

Seep data point PHIA405 facing northwest



Seep data point PHIA406 facing southwest

Project/Site: Atlantic Coast Pipeline	City/County: Hig	hland	_ Sampling Date: 7/14/2016
Applicant/Owner: DOMINION		State: VA	Sampling Point: phiz003
Investigator(s): Team Z	Section, Townsh	nip, Range:	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concav	e, convex, none): <u>convex</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): Lat: 2	38.2972433	Long:79.7579947	Datum: WGS1984
Soil Map Unit Name:		NWI classif	ication: UPL
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	<pre>_ significantly disturbed?</pre>	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: This is a seep on the edge of a proposed	d access road (06-001-B001_AR5)			
	,	_ ,			

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 Present? Yes No 🔽 Depth (inches):	
Water Table Present? Yes <u>/</u> No Depth (inches): <u>1</u>	
Water Table Present? Yes	Wetland Hydrology Present? Yes <u>V</u> No
Water Table Present? Yes ✓ No Depth (inches): 1 Saturation Present? Yes ✓ No Depth (inches): 1 (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): 1 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 ions), if available:
Water Table Present? Yes ✓ No Depth (inches):	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):1 Saturation Present? Yes No Depth (inches):1 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):I Saturation Present? Yes No Depth (inches):I (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):1 Saturation Present? Yes No Depth (inches):1 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):1 Saturation Present? Yes ✓ No Depth (inches):1 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):1 Saturation Present? Yes ✓ No Depth (inches):1 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches):1 Saturation Present? Yes ✓ No Depth (inches):1 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks: Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:

Sampling Point: phiz003

, ,	Abcoluto	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance rest worksneet.
1 none	0	<u></u>		Number of Dominant Species
1	·	·		
2		·	. <u> </u>	Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4.				
5				Percent of Dominant Species
-		·		That Are OBL, FACW, or FAC: (A/B)
6		·		Provalance Index worksheet:
7				
	0	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cov	ver: 0 20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15		-		FACW species 0 x 2 = 0
)			EAC species 20 $x_3 = 60$
1. <u></u>	0			$\frac{1}{80}$ $\frac{320}{320}$
2				FACU species $x 4 = 0$
3.				UPL species $0 x 5 = 0$
1				Column Totals: ¹⁰⁰ (A) ³⁸⁰ (B)
			·	
5		·	<u> </u>	Prevalence Index = $B/A = 3.8$
6				Hydrophytic Vegetation Indicators:
7				1 Denid Test for Underschutis Verstetion
8				
0	· · · · · · · · · · · · · · · · · · ·	·		2 - Dominance Test is >50%
9		·		3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cov	ver: 0 20% of	total cover:	0	data in Romarks or on a soparate sheat)
Herb Stratum (Plot size: 5)				
1 Urtica dioica	50	Yes	FACU	Problematic Hydrophytic Vegetation' (Explain)
 Dennstaedtia punctilobula 	20	Yes	FACU	
Adjointum nodotum		Vee		¹ Indicators of hydric soil and wetland hydrology must
3. Adianium pedalum	20	fes	FAC	be present, unless disturbed or problematic.
4. Polystichum acrostichoides	10	No	FACU	Definitions of Four Vegetation Strata
5.				Sommone of Four Poyotation of atal
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
0		·		more in diameter at breast height (DBH), regardless of
7				height.
8				Sanling/Shrub Woody planta evoluting vines loss
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall.
10:		·		,
11		·	<u> </u>	Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cov	/er: <u>50</u> 20% of	total cover:	20	Weedwine All weedwines greater than 2.29 ft in
Woody Vine Stratum (Plot size: 30)			beight
1 none	0			lingin.
··				
2		· <u> </u>	·	
3		·		
4				Liver and which
5				Vegetation
0			·	Present? Yes No
	0	= Total Cove	er O	
50% of total cov	ver: 0 20% of	total cover:	0	
Remarks: (Include photo numbers here or on a	separate sheet.)			

Profile Desc	cription: (Describe to	o the depth	n needed to docum	nent the ind	licator o	or confirm	the absence	of indicato	rs.)	
Depth	Matrix		Redox	<u>Features</u>	- 1	. 2	-		. .	
(inches)		100	Color (moist)		lype	Loc	<u> </u>		Remarks	
0-2	10YR 4/3	100					SCL			
2-16	10YR 5/3	100					SCL			
						·				
¹ Turner 0, 0				Maskad C			² 1	Deve Linis	a M Matrice	
	Indicators:	etion, Rivi=F	Reduced Matrix, ME	=IVIasked Sa	and Gra	ins.	Location: P	ters for Pr	oblematic H	vdric Soile ³ :
Listoool	(A1)		Dark Surface	(67)				om Muck (A		47)
	(A1)			(37)	(S9) /M	I D A 147	148) 2	Cont Proirio	Rodov (A16)	47)
Flistic E	istic (A3)		Thin Dark Su	rface (SQ) (N		LNA 147, 17 1/8)	140)		7 1/8)	
<u> </u>	n Sulfide (A4)		Loamy Gleve	d Matrix (F2		+1, 140)	F	Piedmont Flo	odolain Soils	(F19)
Stratifie	d Lavers (A5)		Depleted Mat	rix (F3))		·	(MLRA 13)	6. 147)	(1.10)
2 cm Mu	uck (A10) (LRR N)		Redox Dark S	Surface (F6)			V	/erv Shallow	Dark Surface	e (TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface (F	7)			Other (Explai	n in Remarks)
Thick Da	ark Surface (A12)	、 ,	Redox Depre	ssions (F8)	,			· ·		,
Sandy N	/lucky Mineral (S1) (LF	RR N,	Iron-Mangane	ese Masses	(F12) (L	.RR N,				
MLR	A 147, 148)		MLRA 136	5)						
Sandy G	Gleyed Matrix (S4)		Umbric Surfa	ce (F13) (MI	LRA 136	6, 122)	³ Inc	licators of hy	drophytic veg	etation and
Sandy F	Redox (S5)		Piedmont Flo	odplain Soils	s (F19) (MLRA 14	8) we	etland hydrol	ogy must be	present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F21) (MLRA	A 127, 147	') un	less disturbe	ed or problem	atic.
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):						Hydric Soil	Present?	Yes	No 🖌
Remarks:							1			
1										



Seep data point phiz003 facing west



Seep data point PHIA401 facing east



Seep data point PHIA402 facing east

Project/Site: Atlantic Coast Pipeline	City/County: Highland	d	Sampling Date: 5/11/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: phif005
Investigator(s): SH, LC	Section, Township, R	ange:	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, co	nvex, none): <u>convex</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): Lat: 38	3.262603 Lo	ong: <u>-79.725565</u>	Datum: WGS1984
Soil Map Unit Name:		NWI classifi	cation: UPL
Are climatic / hydrologic conditions on the site typical for the	nis time of year? Yes No	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are	e "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If r	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:					
No hydric vegetation or soils. Rainfall in	ı past 24 hours,	significant rainfall in	n past week.		

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is require	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	coots (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 Soi	ls (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 (B	7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes I	No Depth (inches): 0.1	
Water Table Present? Yes <u></u>	No Depth (inches):0	
Saturation Present? Yes <u>/</u> I	No Depth (inches):0	Wetland Hydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspecti	ons), if available:
Remarks:		

Sampling Point: phif005

	Abaaluta	Dominant In	diaatar	Deminence Test werkehest
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Dominance Test worksneet:
Fraxinus americana	35	Yes	FACU	Number of Dominant Species
1. Potulo lonto	20	Ves	FACIL	That Are OBL, FACW, or FAC: (A)
2. Betula lenta	20	165	TACU	Total Number of Dominant
3. Acer saccharum	15	No	FACU	Species Across All Strata: 6 (B)
4. Tilia americana	10	No	FACU	· · · · · · · · · · · · · · · · · · ·
5				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 10.0000000 (A/B)
6				Brovalanca Index workshoot:
7				
	80	= Total Cover		Total % Cover of: Multiply by:
50% of total cover: 40	20% of	total cover:	16	OBL species x 1 =0
Copling/Chruh Stratum (Dist size: 0				FACW species $0 x^2 = 0$
<u>Saping/Shrub Stratum</u> (Piot size)	20	Vaa		$10 \times 3 = 30$
1. Acer saccharum	20	res	FACU	FAC species $x_3 =$
2				FACU species $x 4 =$
3				UPL species $0 x 5 = 0$
		· ·		Column Totals: 145 (A) 570 (B)
4		· ·		
5		· ·		Prevalence Index = $B/A = 3.93$
6				
7				Hydropnytic vegetation indicators:
/		· ·		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				
	20	= Total Cover		
50% of total cover: 10	20% of	total cover:	4	4 - Morphological Adaptations' (Provide supporting
Lierh Stretum (Blet eize 0)				data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot Size:)	20		-	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Polystichum acrostichoides	20	Yes	FACU	
2. Osmorhiza claytonii	10	Yes	FACU	4
3 Athyrium asplenioides	10	Yes	FAC	Indicators of hydric soil and wetland hydrology must
Alliaria petiolata	5	No	FACU	be present, unless disturbed or problematic.
4. <u>/ Indita periodata</u>	0		17.00	Definitions of Four Vegetation Strata:
5		· ·		
6				Iree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				height
·		· ·		noight.
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				
	45			Herb – All herbaceous (non-woody) plants, regardless
22.5		= Total Cover	0	or size, and woody plants less than 3.26 it tall.
50% of total cover: <u>22.5</u>	20% of	total cover:	9	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 0)				height.
1. none	0			~~~~~
2				
2		· ·		
3		· ·		
4		· ·		Hydrophytic
5.				Vegetation
	0	= Total Cover		Present? Yes No 🖌
50% of total cover: 0	20% of		0	
	20 /0 01			
Remarks: (Include photo numbers here or on a separate sl	heet.)			

Depth	Matrix		Redo	x Features						
(inches) 0-5	Color (moist) 10YR 2/2	<u>%</u> 100	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture SIL		Remarks	
				·						
				·						
				·						
Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked S	Sand Gra	ins.	² Location: P	L=Pore Lining	, M=Matrix.	
Hydric Soil	Indicators:						Indica	ators for Pro	blematic Hy	dric Soils ³ :
Histosol Histic E Black H	(A1) pipedon (A2) (A3)		Dark Surface Polyvalue Be Thin Dark Su	e (S7) elow Surface urface (S9) (e (S8) (M (MLRA 1	LRA 147, 47, 148)	2 148) C	cm Muck (A ² oast Prairie F (MLRA 147	0) (MLRA 1 4 Redox (A16) 148)	17)
Hydroge Stratifie	en Sulfide (A4) d Lavers (A5)		Loamy Gleye	ed Matrix (F atrix (F3)	2)		P	iedmont Floo	dplain Soils (147)	F19)
2 cm Mi	uck (A10) (LRR N)		Redox Dark	Surface (F6	i)		V	ery Shallow [Dark Surface	(TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Da	rk Surface (F7)		C	ther (Explain	in Remarks)	
Thick D	ark Surface (A12)		Redox Depre	essions (F8)						
Sandy N	/lucky Mineral (S1) (L \ 147 148)	RR N,	Iron-Mangan	ese Masses	s (F12) (L	.RR N,				
Sandy (Gleved Matrix (S4)		Umbric Surfa	ace (F13) (N	ILRA 13	6. 122)	³ Ind	icators of hvo	rophytic yea	etation and
Sandy F	Redox (S5)		Piedmont Flo	podplain Soi	ils (F19)	(MLRA 14	8) we	tland hydrolo	gy must be p	resent,
Stripped	Matrix (S6)		Red Parent I	Material (F2	1) (MLR	A 127, 147	7) un	less disturbed	l or problema	tic.
Restrictive	Layer (if observed):									
Type: Ro	OCK									
Dende (ches): 5						Hydric Soil	Present?	Yes	No 🖌



Seep data point phif005 facing west



Seep data point phif005 facing east

Project/Site: Atlantic Coast Pipeline	City/County: Hi	ghland	_ Sampling Date: 5/11/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: phif006
Investigator(s): SH, LC	Section, Towns	hip, Range:	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (conca	ve, convex, none): <u>convex</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): Lat: 38.26	324879	Long: <u>-79.7253398</u>	Datum: WGS1984
Soil Map Unit Name:		NWI classif	ication: UPL
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 sig	inificantly disturbed?	Are "Normal Circumstances"	present? Yes No _
Are Vegetation, Soil, or Hydrology na	turally problematic?	(If needed, explain any answ	ers in Remarks.)
Are Vegetation, Soil, or Hydrology sig Are Vegetation, Soil, or Hydrology na	inificantly disturbed?	Are "Normal Circumstances" (If needed, explain any answ	present? Yes No _

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:					
No hydric vegetation or soils. Rainfall in	ו past 24 hours,	significant rainfall ir	n past week.		

