual movement of the embankment slope
	Sudden or rapidly progressing slides of the slopes
Vortex in Pond	Whirlpool with discharge downstream
Earthquake	Measurable earthquake with a magnitude of 3.5 within 50 miles of the dam
	Earthquake resulting in visible damage to the dam
	Earthquake resulting in potential uncontrolled release of water from the dam
Security Threat, Sabotage, and Vandalism	Verified bomb threat that, if carried out, could result in damage to the dam
	Detonated bomb that has resulted in damages to the dam or its appurtenances
	Damage to the dam or appurtenances with no impacts to the functioning of the dam
	Damage to the dam or appurtenances that has resulted in seepage flow
	Damage to the dam or appurtenances that has resulted in potential uncontrolled water release

In the event of a measurable earthquake with a magnitude of 3.5 within 50 miles of the dam, overtopping of the dam, evacuation of inundation areas, or other serious problems resulting in a triggering of stage conditions, the dam must be inspected by a professional engineer knowledgeable with the dam site. This inspection may be postponed due to unsafe conditions or lack of accessibility to the site.

6.6 De-Escalation of Stage Conditions

Stage conditions can be stepped down when the following events as applicable:

Stage 3 to Stage 2

- After heavy rains have ended, the water level in the impoundment is below El 19 and the water level is receding.

Stage 2 to Stage 1

- After heavy rains have ended, the water level in the impoundment is below El 15.5 and the water level is receding.

Stage 1 to Termination

- Other emergency conditions have been evaluated by Dominion personnel and determined to not present a hazard to the dam going forward.
- After heavy rains have ended, the water level in the impoundments is below El 13.5 and the water level is receding.

Termination of stage conditions occurs when all entities notified of the emergency condition have been communicated with and informed of current non-emergency conditions.

7.0 RESPONSIBILITY UNDER THE EAP

This section is intended to clearly outline the responsibilities of parties involved in all EAP procedures, including notification, surveillance, classification, evacuation, and termination.

7.1 Dam Owner/Operator Responsibilities

1) The Dam Owner/Operator/EAP Coordinator/Assignee IS RESPONSIBLE for notifying the City of Chesapeake Emergency Management Coordinator of any problem or potential problem at the dam site.

2) The Dam Owner/Operator/EAP Coordinator/Assignee WILL DETERMINE when Stage 1 conditions are met at the dam and WILL INITIATE dam surveillance accordingly.

3) The Dam Owner/Operator/EAP Coordinator/Assignee WILL DETERMINE when Stage 2 conditions are met at the dam.

4) The Dam Owner/Operator/EAP Coordinator/Assignee WILL DETERMINE when Stage 3 conditions are met at the dam.

5) The Dam Owner/Operator/EAP Coordinator/Assignee WILL BE RESPONSIBLE for restricting traffic access to Vepco Road under Stage 2 and Stage 3 conditions.

7.2 Responsibility for Notification

1) The observer of the emergency situation WILL NOTIFY the Dam Owner/Operator/EAP Coordinator/Assignee before beginning dam surveillance under Stage 1 conditions.

2) The Dam Owner/Operator/EAP Coordinator/Assignee WILL NOTIFY the 24-hour dispatch center and the City of Chesapeake Emergency Management Coordinator when Stage 2 conditions are met, in order to alert them to perform actions required for Stage 2 conditions and to review actions that may be required for the safety and protection of people and property. The dam owner/operator WILL NOTIFY the Regional Dam Safety Engineer and Dominion Power Generation Engineering that Stage 2 conditions have been implemented.

3) The Dam Owner/Operator/EAP Coordinator/Assignee WILL NOTIFY the 24-hour dispatch center and the City of Chesapeake Emergency Management Coordinator to initiate warning/evacuation of residents when Stage 3 conditions or imminent dam failure are probable. The dam owner/operator WILL NOTIFY the Regional Dam Safety Engineer and Dominion Power Generation Engineering that Stage 3 conditions have been implemented.

4) The Dam Owner/Operator/EAP Coordinator/Assignee WILL NOTIFY local emergency response personnel of changes in emergency conditions include stage escalation and de-escalation and termination of the EAP under non-emergency conditions.

