



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### VALLEY REGIONAL OFFICE

P.O. Box 3000, Harrisonburg, Virginia 22801

(540) 574-7800 Fax (540) 574-7878

located at 4411 Early Road, Harrisonburg, VA

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Molly Joseph Ward.  
Secretary of Natural Resources

David K. Paylor  
Director

Amy Thatcher Owens  
Regional Director

July 20, 2017

By Email ([jason.e.williams@dom.com](mailto:jason.e.williams@dom.com))

Mr. Jason E. Williams  
Manager, Generation Environmental Services  
Dominion Resources Services, Inc.  
5000 Dominion Boulevard  
Glen Allen, Virginia 23060

Re: Notice of Planned Change – East Ash Pond Excavation Stormwater Management Phasing Plan  
July 2017 (Rev. 4)  
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0004138  
Dominion – Bremono Power Station

Dear Mr. Williams:

We are in receipt of the Notice of Planned Change for the Dominion – Bremono Power Station received under cover letter dated July 18, 2017, regarding stormwater management during the removal and relocation of the coal combustion residuals from the East Ash Pond to the North Ash Pond. The Virginia Department of Environmental Quality has reviewed Dominion's submittal and does not consider the placement of ash from the East Ash Pond into the North Ash Pond to conflict with the facility's aforementioned VPDES permit. Also, DEQ does not object to the stormwater management phasing plan described in the Notice of Planned Change and does not believe a modification of VPDES Permit No. VA0004138 is necessary.

While the consolidation of materials on site does not conflict with the VPDES permit, this correspondence does not constitute approval of the closure plans for the facility and Dominion should consider any possible implications of this placement as it relates to future planning for solid waste management purposes.

If you have questions about this notification, please contact me at (540) 574-7892 or [brandon.kiracofe@deq.virginia.gov](mailto:brandon.kiracofe@deq.virginia.gov).

Sincerely,

A handwritten signature in purple ink that reads "Brandon D. Kiracofe".

Brandon D. Kiracofe  
Regional Water Permits & Compliance Manager

cc: Ken Roller ([kenneth.roller@dom.com](mailto:kenneth.roller@dom.com))  
Taylor L. Engen ([taylor.l.engen@dom.com](mailto:taylor.l.engen@dom.com))  
Correspondence File



**Overnight Mail**  
**Return Receipt Requested**

July 18, 2017

Ms. Beverley Carver  
Senior Water Permit Writer  
Virginia Department of Environmental Quality  
Valley Regional Office  
4411 Early Road, Harrisonburg, VA 22801

DEQ VALLEY

JUL 19 2017

To: \_\_\_\_\_

Date: \_\_\_\_\_

**RE: Dominion Bremo Power Station VPDES Permit No. VA0004138:**  
**Revised Notice of Planned Change**

Dear Ms. Carver,

Enclosed is Revision 4 to the Notice of Planned Change (NPC) concerning the East Ash Pond Stormwater Management Phasing Plan that was transmitted to you by cover letter dated December 15, 2016. Revision 3 of the NPC, submitted February 15, 2017, has been revised as described in the attached summary of changes. These changes were discussed with you and Mr. Kiracofe during a phone call with Dominion Energy Environmental personnel yesterday.

Dominion Energy is submitting this revised Notice of Planned Change in accordance with Part II.J of the subject permit and requests DEQ concurrence with the *East Ash Pond Stormwater Management Phasing Plan*. We understand that regulatory authorizations beyond DEQ's concurrence may be needed and we will obtain all such authorizations as required to carry out this project.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact Ken Roller at (804) 273-3494 should you have any questions related to this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason E. Williams", written over a horizontal line.

Jason E. Williams  
Manager, Generation Environmental Services

cc: Brandon Kiracofe: [brandon.kiracofe@deq.virginia.gov](mailto:brandon.kiracofe@deq.virginia.gov)  
Beverley Carver: [beverley.carver@deq.virginia.gov](mailto:beverley.carver@deq.virginia.gov)



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## SUMMARY OF CHANGES EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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The following changes have been made to the February, 2017 (Rev. 3) VPDES Permit Notice of Planned Changes for the East Ash Pond Stormwater Management Phasing Plan now dated July, 2017:

- Non-contact water from areas other than the EAP (i.e., non-contact diversions) were included in non-contact water pumped to permitted outfalls and the existing Stormwater Management Pond.
- Outfall 008 (i.e., Outfall 003 to reopen as Outfall 008 post CCR removal) was added to the list of outfalls to which non-contact water can be pumped.
- A date, July, 2017, and revision number, 4, was added to the footer of the narrative.
- Throughout the narrative, the downstream outlet structure of Outfall 003, and Outfalls 006 and 008 (Outfall 003 to reopen as Outfall 008 post CCR removal), or the existing Stormwater Management Pond were identified as permitted outfalls to which non-contact water can be pumped (as an alternative to pumping non-contact stormwater to just the existing Stormwater Management Pond).
- The upstream invert of Outfall 003 (i.e., the invert within the stop-log tower structure) has been specified as the part of the outfall that will be sealed to prohibit contact stormwater discharges during Phase 3 excavation activities. A statement was added to Phase 3 specifying that the downstream outlet structure of Outfall 003 (i.e., the pipe weir box) may be used for pumped non-contact stormwater during Phase 3 excavation activities.
- A statement was added that the sealing of the upstream invert of Outfall 003 will be separate from the retirement of Outfall 003, and that the DEQ will be notified in writing within seven days after sealing the invert.
- A statement was added to Phase 3 that allows for Phase 3 to be excavated in conjunction with Phases 1 and 2.
- A statement was added to Phase 5 specifying the 24" culvert will be removed prior to the completion of Phase 5.
- A statement was added to Phase 5 specifying that the excavation shall follow the suggested phasing, but the phases can be completed in any order, concurrently, and/or in smaller phases to aid in stormwater management.

The following changes have been made to the February 2017 (Rev. 2) Stormwater Management Phasing Plan figures with revisions dated July, 2017:

- Figure 2, Existing Conditions has been revised as Figure 2A and the label for the 24" culvert was revised to only reflect that the pipe exists (i.e., reference to its future status removed).
- A figure for Interim Pond Grading, Figure 2B, was added to depict the concurrent interim grading of Phases 1 through 5.
- Note 7 on Figure 3 was revised to specify the 24" culvert will be removed prior to the completion of Phase 5.
- The revision block was updated on Figures that were changed.

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## EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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The East Ash Pond Stormwater Management Phasing Plan was created for stormwater management during the removal and relocation to the North Ash Pond (NAP) of the Coal Combustion Residuals (CCR) from the East Ash Pond (EAP) at the Bremono Power Station. This plan is for the interim condition between the existing conditions and the establishment of the East Stormwater Management Pond. The plan was designed with the following objectives:

- Close the EAP through removal of the CCR and repurpose the area as a stormwater management basin;
- Phase CCR removal activities to maintain separation of the CCR contact water and non-contact water throughout the period of CCR removal from the EAP through the use of separation berms and temporary lined areas (e.g., geomembrane rain cover material);
- Manage CCR contact water within the EAP during construction;
- Pump CCR contact water from areas of the EAP to the Centralized Source Water Treatment System (CSWTS) for treatment;
- Pump non-contact water to established permitted Outfalls 003, 006, 008 (Outfall 003 to reopen as Outfall 008 post CCR removal), and the existing stormwater management pond as appropriate;
- Maintain existing Outfall 003 as a non-contact stormwater discharge point until its retirement in the phased plan, and;
- Dismantle and refurbish existing Outfall 003 to become the newly established non-contact stormwater discharge point of Outfall 008.