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 Ro	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)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>/</u> No Depth (inches): 0.1	
Water Table Present? Yes <u>/</u> No Depth (inches): 0	
Saturation Present? Yes <u>/</u> No Depth (inches): 0 V	Vetland Hydrology Present? Yes <u>/</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarke:	
Nemans.	

Sampling Point: phif006

, , , , , , , , , , , , , , , , , , ,	Absolute	Dominant Ir	dicator	Dominance Test worksheet:
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Number of Deminant Species
Acer saccharum	50	Yes	FACU	That Are OBL_EACW_or EAC: 1 (A)
- Fraxinus americana	20	Yes	FACU	
	10	No	FACU	Total Number of Dominant
3. This americana				Species Across All Strata: (B)
4		<u> </u>		Percent of Dominant Species
5		<u> </u>		That Are OBL, FACW, or FAC: 20 (A/B)
6.				
7				Prevalence Index worksheet:
/	80	Tatal Cause		Total % Cover of: Multiply by:
500/ - () -		= Total Cover	16	OBL species $0 \times 1 = 0$
50% of total cover:0	20% of	total cover:		$\frac{1}{1} = \frac{1}{1} = \frac{1}$
Sapling/Shrub Stratum (Plot size:)				$\begin{array}{c} \text{FACW species} \\ \hline 15 \\ \hline 45 \\ \hline \end{array}$
1. Acer saccharum	10	Yes	FACU	FAC species 10° $x^{\circ} = 10^{\circ}$
2				FACU species 105 x 4 = 420
3				UPL species $0 x 5 = 0$
		<u> </u>		Column Totals: ¹²⁰ (A) ⁴⁶⁵ (B)
4		<u> </u>		
5		<u> </u>		Prevalence Index = $B/A = $ 3.87
6				Hydrophytic Vegetation Indicators
7				1. Donid Toot for Hydrophytic Versitation
8.				
0		. <u> </u>		2 - Dominance Test is >50%
9	10			3 - Prevalence Index is ≤3.0 ¹
5		= Total Cover	2	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 0)				Droblemetic Lludrophytic Megetation ¹ (Evaluin)
1. Athyrium asplenioides	15	Yes	FAC	
2 Polystichum acrostichoides	10	Yes	FACU	
3 Osmorhiza claytonii	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
		· ·		be present, unless disturbed or problematic.
4		· ·		Definitions of Four Vegetation Strata:
5		· ·		Tree Weedy plants evoluting vince 2 in (7.6 cm) or
6				more in diameter at breast beight (DBH) regardless of
7.				height.
8				
0		. <u> </u>		Sapling/Shrub – Woody plants, excluding vines, less
8		· ·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		· ·	<u> </u>	
11		·		Herb – All herbaceous (non-woody) plants, regardless
	30	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of	total cover:	6	Weedwaine Allowedwainee restantion 2 00 ft in
Woody Vine Stratum (Plot size: 0)				woody vine – All woody vines greater than 3.28 it in height
1 none	0			noight.
··		<u> </u>		
<u>2</u>		<u> </u>		
3		<u> </u>		
4		<u> </u>		Hydrophytic
5				Vegetation
	0	= Total Cover		Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Pomarka: (Include photo numbers boro or on a soparate s				
Remarks. (include photo numbers here of on a separate s	neet.)			

Profile Desc	cription: (Describe to	o the depth	needed to docum	nent the in	dicator o	or confirm	the absence o	f indicators.)		
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	F	Remarks	
0-3	10YR 2/2	100					SIL			
							·			
·										
						<u> </u>				
										<u> </u>
¹ Type: C=C	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=	Pore Lining, N	/I=Matrix.	
Hydric Soil	Indicators:						Indicat	ors for Proble	matic Hydri	c Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 c	m Muck (A10)	(MLRA 147)	
Histic E	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (M	LRA 147,	148) <u> </u>	ast Prairie Rec	lox (A16)	
Black H	istic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)	(MLRA 147, 14	18)	
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F	2)		Pie	dmont Floodpl	ain Soils (F1	9)
Stratifie	d Layers (A5)		Depleted Mat	trix (F3)			(MLRA 136, 14	17)	
2 cm Mu	uck (A10) (LRR N)		Redox Dark S	Surface (F6	<u>6)</u>		Ve	ry Shallow Dar	k Surface (T	F12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface ((F7)		Oth	ier (Explain in	Remarks)	
Thick Da	ark Surface (A12)		Redox Depre)					
Sandy N	Aucky Mineral (S1) (LI	KR N,	Iron-Mangan	ese Masse	s (F12) (l	_RR N,				
MLRA	A 147, 148)		MILRA 13	b)		c 400)	31	atowa of building		tion and
Sandy G	Dedex (SE)		Umbric Surra	Ce (F13) (N adalaia Sa		$(\mathbf{M} \mid \mathbf{D} \wedge \mathbf{A})$		ators of nyarop	must he prov	tion and
Sandy P	(CODX (CC)		Pleamont Flo	Actorial (E2	1) (MI D	(IVILKA 14)	o) wella	and nyurology	must be pres	sent,
Surpped	l mainx (30)			laterial (FZ		4 127, 147) unie	ss disturbed of	problematic	•
	ock									
Type:	3									
Depth (in	ches): <u> </u>		_				Hydric Soil P	resent? Ye	s I	No
Remarks:										



Seep data point phif006 facing west



Seep data point phif006 facing east

· · · · · · · · · · · · · · · · · · ·	
Applicant/Owner: Dominion State: VA Sampling Point: Phif00	ļ _
Investigator(s): SH, LC Section, Township, Range:	
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1)
Subregion (LRR or MLRA): Lat: <u>38.261612</u> Long: <u>-79.725013</u> Datum: <u>WGS1</u>	984
Soil Map Unit Name: NWI classification: UPL	
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 answers 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:					
No hydric vegetation or soils. Rainfall in	ı past 24 hours,	significant rainfall in	n past week.		

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 Roo	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)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u><</u> No <u>Depth (inches)</u> . 0.5	
Water Table Present? Yes <u></u>	
Saturation Present? Yes 🖌 No Depth (inches): 0 🛛 🛛	/etland Hydrology Present? Yes <u>/</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	is), if available:
Remarke:	
Nemana.	

Sampling Point: phif004

	Absolute	- Dominant Ir	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Number of Deminerat Creasing
Acer saccharum	55	Yes	FACU	That Are OBL EACIAL or EAC: 2 (A)
Fravinus americana	35	Yes	FACU	
2		100		Total Number of Dominant
3				Species Across All Strata: 5 (B)
4.				
5				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Brovelence Index workeheet
7				Frevalence muex worksheet.
	90	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: 45	20% of	total cover	18	OBL species x 1 =0
	2070 01			FACW species $20 \times 2 = 40$
Sapling/Shrub Stratum (Plot size:)	45	Vee		$10 \times 2 30$
1. Acer saccharum	15	res	FACU	FAC species $x_3 = 448$
2.				FACU species 112 x 4 = 440
3				UPL species $0 x 5 = 0$
				Column Totals: 142 (A) 518 (B)
4				
5				Prevalence Index - B/A - 3.64
6.				
7				Hydrophytic Vegetation Indicators:
· ·				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$\frac{1}{2} = 2 \text{Derivations of local of $20070}$
	15	- Total Cove		
50% of total approx 7.5	200/ of	total cover	3	4 - Morphological Adaptations ¹ (Provide supporting
	20% 01	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 0)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Boehmeria cylindrica	20	Yes	FACW	
2. Athyrium asplenioides	10	Yes	FAC	
 Alliaria petiolata 	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
Trillium undulatum		No		be present, unless disturbed or problematic.
4. Thillum undulatum	Z	NO	FACU	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
-				more in diameter at breast height (DBH), regardless of
7				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.
10				,
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cover	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>18.5</u>	20% of	total cover:	7.4	Weedwine All weedwines greater than 2.29 ft in
Woody Vine Stratum (Plot size: 0)				beight
	0			
-				
2				
3				
4.				
5				Hydrophytic
J				Present? Ves No
		= Total Cover	r O	
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Des	cription: (Describe t	o the dept	h needed to docun	nent the in	dicator o	or confirm	the absence	of indicators.)		
Depth (is a b a a)	Matrix		Redo	x Features	T	1.2.2	Tautuna	D		
0-3	10YR 2/2	100		<u></u>			SIL		narks	
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	iins.	² Location: PL	=Pore Lining, M= tors for Problem	Matrix. atic Hvdric So	ils ³ :
Histosol Histic E Black H Hydroge Stratifie 2 cm M Deplete Thick D	I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) (L	(A11) RR N,	Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark S Depleted Dar Redox Depre Iron-Mangan	(S7) low Surface rface (S9) d Matrix (F trix (F3) Surface (F6 k Surface (essions (F8) ese Masses	e (S8) (M (MLRA 1 2) ;;) ;F7) ; s (F12) (I	LRA 147, 47, 148) -RR N,	2 c 148) Cc Pic Ve Ot	cm Muck (A10) (N past Prairie Redox (MLRA 147, 148) edmont Floodplain (MLRA 136, 147) ery Shallow Dark S her (Explain in Re	ILRA 147) (A16) D Soils (F19) Surface (TF12) emarks)	
MLR Sandy (Sandy F Stripped	A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		MLRA 13 Umbric Surfa Piedmont Flo Red Parent M	6) ce (F13) (N podplain So /laterial (F2	/LRA 13 ils (F19) 1) (MLR /	6, 122) (MLRA 14 A 127, 147	³ India 8) wet) unle	cators of hydrophy land hydrology mi ess disturbed or p	rtic vegetation a ust be present, roblematic.	and
Type: Restrictive	ches): 3						Hydric Soil I	Present? Yes	No	~
rtemarks:										



Seep data point phif004 facing northwest



Seep data point phif004 facing southeast

Project/Site: Atlantic Coast Pipeline	City/County: Highland Sam	pling Date: 5/11/2016
Applicant/Owner: Dominion	State: VA St	ampling Point: <u>phif003</u>
Investigator(s): SH, LC	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex, none): <u>convex</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): Lat: 38.261568	Long: <u>-79.724884</u>	Datum:
Soil Map Unit Name:	NWI classification	UPL
Are climatic / hydrologic conditions on the site typical for this time o	of year? Yes No 🔽 (If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology significat	ntly disturbed? Are "Normal Circumstances" preser	nt? Yes No 🔽
Are Vegetation, Soil, or Hydrology naturally	v problematic? (If needed, explain any answers in l	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:					
No hydric vegetation or soils. Rainfall in	past 24 hours,	significant rainfall ir	n past week.		

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 Roo	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)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u><</u> No <u>Depth (inches)</u> . 0.5	
Water Table Present? Yes <u></u>	
Saturation Present? Yes 🖌 No Depth (inches): 0 🛛 🛛	/etland Hydrology Present? Yes <u>/</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	is), if available:
Remarke:	
Nemana.	

Sampling Point: phif003

	Abaaluta	Dominant Ir	diaatar	Dominanaa Taat warkabaati
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Dominance Test worksneet:
A Acer saccharum	45	Yes	FACU	Number of Dominant Species
- Fravinus americana	20	Yes	FACU	That Are OBL, FACW, or FAC: (A)
	10	<u> </u>		Total Number of Dominant
3. Tilia americana	10	NO	FACU	Species Across All Strata: 5 (B)
4. Prunus serotina	5	No	FACU	
5				Percent of Dominant Species
<u> </u>		- <u></u>		That Are OBL, FACW, or FAC: (A/B)
0				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	80	= Total Cover		
50% of total cover: 40	20% of	f total cover:	16	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 0)				FACW species $10 x 2 = 20$
Acer saccharum	35	Yes	FACU	FAC species 0 x 3 = 0
		·		EACU species 127 x 4 = 508
2		·		$1 \text{ Act species} = \frac{2}{10}$
3				UPL species $x_5 = \frac{10}{520}$
4.				Column Totals: (A) (B)
5				
		- <u> </u>	<u> </u>	Prevalence Index = B/A = 3.87
б		·		Hydrophytic Vegetation Indicators:
7				1 - Ranid Test for Hydrophytic Vegetation
8.				
0				2 - Dominance Test is >50%
9	35			3 - Prevalence Index is ≤3.0 ¹
47.5		= Total Cover	. 7	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:17.5	20% of	f total cover:	/	deta in Romarka ar an a constate aboat)
Herb Stratum (Plot size: 0)				
1 Boehmeria cylindrica	10	Yes	FACW	Problematic Hydrophytic Vegetation' (Explain)
o. Osmorhiza clavtonii	10	Yes	FACU	
				¹ Indicators of hydric soil and wetland hydrology must
3. Sanguinaria canadensis	2	NO	UPL	be present, unless disturbed or problematic.
4. Trillium undulatum	2	No	FACU	Definitions of Four Vegetation Strata
5				Demittoris of Four Vegetation Strata.
o				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
0		·		more in diameter at breast height (DBH), regardless of
7		·		height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less
40	-			m) tall
10		· · · · · · · · · · · · · · · · · · ·		
11		- <u> </u>		Herb – All herbaceous (non-woody) plants, regardless
	24	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 12	20% of	f total cover:	4.8	
Woody Vine Stratum (Plot size: 0)				Woody vine – All woody vines greater than 3.28 ft in
none	0			neight.
1	0	• <u> </u>		
2				
3.				
4				
-		·		Hydrophytic
5		- <u> </u>		Vegetation
	0	= Total Cover		Present? Yes No *
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet)			
	1001.)			