5) The Dam Owner/Operator/EAP Coordinator/Assignee WILL PROVIDE verbal notification of an activation of the EAP to the Virginia Department of Environmental Quality within 24-hours, followed by written notification within seven (7) days.

Once stage conditions have been activated, the Dam Owner/Operator/EAP Coordinator/Assignee will continue to provide the EAP Coordinator with information concerning water level rise, erosion in the emergency spillway, and/or dam overtopping, as provided by the dam/spillway/staff gauge observer. It is particularly important for the EAP Coordinator to know when a breach is occurring to evacuate their rescue personnel. During stage 3 conditions, the staff gauge observer will remain at the dam until released from duty by the EAP Coordinator or Assignee.

7.3 Responsibility for Evacuation

The dam breach inundation zone is not expected to impact downstream properties, structures, or residents. Therefore, no evacuation is anticipated in the event of a breach of the Bottom Ash and Sediment Pond Dam.

7.4 Responsibility for Termination

Stage conditions can be rescinded when the following events occur:

1) Stage conditions have de-escalated to non-emergency conditions, reference Section 6.6, the EAP Coordinator may terminate or rescind the activation of the EAP.

2) All entities notified of the emergency condition have been communicated with and informed of current non-emergency conditions.

3) Regional flooding may occur prior to an incident at this dam and could continue for long periods of time. The staff gauge observer needs to have plans for staying or returning to the dam as conditions worsen. The termination responsibility should be handled by the EAP Coordinator or Assignee.

7.5 Responsibility for Stage Follow-Up

1) Post-EAP activation event, discussions should be used to determine strengths and weaknesses in the EAP in order to improve the document for future events.

2) The EAP Coordinator or designee should prepare documents recording the activation of the EAP event, reference Appendix C. Per 257.73(a)(3)(v) and 257.105(f)(8) of the CCR Rule, Stage 2 and 3 activation documentation will be posted to the Public CCR website (see Section 2.0).

7.6 EAP Coordinator Responsibility

The EAP coordinator or Assignee will be responsible for EAP-related activities, including (but not limited to) preparing revisions to the EAP, establishing training seminars, and coordinating annual face-to-face EAP exercises between representatives of the owner/operator and City of Chesapeake emergency responders. This person will be the EAP contact if any involved parties have questions about the plan.

7.7 Methods for Notification and Warning

The City of Chesapeake has the authority and responsibility for Mass Notification, Alert and Warning, and Population Protective Actions for all offsite facilities.

During an emergency condition, the EAP Coordinator will communicate timely information about conditions at the dam to the City of Chesapeake Emergency Management Coordinator, who will initiate their own emergency notifications and action.

8.0 PREPAREDNESS

This section is intended to clearly outline the responsibilities of parties involved in all EAP procedures, including notification, surveillance, classification, evacuation, and termination.

8.1 Surveillance

This dam is unattended under normal operating conditions.

The Chesapeake Energy Center management and staff should monitor the status of weather fronts through the NWS. The NWS maintains a hurricane center that reports on hurricanes, tropical storms & tropical depressions as they travel and affect coastal and inland areas. The web site address is: http://www.nhc.noaa.gov/.

Should a potential event be determined, an operator should be dispatched to observe the dam and elevation during an emergency situation. The observer should never put themselves in harm's way. In the event a hurricane or tropical depression occurs with high winds, the observer shall use extreme caution while monitoring conditions.

Pre-planned access routes should be utilized, given that small streams crossing under state and local roads may flood, preventing safe access. The gauge observers and Dam Safety Region staff should never attempt to cross a road that has flood water crossing it at a depth greater than one-foot unless the vehicle is specially designed for that purpose.

Alternative routes should be chosen for access by foot in the event that a car is unsafe for use. Other alternative means of transportation may be considered.

8.2 Routine Inspections

The Bottom Ash portion of the Dam is inspected every 7 days by the ECC or other qualified person in accordance with the CCR Rule. In addition, annual inspections occur for the Sediment Pond Dam in accordance with the Virginia Impounding Structure Regulations and quarterly inspections are conducted as a best management practice. If any findings trigger an action level, the EAP will be put into place immediately. Any findings in question will be discussed with a Dominion Power Generation Engineer and a resolution determined by the next inspection. Any maintenance needs will be relayed to the grounds contractor within one calendar week.