Closure of the East Ash Pond will involve the sequential construction of non-contact stormwater management areas, which will be generated in each phase by removal of CCR from sections of the pond and certifying the remaining soil subgrade as "clean closed." The removal protocol will involve removing accumulated CCR such that no residual materials remain visible, followed by over-excavating the removal footprints by approximately 6 inches. Certification of the clean closure will be provided by a registered Professional Engineer.

The following sections provide a narrative description of the phased CCR removal activities and how stormwater (CCR contact and non-contact water) will be managed. The attached series of figures support this narrative description and represent the conceptual construction excavation and stormwater management plans to be implemented.

### Figure 1 - East Ash Pond Excavation Stormwater Management Phasing Plan

Figure 1 depicts an overview of the EAP locations associated with the 5 phases of CCR removal and stormwater management. Phase 1 begins in the southwest corner of the EAP with subsequent phases moving counterclockwise until Phase 5 is complete. Existing non-contact stormwater Outfalls 003 and 006 are depicted on this figure along the southern Dominion property line.

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## EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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### Figure 2A - Existing Conditions

Figure 2A depicts the six existing drainage areas that will be affected by the phased project, stormwater flow directions, and stormwater type (i.e., CCR contact versus non-contact) for each area based on the existing field conditions pre-construction. As outlined in the figure, stormwater flows from each drainage area as follows:

- Areas A and B drain to the existing Stormwater Management Pond
- Area C infiltrates
- Area D drains to the existing stone arched culvert beneath the railroad tracks
- Area E discharges through Outfall 003
- Area F is pumped to the CSWTS

Outfall 004 will be retired, and the DEQ-Valley Regional Office will be notified within seven days of its retirement in accordance with part I.G.20 of the Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0004138.

### Figure 2B – Interim Pond Grading

Figure 2B depicts the concurrent interim grading of Phases 1 through 5. This interim grading plan is designed to aid in the removal of the bulk CCR material and contact water while maintaining the maximum flood protection during excavation.

### Figure 3 - Phase 1 and Phase 2

Figure 3 depicts the result of alternating CCR excavation between Phases 1 and 2 until both phases are complete. An existing non-CCR soil splitter dike will separate the Phase 1 and Phase 2 locations after CCR excavation, and each phase area will be separated into CCR contact and non-contact stormwater management areas by the construction of additional berms using clean fill material. The CCR contact stormwater will be pumped to the CSWTS for treatment prior to discharge through Outfall 504. The non-contact stormwater drainage areas will be temporarily lined, and the collected stormwater will be pumped to Outfall 006, Outfall 003, or the existing Stormwater Management Pond. Stormwater may also be pumped from one temporary lined area to another for management purposes.

Prior to the initiation of CCR excavation activities, a haul road will be constructed connecting the NAP and the EAP. The road will be graded to divert stormwater that contacts the road to a designated contact stormwater management area located in Area B2. The contact stormwater will then be pumped to the CSWTS.

Non-contact stormwater will continue to drain from the existing non-contact drainage areas containing the Stump Pond and adjacent to the connecting NAP and EAP haul road (Areas A and B1, respectively)

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## EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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to the Stormwater Management Pond or alternatively pumped to the downstream outlet structure of Outfall 003, Outfall 006, or Outfall 008 (Outfall 003 to reopen as Outfall 008 post CCR removal).

The NAP toe drain water will continue to drain into Area B2 and ultimately discharge into the contact stormwater management area and be pumped to the CSWTS.

Non-contact stormwater from Area E will continue to drain into the existing non-contact Outfall 003.

### Figure 4 - Phase 3

Figure 4 depicts the result of the CCR excavation in the Phase 3 area. Prior to the Phase 3 CCR excavation, the upstream invert of Outfall 003 (i.e., the invert within the stop-log tower structure) will be sealed to prohibit contact stormwater discharges during the Phase 3 CCR excavation activities. Concurrently, the downstream outlet structure of Outfall 003 (i.e., the pipe weir box) may be used for non-contact stormwater discharges, such as those generated from non-contact water flow diversions (e.g., natural springs entering the Phase 3 area), during the Phase 3 CCR excavation activities. The sealing off of the invert within the stop-log tower structure will not constitute retirement of Outfall 003; however, the DEQ-Valley Regional Office will be notified in writing within seven days after completion of this activity. CCR contact stormwater during excavation will be pumped to the CSWTS for treatment prior to discharge through Outfall 504.

After CCR removal, the newly created non-contact drainage area will be temporarily lined, and the stormwater will be pumped to Outfall 006, 008 (Outfall 003 to reopen as Outfall 008 post CCR removal), or the existing Stormwater Management Pond. The DEQ-Valley Regional Office will be notified in writing of Outfall 003's retirement within seven days of its retirement, in accordance with part I.G.20 of the VPDES Permit No. VA0004138. Stormwater may also be pumped from one temporary lined area to another for management purposes. The road's CCR contact stormwater will continue to drain into a CCR contact stormwater management area created during Phase 1. Non-contact stormwater will continue to drain through the existing non-contact drainage areas A and B1 or alternatively pumped to the downstream outlet structure of Outfall 003, Outfall 006, Outfall 008 (Outfall 003 to reopen as Outfall 008 post CCR removal), or the existing Stormwater Management Pond.

The NAP toe drain water will continue to drain into the contact stormwater management area (Area B2) and ultimately be pumped to the CSWTS.

Phase 3 may be excavated in conjunction with Phases 1 and 2.

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## EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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### Figure 5 - Phase 4

Figure 5 depicts the CCR removal in the Phase 4 area as well as the toe excavation of the NAP. Soil excavated from the NAP toe will be used to shape the final side slopes of the non-contact drainage area created in Phase 1. During excavation activities, CCR contact stormwater will be pumped to the CSWTS to be treated prior to discharge through Outfall 504. After the excavation and CCR removal, the former CCR contact stormwater management areas created by Phases 2 and 3 will be expanded by Phase 4 and become a non-contact drainage area. The northwestern corner will use the existing soil splitter dike as the drainage divide between the CCR contact stormwater management area created by Phase 1 and the non-contact drainage areas to the east of the splitter dike. Stormwater in the non-contact drainage areas may be pumped to Outfall 006, 008, or the existing Stormwater Management Pond. Stormwater may also be pumped from one temporary lined area to another for management purposes. The road's CCR contact stormwater will continue to drain into a CCR contact stormwater management area created during Phase 1.

Non-contact stormwater will continue to drain through the existing drainage areas A and B1.

The NAP toe drain water will cease to drain during excavation of the NAP toe through installation of a series of toe drain wells installed on the NAP embankment. The toe drain water will be pumped to the Stormwater Management Pond or CSWTS for treatment prior to discharge.

Phase 4 excavation may begin during the Phase 3 excavation in preparation of the North Ash Pond Embankment toe excavation.

