Project/Site: Atlantic Coast Pipeline	_ City/County:	Highland County	Sampling Date: <u>5/7/2016</u>
Applicant/Owner: Dominion		State: VA	Sampling Point: whia408f_w
Investigator(s): GB, SA, AS	_ Section, Tow	nship, Range: No PLSS in this	s area
Landform (hillslope, terrace, etc.): wale	ocal relief (con	cave, convex, none): <u>concave</u>	e Slope (%): <u>5</u>
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.30554949</u>	)	Long: <u>-79.77761315</u>	Datum: WGS 1984
Soil Map Unit Name: Macove channery silt loam, 3 to 15 percent slop	pes, very stony	NWI cla	assification: None
Are climatic / hydrologic conditions on the site typical for this time of y	year?Yes	No (If no, explain	n in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	tly disturbed?	Are "Normal Circumstan	ces" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any a	inswers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling	point locations, trans	ects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ Yes _ ✔ Yes _ ✔	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No	
Remarks:			-			
Saturated PEO wetland located in a swale along toe of slope above perennial stream shia409: hydrology from spring phia407; outflow has surface						

Saturated PFO wetland located in a swale along toe of slope above perennial stream shia409; hydrology from spring phia407; outflow has surface connection to stream within the corridor; NCWAM key = seep.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Water Marks (B1)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Thin Muck Surface (C7)</li> <li>Algal Mat or Crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> </ul>	
Field Observations:	
Surface Water Present? Yes No _ Depth (inches):	
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):	
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _          Saturation Present?       Yes _          (includes capillary fringe)       No Depth (inches):	Wetland Hydrology Present? Yes <u>✓</u> No
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _          Saturation Present?       Yes _          Includes capillary fringe)       No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes <u>V</u> No
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Ves No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         (includes capillary fringe)       Depth (inches):       0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Ves No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Mo Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         Saturation Present?       Yes _        No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       Remarks:	Wetland Hydrology Present? Yes <u>Yes</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes        No Depth (inches):         Saturation Present?       Yes        No Depth (inches):         Saturation Present?       Yes        No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:

Sampling Point: whia408f\_w

	Absolute	- Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Deminent Operator
Acer rubrum	10	Yes	FAC	That Are OBL_EACW or EAC: 4 (A)
	10	Yes	FACU	
2. Potiga cantacinito	10	Ves	FACU	Total Number of Dominant
3. <u></u>	10	163	1,400	Species Across All Strata: (B)
4				Demonst of Deminent Creation
5.				That Are OBL EACW or EAC: 57.14285714 (A/B)
6				
7		<u> </u>	······································	Prevalence Index worksheet:
1	30			Total % Cover of: Multiply by:
45		= Total Cove	r 6	$\frac{1}{1} \frac{1}{1} \frac{1}$
50% of total cover: 15	20% of	total cover:	0	$\frac{15}{15} = \frac{30}{30}$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x^2 = \frac{32}{62}$
<sub>1.</sub> Hamamelis virginiana	5	Yes	FACU	FAC species $21$ x 3 = $05$
2 Fraxinus pennsylvanica	5	Yes	FACW	FACU species x 4 =112
Acer saccharum	3	No	FACU	UPL species $0 \times 5 = 0$
3. Corrinuo coroliniono	3	No	FAC	Column Totals: $99$ (A) $240$ (B)
4. Carpinus caroliniana			170	
5				Prevalence Index $= B/A = 2.42$
6				
7.				
·				1 - Rapid Test for Hydrophytic Vegetation
8		<u> </u>		✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
	16	= Total Cove	r	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: <u>8</u>	20% of	total cover:	3.2	4 - Molphological Adaptations (inforde supporting
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sneet)
1 Carex scabrata	20	Yes	OBL	Problematic Hydrophytic Vegetation' (Explain)
o Carex gynandra	15	Yes	OBI	
	10	No		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Viola cuculata	10		FACW	be present, unless disturbed or problematic.
4. Viola rotundifolia	4	No	FAC	Definitions of Four Vegetation Strata:
5. Athyrium asplenioides	4	No	FAC	Jan
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
· · · · · · · · · · · · · · · · · · ·				neight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	53	- Total Covo	r	of size, and woody plants less than 3.28 ft tall
50% of total cover: 26.5	20% of	total cover:	10.6	
	20 % 01	total cover.		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1				
2				
3.				
4				
				Hydrophytic
o		. <u> </u>		Vegetation Brecont?
		= Total Cove	r	
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
1				

Uppin         Matrix         Kedox Features           (inches)         Color (moist)         %         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           4-16         10YR 3/1         100         %         Type <sup>1</sup> Loc <sup>2</sup> Texture         Remarks           4-16         10YR 4/1         90         7.5YR 5/8         10         C         PL/M         SiL         rock at 16*	Profile Des	cription: (Describe t	o the de	ptn needed to docui	nent the	indicator	or contirm	the absence	e of indicators.)
Interest         Conductions         a         Conductions         Figure         Low         Figure         Nether           4-16         10YR 3/1         90         7.5YR 5/8         10         C         PL/M         SiL         rock at 16"           4-16         10YR 4/1         90         7.5YR 5/8         10         C         PL/M         SiL         rock at 16"	Depth (inches)	<u>Matrix</u>	0/_	Color (moist)	<u>∞ ⊢eature</u> %	S Type <sup>1</sup>	$1 \text{ oc}^2$	Texture	Remarks
4-16       10YR 4/1       90       7.5YR 5/8       10       C       PL/M       SIL       rock at 16"	<u>(incries)</u> 0-4	10YR 3/1	100		70	Type	LUC	SIL	Remarks
Image:	4-16	10YR 4/1	90	7.5YR 5/8	10	С	PL/M	SIL	rock at 16"
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histosol (A1)          Histosol (A1)          Histosol (A2)       Polyvalue Below Surface (S8) (MLRA 147, 148)          Black Histic (A3)        Thin Dark Surface (S9) (MLRA 147, 148)          Hydrogen Sulfide (A4)        Loamy Gleyed Matrix (F2)        Piedmont Floodplain Soils (F19)         Stratified Layers (A5)       ✓       Depleted Matrix (F3)        (MLRA 136, 147)									
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :         — Histosol (A1)       Dark Surface (S7)       _2 cm Muck (A10) (MLRA 147)         — Histosol (A2)       Polyvalue Below Surface (S8) (MLRA 147, 148)       _Coast Prairie Redox (A16)						·			
Hydric Soil Indicators:       Indicators for Problematic Hydric Soils <sup>3</sup> :	<sup>1</sup> Type: C=C	Concentration, D=Deple	etion, RM	I=Reduced Matrix, M	S=Maske	d Sand Gra	ains.	<sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.
	Hydric Soil	Indicators:						Indic	ators for Problematic Hydric Soils <sup>3</sup> :
MLRA 147, 148)       MLRA 136)	Histosco Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy	ol (A1) Epipedon (A2) Histic (A3) Hen Sulfide (A4) ed Layers (A5) Huck (A10) <b>(LRR N)</b> ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) <b>(L</b> )	(A11) <b>RR N,</b>	<ul> <li>Dark Surface</li> <li>Polyvalue Be</li> <li>Thin Dark Su</li> <li>Loamy Gleye</li> <li>Depleted Ma</li> <li>Redox Dark</li> <li>Depleted Da</li> <li>Redox Depression</li> <li>Iron-Mangan</li> </ul>	e (S7) elow Surfa urface (S9 ed Matrix (F3) Surface (I rk Surface essions (F esse Mass	ace (S8) <b>(N</b> ) <b>(MLRA 1</b> (F2) F6) e (F7) (8) ses (F12) <b>(</b> 1	ILRA 147, 47, 148) LRR N,	148) ( F (	2 cm Muck (A10) <b>(MLRA 147)</b> Coast Prairie Redox (A16) <b>(MLRA 147, 148)</b> Piedmont Floodplain Soils (F19) <b>(MLRA 136, 147)</b> Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Type:     none       Depth (inches):     Hydric Soil Present? Yes No	MLR Sandy Sandy Strippe	A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		MLRA 13 Umbric Surfa Piedmont Flo Red Parent I	<b>6)</b> ace (F13) podplain S Material (F	<b>(MLRA 13</b> Soils (F19) F21) <b>(MLR</b>	6, 122) (MLRA 14 A 127, 147	<sup>3</sup> Inc (8) w (7) ur	dicators of hydrophytic vegetation and etland hydrology must be present, nless disturbed or problematic.
Type:		one							
	Type: //	nches):						Hydric Soi	il Present? Ves 🗸 No



Photo 1 Wetland data point WHIA408f\_w facing north



Photo 2 Wetland data point WHIA408f\_w facing east

Project/Site: Atlantic Coast Pipeline	City/County:	Highland County	Sampling Date: 5/7/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>whia408_u</u>
Investigator(s): GB, SA, AS	Section, Tov	vnship, Range: No PLSS in this a	area
Landform (hillslope, terrace, etc.): slope	_ Local relief (con	cave, convex, none): <u>none</u>	Slope (%): <u>15</u>
Subregion (LRR or MLRA): S Lat: 38.305470	09	Long: <u>-79.77756927</u>	Datum: WGS 1984
Soil Map Unit Name: Macove channery silt loam, 3 to 15 percent	slopes, very stony	NWI clas	sification: None
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes	No (If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hydrology signific	antly disturbed?	Are "Normal Circumstance	s" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology natural	ly problematic?	(If needed, explain any ans	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling	point locations, transe	cts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	_ No			
Remarks:								
Upland data point taken above toe of slope for a saturated PFO wetland located in a swale along toe of slope above perennial stream shia409.								

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u></u>	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	
no hydrology indicators present	

# Sampling Point: whia408\_u

		Ahsolute	Dominant In	dicator	Dominance Test worksheet	
Tree Stratum (Plot size: 30	)	% Cover	Species?	Status	bonnhance rest worksheet.	
Liriodendron tulinifera	/	15	Yes	FACU	Number of Dominant Species	
1. Zinodenaron tampireta	· _	15	Ves	FACU	That Are OBL, FACW, or FAC: (A)	
2. Magnalia aguminata	· .	10	Ves	FACU	Total Number of Dominant	
3. Magnolia acuminata		10	<u> </u>		Species Across All Strata: [12] (B)	
4. Acer rubrum		10	Yes	FAC	Percent of Dominant Species	
5. Tilia americana		10	Yes	FACU	That Are OBL, FACW, or FAC: 25 (A/I	B)
<sub>6.</sub> Betula lenta		10	Yes	FACU		'
7. Acer saccharum		5	No	FACU	Prevalence Index worksheet:	
		75	- Total Cover		Total % Cover of: Multiply by:	
50% of	total cover: 37.5	20% of	total cover:	15	OBL species 0 x 1 = 0	
	15 、	_ 2070 01			FACW species $0$ x 2 = $0$	
Sapling/Shrub Stratum (Plot size:	)	20	Vee		$\frac{20}{20} \times 2 = \frac{60}{100}$	
1. Acer pensylvanicum		20	res	FACU	FAC species $3 = 460$	
<sub>2.</sub> Betula lenta		6	No	FACU	FACU species $x 4 = $	
<sub>3.</sub> Hamamelis virginiana		5	No	FACU	UPL species x 5 =	
4. Magnolia acuminata		4	No	FACU	Column Totals: <u>135</u> (A) <u>520</u> (B	3)
5			·		2.95	
6.					Prevalence Index = B/A =	
7					Hydrophytic Vegetation Indicators:	
7			· ·		1 - Rapid Test for Hydrophytic Vegetation	
8	·		· ·		2 - Dominance Test is >50%	
9		25	·		3 - Prevalence Index is ≤3.0 <sup>1</sup>	
	47 5	35	= Total Cover	7	4 - Morphological Adaptations <sup>1</sup> (Provide supporti	na
50% of	total cover: 17.5	_ 20% of	total cover:	1	data in Remarks or on a senarate sheet)	
Herb Stratum (Plot size: 5	)					
<sub>1.</sub> Dennstaedtia punctilobula		10	Yes	FACU	Problematic Hydrophytic Vegetation' (Explain)	
2 Viola rotundifolia		5	Yes	FAC		
<ul> <li>Dryopteris carthusiana</li> </ul>		5	Yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
A Polystichum acrostichoides		5	Yes	FACU	be present, unless disturbed or problematic.	
4. <u>····································</u>					Definitions of Four Vegetation Strata:	
5			<u> </u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm)	or
6			<u> </u>		more in diameter at breast height (DBH), regardless of	of
7			<u> </u>		height.	
8					Sanling/Shrub Weedy plants evoluting vince loss	•
9					than 3 in. DBH and greater than or equal to 3.28 ft (1	2
10.					m) tall.	
11						
· · · ·	·	25	Total Cave		Herb – All herbaceous (non-woody) plants, regardles	iS
50% of	total covor: 12.5	20% of	= Total Cover	5	or size, and woody plants less than 3.20 it tall.	
S0 % Of	30 \	_ 20 % 01	total cover.		Woody vine - All woody vines greater than 3.28 ft in	
Aristolochia elegans	)	7	Voc		height.	
1. Ansiolocilla elegans			165			
2			<u> </u>			
3			<u> </u>			
4.						
5.					Hydrophytic	
		0	- Total Cover		Present? Yes No	
50% of	total cover: 3.5	20% of	total cover	1.4		
		_ 2070 01				
Remarks: (Include photo numbers here	or on a separate sh	eet.)				

L

Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	<u>%</u> T	ype <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-2	10YR 2/2	100					L			
2-6	10YR 5/4	100					SL			
6-14	10YR 5/6	100					SCL	rock at 14	11	
<sup>1</sup> Type: C=C Hydric Soil	Concentration, D=Depl	etion, RM=	Reduced Matrix, M		and Gra	ins.	<sup>2</sup> Location: P Indica	L=Pore Lini ators for Pr	ng, M=Matrix oblematic H	ydric Soils <sup>3</sup> : 147)
Histic E	Epipedon (A2)		Polyvalue Be	elow Surface	(S8) <b>(M</b>	LRA 147,	148) C	oast Prairie	Redox (A16	)
Black H	Histic (A3)		Thin Dark Su	urface (S9) (N	ILRA 14	47, 148) <sup>′</sup>		(MLRA 14	7, 148)	,
Hydrog	gen Sulfide (A4)		Loamy Gleye	ed Matrix (F2)	1		P	iedmont Flo	odplain Soils	; (F19)
Stratifie	ed Layers (A5)		Depleted Ma	trix (F3)				(MLRA 13	6, 147)	. ,
2 cm N	luck (A10) (LRR N)		Redox Dark	Surface (F6)			V	ery Shallow	Dark Surfac	e (TF12)
Deplete	ed Below Dark Surface	e (A11)	Depleted Da	rk Surface (F	7)		C	ther (Expla	in in Remarks	3)
Thick D	Dark Surface (A12)		Redox Depre	essions (F8)						
Sandy	Mucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Masses (	(F12) <b>(L</b>	.RR N,				
MLR	RA 147, 148)		MLRA 13	6)			2			
Sandy	Gleyed Matrix (S4)		Umbric Surfa	ace (F13) <b>(ML</b>	RA 136	5, 122)	°Ind	icators of h	/drophytic ve	getation and
Sandy	Redox (S5)		Piedmont Flo	podplain Soils	(F19) (	MLRA 14	<b>l8)</b> we	tland hydro	logy must be	present,
Strippe	ed Matrix (S6)		Red Parent I	Material (F21)	(MLRA	A 127, 147	7) un	less disturb	ed or problen	natic.
Type. n	e Layer (If observed):									
Type.	nahaa);						Hydric Soil	Present?	Yes	No 🖌
Depth (ii	nunes).									