Profile Des	scription: (Describe to	o the depth r	needed to docur	ment the indicator	or confirm	the absence of indicators.)
Depth	Matrix Color (moiot)	0/	Redo Color (moiot)	x Features		Tautura
<u>(incries)</u> 0-3	10YR 2/2	100		<u> </u>	LUC	SII
0-0	1011(2/2	100				
			<u> </u>	<u> </u>		
				·		
			<u> </u>	<u> </u>		
			<u> </u>	<u> </u>		
¹ Type: C=C	Concentration, D=Deple	tion, RM=Re	duced Matrix, M	S=Masked Sand G	rains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	I Indicators:					Indicators for Problematic Hydric Soils ³
Histosc	ol (A1)	-	Dark Surface	e (S7)		2 cm Muck (A10) (MLRA 147)
Histic E	Epipedon (A2)	-	Polyvalue Be	elow Surface (S8) (I	MLRA 147, 1	148) Coast Prairie Redox (A16)
Black H	Histic (A3)	-	Thin Dark Sι	urface (S9) (MLRA	147, 148)	(MLRA 147, 148)
Hydrog	gen Sulfide (A4)	-	Loamy Gleye	ed Matrix (F2)		Piedmont Floodplain Soils (F19)
Stratifie	ed Layers (A5)	-	Depleted Ma	ıtrix (F3)		(MLRA 136, 147)
2 cm M	luck (A10) (LRR N)	-	Redox Dark	Surface (F6)		Very Shallow Dark Surface (TF12)
Deplete	ed Below Dark Surface	(A11) _	Depleted Da	rk Surface (F7)		Other (Explain in Remarks)
Thick D	Dark Surface (A12)	-	Redox Depre	essions (F8)		
Sandy	Mucky Mineral (S1) (LF	RR N,	Iron-Mangan	ese Masses (F12)	(LRR N,	
MLR	RA 147, 148)		MLRA 13	6)		2
Sandy	Gleyed Matrix (S4)	-	Umbric Surfa	ace (F13) (MLRA 1 3	36, 122)	Indicators of hydrophytic vegetation and
Sandy	Redox (S5)	-	Piedmont Flo	podplain Soils (F19)) (MLRA 148	B) wetland hydrology must be present,
		-	Red Parent I	Material (F21) (MLF	RA 127, 147)	unless disturbed or problematic.
Strippe	ed Matrix (S6)					
Strippe Restrictive	ed Matrix (S6) Layer (if observed):					
Strippe Restrictive Type:	ed Matrix (S6) Layer (if observed): Rock		_			
Strippe Restrictive Type: Depth (ir	ed Matrix (S6) Layer (if observed): Rock nches): <u>3</u>		-			Hydric Soil Present? Yes No
Strippe Restrictive Type: Depth (ir Remarks:	ad Matrix (S6) Layer (if observed): Rock nches): <u>3</u>		-			Hydric Soil Present? Yes No



Seep data point phif003 facing northwest



Seep data point phif003 facing southeast

City/County: Highland	Sampling Date: 5/11/2016
State: VA	Sampling Point: phif002
Section, Township, Range:	
_ Local relief (concave, convex, none): <u>convex</u>	Slope (%): <u>10</u>
16 Long: <u>-79.724589</u>	Datum: WGS1984
NWI clas	ssification: UPL
e of year? Yes No (If no, explain	in Remarks.)
cantly disturbed? Are "Normal Circumstance	es" present? Yes No 🖌
ally problematic? (If needed, explain any an	nswers in Remarks.)
	City/County: Highland State: VA Section, Township, Range: Local relief (concave, convex, none): convex 6 Long: -79.724589 No (If no, explain antly disturbed? Are "Normal Circumstance" Ily problematic?

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:					
No hydric vegetation or soils. Rainfall in	past 24 hours,	significant rainfall ir	n past week.		

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	coots (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 Sol	ls (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 <u><</u> No <u>Depth</u> (inches): 0.25			
Water Table Present? Yes 🖌 No Depth (inches):0			
Saturation Present? Yes <u>/</u> No Depth (inches): 0	Wetland Hydrology Present? Yes <u>V</u> No		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspecti	ons), if available:		
Pomorke:			
Remarks.			

Sampling Point: phif002

	Absoluto	Dominant Ir	dicator	Dominance Test worksheet:
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Number of Deminent Creation
Acer saccharum	40	Yes	FACU	That Are OBL_EACW_or EAC·0 (A)
² Tilia americana	20	Yes	FACU	
2. Ulmus americana	10	No	FACW	Total Number of Dominant
. Fravinus americana	10	No	FACU	Species Across All Strata: (B)
		· ·		Percent of Dominant Species
5		· ·		That Are OBL, FACW, or FAC:0 (A/B)
6		·		Brovalanco Index workshoot:
7				
	80	= Total Cover		
50% of total cover: 40	20% of	total cover:	16	OBL species 13 $x = 0$
Sapling/Shrub Stratum (Plot size: 0)				FACW species $x^2 = \frac{20}{6}$
1. Acer saccharum	15	Yes	FACU	FAC species $2 \times 3 = 0$
2				FACU species $x 4 =460$
3.				UPL species $0 x 5 = 0$
4		- <u> </u>		Column Totals: (A) (B)
		·		
S		· ·		Prevalence Index = B/A =3.78
0		· ·		Hydrophytic Vegetation Indicators:
ſ		· ·		1 - Rapid Test for Hydrophytic Vegetation
8			<u> </u>	2 - Dominance Test is >50%
9				$3 - Prevalence Index is \leq 3.0^{1}$
	15	= Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 7.5	20% of	total cover:	3	data in Romarks or on a soparate sheat)
Herb Stratum (Plot size: 0)				Data in Remarks of on a separate sheet)
1. Osmorhiza claytonii	20	Yes	FACU	
2. Polystichum acrostichoides	5	No	FACU	
3. Alliaria petiolata	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
A Boehmeria cylindrica	3	No	FACW	be present, unless disturbed of problematic.
5 Smilax rotundifolia	2	No	FAC	Definitions of Four Vegetation Strata:
S				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
б				more in diameter at breast height (DBH), regardless of
7		• ·		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 herbaceous (non-woody) plants, regardless
	35	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover:17.5	20% of	total cover:	7	Weady vine All weady vince greater than 2.29 ft in
Woody Vine Stratum (Plot size: 0)				height.
1. none	0			
2.				
3.				
4		·		
5		· ·		Hydrophytic
J				Present? Yes No
		= I otal Cover	. 0	
	20% 0	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	cription: (Describe t	o the dept	h needed to docur	ment the i	ndicator	or confirm	the absence of in	ndicators.)	
Depth	Matrix		Redo	x Features	; 				
(inches)	Color (moist)		Color (moist)	%	Type'	Loc	Texture	Remark	S
0-3	10YR 2/2	100					SIL		
		<u> </u>				<u> </u>	·		
							. <u> </u>		
							<u> </u>		<u> </u>
	oncentration D-Denl	etion RM-	Reduced Matrix M	S-Maskad	Sand Gra	ine	² Location: PL-P	ore Lining M-Matri	×
Hydric Soil	Indicators:				Sand Ora	aii 13.	Indicators	s for Problematic I	^. Hydric Soils ³ '
Histopol	(A1)		Dark Surface	(97)			2		147)
Listic E	ninodon (A2)			- (37)	o (S9) (M		148) Coast		(147)
	pipedon (A2)		Thin Dark Su	urfaco (SQ)		1211A 147, 17 110)	146) <u>(</u> Clast	DA 147 149	5)
Black II	Suc(A3)			ad Matrix (I		47, 140)	Piedre	-RA 147, 140)	le (F10)
Tryuroge	$d \downarrow avers (A5)$		Depleted Ma	triv (E3)	2)		rieuri /MI	PA 136 147)	13 (1 1 3)
Oranie			Depleted Ma	Surface (F	6)			Shallow Dark Surfa	ce (TE12)
2 cm M	d Below Dark Surface	Δ11)	Depleted Da	rk Surface	(F7)		Very C	(Evolain in Remark	
Depicte	ark Surface (A12)	, (/ (1)	Bedox Depre	essions (F8	(17)				(0)
Sandy M	Aucky Mineral (S1) (I	RR N	Iron-Mandan	lese Masse	,, s (F12) (I				
	Δ 147 148)	, , , , , , , , , , , , , , , , , , ,	MIRA 13	(6)	,5 (i i 2) (i	,			
Sandy (Gleved Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 13	6, 122)	³ Indicato	ors of hydrophytic v	egetation and
Sandy F	Redox (S5)		Piedmont Flo	odolain So	oils (F19)	(MLRA 14	.8) wetland	d hydrology must be	e present.
Stripped	Matrix (S6)		Red Parent I	Material (F:	21) (MLR	A 127. 147	') unless	disturbed or proble	matic.
Restrictive	Laver (if observed):					,	,		
Type. Ro	ock								
Type	-1								
Deptn (in	cnes):						riyaric Soli Pres	sent? Yes	
Remarks:									



Seep data point phif002 facing west



Seep data point phif002 facing east



Seep data point PHIF001 facing southeast



Seep data point PHIF007 facing northwest

Project/Site: Atlantic Coast Pipeline	City/County: Highland	Sampling Date: 11/3/2016
Applicant/Owner: DOMINION	State:	VA Sampling Point: phiz004
Investigator(s): Team Z	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Hillside	Local relief (concave, convex, none): <u>conv</u>	vex Slope (%): <u>3</u>
Subregion (LRR or MLRA):	Lat: <u>38.272107</u> Long: <u>-79.7007928</u>	Datum: WGS1984
Soil Map Unit Name:	NW	I classification: UPL
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Yes <u></u> No (If no, exp	plain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Circums	tances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain an	ny answers 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: This is a seep on the edge of a proposed access road (06-001-C026-AR3).					

weganu nyurulogy indicato	ors:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is rea		Surface Soil Cracks (B6)		
 Surface Water (A1) 			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 Aer	ial Imagery	(B7)			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):2		
Water Table Present?	Yes 🖌	No	Depth (inches):1		
	Voc 🗸	No	Depth (inches):1	Wetland I	Hydrology Present? Yes <u>/</u> No
Saturation Present?	163				
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	am daude.	monitorir	o well, aerial photos, previous inspec	ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	eam gauge,	monitorin	g well, aerial photos, previous inspec	ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ig well, aerial photos, previous inspec	ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorir	ng well, aerial photos, previous inspec	ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ng well, aerial photos, previous inspec	Lctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ng well, aerial photos, previous inspec	Lctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ig well, aerial photos, previous inspec	ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorir	ng well, aerial photos, previous inspec	Lctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorir	ng well, aerial photos, previous inspec	Lctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ng well, aerial photos, previous inspec	L ctions), if ava	ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	eam gauge,	monitorin	ng well, aerial photos, previous inspec	ctions), if ava	ailable:

Sampling Point: phiz004

, ,	Abcoluto	- Dominant Ir	dicator	Dominanco Tost workshoot:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance rest worksneet.
	500	Yes	FACU	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50 (A/B)
6				
7				Prevalence Index worksheet:
/	500	·		Total % Cover of: Multiply by:
	500	= Total Cover		
50% of total cover: 250	20% of	total cover:	100	OBL species $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x = 0$
,	0			EAC species $20 \times 3 = 60$
1		·		$\frac{500}{500} \times 4 \frac{2000}{2000}$
2		<u> </u>		FACU species $x 4 = 0$
3.				UPL species $0 x 5 = 0$
4				Column Totals: 520 (A) 2060 (B)
4		<u> </u>		
5		<u> </u>		Prevalence Index = $B/A = 3.96$
6.				
7				Hydrophytic Vegetation Indicators:
/		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8		<u> </u>		2 - Dominance Test is >50%
9.				
	0			3 - Prevalence Index is ≤3.0
E0% of total cover			0	4 - Morphological Adaptations ¹ (Provide supporting
	20% 0	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				Droblemetic Lludrenbutic (contestion ¹ (Euclein)
_{1.} Rumex crispus	20	Yes	FAC	
2				
Z				¹ Indicators of hydric soil and wetland hydrology must
3		<u> </u>		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata
5				Deminions of Four Vegetation offata.
<u> </u>				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
b		·		more in diameter at breast height (DBH), regardless of
7				height.
8.				
0				Sapling/Shrub – Woody plants, excluding vines, less
9		<u> </u>		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb - All herbaceous (non-woody) plants, regardless
	20	- Total Cover		of size and woody plants less than 3.28 ft tall
E0% of total anyor: 10	200/ of		4	
	20 % 01			Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 50)				height.
1. none	0			
2				
2		<u> </u>		
3		<u> </u>		
4				Hydrophytic
5.				Vegetation
	0	Tatal Cause		Present? Yes No
		= Total Cover	0	
50% of total cover:	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			·

Profile Des	cription: (Describe t	o the dept	h needed to docur	ment the ir	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
0-2	10YR 4/3	100					SIL	
2-16	10YR 5/3	100					COSL	Extremely gravelly.
		<u> </u>						
'Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indic	ators for Problematic Hydric Soils":
Histoso	I (A1)		Dark Surface	e (S7)			2	2 cm Muck (A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue Be	elow Surfac	æ (S8) (№	ILRA 147,	148)	Coast Prairie Redox (A16)
Black H	ISTIC (A3)			Irrace (59)		47, 148)	-	(MLRA 147, 148)
Hydroge	d Lovero (AE)		Loamy Gleye	ed Matrix (F	-2)		F	
			Depleted Ma	NIIX (F3) Surfaca (E6	2)		、	(MLRA 130, 147)
2 cm m	d Below Dark Surface	(A11)	Depleted Da	rk Surface	(F7)			Other (Explain in Remarks)
Thick D	ark Surface (A12)	(,,	Redox Depre	essions (F8	()			
Sandy I	Mucky Mineral (S1) (L	RR N.	Iron-Mangan	ese Masse	, s (F12) (I	LRR N.		
MLR	A 147, 148)	,	MLRA 13	6)		,		
Sandy (Gleyed Matrix (S4)		Umbric Surfa	, ace (F13) (I	MLRA 13	6, 122)	³ Inc	licators of hydrophytic vegetation and
Sandy I	Redox (S5)		Piedmont Flo	podplain Sc	oils (F19)	(MLRA 14	8) we	etland hydrology must be present,
Stripped	d Matrix (S6)		Red Parent N	Material (F2	21) (MLR	A 127, 147	') un	less disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (in	iches):						Hydric Soi	I Present? Yes No
Remarks								
. tomanto.								
ł								



Seep data point PHIZ004 facing northwest

Project/Site: Atlantic Coast Pipeline	ty/County: Highland Sampling Date: 5/21/2016
Applicant/Owner: DOMINION	State: <u>VA</u> Sampling Point: <u>phiz001</u>
Investigator(s):	ection, Township, Range:
Landform (hillslope, terrace, etc.): Slope	l relief (concave, convex, none): <u>concave</u> Slope (%): <u>5</u>
Subregion (LRR or MLRA): Lat: <u>38.2474108</u>	Long: <u>-79.7112189</u> Datum:
Soil Map Unit Name:	NWI classification: UPL
Are climatic / hydrologic conditions on the site typical for this time of y	? Yes 🗹 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	sturbed? Are "Normal Circumstances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	ematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ampling 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: Spring point adjacent to a driveway, area was dug up and modified. The spring is surrounded by placed flat stones and drains through a pipe underneath the driveway. Two photos were taken.							

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) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aei Water-Stained Leaves (E Aquatic Fauna (B13) 	rial Imagery (B7) 39)	Tru Hy Ox Pre Re Thi Oth	ue Aquatic Plants (B14) /drogen Sulfide Odor (C1) kidized Rhizospheres on Living F esence of Reduced Iron (C4) ecent Iron Reduction in Tilled So in Muck Surface (C7) ther (Explain in Remarks)	Roots (C3) ils (C6)	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) 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	• D	epth (inches):			
	Vee Ne	• D	enth (inches).			
Water Table Present?	res NO					
Water Table Present? Saturation Present? (includes capillary fringe)	Yes <u>No</u>		pepth (inches):	Wetland H	lydrology Present? Yes <u>No</u>	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes No Yes No eam gauge, monit	Depring well,	Pepth (inches): I, aerial photos, previous inspect	Wetland H	Iydrology Present? Yes No	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No	✓ Depring well	Pepth (inches): I, aerial photos, previous inspect	Wetland H	Iydrology Present? Yes No	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stro Remarks:	Yes No	✓ Depring well	Pepth (inches):	Wetland H	lydrology Present? Yes No✓ ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No	✓ Depring well,	Pepth (inches):	Wetland H	lydrology Present? Yes No ✓ ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No	✓ Depring well,	Pepth (inches):	Wetland H	lydrology Present? Yes No ✓ ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stro Remarks:	Yes No	✓ Depring well,	Pepth (inches):	Wetland H	lydrology Present? Yes No ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No Yes No eam gauge, monit	✓ Do	Pepth (inches): l, aerial photos, previous inspect	Wetland H	lydrology Present? Yes No⊻ ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No	✓ Do	Pepth (inches):	Wetland H	lydrology Present? Yes No✓ ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes No	✓ Do	Pepth (inches):	Wetland H	lydrology Present? Yes No ilable:	
Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stro Remarks:	Yes No Yes No eam gauge, monit	✓ Do	Pepth (inches): l, aerial photos, previous inspect	Wetland H	lydrology Present? Yes No _ ✓ ilable:	

Sampling Point: phiz001

, , ,	Abaaluta	- Daminant I		Deminence Test worksheet						
Trop Stratum (Plot size: 30)		Dominant II	Status	Dominance Test worksneet:						
	0	opecies:	Status	Number of Dominant Species						
1. norie		. <u> </u>		That Are OBL, FACW, or FAC: (A)						
2				T-t-! Number of Deminent						
3				Species Across All Strata: 5 (B)						
<u> </u>										
4			·······	Percent of Dominant Species						
5				That Are OBL, FACW, or FAC: 20 (A/B)						
6										
7				Prevalence Index worksheet:						
/ ·:	0	T · 1 O · · · ·		Total % Cover of: _ <u>Multiply by:</u>						
		= Total Cove	r N	OPL enceion 0 x 1 = 0						
50% of total cover:	20% of	total cover:	0							
Sapling/Shrub Stratum (Plot size: 10)				FACW species $x^2 = 0$						
1 Liriodendron tulipifera	40	Yes	FACU	FAC species 20 x 3 = 00						
	15	Yes	FACU	FACUS percises 105 x 4 = 420						
2. <u>Beluia ienia</u>	10	163	1 400							
3				UPL species $x = \frac{1}{125}$						
				Column Totals: (A) (B)						
5				Prevalence Index = B/A =3.84						
6				Hudrophytic Vacatation Indicators:						
7.				Hydrophytic vegetation indicators.						
				1 - Rapid Test for Hydrophytic Vegetation						
8				2 - Dominance Test is >50%						
9				3 - Prevalence Index is <3 0 ¹						
	55	= Total Cove	r							
50% of total cover: 27.5	20% of	total cover:	11	4 - Morphological Adaptations" (Provide supporting						
				data in Remarks or on a separate sheet)						
Herb Stratum (Plot size:)	05			Problematic Hydrophytic Vegetation ¹ (Explain)						
1. Rubus argutus	35	Yes	FACU							
2 Microstegium vimineum	20	Yes	FAC							
 Dennstaedtia punctilobula 	15	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must						
3. Donnotadana pandalogala			17.00	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						
0	-			more in diameter at breast height (DBH), regardless of						
7				height.						
8				One l'en (Ohmethie) Manufactor and ell'en discontente						
9.				than 2 in DBH and greater than or equal to 3.28 ft (1						
				m) tall						
10				11) tan.						
11				Herb – All herbaceous (non-woody) plants, regardless						
	70	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.						
50% of total cover: 35	20% of	total cover:	14							
$\frac{30}{30}$				Woody vine – All woody vines greater than 3.28 ft in						
<u>vvoody vine Stratum</u> (Piot size:)	•			height.						
1. none	0									
2.										
2										
٥										
4				Hydrophytic						
5.				Vegetation						
	0	- Total Covo	r	Present? Yes No						
			0							
	20% 0	total cover:								
Remarks: (Include photo numbers here or on a separate s	heet.)									
Profile Des	cription: (Describe t	o the dept	h needed to docu	ment the ir	ndicator	or confirm	the absence	e of indicato	ors.)	
------------------------	---	--	-------------------	------------------------------------	--------------------------	----------------------	------------------------	-------------------------------	--------------------------------	----------------------------
Depth	Matrix		Redo	x Features	5 Turn a ¹	L = = 2	Tautuma		Demente	
(Incnes)	$\frac{\text{Color (moist)}}{10 \text{ VP } 4/3}$	<u> % </u>	Color (moist)	<u>%</u>	Type	LOC	<u>exture</u>	contains s	Remarks	
0-3	10 1 K 4/3	100							one graver	
3-13	10 YR 5/6	100					SIL	contains g	Iravel	
								·		
								·		
						<u> </u>				
								·		
		·		<u> </u>		<u> </u>		·		
¹ Tvpe: C=C	concentration. D=Depl	etion. RM=	Reduced Matrix. M	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Lini	ng. M=Matrix	
Hydric Soil	Indicators:	,	·····, ···				Indic	ators for Pr	oblematic H	ydric Soils ³ :
Histoso	l (A1)		Dark Surface	e (S7)			:	2 cm Muck (A	A10) (MLRA [·]	147)
Histic E	pipedon (A2)		Polyvalue Be	elow Surfac	ce (S8) (N	ILRA 147,	148)	Coast Prairie	Redox (A16))
Black H	listic (A3)		Thin Dark Su	urface (S9)	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
Hydrog	en Sulfide (A4)		Loamy Gleye	ed Matrix (F	-2)		I	Piedmont Flo	odplain Soils	(F19)
<u> </u>	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 13	6, 147)	
2 cm M	uck (A10) (LRR N)		Redox Dark	Surface (F	6)			Very Shallow	Dark Surface	ə (TF12)
Deplete	ed Below Dark Surface	e (A11)	Depleted Da	rk Surface	(F7)		'	Other (Explai	in in Remarks	;)
Thick D	ark Surface (A12)		Redox Depre	essions (F8	3)					
Sandy I	Mucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Masse	es (F12) (I	LRR N,				
MLR	A 147, 148)		MLRA 13	6) (540) (1		c 400)	31	diantana af hu		nototion and
Sandy C	Gleyed Matrix (54)		Umbric Surra	ace (F13) (I Sodeloin So		0, 122) /MI DA 44	ID:	atland hydro	aropnytic ve	jetation and
Sanuy r	d Matrix (S6)		Pieumonii Fil	Motorial (E	DIIS (F 19)	(IVILKA 14	ю) w	elianu nyuru aloce disturb	od or problem	present,
Restrictive	Laver (if observed):					A 127, 147) u			
Type	Layer (in observed).									
Type	h) -						Undein Cal		Vee	
Deptn (In	iches):						Hydric So	resent?	res	
Remarks:										



Seep data point phiz001 facing east



Seep data point phiz001 facing south



Seep data point PHIA410 facing west



Seep data point PHIA411 facing west



Seep data point PHIA400 facing west



Seep data point PBAX001 facing east



Seep data point PBAA009 facing east



Seep data point PBAA004 facing east



Seep data point PBAA006 facing northeast



Seep data point PBAA001 facing southeast



Seep data point PBAA008 facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Bath	1	_ Sampling Date: 8/24/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: Pbay001
Investigator(s): KO, SA	Section, Townshi	p, Range:	
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave	, convex, none): <u>concave</u>	Slope (%): <u>7</u>
Subregion (LRR or MLRA): L	at: <u>38.0993721</u>	Long: <u>-79.5414914</u>	Datum: WGS1984
Soil Map Unit Name:		NWI classifi	cation: UPLAND
Are climatic / hydrologic conditions on the site typica	I 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:						
Seep point Pbay001 taken in upland fore	st.					

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 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 Present? Yes 🖌 No Depth (inches): 2	
Water Table Present? Yes <u></u> No <u>Depth</u> (inches): 0	
Saturation Present? Yes <u>V</u> No Depth (inches): 0	Wetland Hydrology Present? Yes <u>V</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Pomorke:	
remains.	