### Figure 6 - Phase 5

Figure 6 depicts the CCR removal in the Phase 5 area which includes the area known as the Stump Pond. A temporary non-contact water diversion berm will be created prior to the Phase 5 excavation, and the non-contact stormwater from the Stump Pond will be directed to the Stormwater Management Pond, the downstream outlet structure of Outfall 003, Outfall 006, or Outfall 008 (Outfall 003 to reopen as Outfall 008 post CCR removal). Stormwater may also be pumped from one temporary lined area to another for management purposes. The 24" culvert previously used to drain Area A into the Stormwater Management Pond will be removed prior to the completion of Phase 5, as well as the NAP and EAP haul road in part.

During the Phase 5 excavation, clean soil structural fill will be brought in to the NAP embankment to complete the buttress that was excavated as part of Phase 4. Prior to terminating the toe drain well operations used during the Phase 4 excavation, the NAP toe drain system will be reconstructed, and a gravity drain system will be installed to collect the toe drain water.

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## EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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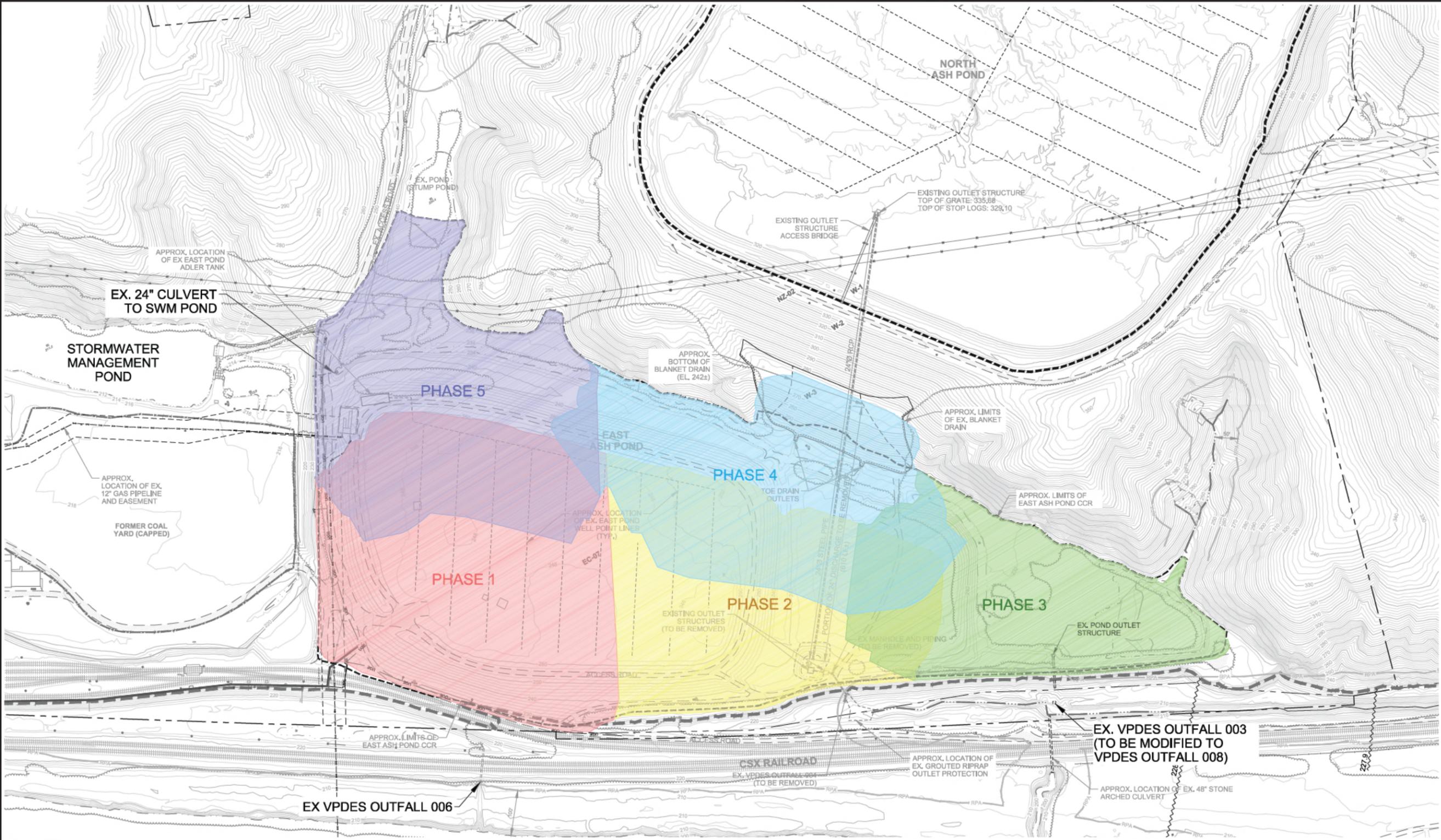
After CCR removal, temporary liners and their interim berms will be removed along with the splitter dike. Those clean soil fill sources will be used to shape the remainder of the EAP area for repurposing as a stormwater management basin.

Phase 5 may be excavated in conjunction with the Phase 4.

The excavation shall generally follow the phasing described above; however, re-ordering, concurrent interim grading, phased closure, and/or sub-phases may be employed to facilitate stormwater management,

### Figure 7 - Final Grading Plan

Figure 7 depicts the final grading plan of the proposed East Stormwater Management Pond. When the final grading plan is achieved, the CCR will have been removed from the EAP, the side slopes will have been reconstructed, and non-contact stormwater will be permitted to fill the area and discharge through the newly established Outfall 008. When Outfall 008 is put into service, the DEQ-Valley Regional Office will be notified in writing within seven days, in accordance with part I.G.20 of the VPDES Permit No. VA0004138. The permanent pool of water retained by the East Stormwater Management Pond will be approximately 15-feet in depth due to the pond being an incised excavation. A permanent safety bench will be provided around the perimeter of the pond, and all areas will be stabilized with vegetation. All stormwater flowing into and from the East Stormwater Management Pond will be post construction non-contact water and will discharge through Outfall 008.



REV	DATE	DIS	BY	CHK	APP
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PROJECT  
**DOMINION  
 BREMO POWER STATION  
 EAST ASH POND EXCAVATION PLAN  
 FLUVANNA COUNTY, VIRGINIA**

TITLE  
**EAST ASH POND  
 EXCAVATION  
 STORMWATER  
 MANAGEMENT  
 PHASING PLAN**

REV	SCALE	AS SHOWN
DESIGN	JRD	11/01/16
CADD	ATN	11/01/16
CHECK	ATN	11/01/16
REVIEW	JRD	11/01/16

**FIGURE 1**

**LEGEND**

---	DOMINION PROPERTY BOUNDARY	---	CREEK/STREAM CENTERLINE
---	ADJACENT PROPERTY BOUNDARY	---	APPROX. EDGE OF SURFACE WATER
---	APPROX. LIMITS OF EX. ASH PONDS	---	WETLANDS
---	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)	---	LIMITS OF RIPARIAN PROTECTION AREA (PER FLUVANNA COUNTY ORDINANCE)
---	EX. PAVED ROAD	---	LIMITS OF 100-YR FLOOD PLAIN
---	EX. UNPAVED ROAD	---	BASE FLOOD ELEVATION
---	EX. RAILROAD	---	EX. GROUNDWATER MONITORING WELL LOCATION AND IDENTIFICATION
---	EX. TREE LINE	---	EX. PIEZOMETER AND IDENTIFICATION
---	EX. FENCE	---	EX. WELL POINT LINES
---	EX. OVERHEAD UTILITY LINE		
---	EX. MANHOLE		

**NOTES**

- GROUNDWATER MONITORING WELLS MW-6, 7, 8, 10, 16, 17, AND 18 TO BE ABANDONED AND REMOVED.



