SOIL

Matrix Redox Features Color (moist) % Type ¹ Loc ⁷ Texture Remarks 2 - 12 IDYR Y/2 ID IDYR Y/a ID C M SL gravel below 2 - 12 IDYR Y/a ID ID C M SL gravel below 2 - 12 IDYR Y/a ID C M SL gravel below 2 - 12 IDYR Y/a ID C M SL gravel below 2 - 12 IDYR Y/a ID C M SL gravel below 2 - 12 IDYR Y/a ID C M SL gravelow gravelow 2 - 12 IDYR Y/a ID C M SL gravelow gravelow 2 - 12 IDYR Y/a ID C M SL gravelow gravelow gravelow 2 - 12 IDYR Y/a ID ID ID ID gravelow gravelow gravelow gravelow gravelow gravelow gra	rofile Description: (Describe to the de	epth needed to docur	nent the ind	dicator o	or confirm	the absence		ampling F	
Inches) Color (moist) % Color (moist) % Type! Loc ² Texture Remarks D-12 1DYLYZ 9 DYLYZ 1D C M SL gravel below		Redo							
Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147, 148) Histosol (A1) Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Pledmont Floodplain Solis (F19) Stratified Layers (A5) Peleted Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LIRR N, Iron-Manganese Masses (F12) (LIRR N, MLRA 136, 122) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5) Piedmont Floodplain Solis (F19) (MLRA 127, 147) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (If observed): Red Parent Material (F21) (MLRA 127, 147) ³ Indicators of h	(inches) Color (moist) %	Color (moist)		Type ¹	Loc ²	Texture	-		
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 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) MLRA 147, 148) MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) aludicators of hydrophytic vegetation and wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) aludicators of problematic. Type:	0-12 104R4/2 40	107K-76	<u>1D</u>	C	_ <u>M_</u>	<u> </u>	grav	lel b	elow
Hydric Soil Indicators:			; ;						
Histosol (A1)		M=Reduced Matrix, M	S=Masked S	and Gra	ins.				
Depth (inches): No No Remarks:	Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5)	Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Su Depleted Dai Redox Depre Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	elow Surface arface (S9) (i ad Matrix (F2) trix (F3) Surface (F6) rk Surface (F6) rk Surface (F8) ese Masses 6) ace (F13) (M bodplain Soil	MLRA 1 2) F7) (F12) (L LRA 13) Is (F19)	47, 148) .RR N, 5, 122) (MLRA 14	148) 2 148) 2 Pi Vi 0 3Indi 88) we	cm Muck (A oast Prairie (MLRA 147 iedmont Floo (MLRA 136 ery Shallow ther (Explain icators of hy tland hydrol	10) (MLRA Redox (A10 7, 148) odplain Soi 5, 147) Dark Surfa n in Remark	a 147) 6) Is (F19) ce (TF12) ks) egetation and e present,
Depth (inches): No No Remarks:									
Remarks:	CONTRACTOR AND	<u></u>						/	/
						Hydric Soil	Present?	Yes_V	No
	CNR Past 12"	due to r	ord	51	de	grave	4		

Environmental Field Surveys Wetland Photo Page



Wetland data point wdio031f_w facing northwest.



Wetland data point wdio031f_w facing northeast.

WETLAND DETERMINATION DATA FOR	RM – Eastern Mountains and Piedmont Region
Project/Site: ACP c	Sity/County: Dinwiddie Sampling Date: 8/22/16
Applicant/Owner: Dominion	State: NL Sampling Point:
Investigator(s): ESI-L. Roper s	Section, Township, Range:
Landform (hillslope, terrace, etc.): depression Loca	al relief (concave, convex, none): LONLAVE Slope (%): 2-5%
	2 Long: -77, 8 2370 Datum: W6584
Soil Map Unit Name: Appling Sandy loam, 2-	-711 510 pes NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year	
Are Vegetation, Soil, or Hydrology significantly d	listurbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally prob	olematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, 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
Access Road	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pla	
High Water Table (A2) Hydrogen Sulfide	
	pheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Red	
Sediment Deposits (B2) Recent Iron Redu Drift Deposits (B3) Thin Muck Surface	uction in Tilled Soils (C6) Crayfish Burrows (C8) ce (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No /Depth (inches):	NA
Water Table Present? Yes No Depth (inches):	012
Saturation Present? Yes No Depth (inches):	Vetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Remarks:	
could not auger past 10 inches	due to gravel road material