Photo 1 Upland data point WHIA408\_u facing southwest



# **Photo 2** Upland data point WHIA408\_u facing southeast

Project/Site: Atlantic Coast Pipeline	City/County:	Highland County	Sampling Date: 5/7/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>whia407f_w</u>
Investigator(s): GB, SA, AS	Section, Tow	vnship, Range: <u>No PLSS in this</u>	area
Landform (hillslope, terrace, etc.): swale	Local relief (con	cave, convex, none): <u>concave</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): S Lat: 38.30507109	9	Long: <u>-79.77686931</u>	Datum: WGS 1984
Soil Map Unit Name: Macove channery silt loam, 3 to 15 percent slo	opes, very stony	NWI clas	ssification: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed?	Are "Normal Circumstanc	es" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any ar	nswers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling	point locations, transe	ects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks:			·		

Saturated PFO wetland located in a swale along toe of slope on floodplain of perennial stream shia409; hydrology from seep phia405 & spring phia406; outflow from wetland has subterranean connection to stream outside the survey corridor; NCWAM key = seep.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres on Living F	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	ils (C6) 🛛 🗹 Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Procent? Vec No 🖌 Depth (inches);	
Water Table Present? Yes <u>V</u> No Depth (inches): <u>3</u>	
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes _          Values capillary fringe)       Yes _	Wetland Hydrology Present? Yes <u></u>
Water Table Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes <u>V</u> No
Water Table Present?       Yes No Depth (inches):3         Saturation Present?       Yes No Depth (inches):3         (includes capillary fringe)       Mo Depth (inches):0         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)       Ves       No       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)        No       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)        Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)        No       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         Saturation Present?       Yes       No       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes        No Depth (inches):         Saturation Present?       Yes        Yes        O         Saturation Present?       Yes        Yes       No       Depth (inches):         Includes capillary fringe)	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes       V       No       Depth (inches):       3         Saturation Present?       Yes       V       No       Depth (inches):       0         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:

Sampling Point: whia407f\_w

	Absolute	Dominant li	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	
Fraxinus pennsylvanica	10	Yes	FACW	Number of Dominant Species
Acer ruhrum	10	Yes	FAC	That Are OBL, FACW, of FAC: (A)
		<u> </u>		Total Number of Dominant
3. Isuga canadensis	0	res	FACU	Species Across All Strata: 7 (B)
<sub>4.</sub> Magnolia acuminata	4	No	FACU	
5				Percent of Dominant Species
o				That Are OBL, FACW, of FAC: (A/B)
0				Prevalence Index worksheet:
7	20			Total % Cover of: Multiply by:
		= Total Cove	r	
50% of total cover: 15	20% of	total cover:	6	OBL species $20$ $x 1 = 20$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $23$ x 2 = $30$
<sub>1.</sub> Hamamelis virginiana	10	Yes	FACU	FAC species $22$ x 3 = $66$
2 Fraxinus pennsvlvanica	7	Yes	FACW	FACU species $28$ x 4 = $112$
Z. Carpinus caroliniana	5	No	FAC	$\frac{1}{10} \frac{1}{10} \frac$
				99 (A) $256$ (D)
4. Fagus grandifolia	4	INO	FACU	Column Lotals: (A) (B)
5. Acer rubrum	2	No	FAC	Droviolance Index D/A 2.58
6.				$Prevalence index = B/A = \underline{2.00}$
7				Hydrophytic Vegetation Indicators:
· · · · · · · · · · · · · · · · · · ·				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$\checkmark$ 3 - Prevalence Index is <3.0 <sup>1</sup>
	28	= Total Cove	r	A Marphala size! A deptational (Dravide surportion)
50% of total cover: 14	20% of	total cover:	5.6	4 - Morphological Adaptations" (Provide supporting
Herb Stratum (Plot size: 5 )				data in Remarks or on a separate sheet)
Carex gynandra	15	Ves	OBI	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	10	<u> </u>		
2. Osmundastrum cinnamomeum	12	Yes	FACW	<sup>1</sup> Indicators of hydric soil and wotland hydrology must
<sub>3.</sub> Carex scabrata	5	No	OBL	be present unless disturbed or problematic
4. Dryopteris carthusiana	5	No	FAC	Definitions of Four Versetation Strates
Dennstaedtia punctilobula	4	No	FACU	Definitions of Four vegetation Strata:
<u>.</u>				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Conting/Church March starts such discuines lass
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall.
10				,
11. <u> </u>	11			Herb – All herbaceous (non-woody) plants, regardless
20.5	41	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20.5	20% of	total cover:	8.2	<b>Woody vine</b> – All woody vines greater than 3 28 ft in
Woody Vine Stratum (Plot size: 30 )				height.
1.				
2				
2				
3		·		
4				Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes V No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heat )			
Remarks. (include photo numbers here of on a separate s	neet.)			

Profile Desc	cription: (Describe to	o the de	pth needed to docun	nent the i	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks	
0-6	10YR 4/1	90	7.5YR 4/6	10	C	PL/M	SIL	
6-18	10YR 5/1	85	5YR 4/6	15	С	PL/M	SICL	
			·					
						·		
						. <u> </u>		
<sup>1</sup> Type: C=C	oncentration D=Deple	etion RM	1=Reduced Matrix MS	S=Masker	Sand Gra	ains	<sup>2</sup> Location: PL=Pore Lining M=Matrix	
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soils <sup>3</sup>	:
Histosol	l (A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) <b>(N</b>	ILRA 147,	148) Coast Prairie Redox (A16)	
Black H	istic (A3)		Thin Dark Su	rface (S9)	) (MLRA 1	47, 148)	(MLRA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (	(F2)		Piedmont Floodplain Soils (F19)	
Stratifie	d Layers (A5)		Depleted Mat	trix (F3)			(MLRA 136, 147)	
2 cm Mi	uck (A10) <b>(LRR N)</b>		Redox Dark S	Surface (F	-6)		Very Shallow Dark Surface (TF12)	
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		Other (Explain in Remarks)	
Thick D	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy N	Mucky Mineral (S1) (Li	KR N,	Iron-Mangan	ese Mass	es (F12) (	LRR N,		
MILK/	A 147, 148)		WILKA 13	<b>0)</b>	MI DA 12	6 122)	<sup>3</sup> Indiantara of hydrophytic variation and	1
Sandy E	Pedax (S5)		Onblic Suna Piedmont Flo	odnlain S		0, 122) (MI DA 14	18) wetland bydrology must be present	1
Stripper	Matrix (S6)		Red Parent M	Aaterial (F	21) (MI R	Δ 127. 147	7) unless disturbed or problematic	
Restrictive	Laver (if observed):			laterial (i		~ 121, 141		
Type. no	one							
Denth (in	ches).						Hydric Soil Present? Yes 🗸 No	
Bomorko:								
nemarks.								



Photo 1 Wetland data point WHIA407f\_w facing east



Photo 2 Wetland data point WHIA407f\_w facing west

Project/Site: Atlantic Coast Pipeline	City/County:	Highland County	_ Sampling Date: 5/7/2016	
Applicant/Owner: Dominion		State: VA	Sampling Point: whia407_u	
Investigator(s): GB, SA, AS	Section, Tow	vnship, Range: <u>No PLSS in this are</u>	ea	
Landform (hillslope, terrace, etc.): slope	ndform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none			
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.305</u>	02518	Long: <u>-79.77697035</u>	Datum: WGS 1984	
Soil Map Unit Name: Shelocta-Berks complex, 35 to 55 percer	nt slopes	NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for this tir	me of year? Yes	No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "Normal Circumstances"	present? Yes 🔽 No	
Are Vegetation, Soil, or Hydrology natu	arally problematic?	(If needed, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map sh	owing sampling	point locations, transect	s, important features, etc.	

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland data point taken above toe of s	slope for a satur	ated PFO wetland lo	cated in a swale along toe c	If slope above p	erennial stream shia409.

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required	; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Living I	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Sc	ils (C6) Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No	Depth (inches):	
Water Table Present? Yes No	✓ Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	└ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous inspec	tions), if available:
Remarks:		
no hydrology indicators present		

Sampling Point: whia407\_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Deminent Creation	
1 Quercus rubra	20	Yes	FACU	That Are OBL EACW or EAC: 0 (A)	
2 Liriodendron tulipifera	10	Yes	FACU		
2. Quercus alba	10	Yes	FACU	Total Number of Dominant	
J. Tsuga canadensis	10	Yes	FACU	Species Across All Strata: (B)	
4. Tsuga canadensis	5	No	FACU	Percent of Dominant Species	
5. Magnolia acuminata			FACU	That Are OBL, FACW, or FAC: (A/E	3)
6. Betula lenta	5	INO	TACO	Drevelan ee hadeu werkek eet	
7				Prevalence index worksneet:	
	60	= Total Cove	ər	Total % Cover of: Multiply by:	
50% of total cover: 30	20% of	total cover:	12	OBL species $0   x 1 = 0$	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =0	
Liriodendron tulipifera	12	Yes	FACU	FAC species $2 \times 3 = 6$	
Acer pensylvanicum	12	Ves	FACIL	FACIL species $126 \times 4 = 504$	
2. Acci pensylvanicum	12		EACU	$\frac{1}{100} \frac{1}{100} \frac{1}$	
3. Hamamens virginiana		res	FACU	$\frac{128}{128}$ (1) $\frac{510}{128}$ (1)	
4. Betula lenta	5	No	FACU	Column Totals: (A) (B	,)
5. Pinus strobus	3	No	FACU	Provalonce Index - P/A - 3.98	
6				Hedrenbedie Mensterlien bediestere	
7.				Hydrophytic vegetation indicators:	
8				1 - Rapid Test for Hydrophytic Vegetation	
0				2 - Dominance Test is >50%	
9	44			3 - Prevalence Index is $≤3.0^1$	
22		= Total Cove	er 88	4 - Morphological Adaptations <sup>1</sup> (Provide supportir	ng
50% of total cover:	20% of	total cover:	0.0	data in Remarks or on a separate sheet)	-
Herb Stratum (Plot size:)				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. Dennstaedtia punctilobula	15	Yes	FACU		
2. Polygonatum biflorum	5	Yes	FACU		
<sub>3.</sub> Viola canadensis	2	No	FAC	'Indicators of hydric soil and wetland hydrology must	
4 Uvularia perfoliata	2	No	FACU	Definitions of From Manufaction Official	
5				Definitions of Four vegetation Strata:	
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of	or
0		·	<u> </u>	more in diameter at breast height (DBH), regardless of	of
7		·	<u> </u>	height.	
8				Sapling/Shrub – Woody plants, excluding vines, less	\$
9				than 3 in. DBH and greater than or equal to 3.28 ft (1	
10				m) tall.	
11				Herb - All berbaceous (non-woody) plants, regardles	
	24	= Total Cove	<u>ə</u> r	of size, and woody plants less than 3.28 ft tall.	3
50% of total cover: 12	20% of	total cover:	4.8		
Woody Vine Stratum (Plot size: 30)		-		<b>Woody vine</b> – All woody vines greater than 3.28 ft in	
1				neight.	
1					
2		·			
3		·			
4		. <u> </u>		Hydrophytic	
5				Vegetation	
	0	= Total Cove	ər	Present? Yes No	
50% of total cover: 0	20% of	total cover:	0		
Remarks: (Include photo numbers here or on a separate s	heet.)	-		1	
	,				

Profile Des	cription: (Describe	to the dep	th needed to docu	nent the i	indicator	or confirm	the absence o	f indicators.)		
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Re	marks	
0-3	10YR 2/1	100					L			
3-8	10YR 4/3	100					L			
8-18	10YR 5/6	100					SCL			
		·								_
		·								
		·								
		·								
										_
<sup>1</sup> Type: C=C	oncentration D=Dep	letion RM=	=Reduced Matrix M	S=Masker	Sand Gr	ains	<sup>2</sup> Location: PL =	-Pore Lining M=	Matrix	
Hydric Soil	Indicators:			e-mainter			Indicate	ors for Problem	natic Hydric Soils <sup>3</sup> :	
Histoso	l (A1)		Dark Surface	e (S7)			2 ci	m Muck (A10) <b>(N</b>	/ILRA 147)	
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) <b>(N</b>	ILRA 147,	148) <u> </u> Coa	ast Prairie Redo	x (A16)	
Black H	istic (A3)		Thin Dark Su	urface (S9)	) (MLRA 1	47, 148)	(	MLRA 147, 148	)	
Hydrog	en Sulfide (A4)		Loamy Gleye	ed Matrix (	(F2)		Pie	dmont Floodplai	n Soils (F19)	
Stratifie	d Layers (A5)		Depleted Ma	trix (F3)			(	MLRA 136, 147	)	
2 cm M	uck (A10) <b>(LRR N)</b>	- (	Redox Dark	Surface (F	-6)		Ver	ry Shallow Dark	Surface (TF12)	
Deplete	d Below Dark Surface	e (A11)	Depleted Da	rk Surface	e (F7)		Oth	ier (Explain in R	emarks)	
Thick D	ark Surface (A12)		Redox Depre	essions (F	8) oc (E12) <b>(</b>					
Sanuy i MI R	Δ 147 148)	.nn <b>n</b> ,	MIRA 13	6)	es (F12) <b>(</b>	LAN N,				
Sandy (	Gleved Matrix (S4)		Umbric Surfa	oce (F13) (	(MLRA 13	6, 122)	<sup>3</sup> Indic	ators of hydroph	vtic vegetation and	
Sandy I	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	(8) wetla	and hvdrology m	ust be present.	
Stripped	d Matrix (S6)		Red Parent	Material (F	21) (MLR	、 A 127, 147	7) unles	ss disturbed or p	problematic.	
Restrictive	Layer (if observed):				, ,		1	•		
Type: no	one									
Depth (in	iches):						Hydric Soil P	resent? Yes	No 🖌	_
Remarks:							1			



Photo 1 Upland data point WHIA407\_u facing west



Photo 2 Upland data point WHIA407\_u facing south

Project/Site: Atlantic Coast Pipeline	City/County: Highland County	Sam	pling Date: 5/4/2016
Applicant/Owner: Dominion		State: <u>VA</u> Sa	ampling Point: <u>whia406f_w</u>
Investigator(s): GB, SA	Section, Township, Range: N	o PLSS in this area	
Landform (hillslope, terrace, etc.): swale Lo	ocal relief (concave, convex, no	ne): <u>concave</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.30580804</u>	Long: <u>-79</u>	77594126	Datum: WGS 1984
Soil Map Unit Name: Macove channery silt loam, 3 to 15 percent slop	es, very stony	NWI classification	None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No	(If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Norma	I Circumstances" preser	nt? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed,	explain any answers in I	Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locati	ons, transects, im	portant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ Yes _ Yes _	ン ン ン	No No No	Is the Sampled Area within a Wetland?	Yes _	v	No
Remarks:							