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REV	DATE	DIS	BY	CHK	RW
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2	12/27/16	JRD	JRD	ATN	JRD

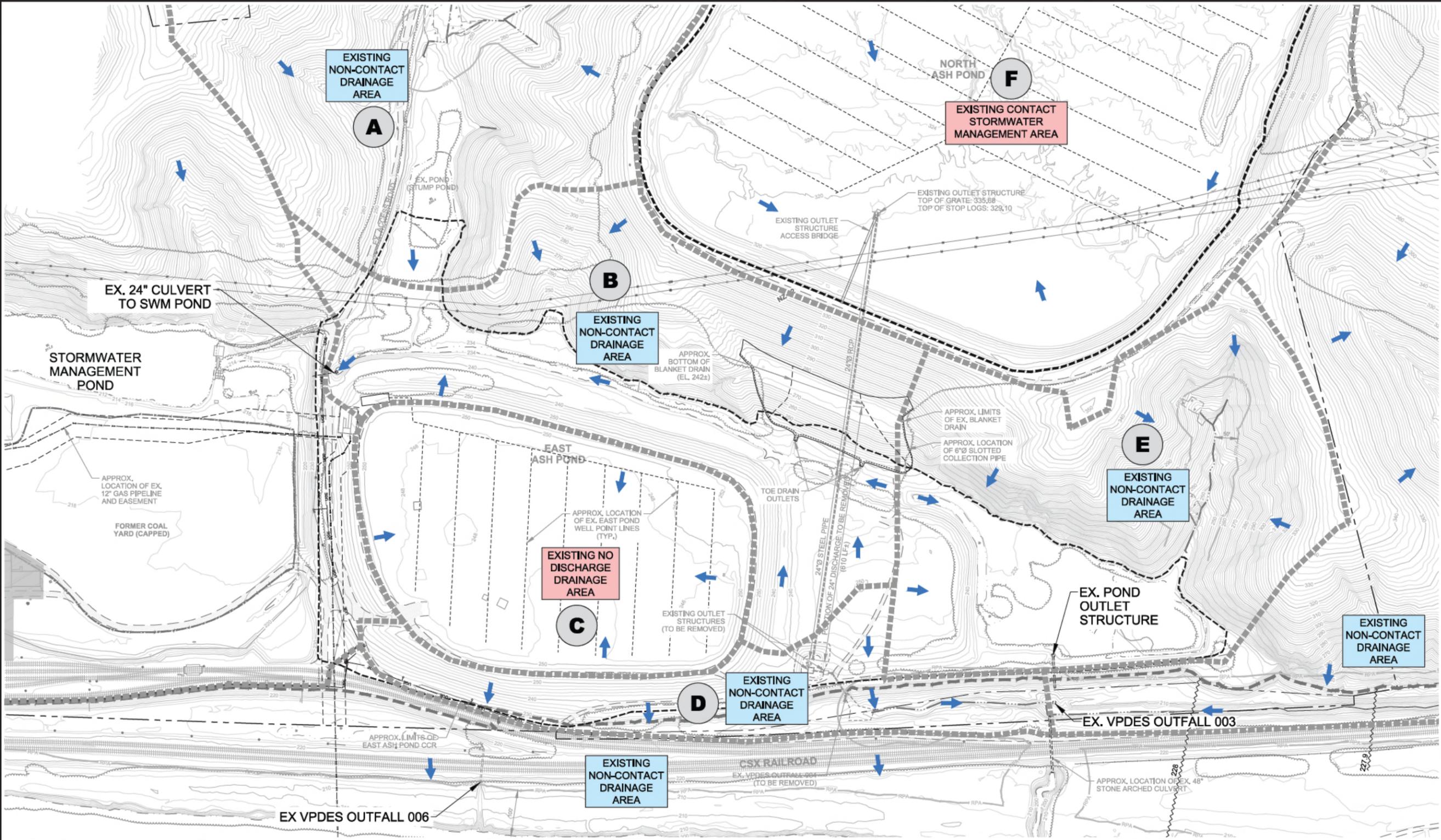
REV	DESCRIPTION
1	REVISED FOR INTERIM CONDITION
2	REVISED PER REG COMMENTS

PROJECT  
**DOMINION POWER STATION  
 BREMO POWER STATION  
 EAST ASH POND EXCAVATION PLAN  
 FLUVANNA COUNTY, VIRGINIA**

TITLE  
**EXISTING CONDITIONS**

PROJECT No.	15-20347
FILE No.	1520347X_DEG1R3
REV. 3	SCALE AS SHOWN
DESIGN	JRD 11/01/16
CADD	ATN 11/01/16
CHECK	ATN 11/01/16
REVIEW	JRD 11/01/16

**FIGURE 2A**



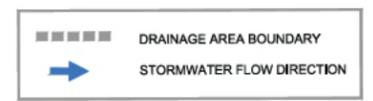
**LEGEND**

	DOMINION PROPERTY BOUNDARY		CREEK/STREAM CENTERLINE
	ADJACENT PROPERTY BOUNDARY		APPROX. EDGE OF SURFACE WATER
	APPROX. LIMITS OF EX. ASH PONDS		WETLANDS
	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)		LIMITS OF RIPARIAN PROTECTION AREA (PER FLUVANNA COUNTY ORDINANCE)
	EX. PAVED ROAD		LIMITS OF 100-YR FLOOD PLAIN
	EX. UNPAVED ROAD		BASE FLOOD ELEVATION
	EX. RAILROAD		MW-6 EX. GROUNDWATER MONITORING WELL LOCATION AND IDENTIFICATION
	EX. TREE LINE		NB-02 EX. PIEZOMETER AND IDENTIFICATION
	EX. FENCE		EX. WELL POINT LINES
	EX. OVERHEAD UTILITY LINE		
	MH EX. MANHOLE		

**NOTES**

- GROUNDWATER MONITORING WELLS MW-6, 7, 8, 10, 16, 17, AND 18 TO BE ABANDONED AND REMOVED.