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Pbay001

	Abaaluta	Dominant In	diaatar	Dominance Test worksheet:
Tree Stratum (Plot size: 0)	% Cover	Species?	Status	Dominance rest worksneet.
	0		Otatus	Number of Dominant Species
1. <u></u>				That Are OBL, FACW, or FAC: (A)
2		. <u> </u>		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				
_		· ·		Prevalence Index worksheet:
7		· ·		Total % Cover of: Multiply by:
	0	= Total Cover		
50% of total cover:	0 20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 0)				FACW species $5 \times 2 = 10$
	0			EAC species 0 $x_3 = 0$
1. <u>1011</u>				
2				FACU species $x 4 = 0$
3				UPL species $0 x 5 = 0$
0		· ·		Column Totals: 15 (A) 20 (B)
4				
5.				
6				Prevalence index = $B/A = 1.00$
0		· ·		Hydrophytic Vegetation Indicators:
7		· ·		1 - Rapid Test for Hydrophytic Vegetation
8.				
0		· ·		2 - Dominance Test is >50%
9		· ·		Y 3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	020% of	total cover:	0	
Herb Stratum (Plot size: 0)				data in Remarks or on a separate sheet)
A Osmunda spectabilis	5	Ves	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
		103		
2. Viola blanda	5	Yes	FACW	
3 Lycopus uniflorus	5	Yes	OBL	Indicators of hydric soil and wetland hydrology must
		· ·		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
		· ·		more in diameter at breast height (DBH), regardless of
1		· ·		height.
8				Conting/Chruth Weady plants evoluting vises loss
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
	15	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 7	7.5 20% of	total cover:	3	
M_{aady}/M_{aa} Stratum (Blat size) 0				Woody vine – All woody vines greater than 3.28 ft in
woody vine Stratum (Piot size:)	0			height.
1. none	0			
2.				
		· ·		
3		· ·		
4				Hydrophytic
5.				Vegetation
		Tatal Cause		Present? Yes V No
	0	= Total Cover	0	
50% of total cover:	<u> </u>	total cover:	0	
Remarks: (Include photo numbers here or on a separate	e sheet.)			

Profile Desc	cription: (Describe to	the depth r	needed to docun	nent the in	dicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redox	x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
	2.5YR 4/3	100					 	A soil profile below	⁷ 5 inches was
	oncentration, D=Deplet		duced Matrix, MS	 S=Masked	 Sand Gra		² Location: P	L=Pore Lining, M=M	atrix.
Hydric Soil	Indicators:						Indica	ators for Problemat	ic Hydric Soils':
Histosol Histic E Histic E Hydroge Stratifie 2 cm Mi Deplete Thick D Sandy M	I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR N) d Below Dark Surface (ark Surface (A12) Mucky Mineral (S1) (LR	- - - - - - - - - - - - - - - - - - -	Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Mat Redox Dark S Depleted Dar Redox Depre Iron-Mangane	(S7) low Surfac rface (S9) d Matrix (F rrix (F3) Surface (F6 k Surface (ssions (F8 ese Masse	e (S8) (M (MLRA 1 2) 6) (F7)) s (F12) (ILRA 147, 47, 148) LRR N.	148) C	cm Muck (A10) (ML coast Prairie Redox ((MLRA 147, 148) iedmont Floodplain : (MLRA 136, 147) fery Shallow Dark Su other (Explain in Ren	RA 147) A16) Soils (F19) Irface (TF12) harks)
MLRA Sandy C Sandy F Stripped	A 147, 148) Gleyed Matrix (S4) Redox (S5) Matrix (S6)		MLRA 130 Umbric Surfa Piedmont Flo Red Parent M	6) ce (F13) (N odplain So laterial (F2	MLRA 13 bils (F19) 21) (MLR)	6, 122) (MLRA 14 A 127, 147	³ lnd (8) we (7) un	icators of hydrophyti atland hydrology mus less disturbed or pro	c vegetation and t be present, blematic.
Restrictive	Layer (if observed):								
Type: ro	CK		_						
Depth (in	ches): <u>5</u>						Hydric Soil	Present? Yes	No
Remarks:									



Seep data point pbay001 taken facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Bath	1	Sampling Date: 8/24/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: pbay002
Investigator(s): KO, SA	Section, Townshi	p, Range:	
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave	, convex, none): <u>concave</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): Lat: 38.	0996244	Long: <u>-79.5394487</u>	Datum: WGS1984
Soil Map Unit Name:		NWI classifi	cation: UPLAND
Are climatic / hydrologic conditions on the site typical for thi	s 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	<u>v</u>
Remarks:							
Seep point pbay002 taken in upland fore	est. Hyd	rology f	lows subsurface.				

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 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 Present? Yes <u></u> No <u>Depth</u> (inches): <u>3</u>	
Water Table Present? Yes <u></u>	
Saturation Present? Yes V No Depth (inches):	Wetland Hydrology Present? Yes 🖌 No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Demorker	
Remarks.	

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: pbay002

· · · · · · · · · · · · · · · · · · ·	<u> </u>	P		
	Absolute	Dominant Ir	dicator	Dominance Test worksheet:
	<u>% Cover</u>	<u>Species</u> ?	Status	Number of Dominant Species
1. <u></u>				That Are OBL, FACW, or FAC: (A)
2				Tatal New Age of Dansie and
3				I otal Number of Dominant
		· ·		Species Across All Strata. (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6.				· · · · · · · · · · · · · · · · · · ·
7		· ·		Prevalence Index worksheet:
<i>I</i>	0	· ·		Total % Cover of Multiply by:
		= Total Cover	•	$\frac{10}{10} \times 1 \times 10^{-10}$
50% of total cover:0	20% of	f total cover:	0	OBL species $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 0)				FACW species x 2 =
1 none	0			FAC species $0 x 3 = 0$
l		·		EACUspecies 0 = 0
2		· ·		$\frac{1}{1}$
3				UPL species $x 5 = $
4				Column Totals:(A)(B)
- ··		· ·		
5				Prevalence Index = B/A = 1
6		<u> </u>		Hydrophytic Vegetation Indicators:
7.				
0				1 - Rapid Test for Hydrophytic Vegetation
δ				✓ 2 - Dominance Test is >50%
9				\checkmark 3 - Prevalence Index is <3.0 ¹
	0	= Total Cover		
50% of total cover: 0	20% of	f total cover:	0	4 - Morphological Adaptations' (Provide supporting
	2070 0			data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)	10			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Osmunda spectabilis	10	Yes	OBL	
2				
		·		¹ 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 of ata.
o		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
б. <u></u>		· ·		more in diameter at breast height (DBH), regardless of
7		<u> </u>		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		. <u> </u>		m) tall.
11.				
	10			Herb – All nerbaceous (non-woody) plants, regardless
F		= Total Cover	່ ວ	of size, and woody plants less than 3.28 it tall.
50% of total cover:	20% of	total cover:	2	Woody vine – All woody vines greater than 3 28 ft in
Woody Vine Stratum (Plot size: 0)				height
1 none	0			
· · · · · · · · · · · · · · · · · · ·		·		
2				
3				
4				
+. <u></u>		· ·		Hydrophytic
5				Vegetation
	0	= Total Cover		Present? Yes _ No
50% of total cover: 0	20% of	f total cover:	0	
D				
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Des	cription: (Describe t	o the dept	h needed to docun	nent the inc	dicator o	or confirm	the absence of	indicato	rs.)		
Depth	Matrix		Redo	x Features							
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-6	2.5Y 3/3	100					SL				
6-18	2.5Y 5/3	100					LS				
·		<u> </u>									
				<u> </u>			·				
·											
17 0.0							2				
Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, Ma	S=Masked S	Sand Gra	uns.	Location: PL=F	ore Linii	ng, M=Matrix	Ivdric Sol	ile ³ .
			Darls Curfa as	(07)						4 47)	
Histoso	rinadan (A2)		Dark Surface	(S7) Iow Surface			149) 2 cm	I WIUCK (A	NIU) (IVILKA Rodov (A16	147)	
Black H	pipedon (A2) listic (Δ3)		Thin Dark Su	rface (SQ) (I	MIRA 1	LNA 147, 47 148)	(M		Teuox (ATO 7 148))	
Hydroge	en Sulfide (A4)		Loamy Gleve	d Matrix (F2	2)	<i>-1</i> , 1 - 0)	Pied	mont Flo	odolain Soils	s (F19)	
Stratifie	d Lavers (A5)		Depleted Ma	trix (F3)	-,		<u> </u>	ILRA 13	6. 147)	, (1.10)	
2 cm M	uck (A10) (LRR N)		Redox Dark \$	Surface (F6))		Very	Shallow	Dark Surfac	e (TF12)	
Deplete	d Below Dark Surface	e (A11)	Depleted Dar	k Surface (F	= 7)		Othe	r (Explai	n in Remark	s) Ć	
Thick D	ark Surface (A12)		Redox Depre	essions (F8)							
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masses	(F12) (L	.RR N,					
MLR	A 147, 148)		MLRA 13	6)							
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ce (F13) (M	LRA 13	6, 122)	³ Indicat	tors of hy	drophytic ve	getation a	and
Sandy F	Redox (S5)		Piedmont Flo	odplain Soil	ls (F19)	(MLRA 14	8) wetlar	nd hydrol	ogy must be	present,	
Stripped	d Matrix (S6)		Red Parent N	Aaterial (F21	1) (MLR	A 127, 147	unless	s disturbe	ed or probler	natic.	
Restrictive	Layer (if observed):										
Туре:											
Depth (in	iches):						Hydric Soil Pre	esent?	Yes	No	~
Remarks:							•				



Seep data point pbay006 facing south



Seep data point PAUA405 facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP	City/County: Augusta	Sampling Date: 3-2	9-16	
Applicant/Owner: Dominion	0	State: VA Sampling Point: Pau	1006	
Investigator(s): W. Vauhen K. Markham	Section, Township, Range:	lone		
Landform (hillslope, terrace, etc.); dramere	Local relief (concave, convex, no	ne): Concert Slope (%):	10	
Subracion (I BB or MI BA): (R RS Lat: 38, 17	855826 Long -	79.44254394 Datum: WC	584	
Sall Man Unit Name: Be-ks Classes Still In-	25-45 % Slope	NVM classification:		
Soli Map Unit Name Creating on the site tuning for this time of	veer2 Yes K No		079235	
Are climatic / hydrologic conditions on the site typical for this time of	the disturbed 2 Are "Normal		la	
Are Vegetation, Soil, or Hydrology significan	tiy disturbed? Are Norma	Circumstances present? Tes N	10	
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed,	explain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locati	ons, transects, important feature	es, etc.	
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Yes No	 Is the Sampled Area within a Wetland? 	Yes No		
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two red	quired)	
Primary Indicators (minimum of one is required; check all that appl	y)	Surface Soil Cracks (B6)		
Surface Water (A1) True Aquation	Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2) Hydrogen St	ulfide Odor (C1)	Drainage Patterns (B10)		
Saturation (A3) Oxidized Rh	izospheres on Living Roots (C3)	Moss Trim Lines (B16)		
Water Marks (B1) Presence of Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6)	Cravfish Burrows (C8)		
Drift Deposits (B3) Thin Muck S	urface (C7)	Saturation Visible on Aerial Imagery ((C9)	
Algal Mat or Crust (B4) Other (Expla	in 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 Relier (D4)		
Aquatic Fauna (B13)				
Surface Water Present? Yes No Depth (inch	es): Linch			
Water Table Present? Yes No Depth (inch	es): Shrface			
Saturation Present? Yes No Depth (inch	es): SurFace Wetland	Hydrology Present? Yes 📈 No _		
(includes capillary fringe)	atos provious inspections) if av	ailabla:		
Describe Recorded Data (stream gauge, monitoring weil, aenai pri	otos, previous inspections), il av	madie.		
Remarks:				