8.3 Alternative Systems of Communication

Communications during a major rainfall event may be problematic. Telephone land lines located on the property may be used as the first means of communication. Cellular telephones can be used to supplement the land lines. Unfortunately, telephone lines, like electrical lines, are subject to damage by falling trees, so radio communication during these events is normally required.

8.4 Emergency Supplies

Stockpiling of Materials and Equipment: The location of necessary supplies and materials, such as barricades, sand, sandbags, etc. are either stored onsite or readily available through our emergency response contractors.

Emergency access to supplies and equipment should be planned before any emergency is called. Appendix D lists sources and locations of supplies and equipment that may be required during an emergency along with addresses and telephone numbers of the sources/suppliers.

9.0 INUNDATION ZONE PROPERTY OWNERS AND RESIDENTS

An Inundation Map is presented in Appendix A. There are no downstream property owners that are expected to be impacted as a result of a dam breach.

10.0 CERTIFICATION BY DAM OWNER/OPERATOR

I certify that procedures for implementation of this Emergency Action Plan (EAP) have been developed pursuant to 40 CFR 257.73(a)(3) of the CCR Rule and coordinated with and a copy given to the City of Chesapeake Emergency Management Coordinator serving the areas potentially impacted by the dam. Also, that a copy of this EAP has been filed with the Virginia Department of Emergency Management in Richmond and a copy of the Dam Break Inundation Map has been provided to the City of Chesapeake Emergency Management Coordinator with plat and plan approval authority or zoning responsibilities as designated by the locality for each locality in which the dam break inundation zone resides; that this plan shall be adhered to during the life of the project; and that the information contained herein is current and correct to the best of my knowledge.

(Signature of Dam Owner/Operator)

This Eleventh day of January, 2024

Mohammed Alfayyoumi

Director Power Generation Station II

Virginia Electric and Power Corporation

11.0 CERTIFICATION BY PREPARER

By means of this certification the undersigned Licensed Professional Engineer attests that he/she is familiar with the requirements *of* 40 CFR 257.73(a)(3). This certification also demonstrates that the Plan is prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of *40 CFR §257.73*; that procedures for required inspections and testing have been established; and the Plan is adequate for the Site.

This certification in no way relieves the owner or operator of a facility/Site of his duty to prepare and fully implement the Plan in accordance with the requirements of *40 CFR §257.73.*

(Signature of Preparer)

This 10th day of January, 2024

Printed Name: Donald Mayer, P.E.