1. GROUNDWATER MONITORING WELLS MW-6, 7, 8, 10, 16, 17, AND 18 TO BE ABANDONED AND REMOVED.



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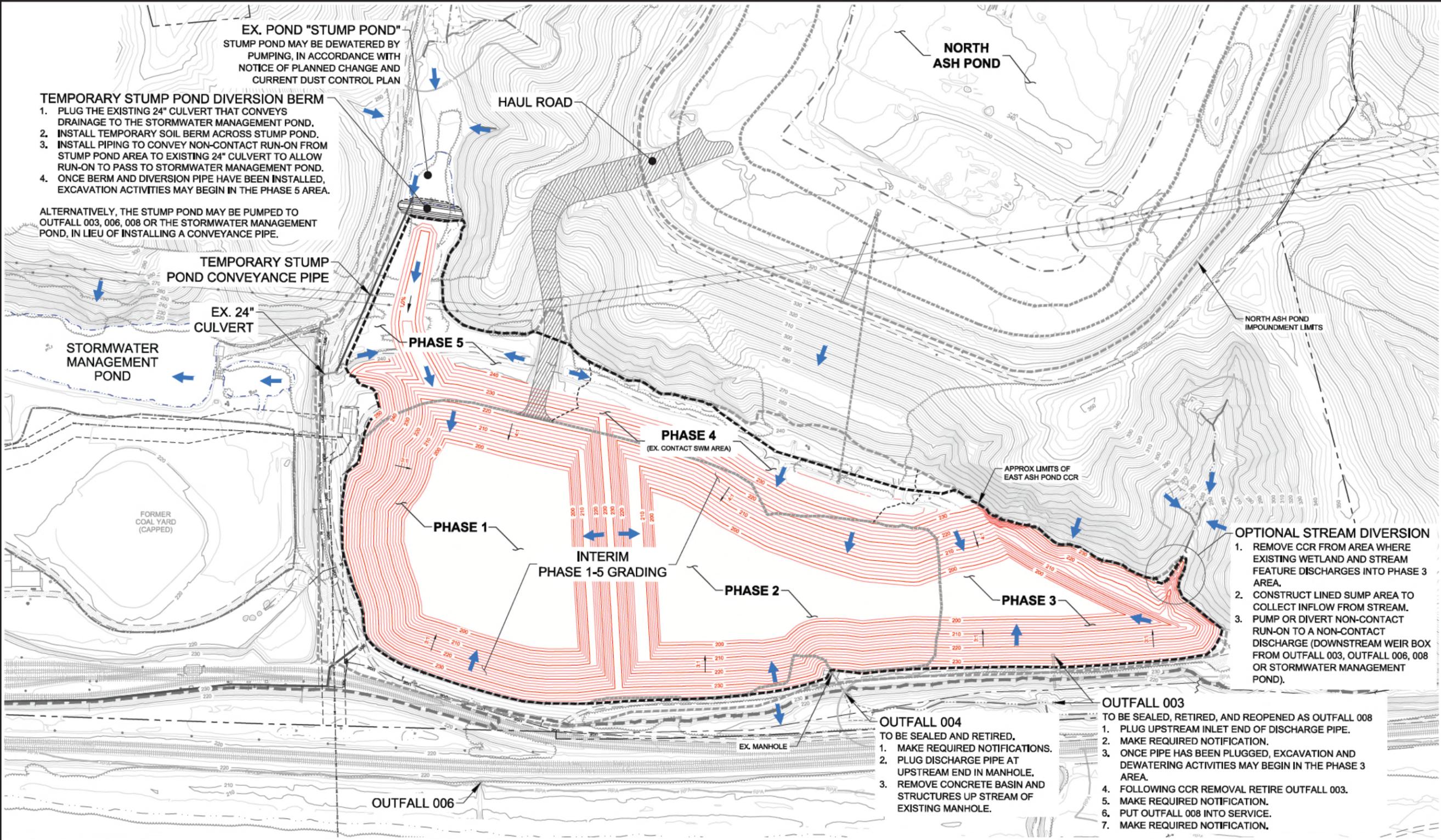
REV	DATE	BY	CHK	DESCRIPTION
1	07/11/17	JRD	ATN	REVISED FOR INTERIM CONDITION
2	12/27/2016	JRD	ATN	REVISED PER REG COMMENTS

PROJECT	TITLE
DOMINION POWER STATION BREMO POND EXCAVATION PLAN EAST ASH POND EXCAVATION PLAN FLUVANNA COUNTY, VIRGINIA	INTERIM POND GRADING

PROJECT	TITLE
DOMINION POWER STATION BREMO POND EXCAVATION PLAN EAST ASH POND EXCAVATION PLAN FLUVANNA COUNTY, VIRGINIA	INTERIM POND GRADING

PROJECT	TITLE
DOMINION POWER STATION BREMO POND EXCAVATION PLAN EAST ASH POND EXCAVATION PLAN FLUVANNA COUNTY, VIRGINIA	INTERIM POND GRADING