Saturated PFO wetland located in a swale on the floodplain of perennial stream Lick Draft - shia408; hydrology from spring phia404 located at toe of slope; surface connection to stream; strip of fill for old road bed crosses wetland, no culvert in place. NCWAM category = seep.

wettallu Tyurology mulcators.	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)       True Aquatic Plants (B14)         High Water Table (A2)       Hydrogen Sulfide Odor (C1)	<ul> <li>Sparsely Vegetated Concave Surface (B8)</li> <li>Drainage Patterns (B10)</li> </ul>
<ul> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or Crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> <li>Aquatic Fauna (B13)</li> <li>Oxidized Rhizospheres on Living I</li> <li>Oxidized Rhizospheres on Living I</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled Sc</li> <li>Thin Muck Surface (C7)</li> <li>Other (Explain in Remarks)</li> </ul>	Roots (C3)       Moss Trim Lines (B16)         Dry-Season Water Table (C2)         sils (C6)       Crayfish Burrows (C8)         Saturation Visible on Aerial Imagery (C9)         Stunted or Stressed Plants (D1)         ✓         Geomorphic Position (D2)         ✓         Shallow Aquitard (D3)         Microtopographic Relief (D4)         FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🔽 Depth (inches):	
Water Table Present? Yes No Ver Depth (inches):	
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Ves No	Wetland Hydrology Present? Yes <u>✓</u> No
Water Table Present?       Yes       No       Depth (inches):         Saturation Present?       Yes          ✓        No       Depth (inches):       0          (includes capillary fringe)       Ves          ✓        No       Depth (inches):       0          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:

Sampling Point: whia406f\_w

	Abaaluta	• Dominant l	adiaatar	Deminence Test werksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksneet:
Fraxinus pennsylvanica	12	Yes	FACW	Number of Dominant Species
Tsuga canadensis	10	Yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	8	Yes	FAC	Total Number of Dominant
3. <u>Acer rubran</u>	6	No	EACU	Species Across All Strata:9 (B)
4. Carya ovata				Percent of Dominant Species
5. Acer saccharum	4	INO	FACU	That Are OBL, FACW, or FAC: <u>55.55555555</u> (A/B)
6				
7.				Prevalence Index worksheet:
	40	= Total Cove	r	Total % Cover of:Multiply by:
50% of total cover: 20	20% of	total cover:	8	OBL species20 x 1 =20
Sapling/Shrub Stratum (Plot size: 15				FACW species $22$ x 2 = 44
<u>A Acer rubrum</u> (Flot size)	5	Yes	FAC	FAC species $31 \times 3 = 93$
Frevinue poppey/verice	5	Voo		$\frac{1}{42} \times 4 = \frac{168}{168}$
2. Fraxinus pennsylvanica	5		FACW	$\begin{array}{c} \text{FACO species} \\ 0 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$
3. Hagus grandifolia	4	Yes	FACU	UPL species $x 5 = 325$
4. Hamamelis virginiana	4	Yes	FACU	Column Totals: (A) (B)
5.				Developed by D/A 2.82
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
7:				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	- 40			✓ 3 - Prevalence Index is $\leq 3.0^1$
	18	= Total Cove	r	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: 9	20% of	total cover:	3.0	data in Remarks or on a senarate sheet)
Herb Stratum (Plot size: 5 )				Data in Kenarks of on a separate sheet)
<sub>1.</sub> Glyceria striata	20	Yes	OBL	Problematic Hydrophytic Vegetation" (Explain)
2 Podophyllum peltatum	10	Yes	FACU	
2 Laportea canadensis	6	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Impatiens capensis	5	No	FACW	be present, unless disturbed or problematic.
4. Impatiens capensis	5	N		Definitions of Four Vegetation Strata:
5. Calex blanda			FAC	<b>Trop</b> Weady plants excluding vines 3 in (7.6 cm) or
6. Geum aleppicum	4	No	FAC	more in diameter at breast height (DBH), regardless of
7. Geranium maculatum	4	No	FACU	height.
<sub>8.</sub> Dryopteris carthusiana	3	No	FAC	
9				<b>Sapling/Shrub</b> – Woody plants, excluding vines, less
10				m) tall.
11	57			Herb – All herbaceous (non-woody) plants, regardless
20.5		= Total Cove	r 11.1	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 28.5	20% of	total cover:	11.4	<b>Woody vine</b> – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: <u>30</u> )				height.
1				
2				
3				
			<u> </u>	
4				Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes <u>Yes</u> No
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			1
	,			

Profile Desc	cription: (Describe t	o the de	pth needed to docur	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-3	10 FR 3/1	100					SIL	
3-8	10YR 4/2	100					SICL	
8-18	10YR 5/2	90	10YR 5/8	10	С	PL/M	SIC	
			·					
1							2	
'Type: C=C	oncentration, D=Depl	etion, RM	1=Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	Location: PL	_=Pore Lining, M=Matrix.
Hyuric Soli			Dark Curfees	(07)			inuica	
Histosol	(A1) ninadan (A2)		Dark Surface	(S7) Iow Surfo	00 (S9) /M		149)	CM MUCK (A10) (MLRA 147)
HISUC E	pipedon (AZ)		Folyvalue Be	rface (SQ	) (MI PA 1	12KA 147, 17 118)	146)	
Black Th	an Sulfide ( $\Delta A$ )			d Matrix (	(F2)	47, 140)	Pi	edmont Floodplain Soils (F19)
Stratifie	d Lavers (A5)		Depleted Mai	trix (F3)	(1 2)		' '	(MI RA 136, 147)
2 cm Mi	uck (A10) (LRR N)		Redox Dark S	Surface (F	-6)		Ve	erv Shallow Dark Surface (TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Dar	Depleted Dark Surface (F7)				ther (Explain in Remarks)
Thick Da	ark Surface (A12)	( )	Redox Depre	ssions (F	8)			
Sandy N	Aucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) <b>(</b> I	LRR N,		
MLR	A 147, 148)		MLRA 13	6)				
Sandy G	Gleyed Matrix (S4)		Umbric Surfa	Umbric Surface (F13) (MLRA 136, 122)				cators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	•8) wet	tland hydrology must be present,
Stripped	d Matrix (S6)		Red Parent N	Aaterial (F	21) <b>(MLR</b>	A 127, 147	') unl	ess disturbed or problematic.
Restrictive	Layer (if observed):							
Type: sli	ty clay							
Depth (in	ches): <u>8</u>						Hydric Soil	Present? Yes 🖌 No
Remarks:								



Photo 1 Wetland datapoint whia406f\_w facing west



Photo 2 Wetland datapoint whia406f\_w facing east

Project/Site: Atlantic Coast Pipeline	City/County:	Highland County	Sampling Date: 5/4/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>whia406_</u> u
Investigator(s): GB, SA	Section, Tow	vnship, Range: <u>No PLSS in this a</u>	area
Landform (hillslope, terrace, etc.): slope	_ Local relief (con	cave, convex, none): <u>none</u>	Slope (%): <u>12</u>
Subregion (LRR or MLRA): S Lat: 38.305929	931	Long: <u>-79.77618098</u>	Datum: WGS 1984
Soil Map Unit Name: Macove channery silt loam, 3 to 15 percent	slopes, very stony	NWI clas	sification: None
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrologysignific	antly disturbed?	Are "Normal Circumstance	es" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natural	ly problematic?	(If needed, explain any and	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling	point locations, transe	cts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	マ マ マ	Is the Sampled Area within a Wetland?	Yes	No	
Remarks: Upland data point taken above toe of s	slope for a satura	ated PF	O wetland loc	cated within a swale on the fl	oodplain of Lic	☆ Draft.	

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Set	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No <u></u>	
Saturation Present? Yes No <u>'</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present?       Yes       No         ctions), if available:
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Mo Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Concern Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)          Remarks:          no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)          Remarks:          no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ _ Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective research in the stream gauge)          Remarks:          no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         no hydrology indicators present	Wetland Hydrology Present? Yes No

Sampling Point: whia406\_u

	A h = = h = ( =	- Density and the	P	Deminence Test werdetest
The Olympic (Distribution 30	Absolute	Dominant Ir	ndicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>50</u> )	% Cover	<u>Species?</u>	Status	Number of Dominant Species
1. Tsuga canadensis	20	Yes	FACU	That Are OBL, FACW, or FAC: 0 (A)
2 Quercus alba	20	Yes	FACU	
Liriodendron tulinifera	15	Yes	FACU	Total Number of Dominant
3. <u></u>	10			Species Across All Strata: (B)
<sub>4.</sub> Acer saccharum	10	No	FACU	
F Fraxinus pennsylvanica	5	No	FACW	Percent of Dominant Species
5. <u></u>				That Are OBL, FACW, or FAC: (A/B)
6				
7.				Prevalence Index worksheet:
	70	Total Caura		Total % Cover of: Multiply by:
25			14	OBL species $0 \times 1 = 0$
50% of total cover:	20% of	total cover:	14	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x 2 = 10$
1 Betula lenta	10	Yes	FACU	FAC species $10$ x 3 = $30$
	10	Voo	EACU	$EACU species 120 \times 4 = 480$
2. Tsuga canadensis	10	res	FACU	$\begin{array}{c} \text{FACO species} \\ \hline \\ 0 \\ \end{array} \\ \begin{array}{c} x \\ 4 \\ \hline \\ 0 \\ \end{array} \\ \begin{array}{c} 0 \\ 0 \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\$
<sub>3.</sub> Fagus grandifolia	5	No	FACU	UPL species x 5 =
Hamamelis virginiana	5	No	FACU	Column Totals: $138$ (A) $526$ (B)
4. mamamens virginiana				
5. Fraxinus pennsylvanica	3	No	FACW	Dravalance Index D/A 381
6				
0				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8.				
				2 - Dominance Test is >50%
9		<u> </u>	<u> </u>	3 - Prevalence Index is ≤3.0 <sup>1</sup>
	33	= Total Cover	r .	
50% of total cover: 16.5	20% of	total cover:	6.6	
Lierh Stretum (Diet eize 5)				data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Piot size)	45			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. Dennstaedtia punctilopula	15	Yes	FACU	
2 Podophyllum peltatum	10	Yes	FACU	
c Carex blanda	5	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Carex bialida			1 AC	be present, unless disturbed or problematic.
4. Viola canadensis	5	No	FAC	Definitions of Four Vegetation Strata:
5				Demittions of Four Vegetation Strata.
5				<b>Tree</b> – Woody plants, excluding vines, 3 in, (7.6 cm) or
6				more in diameter at breast beight (DBH) regardless of
7.				height.
8		<u> </u>	<u> </u>	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
10				,
11		·		Herb – All herbaceous (non-woody) plants, regardless
	35	= Total Cover	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 17.5	20% of	total cover:	7	
30				Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1				
2				
3				
4.				
5				Hydrophytic
5				
	0	= Total Cover	r _	Present? res <u>No</u>
50% of total cover: 0	20% of	total cover:	0	
Remarka: (Include photo numbero horo er en a constato e	haat )			
Remarks. (include photo numbers here of on a separate s	neet.)			

Profile Desc	cription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features	5			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 3/2	100					SL	
2-5	10YR 4/3	100					SL	
5-13	10YR 5/6	100					SCL	rock at 13"
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	<sup>2</sup> Location: P	L=Pore Lining, M=Matrix.
Hydric Soli	Indicators:			(07)			Indica	ators for Problematic Hydric Solis :
Histosol	(A1) ninadan (A2)		Dark Surface	e (S7) Jour Surfo			2	cm Muck (A10) <b>(MLRA 147)</b>
	pipedon (AZ)		Polyvalue Be	urfooo (SO)		ILKA 147, 47 440)	146)	
Black II	Suc(A3)			ad Matrix (		47, 140)	P	Diedmont Floodplain Soils (F19)
Stratifie	d Lavers (A5)		Depleted Ma	trix (F3)	12)		'	(MI RA 136 147)
2 cm Mi	uck (A10) (LRR N)		Redox Dark	Surface (F	6)		V	(erv Shallow Dark Surface (TF12)
Deplete	d Below Dark Surfac	e (A11)	Depleted Da	rk Surface	(F7)		C	Other (Explain in Remarks)
Thick D	ark Surface (A12)		Redox Depre	essions (F8	3)			
Sandy N	/ Jucky Mineral (S1) <b>(L</b>	.RR N,	Iron-Mangan	ese Masse	, es (F12) <b>(</b>	LRR N,		
MLR	A 147, 148)		MLRA 13	6)				
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ce (F13) (	MLRA 13	6, 122)	<sup>3</sup> Ind	licators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	<b>18)</b> we	etland hydrology must be present,
Stripped	d Matrix (S6)		Red Parent M	Aaterial (F	21) <b>(MLR</b>	A 127, 147	<b>7)</b> un	less disturbed or problematic.
Restrictive	Layer (if observed):							
Type: no	one							
Depth (in	ches):						Hydric Soil	Present? Yes No
Remarks:							1	



**Photo 1** Upland data point whia406\_u facing north



Photo 2 Upland data point whia406\_u facing west

Project/Site: Atlantic Coast Pipeline	City/County: Bath Cour	unty	Sampling Date: 10/29/2016			
Applicant/Owner: Dominion		State: VA	Sampling Point: wbaa005f_w			
Investigator(s): GB, AS	Section, Township, Ra	ange: No PLSS in this are	a			
Landform (hillslope, terrace, etc.): floodplain	Local relief (concave, cor	ivex, none): microtopogra	aphy Slope (%): <u>2</u>			
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.11</u>	213301 Lor	ng:79.59107438	Datum: WGS 1984			
Soil Map Unit Name:		NWI classifi	cation: PFO			
Are climatic / hydrologic conditions on the site typical for this t	time of year? Yes No _	(If no, explain in F	Remarks.)			
Are Vegetation, Soil, or Hydrologysig	inificantly disturbed? Are	"Normal Circumstances"	present? Yes 🖌 No			
Are Vegetation, Soil, or Hydrology na	turally problematic? (If n	eeded, explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes <u>Ves</u> No	Is the Sample	d Area				

Hydric Soil Present? Wetland Hydrology Present?	Yes V Yes V	No No	Is the Sampled Area within a Wetland?	Yes 🖌	No	
Remarks:						
Saturated PFO wetland located on the floodplain of and connected to perennial stream sbaa019; stream sbaa003 ends within the wetland as the						

Saturated PFO wetland located on the floodplain of and connected to perennial stream sbaa019; stream sbaa003 ends within the wetland as the channel is lost upon entry; NCWAM key = Headwater Forest.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
✓ Saturation (A3) Oxidized Rhizospheres on Living Roc	ots (C3) Moss Trim Lines (B16)		
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)		
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils	(C6) Crayfish Burrows (C8)		
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)		
Iron Deposits (B5)	Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)		
Water-Stained Leaves (B9)	<ul> <li>Microtopographic Relief (D4)</li> </ul>		
Aquatic Fauna (B13)	<ul> <li>FAC-Neutral Test (D5)</li> </ul>		
Field Observations:			
Surface Water Present? Yes No 🖌 Depth (inches):			
Water Table Present? Yes <u>/</u> No Depth (inches): <u>12</u>			
Saturation Present? Yes <u>&lt;</u> No <u>Depth (inches):</u> 8 W	etland Hydrology Present? Yes <u>/</u> No		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	s), if available:		
Remarke:			