Title: Vice President

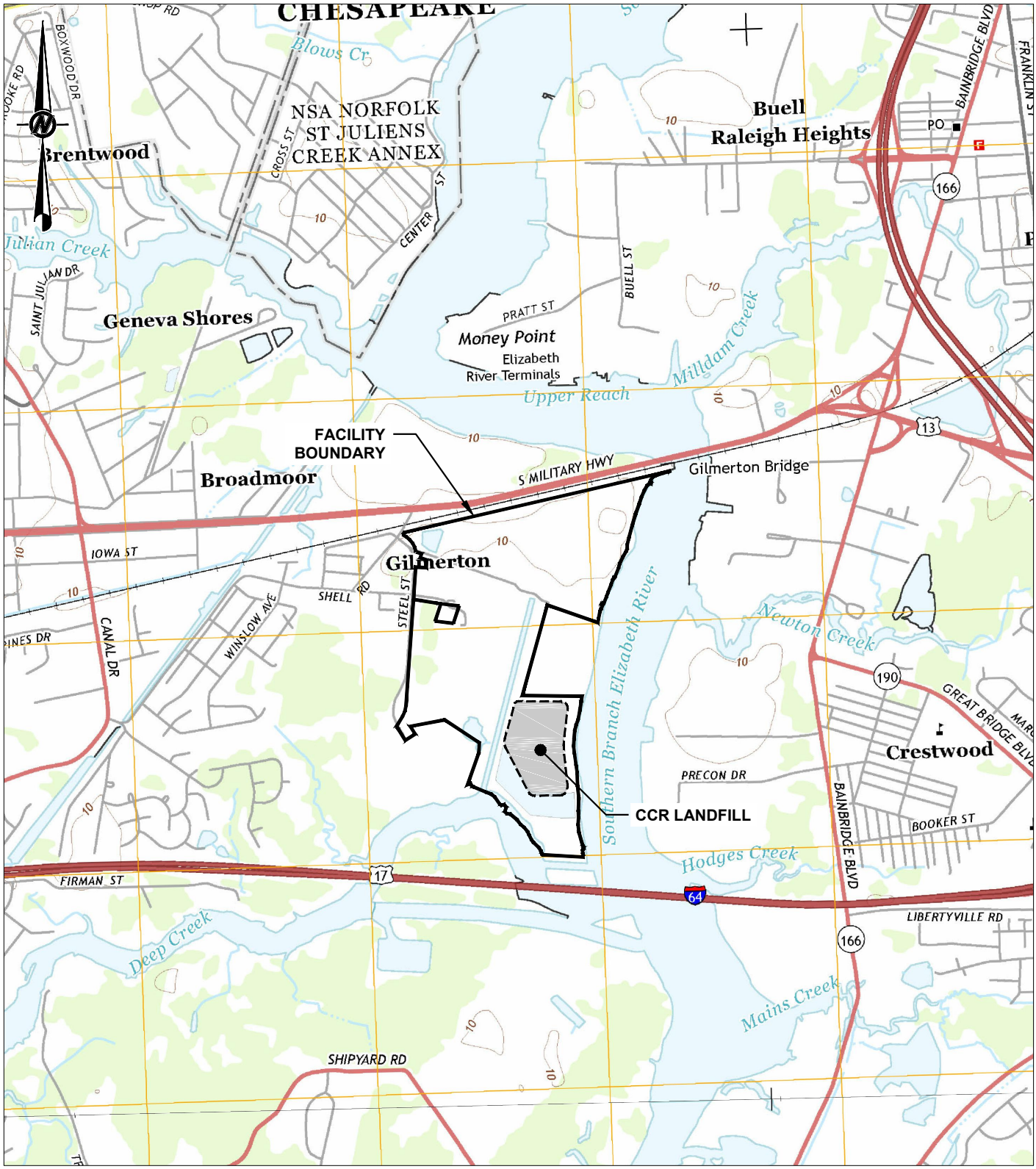
Address: 1100 Boulders Parkway, Suite 503

Richmond, VA 23225

Telephone: 804-521-1782

APPENDIX A

Vicinity Map, Emergency Operations Center Map, and Inundation Map



REFERENCE

BASE MAP CONSISTS OF USGS 7.5 MINUTE QUADRANGLES NAMED NORFOLK SOUTH AND DEEP CREEK, VIRGINIA, DATED 2013.