FIGURE 2B

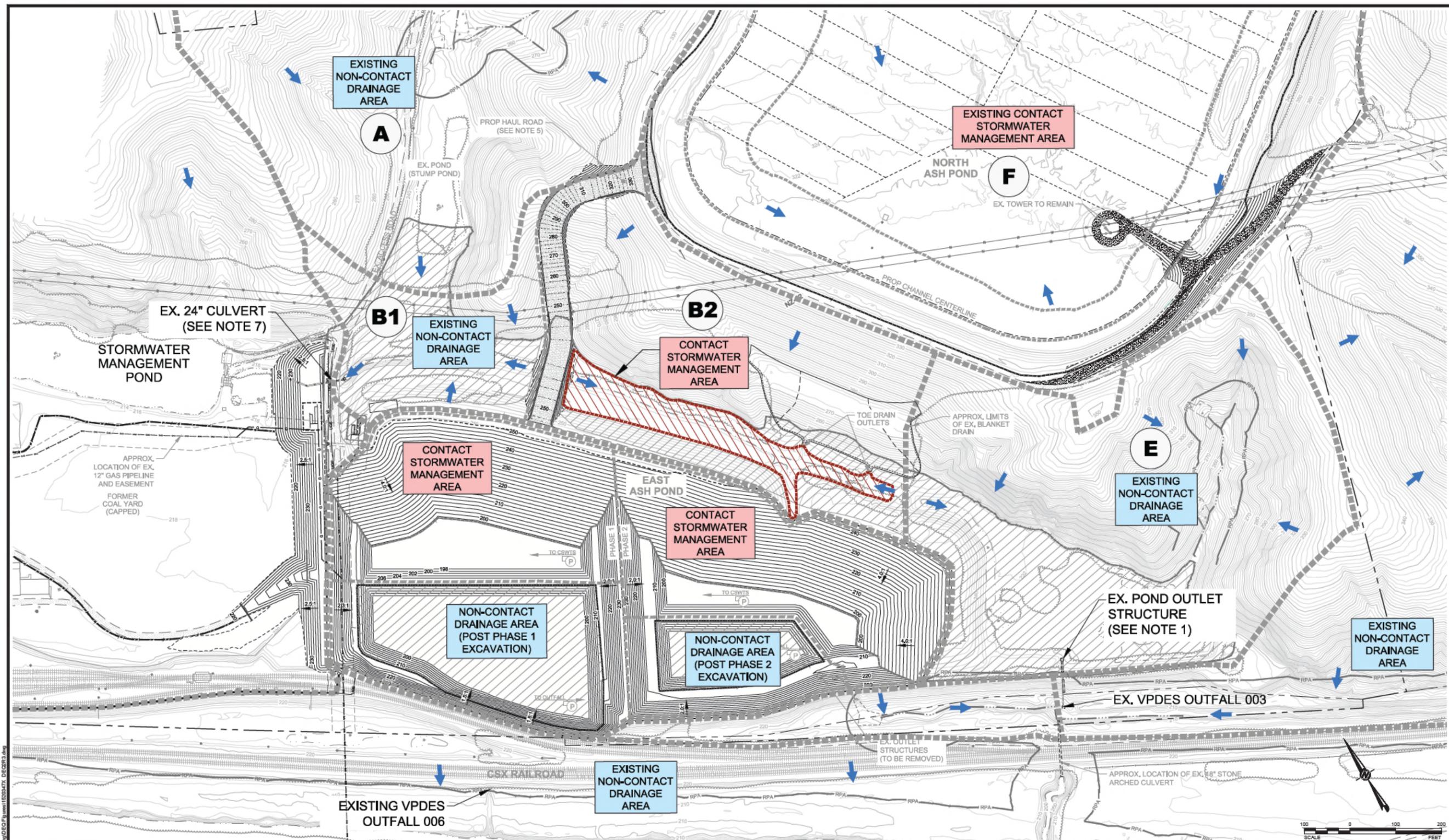


**LEGEND**

	DOMINION PROPERTY BOUNDARY		SURFACE WATER FLOW DIRECTION
	APPROX. LIMITS OF EX. ASH PONDS		PROP. TOPOGRAPHIC CONTOURS (2' INTERVALS)
	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)		LIMITS OF EX. EXCAVATION
	EX. PAVED ROAD		PHASE LIMITS
	EX. UNPAVED ROAD		
	EX. RAILROAD		
	EX. TREE LINE		
	EX. FENCE		
	EX. OVERHEAD UTILITY LINE		
	CREEK/STREAM CENTERLINE		
	APPROX. EDGE OF SURFACE WATER		
	WETLANDS		



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REV	DATE	DIS	CHK	RW	REVISION DESCRIPTION
1	07/17/17	JRD	ATN	JRD	REVISED FOR INTERIM CONDITION
2	02/08/2017	JRD	ATN	JRD	HAUL ROAD CONTACT SWM AREA
3	12/27/2016	JRD	KLL	ATN	REVISED PER REG COMMENTS

PROJECT  
**DOMINION POWER STATION  
 BREMO POND EXCAVATION PLAN  
 EAST ASH POND EXCAVATION PLAN  
 FLUVANNA COUNTY, VIRGINIA**

TITLE  
**EAST ASH POND  
 EXCAVATION PLAN  
 (PHASE 1 & PHASE 2)**

PROJECT No.	15-20347
FILE No.	1520347X_DEG2R3
REV. 3	SCALE AS SHOWN
DESIGN	JRD 11/01/16
CADD	ATN 11/01/16
CHECK	ATN 11/01/16
REVIEW	JRD 11/01/16

**FIGURE 3**

**LEGEND**

-----	DOMINION PROPERTY BOUNDARY	-----	CREEK/STREAM CENTERLINE
-----	ADJACENT PROPERTY BOUNDARY	-----	APPROX. EDGE OF SURFACE WATER
-----	APPROX. LIMITS OF EX. ASH PONDS	-----	WETLANDS
-----	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)	-----	LIMITS OF RIPARIAN PROTECTION AREA (PER FLUVANNA COUNTY ORDINANCE)
-----	EX. PAVED ROAD	-----	EX. MONITORING WELL LOCATION AND IDENTIFICATION
-----	EX. UNPAVED ROAD	-----	EX. PIEZOMETER AND IDENTIFICATION
-----	EX. RAILROAD	-----	PROP. TREELINE
-----	EX. TREE LINE	-----	PROP. TOPOGRAPHIC CONTOURS (2' INTERVALS)
-----	EX. FENCE	-----	PROP. LIMITS OF CHANNEL UNDERCUT
-----	EX. OVERHEAD UTILITY LINE		
o	EX. MANHOLE		

**EXCAVATION NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF ALL CUT AND FILL SLOPES DURING CONSTRUCTION. WITH ALL SLOPES EXCAVATED IN ACCORDANCE WITH OSHA REQUIREMENTS.
- TEMPORARY GRADES SHOWN ON THE PHASED EXCAVATION DRAWINGS ARE ESTIMATED LIMITS AND SHOULD NOT BE TAKEN AS ENGINEERED SLOPES.
- CONTRACTOR SHALL PROVIDE ADEQUATE DEWATERING TO MAINTAIN SLOPE STABILITY AT ALL TIMES.
- RECOMMENDED MAXIMUM EXCAVATION SLOPES FOR CCR MATERIALS SHALL BE 4 FEET HORIZONTAL TO 1 FOOT VERTICAL (I.E., 4:1).
- EXCAVATED CCR MATERIAL SLOPES STEEPER THAN 4:1 SHALL BE AT THE CONTRACTORS OWN RISK AND SHALL NOT BE LEFT UNMONITORED FOR MOVEMENT FOR MORE THAN 14 CALENDAR DAYS.
- EXCAVATED CCR MATERIAL SLOPES STEEPER THAN 4:1 LEFT FOR MORE THAN 14 CALENDAR DAYS SHALL HAVE OWNER'S WRITTEN APPROVAL.
- RECOMMENDED MAXIMUM EXCAVATION SLOPES FOR SOIL MATERIALS SHALL BE 2 FEET HORIZONTAL TO 1 FOOT VERTICAL (I.E., 2:1).
- EXCAVATED SOIL SLOPES STEEPER THAN 2:1 SHALL BE AT THE CONTRACTORS OWN RISK AND SHALL NOT BE LEFT UNMONITORED FOR MOVEMENT FOR MORE THAN 14 CALENDAR DAYS.
- EXCAVATED SOIL SLOPES STEEPER THAN 2:1 LEFT FOR MORE THAN 14 CALENDAR DAYS SHALL BE HAVE OWNER'S WRITTEN APPROVAL.
- ALL EXCAVATION SLOPES GREATER THAN 30 VERTICAL FEET SHALL BE PROTECTED FROM EROSION BY BENCHING OR TEMPORARY BERMS WITH DOWNCHUTES UNLESS APPROVED IN WRITING OTHERWISE BY OWNER.
- ALL FINAL SOIL SLOPES SHALL BE LEFT NO STEEPER THAN 3:1 UNLESS APPROVED IN WRITING BY OWNER.



**NOTES**

- EXISTING OUTFALL 003 TO REMAIN A NON-CONTACT STORM WATER OUTFALL THROUGH THE PHASE 1 & PHASE 2 EXCAVATION. AREA TO BE PROTECTED FROM CONTACT RUNOFF.
- CONTACT STORM WATER RUNOFF TO BE COLLECTED AND SENT TO CENTRALIZED SOURCE WATER TREATMENT SYSTEM (CSWTS).
- GAS PIPELINE RELOCATION TO BE SEQUENCED TO MINIMIZE STATION OUTFALL. CONTRACTOR SHALL BE RESPONSIBLE FOR SOIL BERM CONSTRUCTION, PIPE WORKS, AND PIG LAUNCHER BY OTHERS.
- PIPELINE TO REMAIN COVERED BY CCR UNTIL CONNECTION OF NEW LINE IS MADE.
- STORMWATER RUNOFF FROM HAUL ROAD TO BE COLLECTED AND SENT TO CSWTS.
- NAP ACCESS ROAD TO PROVIDE ACCESS FOR FILLING OPERATION. PORTION OF RAMP WITHIN LIMITS OF NAP MAY BE CONSTRUCTED OF COMPACTED CCR MATERIAL.
- EXISTING 24" CULVERT TO BE EXTENDED WITH 24" HDPE DURING CONSTRUCTION OF GAS PIPELINE BERM. EXTENSION AND EXISTING PIPE TO BE REMOVED PRIOR TO THE COMPLETION OF PHASE 5 EXCAVATION.





