



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE

4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801

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

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Amy Thatcher Owens
Regional Director

February 22, 2017

By Email (paula.a.hamel@dom.com)

Ms. Paula A. Hamel
Director, 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
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0004138
Dominion – Bremo Power Station

Dear Ms. Hamel:

We are in receipt of the Revised Notice of Planned Change for the Dominion – Bremo Power Station received under cover letter dated February 15, 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 revision 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.

Sincerely,

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

Brandon D. Kiracofe
Regional Water Permits & Compliance Manager

cc: Cathy Taylor (cathy.c.taylor@dom.com)
Jason Williams (jason.e.williams@dom.com)
Ken Roller (kenneth.roller@dom.com)
Taylor L. Engen (taylor.l.engen@dom.com)
Correspondence File



Overnight Mail
Return Receipt Requested

February 15, 2017

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

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

Dear Ms. Carver,

Enclosed is Revision 3 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 2 of the NPC, submitted January 20, 2017, has been revised as follows:

- A new contact stormwater area B2 has been added to receive drainage from the new access road to the North Ash Pond. The collected water will be directed to the CSWTS.
- The existing Stormwater Management Pond has been identified as a location that may receive collected non-contact stormwater.
- Narrative was added to recognize that excavation in the Phase 4 area may begin during the excavation in the Phase 3 area in preparation for the North Ash Pond toe excavation activities.
- Narrative was added to recognize that excavation in the Phase 5 area may occur in conjunction with excavation of the Phase 4 area.

Dominion 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. Dominion understands 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 cursive script that reads "Paula A. Hamel". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Paula A. Hamel
Director, Generation Environmental Services

cc: Brandon Kiracofe: brandon.kiracofe@deq.virginia.gov
Beverley Carver: beverley.carver@deq.virginia.gov



EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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 Bremo 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 from areas of the EAP to established permitted Outfalls 003, 006, 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.



EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

Figure 2 - Existing Conditions

Figure 2 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 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) to the Stormwater Management Pond.

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.



EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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, Outfall 003 will be sealed to prohibit discharges during the Phase 3 CCR excavation activities. 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. 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. 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.

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

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.



EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

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, 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 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.

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.