2000 0 2000

SCALE FEET

CLIENT
DOMINION ENERGY

PROJECT
CHESAPEAKE ENERGY CENTER
CHESAPEAKE, VIRGINIA

CONSULTANT
GOLDER

YYYY-MM-DD	2018-06-24
DESIGNED	-
PREPARED	BPG
REVIEWED	
APPROVED	

TITLE
SITE LOCATION MAP

PROJECT NO. 17-8975418 | REV. 0 | ATTACHMENT

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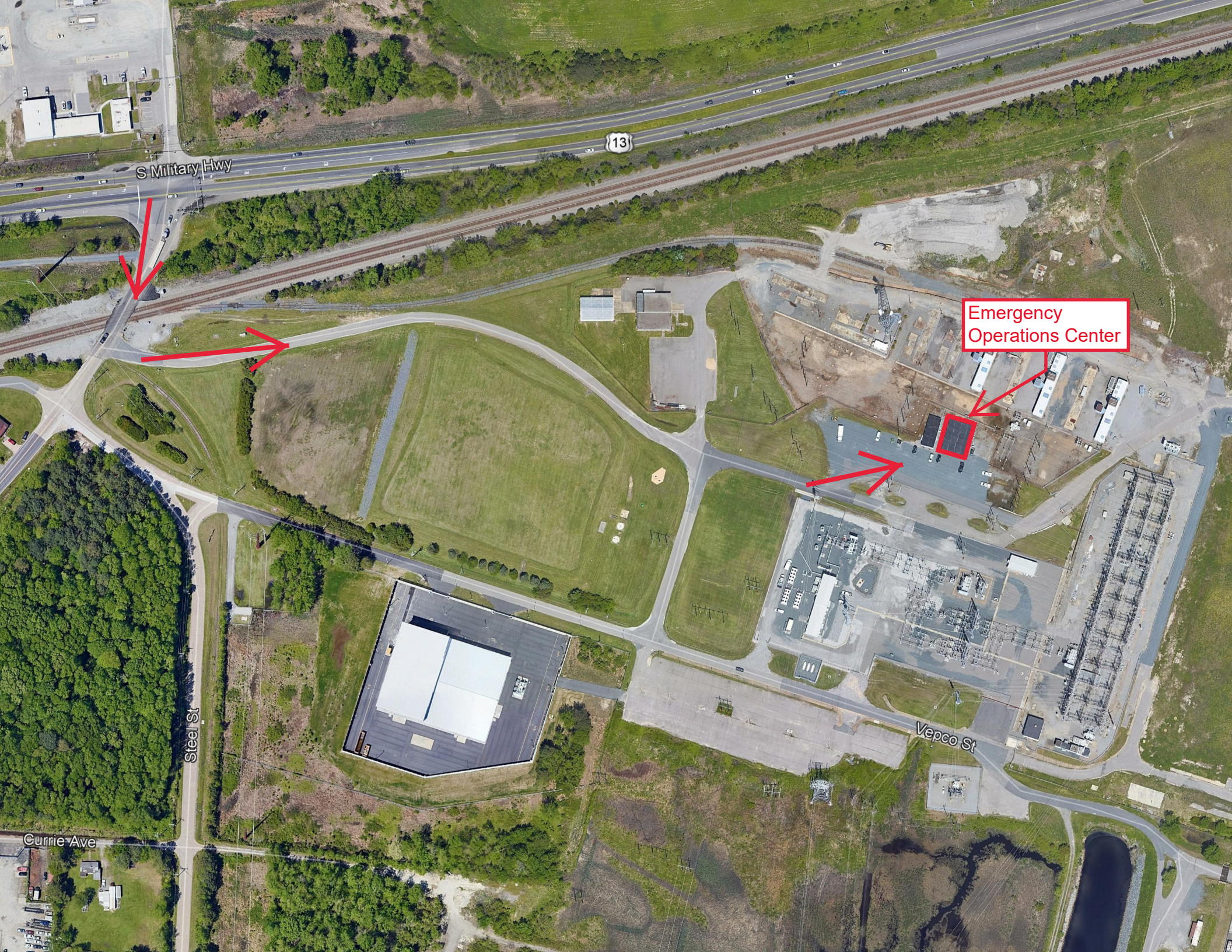
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Emergency Operations Center
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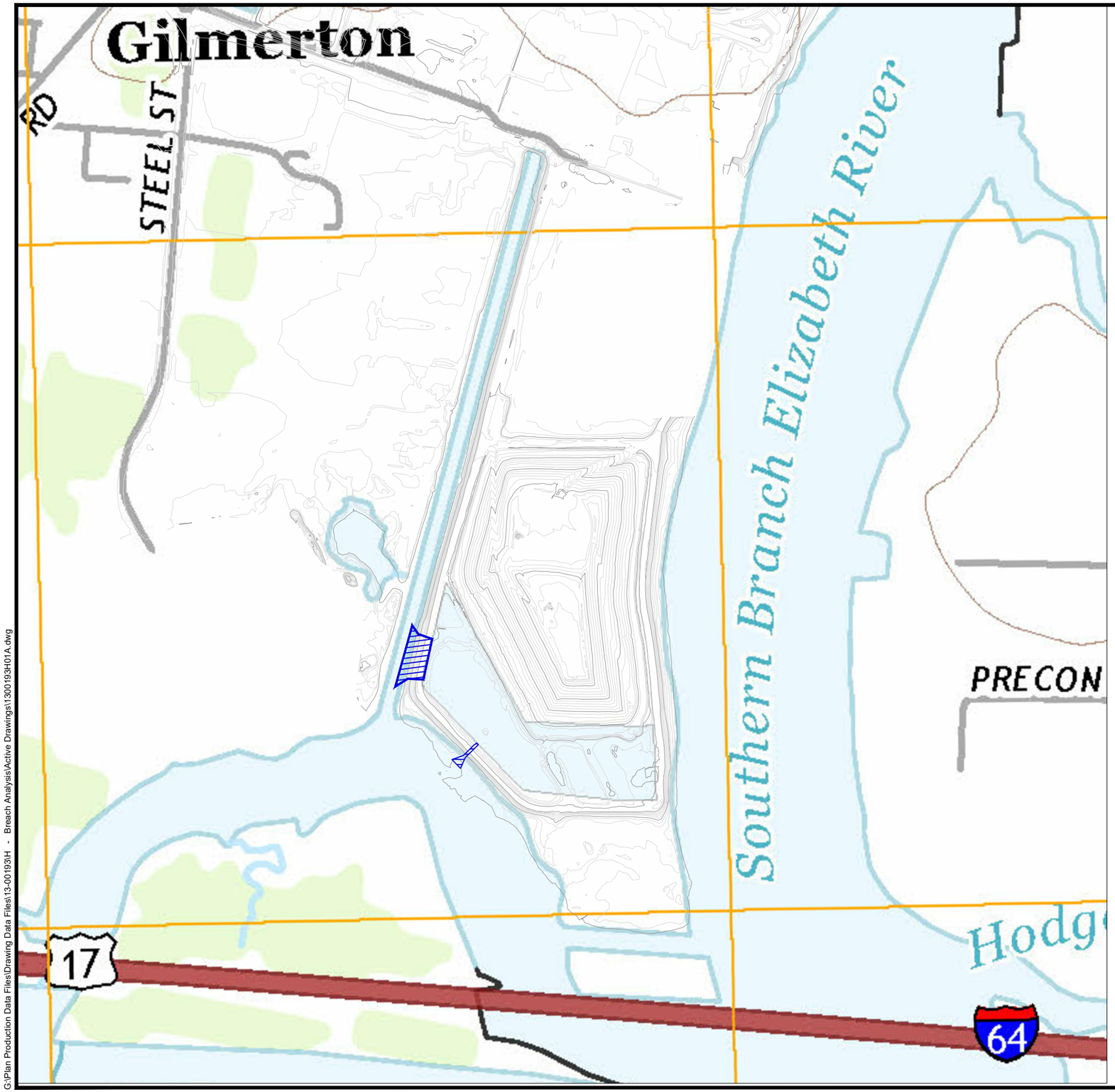