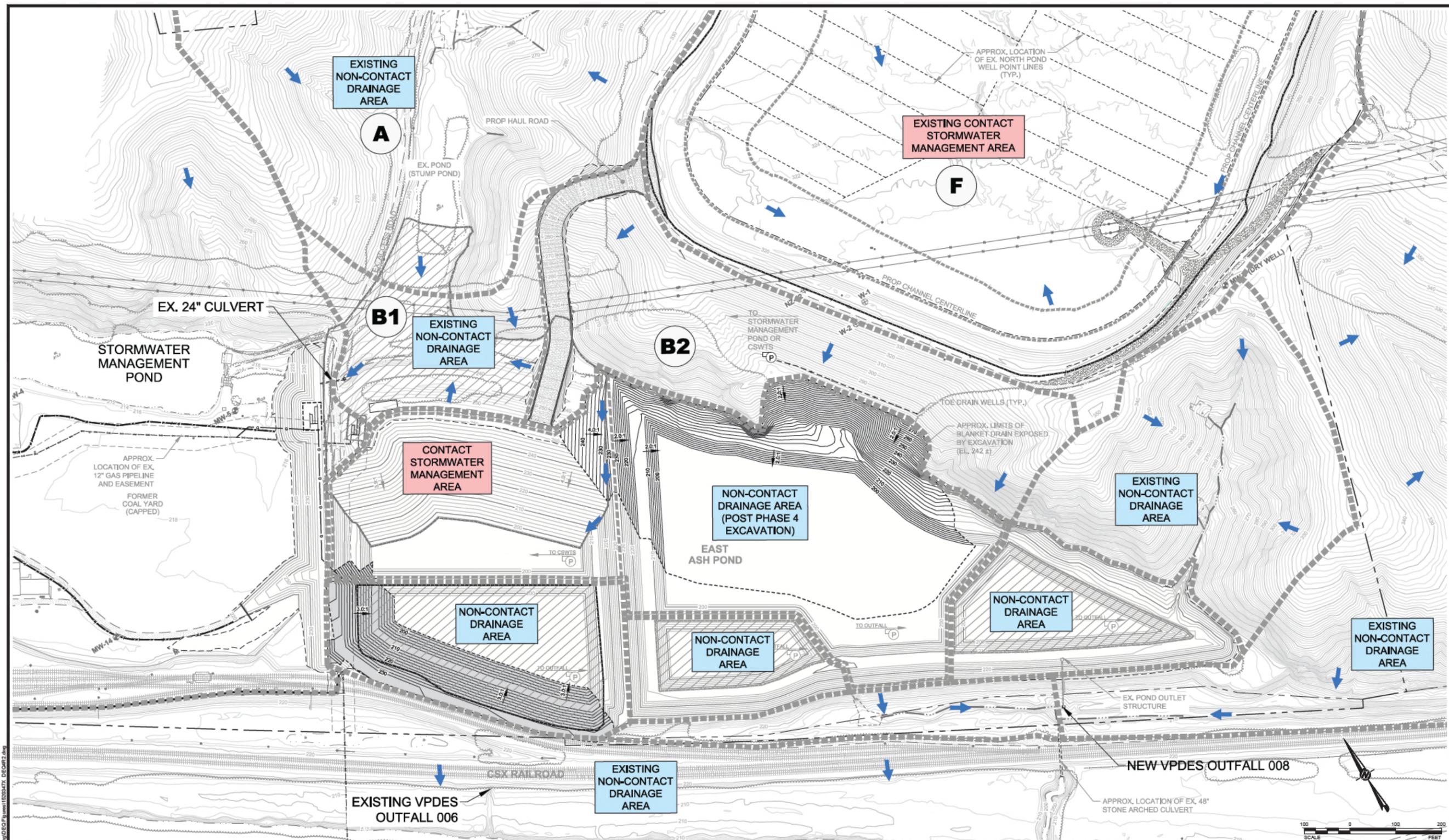
REV	DATE	DESCRIPTION	BY	CHK	RW
1	02/08/2017	HALF ROAD CONTACT SWM AREA	JRD	ATN	JRD
2	12/27/2016	REVISED PER REG COMMENTS	JRD	ATN	JRD

PROJECT  
**DOMINION  
 BREMO POWER STATION  
 EAST ASH POND EXCAVATION PLAN  
 FLUVANNA COUNTY, VIRGINIA**

TITLE  
**EAST ASH POND  
 EXCAVATION PLAN  
 (PHASE 4)**

PROJECT No.	15-20347
FILE No.	1520347X_DEG4R2
REV. 2	SCALE AS SHOWN
DESIGN	JRD 11/01/16
CADD	ATN 11/01/16
CHECK	ATN 11/01/16
REVIEW	JRD 11/01/16

**FIGURE 5**



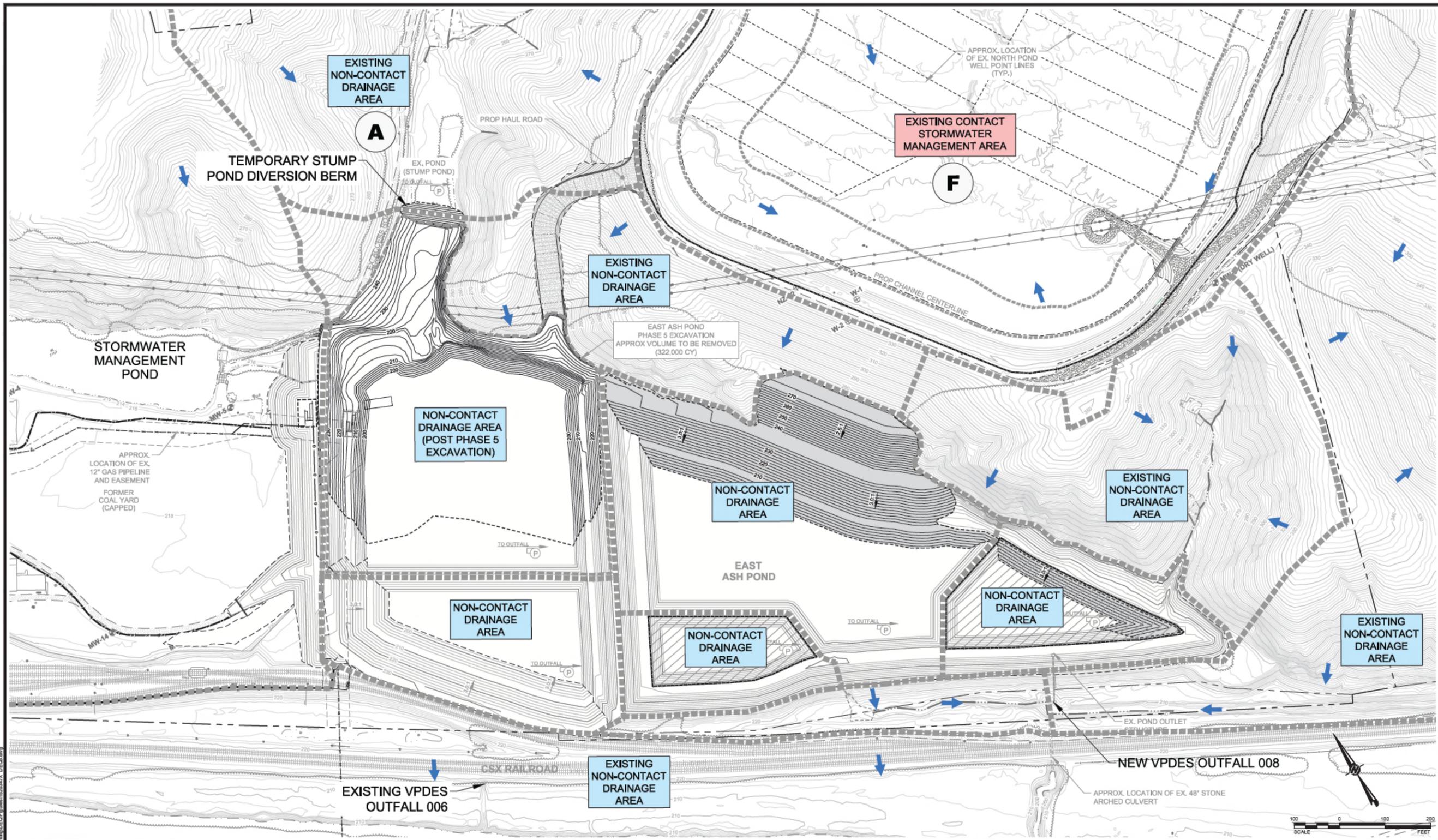
LEGEND	
---	DOMINION PROPERTY BOUNDARY
---	ADJACENT PROPERTY BOUNDARY
---	APPROX. LIMITS OF EX. ASH PONDS
---	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	EX. PAVED ROAD
---	EX. UNPAVED ROAD
---	EX. RAILROAD
---	EX. TREE LINE
---	EX. FENCE
---	EX. OVERHEAD UTILITY LINE
○	EX. MANHOLE
---	CREEK/STREAM CENTERLINE
---	APPROX. EDGE OF SURFACE WATER
---	WETLANDS
---	LIMITS OF RIPARIAN PROTECTION AREA (PER FLUVANNA COUNTY ORDINANCE)
○	EX. MONITORING WELL LOCATION AND IDENTIFICATION
○	EX. PIEZOMETER AND IDENTIFICATION
---	PROP. TREELINE
---	PROP. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	PROP. LIMITS OF CHANNEL UNDERCUT