wdie031-4 Sampling Point:____

2011 1011	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30ft × 10ft) 1. NODE	<u>% Cover Species?</u> Status	Number of Dominant Species (A)
2 3	·	Total Number of Dominant 2 (B)
45		Percent of Dominant Species
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
EQ% of total course	= Total Cover 20% of total cover:	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 30ff × 10ff)	20% of total cover	C SUCCESSION AND AND AND AND AND AND AND AND AND AN
The second state of the se		FACW species $x_2 =$ FAC species 15 $x_3 = 45$
1. none		FACU species $3D$ x4 = 120
2		UPL species x 5 =
3		Column Totals: <u>45</u> (A) <u>165</u> (B)
4		
5		Prevalence Index = B/A = 3,66
6		Hydrophytic Vegetation Indicators:
7		1 - Rapid Test for Hydrophytic Vegetation
8		2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.01
	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>30ff x 10ff</u>)	TO V EDCIN	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Paspalum notatum		
	The first sector sector is a strategie where a sector is a sector of the sector is a sector of the s	¹ Indicators of hydric soil and wetland hydrology must
3		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6		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	<u>45</u> = Total Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 225	20% of total cover: 9	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30ft x 10 ft)		height.
1. none		
2		
3		
4		Hydrophytic
5		Venetation
	= Total Cover	Present? Yes <u>No X</u>
50% of total cover:	20% of total cover:	
Remarks: (Include photo numbers here or on a separate si	heet.)	

mpling Point

SUIL	
Profile Description: (Describe to the depth needed to document	t the indicator or confirm the absence of indicators.)
Depth Matrix Redox F	
(inches) Color (moist) % Color (moist)	% Type ¹ Loc ² Texture Remarks
0-10 104R3/3 100 104R3/3	SL gravel below
0 10 10 10 10 10 10 10 10 10 10 10 10 10	
	And a former of the second sec
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=N	
Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Dark Surface (S	
Histic Epipedon (A2) Polyvalue Below	Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)
Black Histic (A3) Thin Dark Surfa	ce (S9) (MLRA 147, 148) (MLRA 147, 148)
Hydrogen Sulfide (A4) Loamy Gleyed M	1atrix (F2) Piedmont Floodplain Soils (F19)
Stratified Layers (A5) Depleted Matrix	
2 cm Muck (A10) (LRR N) Redox Dark Sur	
Depleted Below Dark Surface (A11) Depleted Dark S	
Thick Dark Surface (A12) Redox Depressi	
	Masses (F12) (LRR N,
MLRA 147, 148) MLRA 136)	
	(F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and
	blain Soils (F19) (MLRA 148) wetland hydrology must be present,
	erial (F21) (MLRA 127, 147) unless disturbed or problematic.
Destriction I areas (if also areas)	
Restrictive Layer (if observed):	
Restrictive Layer (if observed): Type:	
Туре:	Hydric Soil Present? Yes No
Type: Depth (inches):	Hydric Soil Present? Yes No
Type: Depth (inches): Remarks:	
Type: Depth (inches): Remarks:	
Type: Depth (inches): Remarks:	
Type: Depth (inches):	
Type: Depth (inches): Remarks:	

Environmental Field Surveys Wetland Photo Page



Upland data point wdio031_u facing west.



Upland data point wdio031_u facing east.