Sampling Point: wbaa005f\_w

	Abaaluta	- Dominant Ir	diaatar	Deminence Test worksheet:
Tree Stratum (Plot size: 30)	Absolute % Covor	Dominant Ir	Stotus	Dominance Test worksneet:
	<u>10</u>	<u>Species:</u> Voe	FACU	Number of Dominant Species
1. Quercus alba	10		540	That Are OBL, FACW, or FAC: (A)
2. Nyssa sylvatica	10	Yes	FAC	Total Number of Deminant
3 Acer rubrum	10	Yes	FAC	Species Across All Strata: 9 (B)
4		·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 77.77777777 (A/B)
6.				
7				Prevalence Index worksheet:
1	30	·		Total % Cover of: Multiply by:
		= Total Cover		$\frac{10}{10} \frac{10}{10} \frac{10}{10} \frac{10}{10}$
50% of total cover: 15	20% of	total cover:	6	$\begin{array}{c} \text{OBL species} \\ 13 \end{array}  x = \underline{13} \\ 26 \end{array}$
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x 2 = $
1 Pinus strobus	6	Yes	FACU	FAC species $49$ x 3 = $147$
Appr rubrum		Voo	EAC	EACU species 16    64
2. <u>Acer rubrum</u>	4	165	FAC	$\begin{array}{c} x \neq z \\ y \neq z \\ z \neq z $ z = z \\ z \neq z \\ z \neq z \\ z \neq z = z  z = z \\ z \neq z = z  z = z = z \\ z \neq z = z  z = z = z = z = z = z  z = z =
3				UPL species $x 5 = $
4				Column Totals: (A) (B)
D		·		Prevalence Index = $B/A = 2.8$
6		. <u></u>		Hydrophytic Vegetation Indicators:
7.				
0				1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9				$\checkmark$ 3 - Prevalence Index is <3 0 <sup>1</sup>
	10	= Total Cover		
50% of total cover: 5	20% of	total cover:	2	4 - Morphological Adaptations' (Provide supporting
Liente Otrecture (Dist size) 5				data in Remarks or on a separate sheet)
Misroeterium vimineum	15		540	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	15	Yes	FAC	· · · · · · · · · · · · · · · · ·
<sub>2.</sub> Carex gynandra	10	Yes	OBL	
3 Dichanthelium clandestinum	10	Yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
S	10	Voc	EAC W/	be present, unless disturbed or problematic.
4. rackera aurea	10	165	FACW	Definitions of Four Vegetation Strata:
5. Viola cucullata	3	No	FACW	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
_				more in diameter at breast height (DBH), regardless of
/		·		neight.
8				Sanling/Shrub Weady planta avaluding vinas loss
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall
10				
11				Herb – All herbaceous (non-woody) plants, regardless
	48	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 24	20% of	total cover:	9.6	
Weedy Vine Stratum (Blot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
	0			height.
1	0			
2				
3				
			<u> </u>	
4		·		Hydrophytic
5				Vegetation
	0	- Total Cove		Present? Yes <u>V</u> No
E0% of total approx	200/ of		0	
	20% 01	total cover.		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	cription: (Describe t	o the dep	oth needed to docur	nent the	indicator	or confirm	the absence of	indicators.)		
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc	Texture	Remarks		
0-3	10YR 3/2	100		_			SCL			
3-8	10YR 4/2	100					SCL			
8-18	10YR 4/1	94	10YR 5/8	6	С	PL/M	CL			
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicato	ors for Problematic Hydric Soils <sup>3</sup> :		
Histosol	(A1)		Dark Surface	e (S7)			2 cn	n Muck (A10) <b>(MLRA 147)</b>		
Histic E	pipedon (A2)		Polyvalue Be	Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)						
Black Hi	istic (A3)		Thin Dark Su	ırface (S9	) (MLRA 1	47, 148)	()	MLRA 147, 148)		
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Piedmont Floodplain Soils (F19)			
Stratifie	d Layers (A5)		Depleted Ma	trix (F3)			()	MLRA 136, 147)		
2 cm Mu	uck (A10) <b>(LRR N)</b>		Redox Dark	Surface (F	-6)		Very Shallow Dark Surface (TF12)			
Deplete	d Below Dark Surface	e (A11)	Depleted Da	rk Surface	e (F7)		Othe	er (Explain in Remarks)		
Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)					
Sandy N	/lucky Mineral (S1) <b>(L</b>	RR N,	Iron-Mangan	ese Mass	es (F12) <b>(</b> I	LRR N,				
MLR	A 147, 148)		MLRA 13	6)			0			
Sandy G	Eleyed Matrix (S4)		Umbric Surfa	ice (F13)	(MLRA 13	6, 122)	<sup>3</sup> Indica	tors of hydrophytic vegetation and		
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 14						8) wetla	nd hydrology must be present,			
Stripped	I Matrix (S6)		Red Parent N	Aaterial (F	<sup>-</sup> 21) <b>(MLR</b>	A 127, 147	) unles	s disturbed or problematic.		
Restrictive	Layer (if observed):									
Type: no	ne									
Depth (in	ches):						Hydric Soil Pr	resent? Yes 🖌 No		
Remarks:							·			
i										



Wetland data point WBAA005f\_w facing north



Wetland data point WBAA005f\_w facing west

Project/Site: Atlantic Coast Pipeline	City/County: Ba	th County	_ Sampling Date: <u>10/29/2016</u>
Applicant/Owner: Dominion		State: VA	Sampling Point: wbaa005_u
Investigator(s): GB, AS	Section, Townsl	nip, Range: <u>No PLSS in this are</u>	ea
Landform (hillslope, terrace, etc.): toe of slope	Local relief (concav	re, convex, none): <u>none</u>	Slope (%): <u>4</u>
Subregion (LRR or MLRA): S	at: <u>38.11210583</u>	Long: <u>-79.59114804</u>	Datum: WGS 1984
Soil Map Unit Name:		NWI classif	ication: UPLAND
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes	No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling p	oint locations, transect	s, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	ン ン ン	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland data point taken on the toe of s	lope above a sa	turated	PFO wetland	l located on the floodplain of	perennial strea	am sbaa019.

Wettand Hydrology indicators.	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	<ul> <li>Sparsely Vegetated Concave Surface (B8)</li> <li>Drainage Patterns (B10)</li> <li>Roots (C3)</li> <li>Moss Trim Lines (B16)</li> <li>Dry-Season Water Table (C2)</li> <li>crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Stunted or Stressed Plants (D1)</li> <li>Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>Microtopographic Relief (D4)</li> <li>FAC-Neutral Test (D5)</li> </ul>
Field Observations:	
Surface Water Present?       Yes No       Depth (inches):         Water Table Present?       Yes No       Depth (inches):         Saturation Present?       Yes No       Depth (inches):	Watland Hydrology Present? Ves No V
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:

Sampling Point: <u>wbaa005\_u</u>

	Absolute	Dominant Ir	dicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	
Quercus alba	45	Yes	FACU	Number of Dominant Species
Acer rubrum	12	No	FAC	That Ale OBL, FACW, OF FAC (A)
2. Binus strebus	10	No	FACU	Total Number of Dominant
3. Pinus strobus		NO	FACU	Species Across All Strata: 6 (B)
4. Quercus rubra	5	No	FACU	
5.				That Aro OBLEACIAL or EAC: 33.33333333 (A/B)
6			_	
				Prevalence Index worksheet:
[ /	72			Total % Cover of: Multiply by:
	:	= Total Cover	111	$\frac{1}{OPI} \text{ species} \qquad 0 \qquad \text{ x 1} = 0$
50% of total cover: 30	20% of	total cover:	14.4	
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = 0$
1. Cornus florida	12	Yes	FACU	FAC species $32 \times 3 = 90$
2 Acer rubrum	10	Yes	FAC	FACU species x 4 = 376
Pinus strobus	6	No	FACU	UPL species $6 \times 5 = 30$
3. Ootra virginiana	6	No	FACU	Column Totals: $132$ (A) $502$ (B)
4. Ostrya virginiana			TACU	
5				Prevalence Index $- B/A - 3.8$
6.				
7				Hydropnytic vegetation indicators:
·				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		= Total Cover		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:17	20% of	total cover:	6.8	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
1 Microstegium vimineum	10	Yes	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
- Elymus hystrix	6	Ves	LIPI	
2. Elymas mysurx		163		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3. Bromus pubescens	6	Yes	FACU	be present, unless disturbed or problematic.
4. Luzula multiflora	4	No	FACU	Definitions of Four Vegetation Strata
<sub>5.</sub> Potentilla canadensis	4	No		
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		. <u> </u>		more in diameter at breast height (DBH), regardless of
/				height.
8				Sanling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
	30	Tatal Cause		Herb – All herbaceous (non-woody) plants, regardless
50% of total accurry 15		= Total Cover	6	or size, and woody plants less than 5.26 it tail.
50% of total cover:	20% of	total cover:	<u> </u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 50 )				height.
1. none	0			
2.				
3.				
4				
				Hydrophytic
5		. <u> </u>		Vegetation
	0.	= Total Cover		Present? Yes <u>No</u>
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			1

Profile Desc	cription: (Describe to	o the depth	needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	k Features	6		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-5	10YR 4/4	100					SCL
5-18	10YR 5/6	100					SCL
. <u> </u>				. <u> </u>			
·			<u> </u>				· · · · · · · · · · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ /
		tion DM D		Maakad			<sup>2</sup> Leastion: DL Data Lining M. Matrix
	Indicators:		euuceu mainx, ma	s=iviaskeu	Sanu Gra	aii 15.	Indicators for Problematic Hydric Soils <sup>3</sup>
Histosol	(A1)		Dark Surface	(97)			2 cm Muck (A10) (MI BA 147)
Histic Er	inedon (Δ2)		Polyvalue Be	(07) Iow Surfa	(S8) (N	II RA 147	148) Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MI RA 1	47. 148)	(MI RA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleve	d Matrix (I	(	,,	Piedmont Floodplain Soils (F19)
Stratified	d Lavers (A5)		Depleted Mat	rix (F3)	)		(MLRA 136, 147)
2 cm Mu	uck (A10) <b>(LRR N)</b>		Redox Dark S	Surface (F	6)		Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)	· · ·	Redox Depre	ssions (F8	3)		
Sandy M	lucky Mineral (S1) (LF	RR N,	Iron-Mangane	ese Masse	es (F12) <b>(</b> I	LRR N,	
MLRA	A 147, 148)		MLRA 130	6)			
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) <b>(</b>	MLRA 13	6, 122)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	(8) wetland hydrology must be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) <b>(MLR</b>	A 127, 147	7) unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Type: <u>no</u>	ne						
Depth (in	ches):						Hydric Soil Present? Yes No
Remarks:							



Upland data point WBAA005\_u facing southwest



Upland data point WBAA005\_u facing northwest

Project/Site: Atlantic Coast Pipeline	City/County: Aug	usta	Sampling Date: 9/27/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>waua411e_w</u>
Investigator(s): GB, AS	Section, Townsh	ip, Range: <u>No PLSS in this are</u>	a
Landform (hillslope, terrace, etc.): drainage way	Local relief (concave	e, convex, none): <u>concave</u>	Slope (%): <u>3</u>
Subregion (LRR or MLRA): <u>S</u> Lat	38.28070879	_ Long: <u>-79.31026212</u>	Datum: WGS 1984
Soil Map Unit Name: Ernest silt loam, 0 to 7 percent s	lopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical f	or this time of year? Yes	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site n	nap showing sampling po	int locations, transects	s, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u> </u>	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
abutting saua436					

# HYDROLOGY

wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3) ✓ Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc	ils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🗸 Depth (inches):	
Water Table Present? Yes <u>V</u> No Depth (inches): <u>1</u>	
Water Table Present?       Yes          ✓ No       Depth (inches): 1          Saturation Present?       Yes          ✓ No       Depth (inches): 0	Wetland Hydrology Present? Yes No
Water Table Present?       Yes          ✓             No       Depth (inches): 1          Saturation Present?       Yes          ✓             No       Depth (inches): 0          (includes capillary fringe)                Ves              Ves	Wetland Hydrology Present? Yes <u>V</u> No
Water Table Present?       Yes          ✓ No       Depth (inches):       1          Saturation Present?       Yes          ✓ No       Depth (inches):       0          (includes capillary fringe)            Depth (inches):       0          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓ No       Depth (inches):       1          Saturation Present?       Yes          ✓ No       Depth (inches):       0          (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective       Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Water Table Present?       Yes          ✓ No       Depth (inches):       1          Saturation Present?       Yes          ✓ No       Depth (inches):       0          (includes capillary fringe)            Depth (inches):       0          Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:            Remarks:	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:

Sampling Point: waua411e\_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2 (A	۹)
2				Total Number of Dominant	
3.				Species Across All Strata: 2 (B	3)
4				(=	- /
5				Percent of Dominant Species	
		·		That Are OBL, FACW, or FAC:(A	√B)
6		·		Prevalence Index worksheet:	
7		·		Total % Cover of: Multiply by:	
		= Total Cove	er O	$\frac{1}{0} \frac{1}{0} \frac{1}$	
50% of total cover: 0	20% of	total cover:	0	$\frac{20}{20} \times 1 = \frac{40}{20}$	
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = \frac{10}{0}$	
1				FAC species $0 \times 3 = 0$	
2				FACU species $0   x 4 = 0$	
3				UPL species x 5 =0	
4				Column Totals: 20 (A) 40 (	(B)
4					( )
D		·		Prevalence Index = B/A =2	
6		·		Hydrophytic Vegetation Indicators:	
7				<ul> <li>1 - Rapid Test for Hydrophytic Vegetation</li> </ul>	
8				$\checkmark$ 2 Dominance Test is > 50%	
9.				$\mathbf{r}$ 2 - Dominiance rest is >50 %	
	0	= Total Cove	۹r	Yevalence Index is ≤3.0	
50% of total cover: 0	20% of	total cover:	0	4 - Morphological Adaptations' (Provide suppor	rting
Horb Stratum (Plot size: 5 )	20 /0 01			data in Remarks or on a separate sheet)	
A Packera aurea	15	Vec	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
		<u> </u>			
2. Juncus enusus	5	res	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology mus	st
3				be present, unless disturbed or problematic.	,
4				Definitions of Four Vegetation Strata	
5.					
6				Tree - Woody plants, excluding vines, 3 in. (7.6 cm)	) or
7				more in diameter at breast height (DBH), regardless	s of
7				neight.	
8		·		Sapling/Shrub – Woody plants, excluding vines, les	SS
9				than 3 in. DBH and greater than or equal to 3.28 ft (	(1
10				m) tall.	
11				Herb - All berbaceous (non-woody) plants, regardle	200
	20	= Total Cove	ər	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 10	20% of	total cover:	4		
Woody Vine Stratum (Plot size: 30)		-		<b>Woody vine</b> – All woody vines greater than 3.28 ft i	in
1				neight.	
l		·			
2					
3					
4				Hydrophytic	
5				Vegetation	
	0	= Total Cove	ər	Present? Yes V No	
50% of total cover: 0	20% of	total cover:	0		
Pomarke: (Include photo numbers here or on a congrate s	hoot)				
Also noted a Carox sp. Unable to identify due to time of ver	ar				
also noted a Carex sp. Onable to identify due to time of yea	ai				