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: paur 006

Tee Stratum (Plot size / DPLACO*_) 2. Correct		Absolute	Dominant	Indicator	Dominance Test worksheet:
2. Organ Constraints 2.5 V/C Factor Indirection 1.5 V/C Factor 1.5 (0) 3. Lir conductors 4.1 p. 2 V/C Factor 5 (0) (0) 4.1 p. 2 V/C Factor 5 (0) (0) (0) 5.1 p. 2 V/C Factor 5 (0) (0) (0) 6.1 Prevalence Index workshett Sector of Multiply hr 100 (0) (10) (0) (10) 7 Solv of total cover 3.2 20% of total cover (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) 100 (11) (11) (11)<	Tree Stratum (Plot size: <u>10+++20+++</u>)	% Cover	Species?	_Status	Number of Dominant Species
2 1 12	2 Plula and the	75	VES	Fach	That Are OBL, FACW, of FAC (A)
3 $2/2$ FRLD Species Arcss AP Stratt: C (i) 5 C C (ii) Prevalence Index workshet: 6 C C (iii) Prevalence Index workshet: 7 Solv of total cover: 35 20% of total cover: 70 FRCU species 0 X1 = 0 8 Solv of total cover: 35 20% of total cover: FRCU species 0 X3 = 47.5 2 C FRCU species 0 X3 = 47.5 FRCU species 0 X4 = 472.0 3 C C FRCU species 0 X5 = 0 C <td>2. I latanus occidentalis</td> <td>25</td> <td>-<u>y</u></td> <td>Facu</td> <td>Total Number of Dominant</td>	2. I latanus occidentalis	25	- <u>y</u>	Facu	Total Number of Dominant
4	3. Einfodendran Tulipifera		yes	Facu	Species Across All Strata: (B)
5	4				Percent of Dominant Species 40
6	5				That Are OBL, FACW, or FAC: (A/B)
7	6				Prevalence Index worksheet:
Δ_{c} Total Cover Table Accord Table Accord Septing/Shub Stratum (Plot size $ Oct_{-} < 2of_{-}$) 2 2 4 5 1 Do a 7 5 7 5 2 7 5 7 5 3 Column Color X_{c} 7 5 4 Column Color X_{c} 7 5 4 Column Color X_{c} 7 5 7 5 7 5 7 5 7 5 7 5 7 5 6 1 Radio Column Col	7				Total % Cover of: Multiply by:
Sophind/Shinds Stratum (Plot size <i>LCL</i> 2.2 <i>GL</i>) 1 $D.Ool$	75	_/0 :	= Total Cove	er //	$OBI species \qquad G \qquad x1 = 0$
Sadinoshub Stratum (Plot size: $DFL \times ZOFL$) 1 DOAL 2	50% of total cover:	20% of	total cover:	14	EACIM spacing 75 $x_2 = 50$
1 Dock X = 4 Y = 4 2 X = 4 Y = 4 Y = 4 3 X = 4 Y = 4 Y = 4 4 X = 4 Y = 5 X = 4 Y = 4 6 X = 4 Y = 5 X = 4 Y = 4 7 X = 4 Y = 5 Y = 5 Y = 5 Y = 5 Y = 5 Y = 4 Y = 5 Y = 5 Y = 4 Y = 5 Y = 5 Y = 5 Y = 4 Y = 5	Sapling/Shrub Stratum (Plot size: 10ft + 20f+)				EAC appelles 15 $x_2 = 45$
2	1. DOCK				FACT species $\frac{105}{105}$ x 4 = $\frac{470}{470}$
3	2				FACU species 100 x4- 120
4	3				$\frac{1}{1} \frac{1}{5} \frac{1}$
5	4				Column Totals: $\underline{-199}$ (A) $\underline{-515}$ (B)
6	5				Prevalence Index = $B/A = 3.55$
7	6				Hydrophytic Vegetation Indicators:
8	7				1 - Rapid Test for Hydrophytic Vegetation
9	8				2 - Dominance Test is >50%
	9		ter e deserver		$3 - $ Prevalence Index is $\leq 3.0^{1}$
50% of total cover. 20% of total cover. Harb Stratum (Plot size: <u>fDF / x 2 OF 1</u>) 60 40% 1 Rara 60 40% 2		=	Total Cove	۲	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 1074 + 2 0 FL) 60 YCS Facu	50% of total cover:	20% of t	total cover:_		data in Remarks or on a senarate sheet)
1 Rosa GO ycs Facta Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 2 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 5 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 6 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 7 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 9 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 9 Indicators of hydric soil and vetland hydrology must be present, unless disturbed or problematic. 10 Indicators of hydrology must be present, unless disturbed or problematic. 11 Indicators of hydrology must be present model of 28 ft (1 m) tall. 11 Indicators of hydrology must respective model of 28 ft (1 m) tall. 12 Indicator of hydrology must respective model of 28 ft (1 m) tall. 13 Indicator of hydrology must respective model of 28 ft (1 m) tall. 14 Intervention of thydrology must respective model of 28 ft (1 m) tall. 15 Intervention of tall cover	Herb Stratum (Plot size: 10f+ 20f+)				Broblematic Hydrophytic Vegetation ¹ (Explain)
2	1. Rosa multiflora	60	yes	Facu	
3	2				Indicators of hydric soil and wetland hydrology must
4	3				be present, unless disturbed or problematic.
5	4				Definitions of Four Vegetation Strata:
6	5				
7.	6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
8	7				height.
9	8			ALC: NOT	a to take to the books and discussions have
10	9.				than 3 in DBH and greater than or equal to 3.28 ft (1
11	10.			THE STREET	m) tall.
GO = Total Cover 50% of total cover: 20% of total cover: /2 Moody Vine Stratum (Plot size:16F1 _ < 20F4 _)	11.				Harb All borbaccours (non woody) plants, regardless
50% of total cover: 30 20% of total cover: /2 Woody Vine Stratum (Plot size: 16F1 x 20F1) 1. Smilax rothadifetica 15 ycs Fac 2.		60 =	Total Cove	r	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 10F1 x 20F1) 15 ycs Fac 1. Smilax rotandifelia 15 ycs Fac 2.	50% of total cover: 30	20% of t	otal cover:	12	
1. Smilex rotundifolia 15 YCS Fac 2.	Woody Vine Stratum (Plot size: 10F1 x 20F1)				Woody vine – All woody vines greater than 3.28 ft in height
2	1. Smilax rotundifolia	15	VES	Fac	hoight.
3.	2	15			
4.	3				
5	4			The state	
IS = Total Cover 50% of total cover: ZO% of total cover: Some result Yes No	5				Hydrophytic Vegetation
50% of total cover: 7.5 20% of total cover: 3 Remarks: (Include photo numbers here or on a separate sheet.)		15 -	Total Cove		Present? Yes No X
Remarks: (Include photo numbers here or on a separate sheet.)	50% of total cover: 7-5	20% of t	otal cover:	3	
	Remarks: (Include photo numbers here or on a separate sh	eet)		The Description of the	
	remarks. (modue photo numbers nere of on a separate sh	cei.)			

(

S	O	ł	Ľ
-	-	٠	-

enth	Matrix		Pa	dox Feature				
nches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
D-6	10yr 3/2				1000		L	
-16	10 11 4/6	60	10r 3/1	20	C	m	CL	
			2.5×5 4/6	5	C	m		
and street		-	750. 3/2		<u> </u>	0.0		
		-	1.519 5/3			1-1		
		-	-					
					-		-	
0.000								
							21	
pe: C=C	oncentration, D=Dep	pletion, RM	=Reduced Matrix,	MS=Masked	Sand Gr	ains.	Location: Pl	ators for Broblematic Hydric Soils
110 301	mulcators:			105			mulc	and the for the second se
Histosol	l (A1)		Dark Surfa	ace (S7)			²	2 cm Muck (A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue	Below Surfa	ce (S8) (N	ILRA 147	r, 148) C	Coast Prairie Redox (A16)
Black Hi	istic (A3)		Thin Dark	Surface (S9)	(MLRA 1	147, 148)		(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gle	eyed Matrix (F2)		— F	(AL DA 426, 447)
Stratified	d Layers (A5)		Depleted N	Matrix (F3)	-		-	(MLRA 136, 147)
2 cm ML	uck (A10) (LRR N)	- (111)	Redox Dal	rk Sunace (F	(57)		- [(op) Shallow Dark Surface (TE12)
Depleter	a Below Dark Surface	e (ATT)	Depieted L	Dark Surface	((-1)		-	Other (Explain in Remarks)
Sandy M	And Sunace (A12)		Redux Dep	anoso Massi	o) ac (E12) (
MID	A 147 148)	LRR N,	MI RA	136)	53 (1 12/ (LIXIX IN,		
Sandy (Sleved Matrix (S4)		Umbric Su	Inface (E13) (MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation an
_ Sandy C	Sleyed Matrix (04)		Piedmont	Floodolain S	oils (F19)	(MLRA 1	48) v	wetland hydrology must be present.
Sandy F	Redax (S5)				0.00 (1 10)	(
Sandy F	Redox (S5) 1 Matrix (S6)						L	unless disturbed or problematic.
Sandy F Stripped	Redox (S5) I Matrix (S6) Layer (if observed)	:		~				unless disturbed or problematic.
Sandy F Stripped strictive	Redox (S5) 1 Matrix (S6) Layer (if observed)	:						inless disturbed or problematic.
Sandy F Stripped strictive	Redox (S5) 1 Matrix (S6) Layer (if observed) ches):	:		*			Hydric Soi	I Present? Yes No
Sandy F Stripped strictive Type: Depth (incomparise)	Redox (S5) 1 Matrix (S6) Layer (If observed) ches):	:					Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped strictive Type: Depth (in- marks:	Redox (S5) I Matrix (S6) Layer (If observed) ches):	:					Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped strictive Type: Depth (in marks:	Redox (S5) I Matrix (S6) Layer (if observed) ches):	: Lat		(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped strictive Type: Depth (in- marks: Au	Redox (S5) I Matrix (S6) Layer (if observed) ches): uger refuse	: I at	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) I Matrix (S6) Layer (If observed) ches): ugerarefusa	: I at	16 inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) I Matrix (S6) Layer (If observed) ches): ugerrefusa	: I at	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) I Matrix (S6) Layer (if observed) ches): ches): uger refusa on mass	: Lat	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) I Matrix (S6) Layer (if observed) ches): ches): on majs	: Lat	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ches): on mass	: Lat	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: Au	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ches): on musics	: Lat	Ib inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped strictive Type: Depth (in marks: Au	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ches): on musics	: Lat	Ib inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped strictive Type: Depth (in marks: A I	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ches): on messos	: Lat	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: A I	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): on messon on messo	: Lat	16 inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Strippec strictive Type: Depth (in marks: A I	Redox (S5) I Matrix (S6) Layer (If observed) ches): uger refuse on masks	l at	Ile inches	(rock)			Hydric Soi	Inless disturbed or problematic.
Sandy F Stripped sstrictive Type: Depth (in marks: A Tr	Redox (S5) I Matrix (S6) Layer (If observed) ches): ug excremesa on masks	l at	Ile inches	(rock)			Hydric Sol	Inless disturbed or problematic.
Sandy F Stripped setrictive Type: Depth (in emarks: A Tr	Redox (S5) I Matrix (S6) Layer (If observed) ches): ug excremesa on masks	l at	Ile inches	(rock)			Hydric Sol	Inless disturbed or problematic.
Sandy F Stripped setrictive Type: Depth (in emarks: A Tr	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ug excremesa on masks	l at	Ile inches	(rock)			Hydric Sol	I Present? Yes No
Sandy F Strippec estrictive Type: Depth (in emarks: A Tr	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ug excremesa on masks	l at	Ile inches	(rock)			Hydric Sol	I Present? Yes No
Sandy F Strippec estrictive Type: Depth (in emarks: A Tr	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ug excremesa on masks	l at	Ile inches	(rock)			Hydric Sol	I Present? Yes No
_ Sandy F _ Strippec astrictive Type: Depth (in emarks: An Ir	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): ugerrefusa on masks	l at		(rock)			Hydric Sol	I Present? Yes No
_ Sandy F _ Strippec estrictive Type: Depth (in marks: A Tr	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): uger refusa on mass	l at		(rock)			Hydric Soi	I Present? Yes No
Sandy F Strippec Isstrictive Type: Depth (in marks: Au Ir	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): uger refusa on mass	l at	Ile inches	(rock)			Hydric Soi	I Present? Yes No
Sandy F Strippec strictive Type: Depth (in marks: Au Ir	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): uger refusa on musics	l at	Ile inches	(rock)			Hydric Soi	I Present? Yes No No
Sandy F Strippec strictive Type: Depth (in marks: Au Ir	Redox (S5) 1 Matrix (S6) Layer (if observed) ches): uger refusa on musius	l at	Ile inches	(rock)			Hydric Soi	I Present? Yes No No



Seep data point paur006 facing south.



Seep data point paur006 facing north.



Seep data point paur002 facing south.



Seep data point paur002 facing east.

Photo Sheet 1 of 1



Seep data point paur003 facing east.



Seep data point paur003 facing north.



Seep data point PAUA406 facing southeast



Seep data point paur005 facing east.



Seep data point paur005 facing west.

Photo Sheet 1 of 1



Seep data point paur001 facing southeast.



Seep data point PAUA404 facing west



Seep data point PAUB102 facing south



Seep paup001 facing northwest.