- EXCAVATION NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF ALL CUT AND FILL SLOPES DURING CONSTRUCTION. WITH ALL SLOPES EXCAVATED IN ACCORDANCE WITH OSHA REQUIREMENTS.
  - TEMPORARY GRADES SHOWN ON THE PHASED EXCAVATION DRAWINGS ARE ESTIMATED LIMITS AND SHOULD NOT BE TAKEN AS ENGINEERED SLOPES.
  - CONTRACTOR SHALL PROVIDE ADEQUATE DEWATERING TO MAINTAIN SLOPE STABILITY AT ALL TIMES.
  - RECOMMENDED MAXIMUM EXCAVATION SLOPES FOR CCR MATERIALS SHALL BE 4 FEET HORIZONTAL TO 1 FOOT VERTICAL (I.E., 4:1).
  - EXCAVATED CCR MATERIAL SLOPES STEEPER THAN 4:1 SHALL BE AT THE CONTRACTORS OWN RISK AND SHALL NOT BE LEFT UNMONITORED FOR MOVEMENT FOR MORE THAN 14 CALENDAR DAYS.
  - EXCAVATED CCR MATERIAL SLOPES STEEPER THAN 4:1 LEFT FOR MORE THAN 14 CALENDAR DAYS SHALL HAVE OWNER'S WRITTEN APPROVAL.
  - RECOMMENDED MAXIMUM EXCAVATION SLOPES FOR SOIL MATERIALS SHALL BE 2 FEET HORIZONTAL TO 1 FOOT VERTICAL (I.E., 2:1).
  - EXCAVATED SOIL SLOPES STEEPER THAN 2:1 SHALL BE AT THE CONTRACTORS OWN RISK AND SHALL NOT BE LEFT UNMONITORED FOR MOVEMENT FOR MORE THAN 14 CALENDAR DAYS.
  - EXCAVATED SOIL SLOPES STEEPER THAN 2:1 LEFT FOR MORE THAN 14 CALENDAR DAYS SHALL BE HAVE OWNER'S WRITTEN APPROVAL.
  - ALL EXCAVATION SLOPES GREATER THAN 30 VERTICAL FEET SHALL BE PROTECTED FROM EROSION BY BENCHING OR TEMPORARY BERMS WITH DOWNCHUTES UNLESS APPROVED IN WRITING OTHERWISE BY OWNER.
  - ALL FINAL SOIL SLOPES SHALL BE LEFT NO STEEPER THAN 3:1 UNLESS APPROVED IN WRITING BY OWNER.

- NOTES**
- REPURPOSING OF OUTFALL 003 TO OUTFALL 008 INCLUDES, BUT IS NOT LIMITED TO: DECOMMISSIONING EXISTING WOODEN ACCESS STRUCTURE INCLUDING STEPS AND PLATFORM, REPLACING EXISTING STOP LOGS INLET STRUCTURE WITH PERMANENT ORIFICE DEWATERING STRUCTURE, AND INSTALLING OPTIONAL TRASH RACK ON INLET STRUCTURE.



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REV	DATE	DIS	BY	CHK	RW
1	12/27/16		JRD	ATN	JRD

PROJECT  
**DOMINION POWER STATION  
 BREMO POND EXCAVATION PLAN  
 EAST ASH POND EXCAVATION PLAN  
 FLUVANNA COUNTY, VIRGINIA**

TITLE  
**EAST ASH POND  
 EXCAVATION PLAN  
 (PHASE 5)**

**LEGEND**

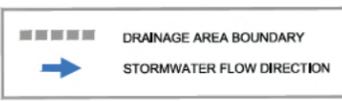
---	DOMINION PROPERTY BOUNDARY	---	CREEK/STREAM CENTERLINE
---	ADJACENT PROPERTY BOUNDARY	---	APPROX. EDGE OF SURFACE WATER
---	APPROX. LIMITS OF EX. ASH PONDS	---	WETLANDS
---	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)	---	LIMITS OF RIPARIAN PROTECTION AREA (PER FLUVANNA COUNTY ORDINANCE)
---	EX. PAVED ROAD	---	EX. MONITORING WELL LOCATION AND IDENTIFICATION
---	EX. UNPAVED ROAD	---	EX. PIEZOMETER AND IDENTIFICATION
---	EX. RAILROAD	---	PROP. TREELINE
---	EX. TREE LINE	---	PROP. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	EX. FENCE	---	PROP. LIMITS OF CHANNEL UNDERCUT
---	EX. OVERHEAD UTILITY LINE		
---	EX. MANHOLE		

**EXCAVATION NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF ALL CUT AND FILL SLOPES DURING CONSTRUCTION. WITH ALL SLOPES EXCAVATED IN ACCORDANCE WITH OSHA REQUIREMENTS.
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- ALL FINAL SOIL SLOPES SHALL BE LEFT NO STEEPER THAN 3:1 UNLESS APPROVED IN WRITING BY OWNER.

**NOTES**

- 24" PIPE AND RISER TO BE REMOVED.



REV	SCALE	AS SHOWN
DESIGN	JRD	11/01/16
CADD	ATN	11/01/16
CHECK	ATN	11/01/16
REVIEW	JRD	11/01/16

**FIGURE 6**