LEGEND

- AREA SUBJECT TO FLOOD FLOW AND VELOCITY
- EXISTING TOPOGRAPHIC CONTOUR (10' INTERVAL)
- EXISTING TOPOGRAPHIC CONTOUR (2' INTERVAL)

NOTES

1. MAPPING OF FLOODED AREAS AND FLOOD WAVE TRAVEL TIMES ARE APPROXIMATE. TIMING AND EXTENT OF ACTUAL INUNDATION MAY DIFFER FROM INFORMATION PRESENTED ON THIS MAP.
2. BASE MAP CONSISTS OF USGS QUADRANGLE - NORFOLK SOUTH, DATED 2013.

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SCALE FEET

GOLDER

PROJECT
DOMINION
CHESAPEAKE ENERGY CENTER
ASH POND DCR INVENTORY #550002
CITY OF CHESAPEAKE, VIRGINIA

TITLE
BOTTOM ASH AND SEDIMENT POND ALL BREACH FLOW EVENTS

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CADD	KAL	06/12/19
CHECK		
REVIEW		

FIG 5

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APPENDIX B

Analyses of Impounding Structure Failure Floods

APPENDIX B
Analyses of Impounding Structure Failure Flood

The structure failure flood for Chesapeake Energy Center Bottom Ash and Sediment Pond Dam is 80% of the Probable Maximum Flood event. A hydraulic modeling analysis is presented in the Initial Hazard Potential Classification Assessment, prepared by Golder Associates, Inc., dated April 2018.

APPENDIX C

Plans for Training, Exercising, Updating, and Posting the Emergency Action Plan; Revision Sheet; and Supplemental Documents

APPENDIX C
Plans for Training, Exercising, Updating, and Posting the Emergency Action Plan

1. Training

Emergency action planning, generally, will be held once a year for responsible staff personnel.