Seep point PAUB001 facing northwest



Seep data point PAUA411 facing southeast



Seep data point PAUA410 facing southeast

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Augusta		_ Sampling Date: 1/14/2016
Applicant/Owner: Dominion		State: VA	Sampling Point: paua050
Investigator(s): GB, SA	Section, Township, Range:_		
Landform (hillslope, terrace, etc.): draw	Local relief (concave, convex, r	none): <u>concave</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): Lat: 37.	945578 Long: _ ⁻⁷	8.959911	Datum:
Soil Map Unit Name:		NWI classifi	ication:
Are climatic / hydrologic conditions on the site typical for thi	s time of year? Yes 🗹 No	_ (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrologys	significantly disturbed? Are "Norm	nal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed	l, 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:					
Seasonal seep in a rocky draw beside s	stream sauc100;	no bed/bank/OHW	VI; 3 feet by 25 feet.		

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 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):1	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes 🖌 No. Depth (inches): 0	Wetland Hydrology Present? Yes 🖌 No
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	ions), if available:
VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: paua050

	Absoluto	Dominant lu	adicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	
Quercus alba	15	Yes	FACU	Number of Dominant Species
	10	Ves	FAC	That Are OBL, FACW, of FAC: (A)
2. <u>Nyssa sylvalica</u>	10	163	170	Total Number of Dominant
3.				Species Across All Strata: 6 (B)
1				(=)
-				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>33.333333333</u> (A/B)
6		. <u></u>		
7.				Prevalence Index worksheet:
	25	Tatal Cause		Total % Cover of: Multiply by:
125		= Total Cove	5	OBL species $0 \times 1 = 0$
50% of total cover:	20% of	total cover:	•	
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = \frac{1}{25}$
_{1.} Carpinus caroliniana	15	Yes	FAC	FAC species $\frac{25}{x 3} = \frac{75}{25}$
o Betula lenta	8	Yes	FACU	FACU species $35 \times 4 = 140$
Z. Homomolia virginiana				
3	/	res	FACU	$\begin{array}{c} \text{OPL species} \\ \hline 60 \\ \hline 215 \\ \hline \end{array}$
4.				Column Totals: (A) (B)
5				
J		<u> </u>		Prevalence Index = B/A = 3.58
6		. <u></u>		Hydrophytic Vegetation Indicators:
7				1 Donid Toot for Undronby the Manatation
8				I - Rapid Test for Hydrophytic Vegetation
0				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	30	= Total Cove	r	
50% of total cover: 15	20% of	total cover:	6	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1				
2				1
3				Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4		<u> </u>		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 of
1				neight.
8				Sanling/Shrub Woody plants excluding vines 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
	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	
Weady Vine Stratum (Plot size) 30				Woody vine – All woody vines greater than 3.28 ft in
woody vine Stratum (Plot size:)	-	N/s s	FAOL	height.
1. Smilax smallli	5	Yes	FACU	
2.				
<u></u>				
J				
4				Hydrophytic
5.				Vegetation
	5	Total Cava		Present? Yes No
25			1	
50% of total cover: 2.3	20% of	total cover:	<u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			
herbaceous layer dormant				

Profile Dese	cription: (Describe t	to the dept	h needed to docur	nent the ir	ndicator o	or confirm	the absence	of indicato	rs.)	
Depth	Matrix		Redo	x Features	- 1	. 2			. .	
(inches)		<u></u> _	Color (moist)		Type	Loc	<u>l exture</u>		Remarks	
0-3	1018 2/2						L			
3-10	7.5YR 4/2	50					SCL			
	7.5YR 5/4	50					SCL	ROCK AT	10"	
		·			<u> </u>					·
										<u> </u>
¹ Type: C=C	oncentration D-Depl	etion RM-	Reduced Matrix M	S-Masked	Sand Gra	ains	² Location: P	– Pore Linii	na M-Matrix	
Hvdric Soil	Indicators:						Indica	ators for Pr	oblematic Hy	dric Soils ³ :
Histoso	l (A1)		Dark Surface	(S7)			2	cm Muck (A	, 10) (MLRA 1	47)
Histic E	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (M	LRA 147,	148) C	oast Prairie	Redox (A16)	,
Black H	istic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)	· <u> </u>	(MLRA 14	7, 148) `́	
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F	-2)		P	iedmont Flo	odplain Soils	(F19)
Stratifie	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 13	6, 147)	
2 cm M	uck (A10) (LRR N)		Redox Dark	Surface (Fe	6)		V	ery Shallow	Dark Surface	e (TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Date	k Surface	(F7)		C	ther (Explai)	n in Remarks)
Thick D	ark Surface (A12)		Redox Depre	ssions (F8	5)					
Sandy M	Mucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Masse	s (F12) (l	_RR N,				
MLR	A 147, 148)		MLRA 13	6) (540) (1			3.			
Sandy C	Bleyed Matrix (S4)		Umbric Surfa	.ce (F13) (I		6, 122)	°Ind	icators of hy	drophytic veg	jetation and
Sandy F	Cedox (SS)		Pleamont Fic	Actorial (EC	DIIS (F19)	(WILKA 14 A 427 447	8) we	loop disturb	logy must be p	oresent,
Supped	Lavor (if obsorved):			laterial (F2		4 127, 147) un		ed of problem	allo.
	ck									
Type:	10							-		
Depth (in	cnes):		<u> </u>				Hydric Soil	Present?	Yes	NO
Remarks:										



Photo 1 Seep data point PAUA050 facing east



Seep data point PAUC107 facing east



Seep data point PAUC102 facing south



Seep data point PAUC103 facing southeast



Seep data point PAUC104 facing south



Seep data point PAUE004 facing southeast



Seep data point PAUE005 facing south



Seep data point PAUE007 facing southeast



Seep data point PAUE003 facing south



Seep data point PAUE002 facing south



Seep data point PAUE001 facing southwest



Seep data point PAUA400 facing south



Seep data point PAUA401 facing south



Seep data point PAUA403 facing east

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Ne	lson		Sampling Date: 2/12/2016			
Applicant/Owner: Dominion				State: VA	Sampling P	oint: <u>pnea401</u>	
Investigator(s): <u>GB</u> , AS		Section, Townsh	hip, Range:				
Landform (hillslope, terrace, etc.): slop	e	_ Local relief (concav	/e, convex, none): concave	Slope (%): <u>50</u>		
Subregion (LRR or MLRA):	Lat: 37.90558	Lat: <u>37.905582</u> Long: <u>-78.972254</u>				tum:	
Soil Map Unit Name:				NWI classif	ication:		
Are climatic / hydrologic conditions on t	he site typical for this time	of year? Yes 🔽	_ No (If	no, explain in	Remarks.)		
Are Vegetation, Soil, or	etation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes						
Are Vegetation, Soil, or	e Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain				ers in Remarks.)	1	
SUMMARY OF FINDINGS - A	ttach site map show	wing sampling p	oint locatior	is, transect	s, important	features, etc.	
Hydrophytic Vegetation Present?	Yes No •						
Hydric Soil Present?	Yes No	/ Is the Sa	Wetland?	Yes	No 🖌		
Wetland Hydrology Present?	Yes 🖌 No					—	
Remarks:		lana, annravimataly 2	Ex 40 feet: we			forring prod 100	
ocep iocaleu in a silyni, imear concav	ty on a very rocky, steep s	sope, approximately 2		ei yoes underg	jiounu upsiope o	n spillig piled400	

Seep located in a slight, linear concavity on a very rocky, steep slope; approximately 2.5 x 40 feet; water goes underground upslope of spring pne Feature lacks bed/bank/OHWM and fails to meet criteria for hydric soils and hydrophytic vegetation.

HYDROLOGY

Wethink 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) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living F	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) 			
 Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Presence of Reduced Iron (C4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks) 	 Dry-Season Water Table (C2) 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? Ves 🖌 No Denth (inches) U.3				
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 ions), 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 inspect Remarks:	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: pnea401

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30)	<u>% Cover</u>	Species?	Status	Number of Dominant Species	
1. Quercus rubra	20	Yes		That Are OBL, FACW, or FAC: 1	(A)
2. Quercus montana	20	Yes	UPL	Total Number of Dominant	
3. Quercus alba	15	Yes	FACU	Species Across All Strata: 8	(B)
4. Liriodendron tulipifera	10	No	FACU		
_{5.} Fraxinus americana	5	No	FACU	That Are OBL_FACW_or FAC: 12.5	(A/B)
_{6.} Nyssa sylvatica	3	No	FAC		(,,,,,,)
7.				Prevalence Index worksheet:	
	73	= Total Cov	er	Total % Cover of: Multiply by:	
50% of total cover: 36.	5 20% of	total cover:	14.6	OBL species $0 \times 1 = 0$	_
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =0	_
1 Quercus montana	6	Yes	UPL	FAC species x 3 = 33	_
2 Sassafras albidum	5	Yes	FACU	FACU species x 4 = 328	_
2. Acer rubrum	5	Yes	FAC	UPL species 26 x 5 = 130	_
S	5	Yes	FACU	Column Totals: 119 (A) 491	(B)
	4	No	FACU		_ (_)
		No	<u> </u>	Prevalence Index = B/A =4.12	_
6. Olinius rubra		No		Hydrophytic Vegetation Indicators:	
7. Hamamelis Virginiana	3	NO	FACU	1 - Rapid Test for Hydrophytic Vegetation	
8				2 - Dominance Test is >50%	
9				$3 - \text{Prevalence Index is } \le 3.0^1$	
	31	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide sup	nortino
50% of total cover:15.	⁵ 20% of	total cover:	6.2	deta in Demarka er en a concrete cheet)	porting
Herb Stratum (Plot size: 5)					
1				Problematic Hydrophytic Vegetation (Explain	n)
2.					
3				¹ Indicators of hydric soil and wetland hydrology n	nust
4		·		be present, unless disturbed or problematic.	
T	·		·	Definitions of Four Vegetation Strata:	
<u> </u>				Tree – Woody plants, excluding vines, 3 in. (7.6	cm) or
0	·	·		more in diameter at breast height (DBH), regard	ess of
7	·	·		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 herbaceous (non-woody) plants, rega	rdless
	0	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.	
50% of total cover:0	20% of	total cover:	0	Weedy vine All weedy vince greater than 2.20	ft :m
Woody Vine Stratum (Plot size: 30)				height.	11 111
_{1.} Vitis aestivalis	15	Yes	FACU		
2.					
3					
4				Hydrophytic	
o	15			Vegetation Present? Yes No	
50% of total array 7.5	10	= Total Cov	er 3		
50% of total cover:	20% 01	total cover:			
Remarks: (Include photo numbers here or on a separate s	sheet.)				
herbaceous layer dormant					

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the in	dicator o	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Features			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-3	7.5YR 3/3	100					SICL
3-10	7.5YR 3/4	100					SICL
				·			
				<u> </u>			
1- 0.0				·			2
Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked S	Sand Gra	uns.	Location: PL=Pore Lining, M=Matrix.
Hydric Soli				(07)			
Histosol	(A1) ninadan (A2)		Dark Surface	(S7) Iow Surfoor	~ (CO) /M		2 cm Muck (A10) (MLRA 147)
HISUC E	pipedon (AZ)		Folyvalue Be	rface (SO)	(30) (IVI (MIDA 1	LKA 147,	(ML DA 147 149)
Black II	suc (AS) (ΔA)			nace (39) (d Matrix (F		47, 140)	Piedmont Floodalain Soils (F19)
Stratifie	d Lavers (A5)		Depleted Mat	trix (F3)	<i>~</i>)		(MI RA 136, 147)
2 cm Mi	uck (A10) (LRR N)		Redox Dark	Surface (F6	;)		Very Shallow Dark Surface (TE12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface (, F7)		Other (Explain in Remarks)
Thick D	ark Surface (A12)	· · /	Redox Depre	ssions (F8)) ´		
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masses	s (F12) (l	.RR N,	
MLR	A 147, 148)		MLRA 13	6)			
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ce (F13) (N	ILRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain Soi	ils (F19)	(MLRA 148	8) wetland hydrology must be present,
Stripped	d Matrix (S6)		Red Parent M	Aaterial (F2	1) (MLR	A 127, 147)) unless disturbed or problematic.
Restrictive	Layer (if observed):						
Type: no	one		_				
Depth (in	ches):						Hydric Soil Present? Yes No
Remarks:							1



Photo 1 Seep data point PNEA401 facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Net	son	Sampling Date: 2/12/2016			
Applicant/Owner: Dominion		State: VA	Sampling Point: pnea400			
Investigator(s): GB, AS	Section, Townsh	p, Range:				
Landform (hillslope, terrace, etc.): slope	Local relief (concave	al relief (concave, convex, none): none Slope (%):				
Subregion (LRR or MLRA): Lat:	37.905172	_ Long: <u>-78.972176</u>	Datum:			
Soil Map Unit Name:		NWI classif	ication:			
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	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site ma	ap showing sampling po	int locations, transect	s, important features, etc.			
Ludranhutia Vacatatian Drasant2 Vac	No. K					

Hydrophytic Vegetation Present?	Yes	No <u> 🖌</u>	Is the Sampled Area					
Hydric Soil Present?	Yes	No <u> 🖌</u>	within a Wetland?	Yes	No 🖌			
Wetland Hydrology Present?	Yes 🖌	No		103				
Remarks:								
Spring located on a steep, rocky slope; origin of intermittent stream snea022; lacks bed/bank/OHWM above mapped extent of stream; does not meet								
hydric soils nor hydrophytic vegetation cr	riteria.							