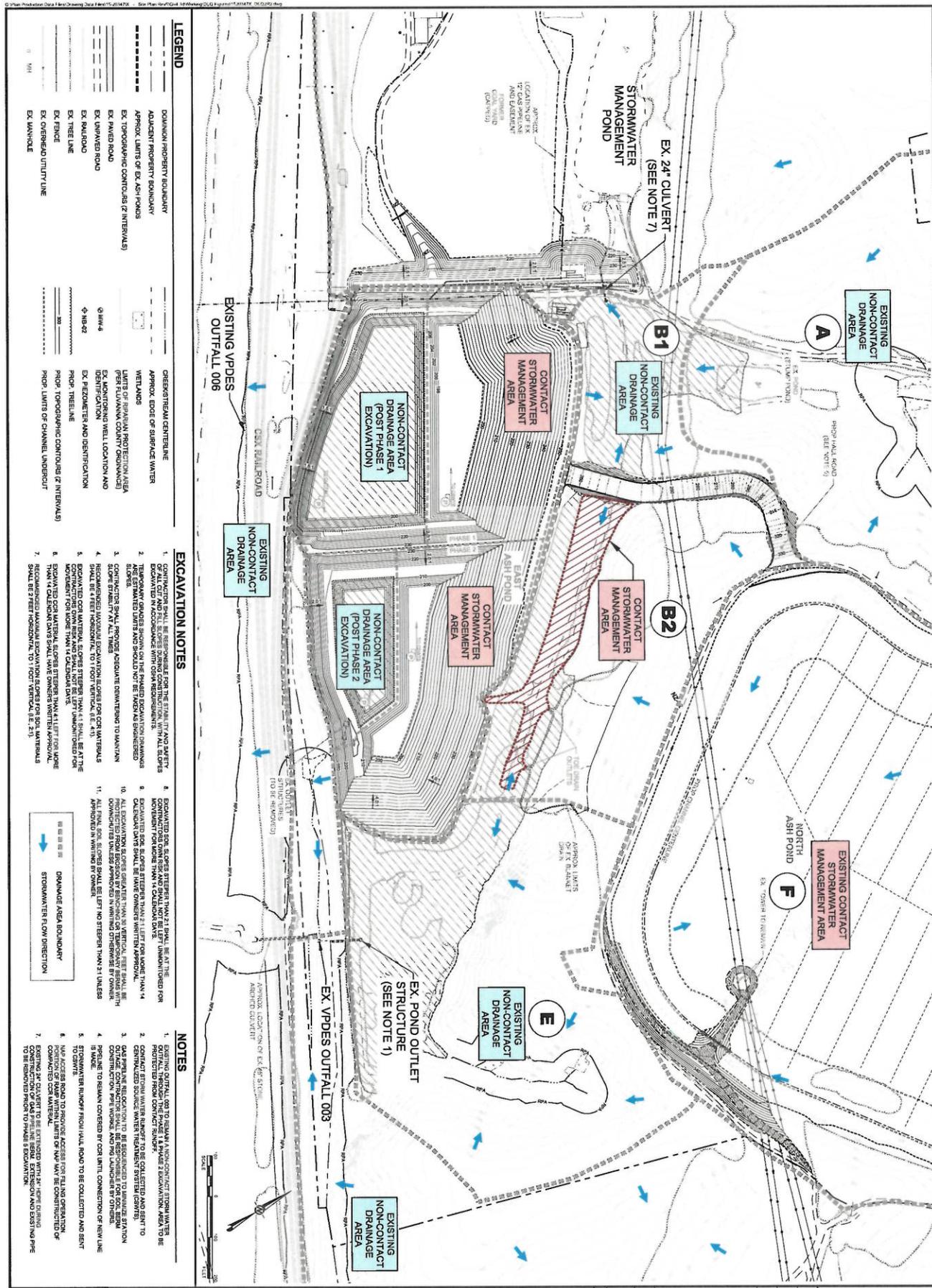
Figure 7 - Final Grading Plan

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



EAST ASH POND EXCAVATION STORMWATER MANAGEMENT PHASING PLAN

stormwater flowing into and from the East Stormwater Management Pond will be post construction non-contact water and will discharge through Outfall 008.



LEGEND

---	DOMINION PROPERTY BOUNDARY
---	ADJACENT PROPERTY BOUNDARY
---	APPROX. LIMITS OF EX. ASP POUNDS
---	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	EX. PAVED ROAD
---	EX. UNPAVED ROAD
---	EX. RAILROAD
---	EX. TREE LINE
---	EX. FENCE
---	EX. OVERHEAD UTILITY LINE
---	EX. MANHOLE

EXCAVATION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF EXCAVATIONS. EXCAVATIONS SHALL BE PROTECTED FROM ADJACENT AREAS BY EXCAVATING IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. TEMPORARY SHIELDS SHALL BE INSTALLED ON THE POND EXCAVATION DRAINAGE SLOPES.
3. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE TO MAINTAIN SOIL STABILITY AT ALL TIMES.
4. RECLAIMED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES.
5. EXCAVATED SOIL SHALL NOT BE LEFT UNPROTECTED FOR MORE THAN 14 CALENDAR DAYS.
6. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
7. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
8. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
9. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
10. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
11. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.

NOTES

1. EXISTING OUTFALL 002 TO REMAIN AND PROTECT FROM WATER INFLUXION FROM EXCAVATION.
2. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
3. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
4. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
5. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
6. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
7. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.

EXCAVATION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF EXCAVATIONS. EXCAVATIONS SHALL BE PROTECTED FROM ADJACENT AREAS BY EXCAVATING IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. TEMPORARY SHIELDS SHALL BE INSTALLED ON THE POND EXCAVATION DRAINAGE SLOPES.
3. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE TO MAINTAIN SOIL STABILITY AT ALL TIMES.
4. RECLAIMED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES.
5. EXCAVATED SOIL SHALL NOT BE LEFT UNPROTECTED FOR MORE THAN 14 CALENDAR DAYS.
6. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.
7. EXCAVATED SOIL SHALL BE REUSED FOR CONSTRUCTION PURPOSES WITHIN 14 CALENDAR DAYS.