Project/Site: Atlantic Coast Pipeline	_ City/County:	Dinwiddie County	Sampling Date: <u>12/14/2015</u>
Applicant/Owner: DOMINION		State: VA	Sampling Point: <u>wdic006f_</u> w
Investigator(s): Team C	_ Section, Tov	vnship, Range: <u>No PLSS in this</u>	s area
Landform (hillslope, terrace, etc.): Floodplain		ncave, convex, none): <u>none</u>	Slope (%): <u>1</u>
Subregion (LRR or MLRA): P Lat: 37.05076175	5	Long: <u>-77.82132923</u>	Datum: WGS 1984
Soil Map Unit Name: Appling sandy loam, 7 to 15 percent slopes		NWI cla	ssification: None
Are climatic / hydrologic conditions on the site typical for this time of y	year?Yes	No (If no, explain	n in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed?	Are "Normal Circumstand	ces" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any a	nswers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling	g point locations, trans	ects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ Yes _ Yes _	~	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:						
Headwater Forest. PFO within floodplain						

HYDROLOG	Y
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Wetland Hydrology Indicato	rs:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	of one is required; chec	x all that apply)		Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Water-Stained Leaves (B9)				 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)
Water-Stained Leaves (B	9)			Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes No 🔽	_ Depth (inches):		
Water Table Present?	Yes No 🔽	_ Depth (inches):		
Saturation Present? (includes capillary fringe)		_ Depth (inches):		łydrology Present? Yes No
Describe Recorded Data (stre	am gauge, monitoring	well, aerial photos, previous inspec	tions), if ava	ilable:
Remarks:				
Wetland hydrology present				

Sampling Point: wdic006f_w

	Absolute	Dominant In	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)			Status	Number of Dominant Species
1. Liquidambar styraciflua	60	Yes	FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Quercus rubra	15	No	FACU	Total Number of Dominant
3. Acer rubrum	10	No	FAC	Species Across All Strata:6 (B)
4.				(=)
5				Percent of Dominant Species That Are OBL_FACW_or_FAC*83.333333333333333333333333333333333
6				That Are OBL, FACW, or FAC: 83.33333333 (A/B)
7		·		Prevalence Index worksheet:
7	85	= Total Cove		Total % Cover of:Multiply by:
50% of total cover: 42.5		total cover:	17	OBL species x 1 =0
15	20 % 01	lotal cover.		FACW species 20 x 2 = 40
Sapling/Shrub Stratum (Plot size:) 1. Magnolia virginiana	20	Yes	FACW	FAC species $120 \times 3 = 360$
2. Liquidambar styraciflua	15	Yes	FAC	FACU species 55 x 4 = 220
3. Ilex opaca	10	No	FACU	UPL species $0 \times 5 = 0$
4. Fagus grandifolia	10	No	FACU	Column Totals: (A) (B)
5. Quercus rubra	5	No	FACU	Prevalence Index = B/A =3.17
6. Juniperus virginiana	5	No	FACU	Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9				✓ 2 - Dominance Test is >50%
··	65	= Total Cove		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 32.5		total cover:	13	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size:5)				data in Remarks or on a separate sheet)
1. Athyrium asplenioides	20	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Polystichum acrostichoides	10	Yes	FACU	
3. Lonicera japonica	10	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
	5			be present, unless disturbed or problematic.
4. Smilax rotundifolia	5	No	FAC	Definitions of Four Vegetation Strata:
5				Tree . Weady planta avaluding vince 2 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Conting/Charles Mandelante evolution visco loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
···-	45	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 22.5		total cover:		
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cove	<u> </u>	Present? Yes Vo No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	o the dep	oth needed to docun	nent the	indicator o	or confirm	the absence of indicators.)	
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type	Loc ²	Texture Remark	ks
0-4	7.5 YR 2.5/3	100					SL	
4-8	2.5Y 6/4	95	10 YR 4/6	5	С	PL	SL	
8-18	5 Y 5/2	97	10 YR 4/6	3	С	PL	SL	
							<u> </u>	
¹ Turney 0, 0				Maalia			² l continue Di Dara Linina M Mat	
Hydric Soil	oncentration, D=Deple	etion, Rivi	Reduced Matrix, Ma	s=iviasked	a Sand Gra	uns.	² Location: PL=Pore Lining, M=Mat Indicators for Problematic	
Histosol			Dark Surface	(97)			2 cm Muck (A10) (MLR	-
	oipedon (A2)		Polyvalue Be	. ,	ice (S8) (M	I RA 147.		•
	stic (A3)		Thin Dark Su				(MLRA 147, 148)	10)
	en Sulfide (A4)		Loamy Gleye			,,	Piedmont Floodplain Sc	oils (F19)
	d Layers (A5)		Depleted Mat		(• _)		(MLRA 136, 147)	
	uck (A10) (LRR N)		Redox Dark S	. ,	-6)		Very Shallow Dark Surf	ace (TF12)
	d Below Dark Surface	(A11)	Depleted Dar	•	,		Other (Explain in Rema	· · ·
·	ark Surface (A12)	(/(11)	Redox Depre					
	/ucky Mineral (S1) (LI	RR N.	Iron-Mangane			.RR N.		
	A 147, 148)	,	MLRA 13			,		
	Gleyed Matrix (S4)		Umbric Surfa	, ce (F13)	(MLRA 13	6, 122)	³ Indicators of hydrophytic	vegetation and
Sandy F	Redox (S5)		Piedmont Flo				wetland hydrology must l	be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR/	A 127, 147) unless disturbed or probl	ematic.
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present? Yes 🔽	No
Remarks:								
Hydric soil pro	esent							