2. Exercises

a. Table Top Exercises - Table top exercises will be held annually. This exercise will occur in the year that certification is required.

b. Drills - A drill will be conducted each year by the owner at the time of the Tabletop Exercise.

c. Annual drills will be conducted to verify lines of communication, phone numbers, personnel roles, and responsibilities. All parties on the Stage 2/3 notification flowchart are invited and encouraged to attend; however attendance from station personnel is mandatory. Record the invitation of the drill to emergency response representatives and the drill attendance and details in the Training Record.

3. Updating

This EAP will be checked yearly during the drill exercise to determine if names, addresses, and telephone numbers of the people shown in Section 1 are accurate. The document will be updated at any time when a major change is determined to have occurred and noted in the plan's revision log.

If an annual review of the EAP indicates that no amendments are necessary, a note shall be placed in the revision log noting that no changes were made during the annual review.

4. Posting

This document will be on file with:

- Dominion Energy (Dam Owner)
- City of Chesapeake Emergency Management Coordinator
- VA Department of Conservation and Recreation (DCR), Division of Dam Safety
- VA Department of Emergency Management

EAP
Chesapeake Energy Center Bottom Ash and Sediment Pond Dam, Inventory #550002
Training Record

Training Date	Training Type	Results
11/07/2018	Annual Tabletop	Updated EAP, distributed EAP to agencies
11/18/2019	Annual Tabletop	Updated EAP, distributed EAP to agencies
10/30/2020	Annual Tabletop	Updated EAP, distributed EAP to agencies
10/18/2021	Annual Tabletop	Updated EAP, distributed EAP to agencies
10/20/2022	Annual Tabletop	Updated EAP, distributed EAP to agencies
10/24/2023	Annual Tabletop	Updated EAP, distributed EAP to agencies

EAP
Chesapeake Energy Center Bottom Ash and Sediment Pond Dam, Inventory #550002
Revision Record

Revision No.	Date Entered	Changed By	Description of Change
Original	October 2018	Golder Associates	Annual Update
1	December 2019	Golder Associates	Annual Update
2	November 2020	Golder Associates	Annual Update
3	October 2021	Golder Associates	Annual Update
4	December 2022	WSP Golder	Annual Update
5	January 2024	WSP USA, Inc.	Annual Update
6			
7			
8			
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15			

Chesapeake Energy Center - Emergency Action Plan
Notification Log

Contact Name/Agency	Phone Number	Person Notified	Time Notified
Refer to Notification Process in the Emergency Action Plan			
Stage 1 Notifications			
(EAP Coordinator) Jessica Kelly/Dominion Energy	757-778-7337 (mobile)		
(Dam Operator) Warren Deal/Dominion Energy	804-400-8965 (mobile)		
(Dam Operator) Mohammed Alfayyoumi/Dominion Energy	804-380-1066 (mobile)		
(Dam Operator) Michael Glagola/Dominion Energy	804-217-1507 (mobile)		
(Dam Engineer) Shaikh Rahman/Dominion Energy	804-387-8263 (mobile)		
TransCanada Local Personnel (Control Room)	757-799-4215		
Duane Michael/TransCanada Emergency Preparedness	304-712-8470		
Stage 2 Notifications			
(EAP Coordinator) Jessica Kelly/Dominion Energy	757-778-7337 (mobile)		
(Dam Operator) Warren Deal/Dominion Energy	804-400-8965 (mobile)		
(Dam Operator) Mohammed Alfayyoumi/Dominion Energy	804-380-1066 (mobile)		
(Dam Operator) Michael Glagola/Dominion Energy	804-217-1507 (mobile)		
(Dam Engineer) Shaikh Rahman/Dominion Energy	804-387-8263 (mobile)		
TransCanada Local Personnel (Control Room)	757-799-4215		
Duane Michael/TransCanada Emergency Preparedness	304-712-8470		
Virginia DCR Dam Safety Region 3 Regional Engineer	804-229-2610		
City of Chesapeake Emergency Management Coordinator	757-382-1778 (Business) 757-382-6161 (24-Hour)		
City of Chesapeake Uniform Fire and Rescue	911		
Virginia Emergency Operations Center	804-674-2400 800-468-8892 (24hr)		
Chief Regional Coordinator	804-495-6122		
EPA National Response Center	800-424-8802		
Environmental & Sustainability Incident Reporting/Dominion Energy	804-389-9242		
Virginia Department of Environmental Quality	757-681-8535 (24hr) 800-468-8892 (24hr)		
Coast Guard	757-615-6661		
Stage 3 Notifications			
(EAP Coordinator) Jessica Kelly/Dominion Energy	757-778-7337 (mobile)		
(Dam Operator) Warren Deal/Dominion Energy	804-400-8965 (mobile)		
(Dam Operator) Mohammed Alfayyoumi/Dominion Energy	804-380-1066 (mobile)		
(Dam Operator) Michael Glagola/Dominion Energy	804-217-1507 (mobile)		
(Dam Engineer) Shaikh Rahman/Dominion Energy	804-387-8263 (mobile)		
TransCanada Local Personnel (Control Room)	757-799-4215		
Duane Michael/TransCanada Emergency Preparedness	304-712-8470		
Virginia DCR Dam Safety Region 3 Regional Engineer	804-229-2610		
City of Chesapeake Emergency Management Coordinator	757-382-1778 (Business)		
City of Chesapeake Uniform Fire and Rescue	911		
Virginia Emergency Operations Center	804-674-2400 800-468-8892 (24hr)		
Chief Regional Coordinator	804-495-6122		
EPA National Response Center	800-424-8802		
Environmental & Sustainability Incident Reporting/Dominion Energy	804-389-9242		
Virginia Department of Environmental Quality	757-407-2516 757-681-8535 (24hr) 800-468-8892 (24hr)		
Coast Guard	757-615-6661		
In-House Counsel Clay Burns/Dominion Energy	804-310-3472		