NOTES

1. EXISTING OUTFALL 002 TO REMAIN AND PROTECT FROM WATER INFLUXION FROM EXCAVATION.
2. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
3. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
4. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
5. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
6. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.
7. CONTACT FROM WATER RAINFALL TO BE COLLECTED AND SENT TO CONTACT FROM EXCAVATION.

FIGURE 3

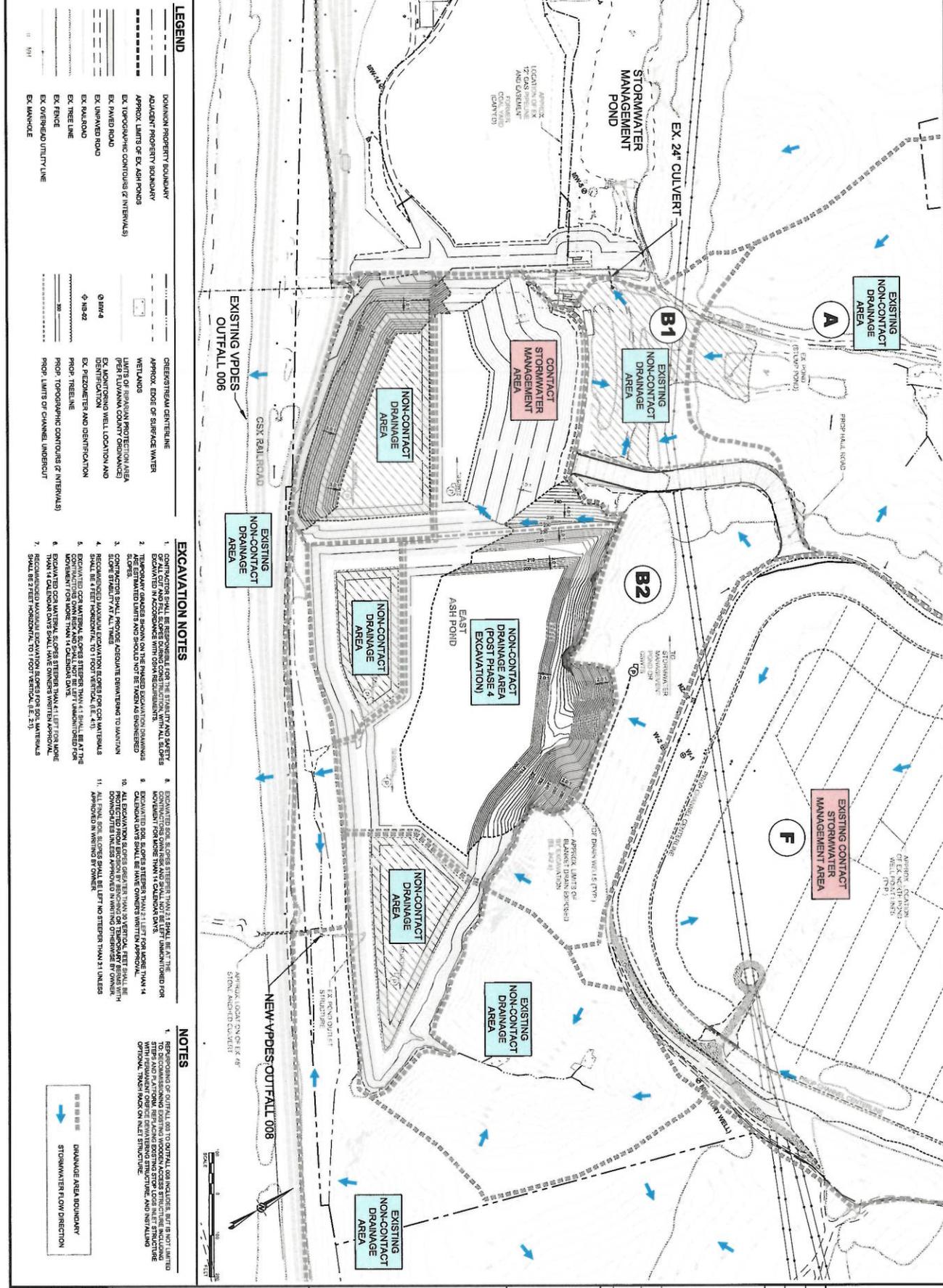
PROJECT	DOMINION BREMO POWER STATION EAST ASH POND EXCAVATION PLAN FLUVANNA COUNTY, VIRGINIA
DATE	11/15/2017
SCALE	AS SHOWN
DESIGNER	W. J. BROWN
CHECKER	J. M. BROWN
REVISION	11/15/2017