Photo 1 Wetland data point WDIC006f_w facing west



Photo 2 Wetland data point WDIC006f_w facing east

Project/Site: Atlantic Coast Pipeline	City/County	Dinwiddie County	_ Sampling Date: <u>12/14/2015</u>
Applicant/Owner: DOMINION		State: VA	Sampling Point: wdic006_u
Investigator(s): Team C	Section, To	wnship, Range: <u>No PLSS in this are</u>	a
Landform (hillslope, terrace, etc.): Slight sl		ncave, convex, none): <u>none</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): P	Lat: <u>37.0509505</u>	Long: -77.8214497	Datum: WGS 1984
Soil Map Unit Name: Cecil sandy loam, 7 t	o 15 percent slopes	NWI classifi	ication: None
Are climatic / hydrologic conditions on the s	site typical for this time of year? Yes	✓ No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hyd	drology significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hyd	drology naturally problematic?	(If needed, explain any answe	ers in Remarks.)

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

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

HYDROLOGY

	rs:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	of one is required; cl	neck 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 Aeri Water-Stained Leaves (B3) Aquatic Fauna (B13) 	al Imagery (B7)	True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks)	
Field Observations:			
Surface Water Present?	Yes No	Depth (inches):	
Water Table Present?	Yes No	Depth (inches):	
		1	
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)		Depth (inches): ng well, aerial photos, previous inspec	, , ,

Sampling Point: wdic006_u

Tree Stratum (Plot size:30)	Absolute	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Liquidambar styraciflua	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. Quercus alba	30	Yes	FACU	
3. Pinus taeda	15	No	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
4. Quercus rubra	15	No	FACU	
5				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7	90			Total % Cover of: Multiply by:
		= Total Cove	er 18	$\begin{array}{c} \hline \hline \\ $
50% of total cover: <u>45</u>	20% of	total cover:	10	
Sapling/Shrub Stratum (Plot size:)	05	Maa	540	FACW species $\begin{array}{c} 0 \\ 90 \end{array}$ x 2 = $\begin{array}{c} 0 \\ 270 \end{array}$
1. Liquidambar styraciflua	25	Yes	FAC	FAC species $x_3 = $
2. Quercus alba	25	Yes	FACU	FACU species $x 4 = $
3. Ilex opaca	10	No	FACU	UPL species $x 5 = 600$
4. Juniperus virginiana	10	No	FACU	Column Totals: (A) (B)
5			<u> </u>	Prevalence Index = B/A =3.53
6				Hydrophytic Vegetation Indicators:
7		. <u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:35	20% of	total cover:	14	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: <u>5</u>)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Lonicera japonica	20	Yes	FAC	
2. Dendrolycopodium obscurum	15	Yes	FACU	¹ Indiastore of hydric coil and watland hydrology must
3				¹ 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
7				height.
8				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	35	= Total Cove	er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 17.5		total cover:		
Woody Vine Stratum (Plot size: 30)		-		Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3		. <u> </u>		
		·		
4				Hydrophytic
5				Vegetation Present? Yes No
50% of total cover:0		= Total Cove total cover:		
Remarks: (Include photo numbers here or on a separate s	neet.)			