CHESAPEAKE ENERGY CENTER EMERGENCY ACTION PLAN

ACTION LOG

Impoundment Name:	**Inspected By:**
Date of Inspection:	**EAP Coordinator:**

WEATHER CONDITIONS:

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One Action Log Per Event	Time of Stage Implementation	Time of Stage Termination
Stage 1 Condition: (Observation Required every 8 hours)		
Stage 2 Condition: (Observation Required every 2 hours)		
Stage 3 Condition: (Continuous observation required)		

Time	Observer Name	Observations/Condition of Dam/Description of Concern/Failure *Note adverse conditions/inability to observe

ACTION LOG

Time	Observer Name	Observations/Condition of Dam/Description of Concern/Failure *Note adverse conditions/inability to observe

General Comments/Event De-Brief Notes:

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APPENDIX D

Additional Resources

APPENDIX D
Additional Resources

Directory of Additional Personnel with Dam Safety Expertise

In addition to personnel shown elsewhere in this plan, the following list identifies other individuals with expertise in dam safety, design, and construction that may be consulted about taking specific actions at the dam when there is an emergency situation:

Name	Telephone	Responsibility
DCR, Division of Dam Safety	804-229-2610	Dam Safety Regional Engineer
WSP USA, Inc. Donald Mayer, P.E.	804-521-1782 (office) 804-301-5244 (cell)	Consulting Design Engineer

Supplies and Resources

Equipment Available	Location	Phone Number
Sand/Sand Bags	Thrasher Sand Company 904 Kempsville Road Chesapeake, VA 23320	757-547-3900
Rock/Gravel	Luck Stone Corp. 4608 Bainbridge Blvd. Chesapeake, VA 23320	757-213-7750
Pumps/Generators/Lights	Godwin Pumps of America, Inc. 1190 Harmony Rd. Norfolk, VA 23502	757-490-1300
	United Rentals 4333 Bainbridge Boulevard Chesapeake, VA 23324	757-543-5723
Heavy Equipment	H&E Equipment Services 3601 Koppens Way Chesapeake, VA 23323	757-295-4944 757-374-8919
	United Rentals 4333 Bainbridge Boulevard Chesapeake, VA 23324	757-543-5723

Personnel Resources/Labor

Company	Contact	Phone Number
Dominion Elizabeth River Power Station	Control Room and Maintenance Operator	757-558-5415/5416
Ryan Construction, Inc.	Ryan Nelms	757-328-7956

wsp.com