10-12 10 0-12 10	Color (moist) DYR 3/1	<u>%</u> 95 10 	Color (moist) YR 4/6	<u>%</u> 5 	Type' C	Loc <sup>2</sup> PL	Texture SCL	Remarks
0-12 10	DYR 3/1	95 10 	YR 4/6		С	PL	SCL	
						 	2	
pe: C=Conce	entration, D=Deple	tion, RM=Re	duced Matrix, MS	=Masked	Sand Gra	ins.	Location: H	PL=Pore Lining, M=Matrix.
			Dorle Curfage	(07)			indic	
Histic Ening	l) Idon (A2)	-	Dark Surface	(37) Iow Surfac	o (S8) <b>(M</b>	I DA 147	148) (	2 CHI MUCK (ATO) (MLRA 147) Coast Prairie Redox (A16)
Black Histic	(A3)	-	Thin Dark Su	rface (S9)	(MIRA 1/	47. 148)	140) <u> </u>	(MI RA 147, 148)
Hvdrogen S	Sulfide (A4)	-	Loamy Gleve	d Matrix (F	2)	,,	ſ	Piedmont Floodplain Soils (F19)
Stratified La	avers (A5)	-	Depleted Mat	rix (F3)	_/			(MLRA 136, 147)
2 cm Muck	(A10) <b>(LRR N)</b>	-	Redox Dark \$	Surface (F6	5)		Ň	Very Shallow Dark Surface (TF12)
Depleted Be	elow Dark Surface (	(A11) –	Depleted Dar	k Surface (	(F7)			Other (Explain in Remarks)
Thick Dark	Surface (A12)	· · · -	Redox Depre	ssions (F8	)			
Sandy Muck	ky Mineral (S1) (LR	RN,	Iron-Mangan	ese Masse	s (F12) <b>(L</b>	.RR N,		
MLRA 14	17, 148)		MLRA 13	6)				
Sandy Gley	ed Matrix (S4)	_	Umbric Surfa	ce (F13) <b>(N</b>	/LRA 136	6, 122)	<sup>3</sup> Inc	dicators of hydrophytic vegetation and
Sandy Redo	ox (S5)	_	Piedmont Flo	odplain So	ils (F19) <b>(</b>	(MLRA 14	<b>8)</b> w	etland hydrology must be present,
Stripped Ma	atrix (S6)	-	Red Parent M	laterial (F2	1) (MLRA	A 127, 147	<b>')</b> ur	nless disturbed or problematic.
strictive Lay	er (if observed):							
Туре:			-					
Depth (inches	s):		_				Hydric Soi	il Present? Yes 🔽 No
narks:								



Photo 1 Wetland data point waua411e\_w facing east



Photo 2 Wetland data point waua411e\_w facing north

Project/Site: Atlantic Coast Pipeline	_ City/County: <u>Augusta</u>	Sa	ampling Date: 9/27/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: waua411_u
Investigator(s): GB, AS	Section, Township, Range: No	PLSS in this area	
Landform (hillslope, terrace, etc.): hill slope	Local relief (concave, convex, no	ne): <u>none</u>	Slope (%):25
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.2807205</u>	9 Long: <u>-79.</u>	31034795	Datum: WGS 1984
Soil Map Unit Name: Ernest silt loam, 0 to 7 percent slopes		NWI classification	on: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🖌 No	(If no, explain in Rem	arks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Norma	I Circumstances" pres	sent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, o	explain any answers i	n Remarks.)
Subregion (LRR or MLRA):       S       Lat: 38.280/2051         Soil Map Unit Name:       Ernest silt loam, 0 to 7 percent slopes         Are climatic / hydrologic conditions on the site typical for this time of         Are Vegetation       , Soil         Are Vegetation       , Soil         Are Vegetation       , Soil         , or Hydrology       naturally	year? Yes <u>v</u> No <u></u> tly disturbed? Are "Norma problematic? (If needed, or the second se	31034795 NWI classificatio (If no, explain in Rem I Circumstances" pres explain any answers i	Datum: <u>WGS 1984</u> on: <u>None</u> arks.) sent? Yes <b>✓</b> _ No n Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living R	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	bils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Surface Water Present?       Yes       No       Depth (inches):         Water Table Present?       Yes       No       Depth (inches):	
Surface Water Present?       Yes No        Depth (inches):         Water Table Present?       Yes No        Depth (inches):         Saturation Present?       Yes No        Depth (inches):         (inches a coefficient)       Yes No        Depth (inches):	Wetland Hydrology Present? Yes No
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge monitoring well aerial photos previous inspect	Wetland Hydrology Present? Yes No
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       No Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No
Surface Water Present?       Yes No _       Depth (inches):         Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Ves No _       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Mo Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Mo Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No _       Depth (inches):         Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       Remarks:	Wetland Hydrology Present? Yes No tions), if available:
Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:	Wetland Hydrology Present? Yes No tions), if available:

Sampling Point: waua411\_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ) 1. <u>Pinus strobus</u>	<u>% Cover</u> 60	<u>Species?</u> Yes	Status FACU	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5			<u> </u>	That Are OBL, FACW, or FAC: (A/B)
6			<u> </u>	
7				Tetal % Cover of:
10	60	= Total Cove	er 16	$\begin{array}{c c} \hline 10 \text{ lat } \% \text{ Cover of } \\ \hline 0 \hline \hline$
50% of total cover: <u>40</u>	20% of	f total cover:	10	$\frac{0}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{10000} = \frac{1}{10000000000000000000000000000000000$
Sapling/Shrub Stratum (Plot size:)	20	Vaa	FACU	FAC species $0 \times 2 = 0$
1. Philos strobus		Yes	FACU	FACt species $340$
2. Carya ovata	5	Yes	FACU	FACU species $2^{-1}$ $x = 2^{-1}$
3				$\begin{array}{c} \text{UPL species} \\ \hline \\ 85 \\ \hline \\ 340 \\ \hline \\ 340 \\ \hline \\ \end{array}$
4				Column Totals: (A) (B)
5			. <u> </u>	Prevalence Index = B/A =4
6		·	<u> </u>	Hydrophytic Vegetation Indicators:
7		·	<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$3 - $ Prevalence Index is $\leq 3.0^{1}$
	25	= Total Cove	er _	0 • Provide index to =0.0
50% of total cover: 12.5	20% of	f total cover:	5	deta in Romarka or on a congrate sheet)
Herb Stratum (Plot size: 5 )				Drahlamatic Hudenshutic Vacatation <sup>1</sup> (Furlain)
1				Problematic Hydrophytic Vegetation (Explain)
2				1
3	_			Indicators of hydric soil and wetland hydrology must
4.				Definitions of Four Verstation Strates
5.				Definitions of Four vegetation Strata:
6		·		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7			·	more in diameter at breast height (DBH), regardless of
8		·		neight.
0		·		Sapling/Shrub – Woody plants, excluding vines, less
5		. <u> </u>	·	than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
		·		
11	0		·	Herb – All herbaceous (non-woody) plants, regardless
50% of total acutoria		= I otal Cove	er 2	of size, and woody plants less than 3.28 ft tall.
50% of total cover.	20% 0	total cover.		Woody vine - All woody vines greater than 3.28 ft in
<u> </u>				height.
1		·		
2		·	·	
3		·		
4		·	·	Hydrophytic
5				Vegetation
	0	= Total Cove	er	Present? Yes No Yes
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the in	dicator o	or confirm	the absenc	e of indicato	ors.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-12	7.5YR 4/4	100					SCL			
								_		
	e	. <u> </u>								
		<u> </u>				<u> </u>				
				·						
. <u></u>										
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked S	Sand Gra	ains.	<sup>2</sup> Location:	PL=Pore Linii	ng, M=Matrix.	
Hydric Soil	Indicators:						Indi	cators for Pr	oblematic Hy	dric Soils <sup>3</sup> :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A	A10) <b>(MLRA 1</b> 4	47)
Histic Ep	oipedon (A2)		Polyvalue Be	low Surface	e (S8) <b>(M</b>	LRA 147,	148)	Coast Prairie	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Sι	ırface (S9) (	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F	2)			Piedmont Flo	odplain Soils (	(F19)
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 13	6, 147)	
2 cm Mı	ıck (A10) <b>(LRR N)</b>		Redox Dark	Surface (F6	5)			Very Shallow	Dark Surface	(TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Da	rk Surface (	F7)			Other (Explai	n in Remarks)	
Thick Da	ark Surface (A12)		Redox Depre	essions (F8)	)					
Sandy N	lucky Mineral (S1) <b>(L</b>	RR N,	Iron-Mangan	ese Masses	s (F12) <b>(I</b>	_RR N,				
MLR	A 147, 148)		MLRA 13	6)						
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ice (F13) <b>(N</b>	ILRA 13	6, 122)	<sup>3</sup> Ir	dicators of hy	/drophytic veg	etation and
Sandy F	Redox (S5)		Piedmont Flo	odplain Soi	ils (F19)	(MLRA 14	<b>8)</b> v	etland hydro	logy must be p	oresent,
Stripped	Matrix (S6)		Red Parent M	Aaterial (F2	1) (MLR	A 127, 147	) u	nless disturbe	ed or problema	atic.
Restrictive	Laver (if observed):			,	/ (		,			
Type										
Denth (in	-h).						Ubudaia Ca	II Due e em tO	Vaa	
Depth (In	cnes):						Hydric So	Il Present?	tes	NO
Remarks:										



**Photo 1** Upland data point waua411\_u facing north



Photo 2 Upland data point waua411\_u facing west

Project/Site: Atlantic Coast Pipeline	City/County: Augu	sta	Sampling Date: 9/20/2016
Applicant/Owner: DOMINION		State: VA	_ Sampling Point: waua408f_w
Investigator(s): Team A	Section, Township	, Range: No PLSS in this area	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave,	convex, none): <u>concave</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): <u>S</u> Lat: <u>3</u>	8.28384841	Long: <u>-79.28858026</u>	Datum: WGS 1984
Soil Map Unit Name: Craigsville fine sandy loam		NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for t	this time of year? Yes N	lo (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	_significantly disturbed?	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	_naturally problematic? (	If needed, explain any answe	rs in Remarks.)
			• • • • • •

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌 Yes 🖌 Yes 🗸	No No No	Is the Sampled Area within a Wetland?	Yes No
Remarks:				
Small depressional wetland located withi	n the floodpl	ain of a perennial strea	am (Dowells Draft).	

Wetland Hydrology Indicators:						Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of	of one is reg	Surface Soil Cracks (B6)						
Surface Water (A1) True Aquatic Plants (B14)						Sparsely Vegetated Concave Surface (B8)		
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)						Drainage Patterns (B10)		
Saturation (A3)		Roots (C3)	Moss Trim Lines (B16)					
Water Marks (B1)			Dry-Season Water Table (C2)					
Sediment Deposits (B2)	ediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6)					Crayfish Burrows (C8)		
Drift Deposits (B3)	Drift Deposits (B3) Thin Muck Surface (C7)					Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)				Other (Explain in Remarks)		Stunted or Stressed Plants (D1)		
Iron Deposits (B5)			<ul> <li>Geomorphic Position (D2)</li> </ul>					
Inundation Visible on Aeri	al Imagery (		Shallow Aquitard (D3)					
Water-Stained Leaves (B	9)					Microtopographic Relief (D4)		
Aquatic Fauna (B13)						FAC-Neutral Test (D5)		
Field Observations:								
Surface Water Present?	Yes	No	~	_ Depth (inches):				
Water Table Present?	Yes 🖌	No		Depth (inches): 0				
Saturation Present? (includes capillary fringe)	Yes 🖌	No _		_ Depth (inches):0	Wetland H	Wetland Hydrology Present? Yes <u></u> No		
Describe Recorded Data (stre	am gauge, r	nonito	ring	well, aerial photos, previous inspec	tions), if ava	ilable:		
Remarks:								
Wetland hydrology indicators p	resent							

Sampling Point: <u>waua408f\_w</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Developed Operator
A Acer rubrum	15	Yes	FAC	Number of Dominant Species
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				
-				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				
7				Prevalence Index worksheet:
··	15			Total % Cover of: Multiply by:
7		= Total Cove	er 2	OBI spacios = 0   x 1 = 0
50% of total cover:	. <u>5</u> 20% of	f total cover:	3	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species x 2 =
1				FAC species $15 \times 3 = 45$
-				
2				
3				UPL species $x_5 = -\frac{1}{45}$
4				Column Totals:15 (A)45 (B)
		<u></u>		
ð				Prevalence Index = $B/A = 3$
6				Hudronbutic Vagetation Indicators
7.				nyurophytic vegetation indicators:
		- <u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$\mathbf{V}$ 2. Browelence index is <2.0 <sup>1</sup>
	0	= Total Cove	<u>-</u> r	
50% of total cover	) 20% of	f total cover:	0	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50 % 01 101al COVEL.	20 % 0			data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1				
2				
Z				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Deminions of Four Vegetation offata.
o				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
o				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	0			Herb – All nerbaceous (non-woody) plants, regardless
		= I otal Cove	er O	of size, and woody plants less than 3.26 it tall.
50% of total cover:	20% of	r total cover:	0	<b>Woody vine</b> – All woody vines greater than 3 28 ft in
Woody Vine Stratum (Plot size: 30 )				height.
1.				
		·		
۷		<u> </u>		
3				
4.				
		· · · · · · · · · · · · · · · · · · ·		Hydrophytic
0				Vegetation
	0	= Total Cove	er	Present? res No
50% of total cover:	) 20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate	sheet )			
	Sheet.)			
1				

Profile Des	cription: (Describe to	o the dept	h needed to docu	ment the i	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	<u>x Feature</u>	<u>s</u>	1 2	<b>T</b> / <b>D</b> /	
(inches) 0-8	$25 \times 4/2$	97	10 VR 6/8	<u>%</u> 3	<u>Type</u>	LOC <sup>-</sup>	SICI Remarks	
	·							
<sup>1</sup> Type: C=C Hydric Soil	Concentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric	Soils <sup>3</sup> :
Histoso Histic E Black H Hydrogu Stratifie 2 cm M Deplete Thick D	I (A1) ipipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) uck (A10) <b>(LRR N)</b> ed Below Dark Surface Park Surface (A12)	(A11)	<ul> <li> Dark Surface</li> <li> Polyvalue Be</li> <li> Thin Dark Su</li> <li> Loamy Gleye</li> <li>✓ Depleted Ma</li> <li> Redox Dark</li> <li> Depleted Da</li> <li> Redox Depression</li> </ul>	e (S7) elow Surfa urface (S9 ed Matrix ( utrix (F3) Surface (F rk Surface essions (F	ice (S8) (N ) (MLRA 1 (F2) =6) ∋ (F7) 8) ∞s (F12) (	ILRA 147, 47, 148)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF1 Other (Explain in Remarks)	) 12)
Sandy I MLR Sandy ( Sandy I Stripped	Mucky Mineral (ST) (Li A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)	<b>ΧΚ Ν</b> ,	MLRA 13 MLRA 13 Umbric Surfa Piedmont Flo	ace (F13) bodplain S Material (F	(MLRA 13 Goils (F19) F21) (MLR	6, 122) (MLRA 14 A 127, 147	<ul> <li><sup>3</sup>Indicators of hydrophytic vegetation</li> <li>wetland hydrology must be prese</li> <li>unless disturbed or problematic.</li> </ul>	on and ent,
Restrictive Type: <u>Re</u> Depth (in	Layer (if observed): ock nches): 8						Hydric Soil Present? Yes 🛩 No	0
Remarks:								
Hydric soil pr	resent							