HYDROLOGY

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) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living R Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled So Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) 	
Field Observations:	
Surface Water Present? Yes <u></u> No <u>Depth</u> (inches): <u>1</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, previous inspect	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: pnea400

· · ·		-		
30	Absolute	Dominant I	ndicator	Dominance Test worksheet:
I ree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1. Quercus rubra	25	Yes	FACU	That Are OBL, FACW, or FAC: 1 (A)
_{2.} Quercus montana	12	Yes	UPL	
3 Acer rubrum	10	No	FAC	I otal Number of Dominant Species Across All Strata: 7 (B)
Nvssa svlvatica	10	No	FAC	
4. <u>Overcus alba</u>	8	No	FACU	Percent of Dominant Species
5. Quercus alba		Ne	FACU	That Are OBL, FACW, or FAC: <u>14.28571428</u> (A/B)
6. Liriodendron tulipitera	5		TACO	Dravalance Index werkeheet
7. Ulmus rubra	4	NO	FAC	Prevalence index worksneet:
	74	= Total Cove	r	Total % Cover of:Multiply by:
50% of total cover: 37	20% of	total cover:	14.8	OBL species x 1 =
Sopling/Shrub Stratum (Diat aiza: 15				FACW species 0 x 2 = 0
<u>Saping/Shiub Stratum</u> (Plot Size)	15	Vaa	EACU	$\frac{39}{117}$
1. Hamamens virginiana	15	res	FACU	$\begin{array}{c} \text{FAC species} \\ \hline \\ 02 \\ \hline \\ 368 \\ \hline \\ 368 \\ \hline \\ \end{array}$
2. Liriodendron tulipifera	10	Yes	FACU	FACU species 42 x 4 = 600
_{3.} Ulmus rubra	10	Yes	FAC	UPL species $12 \times 5 = 60$
A Acer rubrum	5	No	FAC	Column Totals: ¹⁴³ (A) ⁵⁴⁵ (B)
		Ne	EACU	
5. Quercus rubra	4		FACU	Prevalence Index = B/A = 3.81
6				Hydrophytic Vegetation Indicators:
7.				Hydrophytic vegetation indicators.
Q				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	44	= Total Cove	r	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 22	20% of	total cover:	8.8	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
,				Problematic Hydrophytic Vegetation ¹ (Explain)
۱				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4.				Definitions of Four Variation Strate:
5				Deminions of Four vegetation Strata.
S				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			<u> </u>	more in diameter at breast height (DBH), regardless of
7				height.
8.				
9				Sapling/Shrub – Woody plants, excluding vines, less
3				man 3 m. DBH and greater than of equal to 3.26 m (1
10				111 <i>)</i> tail.
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	
Woody Vine Stratum (Plot size: 30	-			Woody vine – All woody vines greater than 3.28 ft in
Rubus allegheniensis	15	Yes	FACU	neight.
	10			
2. <u>VIIIS aestivalis</u>	10	res	FACU	
3				
4				
E				Hydrophytic
J				Present? Ves No
	20	= Total Cove	r 5	
50% of total cover: 12.5	20% of	total cover:	5	
Remarks: (Include photo numbers here or on a separate s	heet.)			
herbaceous layer is dormant and cannot be identified				

Profile Desc	cription: (Describe t	o the deptl	h needed to docur	ment the ir	ndicator	or confirm	the absence	of indicato	ors.)		
Depth	Matrix		Redo	x Features	1		_				
(inches)	Color (moist)		Color (moist)	%	Type'	Loc	Texture		Remarks		—
0-2	7.5YR 3/3	100					5L				
2-9	7.5YR 4/3	100					SCL	rock at 9"			
		·									
·											_
											_
		·		·							
		<u> </u>									
											_
1							21		M. Martela		
Type: C=C	oncentration, D=Depi	etion, RIVI=I	Reduced Matrix, Ma	5=Masked	Sand Gra	ains.	Location: P	L=Pore Lini	ng, M=Matrix	vdric Soils ³ :	
Listood			Dorle Curfood	(07)			indic				
Histic E	ninedon (A2)			+ (37) Now Surfac	o (S8) (N		148) (Continuer (A	Redox (A16)	147)	
Black H	istic (A3)		Thin Dark Su	irface (S9)	(MIRA 1	47 148)	140) <u> </u>	/MI RA 14	7 148)	,	
Hydroge	en Sulfide (A4)		Loamy Gleve	ed Matrix (F	-2)	41, 140)	F	Piedmont Flo	odplain Soils	(F19)	
Stratifie	d Lavers (A5)		Depleted Ma	trix (F3)	_,			(MLRA 13	6, 147)	()	
2 cm Mi	uck (A10) (LRR N)		Redox Dark	Surface (F	6)		\	, ery Shallow	Dark Surface	e (TF12)	
Deplete	d Below Dark Surface	(A11)	Depleted Da	rk Surface	(F7)		_ (Dther (Explai	in in Remarks	3)	
Thick Da	ark Surface (A12)		Redox Depre	essions (F8	5)						
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	es (F12) (I	_RR N,					
MLR	A 147, 148)		MLRA 13	6)							
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ace (F13) (I	MLRA 13	6, 122)	³ Inc	licators of hy	drophytic ve	getation and	
Sandy F	Redox (S5)		Piedmont Flo	odplain Sc	oils (F19)	(MLRA 14	8) we	etland hydro	logy must be	present,	
Stripped	d Matrix (S6)		Red Parent N	Material (F2	21) (MLR	A 127, 147) ur	less disturb	ed or problem	natic.	
Restrictive	Layer (if observed):										
Type: 10	ле									,	
Depth (in	ches):						Hydric Soi	Present?	Yes	No	
Remarks:											



Photo 1 Seep data point PNEA400 facing north



Seep data point PNEZ001 facing north



Seep data point PNEA402 facing westsouthwest



Seep data point PNEA403 facing west



Seep data point PNEA404 facing west

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: E	Buckingham	Sampling Date: 5/28/2015	
Applicant/Owner: DOMINION		State: Virginia	Sampling Point: pbuc051	
Investigator(s): Team C	Section, Towr	ship, Range:		
Landform (hillslope, terrace, etc.): Toe of slope	Local relief (conc	ave, convex, none): <u>none</u>	Slope (%): <u>2</u>	
Subregion (LRR or MLRA): Lat: 37	.59019852	Long: <u>-78.665802</u>	Datum:	
Soil Map Unit Name:		NWI classific	ation:	
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes	No (If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	oresent? Yes 🖌 No	
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	rs in Remarks.)	
SUMMARY OF EINDINGS Attach site man	chowing compling	naint logations transacts	important factures ato	

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>′</u>		
Remarks:							
Unvegetated seep point which flows into an intermittent stream							

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	(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></u>			
Saturation Present? Yes <u><</u> No <u>Depth (inches)</u>	Wetland Hydrology Present? Yes <u>/</u> No		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:		
Remarke:			
Nemana.			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: pbuc051

	Absolute	Dominant Ir	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1		<u> </u>		That Are OBL, FACW, or FAC: 0 (A)
2.				Total Number of Device of
3.				Species Across All Strata: 0 (B)
4.				()
5.				Percent of Dominant Species
6		<u></u> -		
7		<u></u>		Prevalence Index worksheet:
/	0	- Total Covo		Total % Cover of: Multiply by:
50% of total cover: 0	20% 0	f total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15	2070 0			FACW species x 2 =
1				FAC species x 3 =
1				FACU species x 4 =
2		· · · · · · · · · · · · · · · · · · ·		UPL species $x 5 =$
3		<u></u>		Colump Totals: (A) (B)
4		·		
5		<u></u>		Prevalence Index = B/A =
6		·		Hydrophytic Vegetation Indicators:
7		<u></u>		1 - Rapid Test for Hydrophytic Vegetation
8		<u> </u>		2 - Dominance Test is >50%
9				$3 - $ Prevalence Index is $\leq 3 0^{1}$
	0	= Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% o	f total cover:	0	dete in Remarka ar an a congrete sheet)
Herb Stratum (Plot size: 5)				Declaration Hudroche (in) (a separate sheet)
1				Problematic Hydrophytic Vegetation (Explain)
2.				
3.				'Indicators of hydric soil and wetland hydrology must
4				De finitiane of Ease Manatation Strate
5		<u> </u>		Definitions of Four vegetation Strata:
6		· · · · · · · · · · · · · · · · · · ·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
	·	·		more in diameter at breast height (DBH), regardless of
7		· · · · · · · · · · · · · · · · · · ·		neight.
8	·	- <u> </u>		Sapling/Shrub – Woody plants, excluding vines, less
9		<u></u>		than 3 in. DBH and greater than or equal to 3.28 ft (1
10	· · · · · · · · · · · · · · · · · · ·			
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:	20% o	f total cover:	0	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 50)				height.
1		- <u> </u>		
2				
3		<u> </u>		
4				Hydrophytic
5				Vegetation
	0	= Total Cover		Present? Yes No
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate	sheet.)			
Unvegetated seep point				
5				

Profile Des	cription: (Describe t	o the dep	th needed to docur	nent the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix	Matrix Redox Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)		<u>Type'</u>	Loc ²	Texture	Remarks
0-4	10 YR 4/2	97	10 YR 3/6	3	С	M	SL	10% gravel
4-16	10 YR 4/3	97	10 YR 3/6	3	С	М	SL	
		. <u> </u>						
		<u> </u>			· . <u></u>			
					·			
		·						
		·						
		. <u> </u>						
	oncentration D-Den	etion RM	-Reduced Matrix M	S-Masko	d Sand Gr	aine	² Location: E	PI-Pore Lining M-Matrix
Hvdric Soil	Indicators:					an 13.	Indic	ators for Problematic Hydric Soils ³ :
Histoso	l (A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ace (S8) (N	ILRA 147,	148) (Coast Prairie Redox (A16)
Black H	istic (A3)		Thin Dark Su	rface (S9) (MLRA 1	47, 148)	· <u> </u>	(MLRA 147, 148)
Hydroge	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19)			
Stratifie	atified Layers (A5) Depleted Matrix (F3)				(MLRA 136, 147)			
2 cm Mi	2 cm Muck (A10) (LRR N) Redox Dark Surface (F6)				Very Shallow Dark Surface (TF12)			
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)				(Other (Explain in Remarks)			
Thick D	ark Surface (A12)		Redox Depre	essions (F	-8)			
Sandy N	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	ses (F12) (LRR N,		
MLR.	A 147, 148) Cloved Metrix (S4)		WILKA 13	b)	/MI DA 12	6 122)	³ lp/	diastors of hydrophytic vegetation and
Sandy Gleyed Matrix (54) Umbric Surface (F13) (MLRA 136, 122)				III (8) w	etland bydrology must be present			
Stripper	Matrix (S6)		Red Parent N	Aaterial (F	50113 (1 13) 521) (MI R	Δ 127 147	7) ur	aless disturbed or problematic
Restrictive	Laver (if observed):				21) (IIIER	~ 127, 14		
Type								
Donth (in	(choc):						Hydric Soi	Prosent? Vos No V
							Hyune Sol	
Remarks:								



Photo 1 Seep data point pbuc051 facing north



Seep point PBUC050 facing north



Seep Point PPED001 facing south



Seep Point PPEA001 facing North



Seep data point PPEA401 facing southeast


Seep Point PPEA001 facing North



Seep point PNOA002 facing west



Seep point PNOC001 facing north

Environmental Field Surveys Seep Photo Page



Seep pnos001 facing northeast.



Seep pnos001 facing east.

Photo Sheet 1 of 1

Environmental Field Surveys Seep Photo Page



Seep data point pnoo001 facing southeast.



Seep data point pnoo001 facing northwest.

Photo Sheet 1 of 1



Seep data point PDIC002 facing west



Seep data point PDIC001 facing west



Seep data point PRZ001 facing north

Environmental Field Surveys Seep Photo Page



Seep psuo001 facing east.



Seep psuo001 facing north.

Photo Sheet 1 of 1