Profile Desc	ription: (Describe to	o the depth n	eeded to docun	nent the in	dicator of	or confirm	the absence of indic	ators.)	
Depth	Matrix		Redo	x Features					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-18	2.5 Y 5/6	100					SL		
					·	· ·			
		<u> </u>			·	·	·		<u> </u>
					<u> </u>				
						·			
1						<u> </u>	· · · · · · · · · · · · · · · · · · ·		
	oncentration, D=Deple	etion, RM=Ree	duced Matrix, MS	S=Masked	Sand Gra	iins.	² Location: PL=Pore I		3
Hydric Soil I	Indicators:						Indicators for	Problematic Hy	dric Soils":
Histosol	(A1)	_	Dark Surface	(S7)			2 cm Muc	< (A10) (MLRA 1 4	7)
Histic Ep	pipedon (A2)	-	Polyvalue Be	low Surfac	e (S8) (M	LRA 147, ′	148) Coast Pra	irie Redox (A16)	
Black Hi	stic (A3)	-	Thin Dark Su	rface (S9)	(MLRA 1	47, 148)	(MLRA	147, 148)	
Hydroge	n Sulfide (A4)	_	Loamy Gleye	d Matrix (F	2)		Piedmont	Floodplain Soils (F19)
Stratified	d Layers (A5)	_	Depleted Mat	rix (F3)			(MLRA	136, 147)	
2 cm Mu	ick (A10) (LRR N)	_	Redox Dark S	Surface (F6	5)		Very Shal	ow Dark Surface	(TF12)
Depleted	d Below Dark Surface	(A11) _	Depleted Dar	k Surface ((F7)		Other (Ex	olain in Remarks)	
Thick Da	ark Surface (A12)	_	Redox Depre	ssions (F8)				
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Mangane	ese Masse	s (F12) (I	.RR N,			
MLRA	A 147, 148)		MLRA 13	6)					
Sandy G	leyed Matrix (S4)	_	Umbric Surfa	ce (F13) (N	ILRA 13	6, 1 22)	³ Indicators c	f hydrophytic vege	etation and
Sandy R	edox (S5)	_	Piedmont Flo	odplain So	ils (F19)	(MLRA 148	wetland hy	rology must be p	resent,
Stripped	Matrix (S6)	_	Red Parent M	laterial (F2	1) (MLR	A 127, 147)	unless dist	irbed or problema	tic.
Restrictive I	_ayer (if observed):								
Type:									
Depth (inc			-				Hydric Soil Presen	? Yes	No 🖌
Remarks:									
No hydrio ooil	nracant								

No hydric soil present



Photo 1 Upland data point WDIC006_u facing west



Photo 2 Upland data point WDIC006_u facing north

Project/Site: Atlantic Coast Pipeline	City/County:	Dinwiddie County	Sampling Date: <u>12/14/2015</u>
Applicant/Owner: DOMINION		State: VA	
Investigator(s):	Section, Tov	vnship, Range: <u>No PLSS in this ar</u>	ea
Landform (hillslope, terrace, etc.): Floodplain		ncave, convex, none): none	Slope (%): <u>1</u>
Subregion (LRR or MLRA): P Lat: 37.049444	18	Long: <u>-77.82300118</u>	Datum: WGS 1984
Soil Map Unit Name: Cecil sandy loam, 7 to 15 percent slopes			fication: None
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes	No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed?	Are "Normal Circumstances"	" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	y problematic?	(If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling	g point locations, transect	ts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ Yes _ Yes _	ン ン ン	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Bottomland Hardwood Forest - PFO with	in flood	plain				

Wetland Hydrology Indicate	ors:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is rea	quired; chec	k all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		_	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)
Saturation (A3)		_	Oxidized Rhizospheres on Living	Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)			Presence of Reduced Iron (C4)		Dry-Season Water Table (C2)
Sediment Deposits (B2)		_	Recent Iron Reduction in Tilled Sc	oils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)			Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)					 Geomorphic Position (D2)
Inundation Visible on Ae	rial Imagery	(B7)			Shallow Aquitard (D3)
Water-Stained Leaves (E	39)				Microtopographic Relief (D4)
Aquatic Fauna (B13)					FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes	No 🗹	_ Depth (inches):		
Water Table Present?	Yes	No 🗹	_ Depth (inches):		
Saturation Present? (includes capillary fringe)			Depth (inches):		lydrology Present? Yes 🖌 No
Describe Recorded Data (stre	eam gauge,	monitoring	well, aerial photos, previous inspec	tions), if ava	ilable:
Remarks:					
Wetland hydrology present					