Photo 1 Wetland data point waua408f\_w facing west

Project/Site: Atlantic Coast Pipeline	City/County: Augusta		Sampling Date: 4/22/2015
Applicant/Owner: DOMINION		State: VA	_ Sampling Point: <u>waua408_u</u>
Investigator(s): Team C	Section, Township, R	ange: <u>No PLSS in this area</u>	
Landform (hillslope, terrace, etc.): Slight slope	Local relief (concave, co	nvex, none): <u>none</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): S Lat:	38.28385244 Lo	ng: <u>-79.2884997</u>	Datum: WGS 1984
Soil Map Unit Name: Craigsville fine sandy loam		NWI classifica	ation: None
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed? Are	"Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If r	needed, explain any answer	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	マ マ マ	Is the Sampled Area within a Wetland?	Yes	No	<u>v</u>
Remarks:							

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Livir	ng Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled	Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Yes No _       Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Wetland Hydrology Present? Yes No
Water Table Present?       Yes       No       ✓       Depth (inches):         Saturation Present?       Yes       No       ✓       Depth (inches):         (includes capillary fringe)       No       ✓       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _        Depth (inches):         Saturation Present?       Yes No _        Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:         No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No

Sampling Point: waua408\_u

	Abaaluta	- Dominant Ir	diaatar	Deminence Test werkehest
Trop Stratum (Plot size: 30)		Species?	Stotus	Dominance Test worksneet:
Dirus strature	<u>50</u>	<u>Species</u>	FACI1	Number of Dominant Species
1. Pinus strobus		fes	1 700	That Are OBL, FACW, or FAC:1 (A)
<sub>2.</sub> Quercus alba	10	No	FACU	
3 Tsuga canadensis	5	No	FACU	Total Number of Dominant
				Species Across All Strata. (B)
4				Percent of Dominant Species
5.				That $\Delta r_{P} \cap BI = F \Delta C M \text{ or } F \Delta C \cdot 33.33333333333333333333333333333333$
6				
0				Prevalence Index worksheet:
7				
	65	= Total Cover		I otal % Cover of: Multiply by:
50% of total cover: 32.5	20% of	total cover:	13	OBL species $0   x 1 = 0$
				FACW species $0$ x 2 = $0$
Sapling/Shrub Stratum (Plot size:)				10 $30$
1. Acer rubrum	10	Yes	FAC	FAC species $x^3 = \frac{10}{200}$
2				FACU species $\frac{80}{x4} = \frac{320}{x4}$
Z				11PL species 0 x 5 - 0
3				90 x 3
4.				Column Totals: (A) (B)
5				
5				Prevalence Index = $B/A = $ 3.88
6				Hydrophytic Vegetation Indicators:
7.				
··				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$\sim$ 2. Prevelence ladewie <2.0 <sup>1</sup>
	10	- Total Cove		3 - Prevalence Index Is ≤3.0
50% of total asses 5			2	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				
<sub>1.</sub> Kalmia latifolia	15	Yes	FACU	Problematic Hydrophytic Vegetation (Explain)
2		·		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3				be present unless disturbed or problematic
Δ				
¬				Definitions of Four Vegetation Strata:
5				Tree Marchards and discussions (7.0 cm) or
6.				Iree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
/		·		neight.
8				Sanling/Shrub - Woody plants, excluding vines, less
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall
10		·		
11				Herb – All herbaceous (non-woody) plants, regardless
	15 .	- Total Cove		of size, and woody plants less than 3.28 ft tall.
E0% of total acuration 7.5			3	
	20% 0	total cover.		<b>Woody vine</b> – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 )				height.
1.				
2		·		
3				
4				
4		·		Hydrophytic
5		. <u> </u>		Vegetation
	0.	= Total Cover		Present? Yes No
50% of total cover: 0	20% of	total cover:	0	
	2070.01			
Remarks: (Include photo numbers here or on a separate s	heet.)			
1				

Profile Desc	cription: (Describe to	o the depth n	eeded to docur	nent the in	dicator of	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features			
(inches)	Color (moist)	<u>%</u> (	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-3	10 YR 3/2	100					SICL
3-16	10 YR 6/4	100					SICL
	·						
	·						
	·						
·	·						
	·						
<sup>1</sup> Type: C=C	oncentration, D=Deple	etion, RM=Red	duced Matrix. MS	S=Masked	Sand Gra	ins.	<sup>2</sup> Location: PI =Pore Lining, M=Matrix
Hydric Soil	Indicators:	,	,				Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) <b>(MLRA 147)</b>
Histic Er	pipedon (A2)	_	Polvvalue Be	low Surfac	e (S8) <b>(M</b>	LRA 147. <sup>-</sup>	148) Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47. 148)	(MLRA 147, 148)
Hvdroge	en Sulfide (A4)		Loamv Gleve	ed Matrix (F	2)	,	Piedmont Floodplain Soils (F19)
Stratified	d Lavers (A5)	—	Depleted Ma	trix (F3)	,		(MLRA 136, 147)
2 cm Mu	uck (A10) (LRR N)	—	Redox Dark	Surface (F6	6)		Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	rk Surface	, (F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (F8	)		
Sandy M	/ucky Mineral (S1) (L	RRN,	Iron-Mangan	ese Masse	s (F12) <b>(I</b>	.RR N,	
MLRA	A 147, 148)	_	MLRA 13	6)	. , .		
Sandy G	Gleyed Matrix (S4)		Umbric Surfa	ice (F13) <b>(</b>	ILRA 13	6, 122)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain So	ils (F19)	(MLRA 148	8) wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	/aterial (F2	21) (MLR	A 127, 147)	) unless disturbed or problematic.
<b>Restrictive</b>	Layer (if observed):						
Type:	,						
Depth (in	ches):						Hydric Soil Present? Yes No
Remarks							
No hydrio opil	nrocont						

No hydric soil present



**Photo 1** Upland data point waua408\_u facing north

Project/Site: Atlantic Coast Pipeline	City/County: Augusta		Sampling Date: 9/20/2016
Applicant/Owner: DOMINION		State: VA	_ Sampling Point: <u>waua409s_</u> w
Investigator(s): Team A	Section, Township, Range	No PLSS in this area	
Landform (hillslope, terrace, etc.): Drainage System	ocal relief (concave, convex,	none): <u>none</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): <u>S</u> Lat: <u>38.29175048</u>	Long: _	79.23425105	Datum: WGS 1984
Soil Map Unit Name: Monongahela cobbly fine sandy loam, 0 to 7 per	rcent slopes	NWI classifica	tion: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Nor	mal Circumstances" pr	esent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If neede	d, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point loca	tions, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u> </u>	No No No	Is the Sampled Area within a Wetland?	Yes _	~	No
Remarks:						
Wattenal teasted within dustrance watterns	No where on the fit	ببراء ممالا ممتأ بملميمم مما	sin a second the second in success the second	4	In also he	مامصد امصطلامين مماتا المم متعامي

Wetland located within drainage pattern. Northwest of the centerline the drainage pattern continues, but the area lacks hydric soil. The wetland ends where the drainage pattern is down cut and hydric soils are present.

Wetland Hydrology Indicate	ors:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required	; check all that apply)	Surface Soil Cracks (B6)
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or Crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Inundation Visible on Aer</li> <li>Water-Stained Leaves (E</li> </ul>	rial Imagery (B7) 39)	<ul> <li>True Aquatic Plants (B14)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres on Living</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled So</li> <li>Thin Muck Surface (C7)</li> <li>Other (Explain in Remarks)</li> </ul>	
Aquatic Fauna (B13)			FAC-Neutral Test (D5)
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No Yes No Yes No eam gauge, monit	Depth (inches):     Depth (inches):     Depth (inches):     Depth (inches):     oring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Remarks: Wetland hydrology indicators	present		

Sampling Point: <u>waua409s\_w</u>

	Absoluto	Dominant li	adicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance rest worksheet.
	/0 00101	000000	Olaido	Number of Dominant Species
				That Are OBL, FACW, of FAC: (A)
2				Total Number of Dominant
3.				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL. FACW, or FAC: 100 (A/B)
6				
_			<u> </u>	Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
		= Total Cove	r	
50% of total cover: 0	20% of	total cover:	0	OBL species X 1 =
Sapling/Shrub Stratum (Plat aiza)				FACW species $0   x^2 = 0$
<u>Saping/Shrub Stratum</u> (Piot size)	45	Ma a	540	$\overline{70}$ $\overline{210}$
1. Acer rubrum	45	Yes	FAC	FAC species $x_3 = $
2				FACU species x 4 =
				UPL species $0 \times 5 = 0$
3				$\frac{85}{225}$
4				Column Totals: (A) (B)
5				
				Prevalence Index = $B/A = 2.64$
6				Hydrophytic Vegetation Indicators
7.				
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$\checkmark$ 2 Provalence Index is $\leq 3.0^{1}$
	45 .	- Total Cove	r	
E0% of total action 22.5	200/ of	total cover	9	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:	20% 01	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				
<sub>1.</sub> Viola sororia	25	Yes	FAC	Problematic Hydrophytic Vegetation (Explain)
<ul> <li>Rosa palustris</li> </ul>	15	Yes	OBI	
2. 1000 paraone		100	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				
_		·		Definitions of Four Vegetation Strata:
5				Tree Mandy plants evaluating vince 2 in (7.6 cm) or
6				I ree – woody plants, excluding vines, 3 in. (7.6 cm) or
7				hoight
/				neight.
8				Sanling/Shrub - Woody plants excluding vines less
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall
10				
11				Herb – All herbaceous (non-woody) plants, regardless
	40	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20	20% of	total cover:	8	
30 % of total cover.	20 /0 01		-	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1.				
۷				
3				
4				
				Hydrophytic
5				Vegetation
	0.	= Total Cove	r	Present? Yes Vo No
50% of total cover: 0	20% of	total cover:	0	
	2070.01			
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	cription: (Describe t	o the dep	oth needed to docur	nent the i	indicator of	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	2.5 Y 4/2	98	10 YR 4/6	2	С	PL	CL	
2-16	2.5 Y 6/1	95	2.5 Y 6/6	5	С	PL/M	CL	
·								
'Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	Location: P	L=Pore Lining, M=Matrix.
Hydric Soli	Indicators:			( <b>-</b> -)			Indica	ators for Problematic Hydric Solis :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) <b>(MLRA 147)</b>
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ice (S8) (IV	LRA 147,	148)	Coast Prairie Redox (A16)
Black H	ISTIC (A3)			Intace (59)	) (NILRA 1	47, 148)		(MLRA 147, 148)
	d Lovoro (AE)		Loarny Gleye	triv (E2)	(FZ)		P	
Stratilied				uix (FS) Surfaca (E	5		V	(IVILKA 130, 147)
2 cm Mit	d Below Dark Surface	(Δ11)		sunace (r rk Surface	0) (F7)			ther (Evolution in Remarks)
Thick D	ark Surface (A12)	(/(11)	Redox Depre	essions (F	8)		0	
Sandy M	/ucky Mineral (S1) <b>(L</b>	RR N.	Iron-Mangan	ese Mass	es (F12) <b>(I</b>	RR N.		
MLR/	A 147. 148)	,	MLRA 13	6)	···/ (···/ (·	,		
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ice (F13) (	(MLRA 13	6, 122)	<sup>3</sup> Ind	icators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	ioils (F19)	(MLRA 14	<b>8)</b> we	tland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	Aaterial (F	21) (MLR	A 127, 147	') un	less disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:							1	
Hydric soil pro	esent							



Photo 1 Wetland data point waua409s\_w facing west

Project/Site: Atlantic Coast Pipeline	City/County: Aug	usta	Sampling Date: 9/23/2016
Applicant/Owner: DOMINION		State: VA	Sampling Point: <u>waua409_u</u>
Investigator(s): Team A	Section, Townshi	p, Range: No PLSS in this are	а
Landform (hillslope, terrace, etc.): Hill Slope	Local relief (concave	, convex, none): <u>none</u>	Slope (%): <u>3</u>
Subregion (LRR or MLRA): <u>S</u>	Lat: <u>38.29181236</u>	Long: <u>-79.23439231</u>	Datum: WGS 1984
Soil Map Unit Name: Monongahela cobbly fine sa	ndy loam, 0 to 7 percent slopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Yes	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No	v
Remarks:						

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Liv	ving Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C-	4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tille	ed Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u></u>	
Water Table Present? Yes <u>No</u> Depth (inches):	
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Ves No _       Ves No _	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _        Depth (inches):         Saturation Present?       Yes No _        Depth (inches):         (includes capillary fringe)       Ves No _        Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)       Depth (inches):	Wetland Hydrology Present?       Yes       No         spections), if available:
Water Table Present?       Yes No _ Depth (inches):         Saturation Present?       Yes No _ Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _        Depth (inches):         Saturation Present?       Yes No _        Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:	Wetland Hydrology Present? Yes No spections), if available:
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No spections), if available:
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       ✓         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:         No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ _ Depth (inches):         Saturation Present?       Yes No _ ✓ _ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ _ Depth (inches):         Saturation Present?       Yes No _ ✓ _ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ _ Depth (inches):         Saturation Present?       Yes No _ ✓ _ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instants:         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _        Depth (inches):         Saturation Present?       Yes No _        Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins         Remarks:       No hydrology indicators present	Wetland Hydrology Present? Yes No