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

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

NO.	DATE	BY	DESCRIPTION
1	11/15/2017	WJB	INITIAL DESIGN
2	11/15/2017	JMB	REVISED FOR COMMENTS
3	11/15/2017	WJB	REVISION 2017/11/15/2017

Goldier Associates



LEGEND

---	DOMINION PROPERTY BOUNDARY
---	ADJACENT PROPERTY BOUNDARY
---	APPROX. LIMITS OF EX. ASP POUNDS
---	EX. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	EX. PAVED ROAD
---	EX. UNPAVED ROAD
---	EX. RAILROAD
---	EX. TREE LINE
---	EX. FENCE
---	EX. OVERHEAD UTILITY LINE
---	EX. MANHOLE
---	GREENSTREAM CENTERLINE
---	APPROX. EDGE OF SURFACE WATER
---	WETLANDS
---	LIMITS OF TRIBUTARY PROTECTION AREA PER FLUVANNA COUNTY ORDINANCE
---	EX. MONITORING WELL LOCATION AND IDENTIFICATION
---	EX. PEGZMETER AND IDENTIFICATION
---	PROP. TREE LINE
---	PROP. TOPOGRAPHIC CONTOURS (2' INTERVALS)
---	PROP. LIMITS OF CHANNEL UNDERCUT

- EXCAVATION NOTES**
1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY AND SAFETY OF EXCAVATION WALLS. EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS.
 2. TEMPORARY GRADERS SHOWN ON THE PAVED EXCAVATION DRAWINGS SHALL BE MAINTAINED AND SHOULD NOT BE REMOVED UNLESS OTHERWISE SPECIFIED.
 3. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE TO MAINTAIN SOIL STABILITY AT ALL TIMES.
 4. RECOMMENDED MAXIMUM EXCAVATION DEPTHS FOR CSU MATERIALS PER SUBMITTAL SHALL BE 21 FEET FOR SOILS WITH A CLAY CONTENT OF 15% OR LESS AND SHALL NOT BE LEFT UNIDENTIFIED FOR MORE THAN 14 CALENDAR DAYS UNLESS OTHERWISE APPROVED BY THE DESIGNER.
 5. RECOMMENDED MAXIMUM EXCAVATION DEPTHS FOR SOIL MATERIALS SHALL BE 21 FEET HORIZONTAL TO 1 FOOT VERTICAL (E.G. 2:1).

- NOTES**
1. REPERFORATING OF OUTFALL 008 TO OUTFALL 008 INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING: REPERFORATING EXISTING STEEL OUTFALL STRUCTURE WITH 12\"/>

EAST ASH POND EXCAVATION PLAN (PHASE 4)

DOMINION BREMOND POWER STATION
 EAST ASH POND EXCAVATION PLAN
 FLUVANNA COUNTY, VIRGINIA

DATE	DESCRIPTION
10/20/14	ISSUE FOR PERMITTING
10/20/14	ISSUE FOR CONSTRUCTION
10/20/14	ISSUE FOR AS-BUILT

PROJECT	DATE	DESCRIPTION
DOMINION BREMOND POWER STATION	10/20/14	ISSUE FOR PERMITTING
EAST ASH POND EXCAVATION PLAN	10/20/14	ISSUE FOR CONSTRUCTION
FLUVANNA COUNTY, VIRGINIA	10/20/14	ISSUE FOR AS-BUILT

PROJECT	DATE	DESCRIPTION
DOMINION BREMOND POWER STATION	10/20/14	ISSUE FOR PERMITTING
EAST ASH POND EXCAVATION PLAN	10/20/14	ISSUE FOR CONSTRUCTION
FLUVANNA COUNTY, VIRGINIA	10/20/14	ISSUE FOR AS-BUILT

FIGURE 5

Golder Associates