Sampling Point: waua409\_u

	Absolute	Dominant I	ndicator	Dominance Test worksheet
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Deminent Creation
, ,				That Are OBL EACIAL or EAC: 1 (A)
<sup>1</sup>		·	<u> </u>	
2		·		Total Number of Dominant
3				Species Across All Strata: 3 (B)
1				(=)
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: <u>33.333333333</u> (A/B)
6				
7				Prevalence Index worksheet:
[ <sup>1</sup>	0			Total % Cover of: Multiply by:
		= Total Cove	r	$\frac{1}{0}$ OPL encodes $\frac{1}{0}$ $\frac{1}{10}$ $\frac{1}{10}$
50% of total cover: 0	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size: 15 )				FACW species $x 2 = 0$
Acer rubrum	15	Yes	FAC	FAC species $15 \times 3 = 45$
	40			63 $252$
2. Kaimia latifolia	10	res	FACU	PACO species X 4 =
3.				UPL species $0 x 5 = 0$
4				Column Totals: $78$ (A) $297$ (B)
4		·		
5		. <u></u>		Prevalence Index = $B/\Delta = 3.8$
6.				
7		·		Hydrophytic Vegetation Indicators:
· ·		·		1 - Rapid Test for Hydrophytic Vegetation
8		·		2 Dominance Test is >50%
9				
	25	<b>T</b> ( ) 0		3 - Prevalence Index is ≤3.0 <sup>+</sup>
10.5		= Total Cove	r 5	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover: 12.5	20% of	total cover:	5	dete in Remarke er en e concrete sheet)
Herb Stratum (Plot size: 5)				
Potentilla simplex	45	Yes	FACU	Problematic Hydrophytic Vegetation' (Explain)
		N		
2. Gautinena procumbens	5	INO	FACU	<sup>1</sup> Indicators of hydric soil and wotland hydrology must
<sub>3.</sub> Andropogon virginicus	3	No	FACU	he present unless disturbed or problematic
1				be present, unless disturbed of problematic.
4		·		Definitions of Four Vegetation Strata:
5		·		
6				I ree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
/·		· <u> </u>		neight.
8		·		Sanling/Shrub - Woody plants excluding vines less
9.				than 3 in DBH and greater than or equal to 3 28 ft (1
10				m) tall.
10:		· <u> </u>		
11				Herb – All herbaceous (non-woody) plants, regardless
	53	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 26.5	20% of	total cover:	10.6	
Weedy Vine Stratum (Plataine) 30				Woody vine – All woody vines greater than 3.28 ft in
				height.
1		. <u> </u>		
2.				
J		·		
4				Hydronhytic
5.				Vegetation
	0	Tatal Cause		Present? Yes No
		= Total Cove	r O	
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			1

Profile Desc	ription: (Describe te	o the depth r	needed to docun	nent the in	dicator o	or confirm	the absence of in	dicato	rs.)		
Depth	Matrix		Redo	x Features							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0-16	10 YR 5/6	100					L				
						·					
·											
<u> </u>											
		<u> </u>									
<sup>1</sup> Turney C. C.				Maaliaali						_	
	Indiactors	etion, RIVI=Re	duced Matrix, Ma	s=iviasked	Sand Gra	ins.	Location: PL=Poi	for Br	ig, M=Matrix	(. Ivdria Saila <sup>3</sup>	
				( <b>a</b> -1)			indicators				•
Histosol	(A1)	-	Dark Surface	(\$7)	(0.0) (1.1		2 cm IV	luck (A	(10) <b>(MLRA</b>	147)	
Histic Ep	Dipedon (A2)	-	Polyvalue Be	low Surface	e (S8) <b>(M</b>	LRA 147, '	148) <u>Coast</u> I	Prairie	Redox (A16	5)	
Black Hi	stic (A3)	-	Thin Dark Su	rface (S9)	(MLRA 1	47, 148)	(MLI	RA 147	7, 148)		
Hydroge	en Sulfide (A4)	-	Loamy Gleye	d Matrix (F	2)		Piedmo	ont Flo	odplain Soils	s (F19)	
Stratified	d Layers (A5)	-	Depleted Mat	trix (F3)			(MLI	RA 136	6, 147)		
2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (F6	5) ()		Very S	hallow	Dark Surfac	e (IF12)	
	d Below Dark Surface	(A11) _	Depleted Dar	K Surface (	(F7)		Other (	Explai	n in Remark	S)	
	ark Surface (A12)	-	Redox Depre	SSIONS (F8)	) - (E40) (I						
Sandy iv			Iron-Mangan	ese Masse	s (F12) <b>(L</b>	.RR N,					
	A 147, 148)		MLRA 13	b)		400	31 - 12 1	( )	design des des sec		
Sandy G	bieyed Matrix (54)	-	Umbric Surfa	ce (F13) (N	ILRA 13	5, 122)		s of ny	aropnytic ve	egetation and	
Sandy R		-	Pleamont Flo	oopiain So	IIS (F19)	(MLRA 140	s) wetland	nyaroi	ogy must be	present,	
Stripped	Matrix (S6)	-	Red Parent N	laterial (F2	1) (MLR/	A 127, 147)	) uniess d	Isturbe	ed or probler	natic.	
Restrictive	Layer (IT observed):										
Туре:			_								
Depth (ind	ches):		_				Hydric Soil Pres	ent?	Yes	No 🔽	
Remarks:											
No hydric soil	indicators prosont										

No hydric soil indicators present

Project/Site: Atlantic Coast Pipeline	City/County: Augusta County	Sampling Date: 1/14/2016
Applicant/Owner: Dominion	State: VA	Sampling Point: <u>waua062f_w</u>
Investigator(s): GB, SA	_ Section, Township, Range: No PLSS in this	area
Landform (hillslope, terrace, etc.): depression	ocal relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): N Lat: 37.95267574	Long: -78.95497548	Datum: WGS 1984
Soil Map Unit Name: Craigsville fine sandy loam	NWI clas	ssification: None
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes 🔽 No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstance	es" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transe	ects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks:					

Saturated to temporarily flooded PFO wetland in a localized depression on a flat below toe of slope; flat is hitoric floodplain of Back Creek; basin wetland is closest NCWAM category.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B1	4) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor	(C1) Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres	on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Ir	ron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction i	n Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Rema	rks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
<ul> <li>Water-Stained Leaves (B9)</li> </ul>	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No <u>&lt;</u> Depth (inches): 14	
Saturation Present? Yes <u>V</u> No Depth (inches): <u>12</u>	Wetland Hydrology Present? Yes <u></u> No
(includes capillary fringe) Describe Recorded Data (stream dauge monitoring well aerial photos, previo	bus inspections) if available:
Remarks:	

Sampling Point: waua062f\_w

	Absolute	- Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance rest worksheet.
Nyssa sylvatica	30	Yes	FAC	Number of Dominant Species
	15		FACU	That Are OBL, FACW, or FAC: (A)
2. Carya ovata	15	res	FACU	Total Number of Dominant
3				Species Across All Strate: 4 (B)
		·		
4				Percent of Dominant Species
5				That Are OBL_EACW_or EAC· 75 (A/B)
6				
0		·		Prevalence Index worksheet:
7		·		Tatal % Occurrent for Multiple has
	45	= Total Cove	r	<u>I otal % Cover or:</u> <u>Multiply by:</u>
50% of total cover: 22.5	20% of	total cover:	9	OBL species 0 x 1 = 0
$\frac{1}{15}$				EACW species $0$ x 2 = $0$
Sapling/Shrub Stratum (Plot size:)				50 - 150
1. Nyssa sylvatica	15	Yes	FAC	FAC species $x^3 = \frac{100}{100}$
<sub>2</sub> Carpinus caroliniana	5	Yes	FAC	FACU species $15$ x 4 = $60$
2		·		$1$ IPI species 0 $x_5 = 0$
3		·		65 × 0 =
4.				Column Totals: (A) (B)
5				
0		·		Prevalence Index = $B/A = 3.23$
6				Hydrophytic Vagatation Indicators:
7.				
··		·		1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9.				
	20	- Total Covo	r	3 - Prevalence Index is ≤3.0
500/ // / 10			4	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:	20% of	total cover:	· · ·	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				
1				Problematic Hydrophytic Vegetation' (Explain)
		·		
2				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3.				be present unless disturbed or problematic
1				be present, unless disturbed of problematic.
4		·		Definitions of Four Vegetation Strata:
5		. <u> </u>		
6.				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
1		·		neight.
8		. <u> </u>		One line (Olympic - Mined and a standard in a since have
9				then 2 in DPH and greater than or equal to 2.28 ft (1
		·		
10		·		III) tall.
11				Herb - All berbaceous (non-woody) plants, regardless
	0	Total Caura	-	of size, and woody plants less than 3.28 ft tall
			0	
50% of total cover:	20% of	total cover:	0	<b>Woody vine</b> – All woody vines greater than 3 28 ft in
Woody Vine Stratum (Plot size: 30 )				height
1				
·· <u> </u>		·		
2		· <u> </u>		
3.				
1				
4		·		Hydrophytic
5		·		Vegetation
	0	- Total Cove	r	Present? Yes Vo No
E0% of total action	200/ of		0	
	20% 0	total cover.	-	
Remarks: (Include photo numbers here or on a separate s	heet.)			
no vines rooted within boundary, herbaceous layer is dorma	ant and the	re are no ider	ntifiable re	emnants present

Profile Desc	cription: (Describe to	o the dep	th needed to docun	nent the i	indicator of	or confirm	the absence of in	dicators.)	
Depth	Matrix		Redo	x Feature	s ,				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks	
0-6	10YR 2/1	100					SIL		
6-18	10YR 5/2	65	10YR 5/8	35	С	PL/M	SICL		
		·					·		
<sup>1</sup> T			Deduced Metric MC	Maaluar			<sup>2</sup> l continue DI Dec	a Lining MA Matrix	<u>_</u>
	Indicators:	etion, RIVI	=Reduced Matrix, Ma	s=iviasked	a Sand Gra	ains.	Location: PL=Poi	for Problematic Hy	dric Soils <sup>3</sup> .
Listoool			Dorle Curtaga	(07)					
Histic E	(AI) ninedon (A2)			(37) Iow Surfa	co (S8) <b>(M</b>		1/8) Coast I	Prairie Redox (A16)	47)
Black H	istic (A3)		Thin Dark Su	rface (S9	) (MI RA 1	47 148)	(MI)	RA 147 148)	
<u> </u>	en Sulfide (A4)		Loamy Gleve	d Matrix (	(F2)	41, 140)	Piedmo	ont Floodplain Soils	(F19)
Stratifie	d Lavers (A5)		<ul> <li>Depleted Mat</li> </ul>	trix (F3)	/		<u> </u>	RA 136. 147)	( )
2 cm Mi	uck (A10) (LRR N)		Redox Dark S	Surface (F	-6)		Very S	hallow Dark Surface	(TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	, (F7)		Other (	Explain in Remarks)	
Thick D	ark Surface (A12)		Redox Depre	ssions (F	8)				
Sandy M	/lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) <b>(I</b>	LRR N,			
MLR	A 147, 148)		MLRA 13	6)					
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	<sup>3</sup> Indicator	s of hydrophytic veg	etation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	ioils (F19)	(MLRA 14	8) wetland	hydrology must be p	present,
Stripped	l Matrix (S6)		Red Parent M	Aaterial (F	21) <b>(MLR</b>	A 127, 147	) unless d	isturbed or problem	atic.
Restrictive	Layer (if observed):								
Type: no	one								
Depth (in	ches):						Hydric Soil Pres	ent? Yes 🖌	No
Remarks:							L		



Photo 1 Wetland data point WAUA062f\_w facing northeast



Photo 2 Wetland data point WAUA062f\_w facing southwest

Project/Site: Atlantic Coast Pipeline	City/County: Augusta County	Sampling Date: 1/14/2016
Applicant/Owner: Dominion	State: VA	Sampling Point: waua062_u
Investigator(s): GB, SA	Section, Township, Range: No PLSS in this a	rea
Landform (hillslope, terrace, etc.): flat	ocal relief (concave, convex, none): <u>none</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): <u>N</u> Lat: <u>37.95268957</u>	Long: <u>-78.95506854</u>	Datum: WGS 1984
Soil Map Unit Name: Craigsville fine sandy loam	NWI class	ification: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain ir	n Remarks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circumstances	s" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answer	wers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transec	ts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	- Is the Sample - within a Wetl	nd Area and? Yes_	No	<u>~</u>
Remarks: Upland data point for a saturated to terr	porarily flooded	PFO wetl	l located in a localized	depression on a flat.		

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled S	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u>✓</u> Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Vo Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present?       Yes       No         ctions), if available:
Saturation Present? Yes No Ves Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)         Remarks:         no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No
Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:         Remarks:       no hydrology indicators present	Wetland Hydrology Present? Yes No

Sampling Point: waua062\_u

	Absoluto	Dominant Ir	dicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance rest worksheet.
Nyssa sylvatica	25	Yes	FAC	Number of Dominant Species
Carva ovata	25	Yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Carva cordiformic	10	No	FACU	Total Number of Dominant
3. Carya cordinomias				Species Across All Strata: o (B)
4. Liriodendron tulipifera	5	INO	FACU	Demonst of Deminent Creation
5				That Are OBL, FACW, or FAC: 37.5 (A/B)
6.				
7				Prevalence Index worksheet:
··	65	Total Caver		Total % Cover of: Multiply by:
50% of total cover: 325		= Total Cover	13	OBL species $0   x   1 = 0$
50% of total cover:	20% of	total cover:		$\overline{\mathbf{D}} = \mathbf{D} = \mathbf{D}$
Sapling/Shrub Stratum (Plot size: 10)				FACTV species $40$ $x = 120$
1. Nyssa sylvatica	10	Yes	FAC	FAC species $40$ x 3 = $120$
2. Acer rubrum	5	Yes	FAC	FACU species $4 = 250$
3. Kalmia latifolia	4	Yes	FACU	UPL species x 5 =0
4 Carya cordiformis	4	Yes	FACU	Column Totals: (A) (B)
5 Carva ovata	4	Yes	FACU	0.01
e Magnolia acuminata	3	No	FACU	Prevalence Index = $B/A = 3.61$
- Betula lenta	3	No	FACU	Hydrophytic Vegetation Indicators:
		110	1700	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$3 - Prevalence Index is \leq 3.0^{1}$
	33	= Total Cover		4 - Morphological Adaptations <sup>1</sup> (Provide supporting
50% of total cover:16.5	20% of	total cover:	6.6	4 - Molphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sneet)
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		<u> </u>		
Z		·		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3		<u> </u>		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				height.
8				
0		· ·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		· ·		m) tan.
11		<u> </u>		Herb – All herbaceous (non-woody) plants, regardless
	0	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover:0	20% of	total cover:	0	Weedy vine All woody vince greater than 2.29 ft in
Woody Vine Stratum (Plot size: 30 )				height
1 Smilax smallii	6	Yes	FACU	noight.
2		<u> </u>		
2		· ·		
3		· ·		
4		·		Hydrophytic
5				Vegetation
	6	= Total Cover		Present? Yes No
50% of total cover: 3	20% of	total cover:	1.2	
Remarks: (Include photo numbers here or on a separate s	heet.)			
herbaceous layer is dormant and there are no identifiable re	emnants			

Profile Des	cription: (Describe	o the dept	th needed to docum	ent the indicato	r or confirm	the absence of	f indicators.)	
Depth	Matrix		Redox	Features				
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u> Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Ren	narks
0-3	10YR 3/2	100				SL		
3-10	10YR 4/3	100				SL		
10-18	10YR 4/4	100				SL		
<sup>1</sup> Type: C=C	Concentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked Sand G	Frains.	<sup>2</sup> Location: PL=	Pore Lining, M=I	Matrix.
Hydric Soil	Indicators:					Indicato	ors for Problema	atic Hydric Soils <sup>°</sup> :
Histoso	l (A1)		Dark Surface	(S7)		2 cr	m Muck (A10) <b>(M</b>	LRA 147)
Histic E	pipedon (A2)		Polyvalue Belo	ow Surface (S8)	(MLRA 147,	148) <u> </u> Coa	ast Prairie Redox	(A16)
Black H	listic (A3)		Thin Dark Sur	face (S9) (MLRA	147, 148)	(	MLRA 147, 148)	
Hydrog	en Sulfide (A4)		Loamy Gleyed	d Matrix (F2)		Pie	dmont Floodplair	i Soils (F19)
Stratifie	d Layers (A5)		Depleted Matr	TIX (F3)		(1	MLRA 136, 147)	
2 cm M	uck (A10) (LRR N)	( )	Redox Dark S	urface (F6)		Ver	y Shallow Dark S	Surface (TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Dark	Surface (F7)		Oth	er (Explain in Re	marks)
	ark Surface (A12)		Redox Depres	sions (F8)				
Sandy i	VIUCKY IVIINERAI (S1) (L	.RR N,		se Masses (F12)	(LRR N,			
	A 147, 148)		MLRA 136		00 400)	31	terre of hereiners here	Concernent - Concernent
Sandy C	Gleyed Matrix (54)		Umbric Surfac	e (F13) <b>(IVILKA</b> 1 Indelain Saila (F10	130, 122		ators of nydropny	rtic vegetation and
Sanuy i	d Matrix (SS)		Pleamont Floc	ouplain Solis (Fis	) (IVILKA 14	o) wella	and nyarology mu	ist de present,
Suipped	Laver (if observed):				KA 127, 147	) unles		oblematic.
Type: no	one							
Depth (in	nches):					Hydric Soil P	resent? Yes	No 🖌
Remarks:						1		



Photo 1 Upland data point WAUA062\_u facing northeast



Photo 2 Upland data point WAUA062\_u facing southwest

Project/Site: Atlantic Coast Pipeline	City/County: <u>Auc</u>	gusta County	_ Sampling Date: 9/24/2016
Applicant/Owner: DOMINION		State: VA	Sampling Point: waua410e_w
Investigator(s): Team A	Section, Townsh	ip, Range: No PLSS in this are	a
Landform (hillslope, terrace, etc.): Seep	Local relief (concave	e, convex, none): <u>none</u>	Slope (%): <u>50</u>
Subregion (LRR or MLRA): N Lat:	37.9518264	_ Long: <u>-78.95511911</u>	Datum: WGS 1984
Soil Map Unit Name: Lew bouldery silt loam, 10 to 45 pe	ercent slopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	No (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	ers in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks:					
Unvegetated seep wetland					

Wetland Hydrology Indicat	ors:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required; c	heck all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)			Sparsely Vegetated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Odor (C1)		✓ Drainage Patterns (B10)
<ul> <li>Saturation (A3)</li> </ul>		<ul> <li>Oxidized Rhizospheres on Living</li> </ul>	Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)		Presence of Reduced Iron (C4)		Dry-Season Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction in Tilled So	oils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)		Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Remarks)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)				Geomorphic Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aquitard (D3)
Water-Stained Leaves (	B9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes No	Depth (inches):		
Water Table Present?	Yes No	✓ Depth (inches):20		
Saturation Present? (includes capillary fringe)	Yes 🖌 No	Depth (inches): 4	Wetland H	ydrology Present? Yes 🖌 No
Describe Recorded Data (str	eam gauge, monitori	ng well, aerial photos, previous inspec	ctions), if avai	ilable:
Remarks:				
vvetiand hydrology indicators	present			

Sampling Point: <u>waua410e\_w</u>

	Absolute	Dominant li	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Deminent
3.				Species Across All Strata: 0 (B)
4				
5		·		Percent of Dominant Species
		·		That Are OBL, FACW, or FAC: (A/B)
б		·		Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
		= Total Cove	r o	
50% of total cover:	0 20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size:)				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3.				UPL species x 5 =
4				Column Totals: (A) (B)
		·		Prevalence Index = B/A =
δ		·		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8		·		2 - Dominance Test is >50%
9		. <u> </u>		$\frac{1}{2} = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 =$
	0	= Total Cove	r	$3$ - Flevalence index is $\leq 3.0$
50% of total cover:	0 20% of	total cover:	0	4 - Morphological Adaptations' (Provide supporting
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1		·		
2		·		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3		·		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5		·		
6				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				height.
8				
0		·		Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		
11		·		Herb – All herbaceous (non-woody) plants, regardless
	0	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	0 20% of	total cover:	0	<b>Woody vine</b> $-$ All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 )				height.
1.				
2.				
3		·		
3				
4		·		Hydrophytic
5		·		Vegetation
	0	= Total Cove	r o	Present? Yes No
50% of total cover:	0 20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separa	te sheet.)			4
No vegetation within wetland				

Profile Desc	ription: (Describe to	o the dep	oth needed to docun	nent the i	ndicator o	or confirm	the absence of	indicators.)
Depth	Matrix		Redo	x Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-6	2.5 Y 4/3	100					SL	
6-16	5 Y 6/1	80	10 YR 4/6	20	С	PL/M	SCL	
·								
						·		
				<u> </u>				
1- 0.0							2	
Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.	Location: PL=	Pore Lining, M=Matrix.
			Darly Curfage					
HIStosol	(A1)		Dark Surface	(S7) Iour Curto			2 cr	n Muck (A10) (MLRA 147)
	stic (A2)		Polyvalue be	rface (SQ)	(MIDA 1	LKA 147,	146) Coa	
Black Th Hydroge	suc (A3) on Sulfide ( $\Delta A$ )			d Matrix (		47, 140)	Pier	dmont Floodplain Soils (F19)
Stratified	1 avers (A5)		Depleted Mat	rix (F3)	12)		(	MI RA 136, 147)
2 cm Mi	uck (A10) (LRR N)		Redox Dark S	Surface (F	6)		Ver	v Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		Oth	er (Explain in Remarks)
Thick Da	ark Surface (A12)	( )	Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (LI	RR N,	Iron-Mangane	ese Mass	, es (F12) <b>(I</b>	_RR N,		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) <b>(</b>	MLRA 13	6, 122)	<sup>3</sup> Indica	ators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) wetla	ind hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) <b>(MLR</b>	A 127, 147	) unles	s disturbed or problematic.
Restrictive I	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil P	resent? Yes 🖌 No
Remarks:							1	
Hydric soil pre	esent							



Photo 1 Wetland data point waua410e\_w facing northeast



Photo 2 Wetland data point waua410e\_w facing southeast

Project/Site: Atlantic Coast Pipeline	c	ity/County: Augusta County	/	Sampling Date: 9/24/2016
Applicant/Owner: DOMINION			State: VA	_ Sampling Point: waua410_u
Investigator(s): Team A	S	ection, Township, Range: <u>^</u>	lo PLSS in this area	
Landform (hillslope, terrace, etc.): H	lill Slope Loca	l relief (concave, convex, n	one): <u>none</u>	Slope (%): <u>50</u>
Subregion (LRR or MLRA): N	Lat: <u>37.95187593</u>	Long: <u>-7</u> 8	8.95510389	Datum: WGS 1984
Soil Map Unit Name: Lew bouldery	silt loam, 10 to 45 percent slopes		NWI classifica	tion: None
Are climatic / hydrologic conditions o	on the site typical for this time of year	? Yes 🖌 No	(If no, explain in Re	marks.)
Are Vegetation, Soil,	or Hydrology significantly d	isturbed? Are "Norm	al Circumstances" pr	esent? Yes 🖌 No
Are Vegetation, Soil,	or Hydrology naturally prob	lematic? (If needed,	explain any answers	s in Remarks.)

# SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	✓ ✓ ✓	Is the Sampled Area within a Wetland?	Yes	No	<u>v</u>
Remarks:							

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B1	4) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor	(C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres	on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced In	on (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in	n Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remai	rks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Yes No Depth (inches):	Wetland Hydrology Present? Yes No✓
Water Table Present?       Yes       No       ✓       Depth (inches):         Saturation Present?       Yes       No       ✓       Depth (inches):         (includes capillary fringe)       Ves       No       ✓       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       ✓ Depth (inches):         Saturation Present?       Yes No _       ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previor	Wetland Hydrology Present? Yes       No       ✓         bus inspections), if available:
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Ves No _       ✓         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:         No wetland hydrology indicators present	Wetland Hydrology Present? Yes No V bus inspections), if available:
Water Table Present?       Yes No       Depth (inches):         Saturation Present?       Yes No       Depth (inches):         (includes capillary fringe)        Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previor         Remarks:         No wetland hydrology indicators present	Wetland Hydrology Present? Yes No V ous inspections), if available:
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previor         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No V pus inspections), if available:
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes No V
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes <u>No</u>
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes <u>No</u>
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previor         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes <u>No</u>
Water Table Present?       Yes No _       Depth (inches):         Saturation Present?       Yes No _       Depth (inches):         (includes capillary fringe)	Wetland Hydrology Present? Yes <u>No</u>
Water Table Present?       Yes No _ ✓ Depth (inches):         Saturation Present?       Yes No _ ✓ Depth (inches):         (includes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previo         Remarks:       No wetland hydrology indicators present	Wetland Hydrology Present? Yes <u>No</u> ous inspections), if available:

Sampling Point: waua410\_u

	Abaaluta	- Deminent In		Deminence Test worksheet	
Trop Strotum (Plot size: 30)		Dominant Ir	Stotuo	Dominance Test worksneet:	
	<u>40</u>	<u>Species:</u>		Number of Dominant Species	
1. Quercus montana	40	res	UFL	That Are OBL, FACW, or FAC: 2 (	(A)
<sub>2</sub> Quercus rubra	15	Yes	FACU		
Acer rubrum	15	Yes	FAC	Total Number of Dominant	
3				Species Across All Strata: 0 (	B)
4.					
5				Percent of Dominant Species	
<sup>5.</sup>		<u> </u>		That Are OBL, FACW, or FAC:	A/B)
6					
7				Prevalence Index worksheet:	
··	70			Total % Cover of: Multiply by:	
		= Total Cover			
50% of total cover: 35	20% of	total cover:	14	OBL species $\underline{\qquad}$ $x_1 = \underline{\qquad}$	
Sanling/Shrub Stratum (Plot size: 15				FACW species $\begin{array}{c} 0 \\ x 2 = \end{array}$	
Lindere henzein	10	Vaa	ГАС	$EAC$ appaging $25$ $x_2 = 75$	
1. Lindera berizoin	10	res	FAC	$\begin{array}{c} FAC Species \\ \underline{} \\ 20 \\ \end{array} \\ \begin{array}{c} X \\ S \\ \underline{} \\ 0 \\ \end{array}$	
2. Pinus strobus	5	Yes	FACU	FACU species $20$ x 4 = $00$	
-				LIPL species $47 \times 5 = 235$	
3				92 390	
4.				Column Totals: (A)	(B)
D		<u> </u>		Prevalence Index = $B/A = 4.23$	
6				Illudraukutia Vanatatian Indiaatana.	
7				nyurophytic vegetation indicators:	
1		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
8				2 Dominance Test is > 50%	
a					
0	15			3 - Prevalence Index is ≤3.0 <sup>1</sup>	
	15	= Total Cover		4 - Morphological Adaptations <sup>1</sup> (Provide suppo	orting
50% of total cover: 7.5	20% of	total cover:	3		Jung
Herb Stratum (Plot size: 5 )				data in Remarks or on a separate sheet)	
Ouereue mentene	7			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
1. Quercus montana		Yes	UPL		, 
2					
£				<sup>1</sup> Indicators of hydric soil and wetland hydrology mu	ist
3		<u> </u>		be present, unless disturbed or problematic.	
4				Definitions of Error Manatation Otherts	
				Definitions of Four vegetation Strata:	
5				The Montheaster and the sector of (7.0 cm	
6.				ree – woody plants, excluding vines, 3 in. (7.6 cm	n) or
				more in diameter at breast height (DBH), regardles	ss of
/		<u> </u>		neight.	
8					
0				Sapling/Snrub – woody plants, excluding vines, le	ess
		·		than 3 In. DBH and greater than or equal to 3.28 ft	(1
10				m) tall.	
11.					
····	7			Herb – All nerbaceous (non-woody) plants, regard	less
		= Total Cover		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 3.5	20% of	total cover:	1.4	We a decide a Allow a decide a grant to the solution (	
Woody Vine Stratum (Plot size: 30)				woody vine – All woody vines greater than 3.28 ft	in
				height.	
1					
2.					
		·			
٥		<u> </u>			
4				l hudna a hudia	
5				Hydrophytic	
<sup>3.</sup>		<u> </u>		Vegetation	
	0	= Total Cover	•	Present? res No	
50% of total cover: 0	20% of	total cover:	0		
	<u> </u>				
Remarks: (Include photo numbers here or on a separate si	heet.)				

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the inc	dicator o	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-16	2.5 Y 6/8	100					SL
						·	
						·	
		tion DM D	aduaad Matrix M	Moolead C	Cond Cro		<sup>2</sup> Leastion: DL Data Lining M. Matrix
Type: C=C	Indicators:			s=iviasked a	Sand Gra	uns.	Location: PL=Pole Lining, M=Matrix.
			David Overface	(07)			
Histosol	(A1) rinodon (AQ)		Dark Surface	(57) Iour Curto o			2 cm Muck (A10) (MLRA 147)
	pipedon (AZ)		Polyvalue Be	IOW SUITACE	e (58) (IVI	LRA 147,	(Al DA 147 140)
	ISTIC (A3)			mace (59) (		47, 148)	(MLRA 147, 148) Diadmant Flaadalain Caila (F10)
Hydroge	en Sulfide (A4)		Loamy Gleye		2)		
Stratilie			Depleted Ma	llix (F3) Surface (E6)	<b>`</b>		(MILKA 130, 147)
2 cm wit	d Bolow Dark Surface	(11)	Redux Dalk	k Surface (FO	) E7)		Other (Explain in Remarks)
Depiete	ark Surface (A12)	(ATT)	Depleted Dal		r <i>(</i> )		
Thick Da	Ark Sunace (A12) Aucky Mineral (S1) <b>(L</b>		Redux Depie	$\sum_{n=1}^{n} M_{n} = \sum_{i=1}^{n} M_{n} = \sum_{i$	(E12) <b>/I</b>		
	1/7 1/8	ixix i <b>x</b> ,	IIOII-Mangan	636 Masses	5 (1 12) <b>(1</b>	-ixix i <b>x</b> ,	
Sandy (	Gleved Matrix (S4)		Umbric Surfa	о) се (F13) <b>(М</b>		6 122)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odolain Soi	ls (F19)	(MI RA 14)	(8) wetland hydrology must be present
Stripper	Matrix (S6)		Red Parent M	Aaterial (F2	1) (MI R	127 147	<i>u</i> nless disturbed or problematic
Restrictive	l aver (if observed):					· 127, 147	
Turnoi	Euger (il observeu).						
Type			_				
Depth (in	cnes):		_				Hyaric Soil Present? Yes No *
Remarks:							
No hydric soi	l indicators present						



Photo 1 Upland data point waua410\_u facing northeast



Photo 2 Upland data point waua410\_u facing southeast