Sampling Point: wdic005f_w

	Abaaluta	Dominant	Indicator	Dominance Test workshe	<u></u>		
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?	<u>Status</u>				
Liquidambar styraciflua	40	Yes	FAC	Number of Dominant Speci		5	<i>(</i> •)
2. Platanus occidentalis	15	Yes	FACW	That Are OBL, FACW, or F	AC:	5	(A)
2. Platantis occidentalis 3. Pinus taeda	10	No	FAC	Total Number of Dominant		~	
	10	No	FACU	Species Across All Strata:		5	(B)
4. Quercus rubra	5			Percent of Dominant Speci	20		
5. Betula nigra		No	FACW	That Are OBL, FACW, or F		100	(A/B)
6. Juniperus virginiana	5	No	FACU				
7				Prevalence Index worksh			
	85	= Total Cove	ər	Total % Cover of:		ultiply by:	
50% of total cover: 42.5	20% of	total cover:	17	OBL species 0	_ x 1 =	0	_
Sapling/Shrub Stratum (Plot size: 15)				FACW species 35	x 2 =	70	_
Liquidambar styraciflua	40	Yes	FAC	FAC species 150	x 3 =	450	
2. Betula nigra	10	No	FACW	FACU species 30	x 4 =	120	_
3. Carpinus caroliniana	10	No	FAC	UPL species 0	x 5 =	0	_
	5	No	FACU	Column Totals: 215		640	(P)
4. Fagus grandifolia		· <u> </u>			_ (A)		(B)
5. Cyrilla racemiflora	5	No	FACW	Prevalence Index = E	3/A =	2.97	
6. Ilex opaca	5	No	FACU	Hydrophytic Vegetation I			_
7							
8				1 - Rapid Test for Hydr		egetation	
9				2 - Dominance Test is			
	75	= Total Cove		3 - Prevalence Index is	≤3.0 ¹		
50% of total cover: 37.5		total cover:	15	4 - Morphological Adap	tations1 (I	Provide sup	porting
	20% 0			data in Remarks or	on a sepa	arate sheet)	
	20	Vaa	FAC	Problematic Hydrophyt	ic Vegeta	tion ¹ (Expla	uin)
1. Lonicera japonica		Yes	FAC		0	、 I	,
2. Smilax rotundifolia	20	Yes	FAC	¹ Indicators of hydric soil and	d wotland	bydrology	muct
3. Athyrium asplenioides	10	No	FAC	be present, unless disturbe			musi
4. Polystichum acrostichoides	5	No	FACU	Definitions of Four Vegeta			
5				Deminitions of Four veget		ala.	
۵				Tree - Woody plants, exclu	ding vine	s, 3 in. (7.6	cm) or
7		·	·	more in diameter at breast	neight (DE	3H), regard	less of
7		·		height.			
8		·		Sapling/Shrub – Woody pl	ants, excl	uding vines	s, less
9		·	<u> </u>	than 3 in. DBH and greater			
10		. <u> </u>		m) tall.			
11		. <u> </u>		Herb – All herbaceous (nor	i-woodv) i	plants. rega	ardless
		= Total Cove		of size, and woody plants le			
50% of total cover: 27.5	20% of	total cover:	11			an than 0.00	.
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vi height.	ies greate	er than 3.20	sπin
1							
2.							
3							
4		·	<u> </u>	Hydrophytic			
5		·		Vegetation Present? Yes	~	_	
		= Total Cove		Present? Yes	<u> </u>	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 de	pth needed to docun	nent the	indicator of	or confirm	the absence of indicators.)	
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	Texture Remarks	
0-4	10YR 4/4	100					SL	
4-10	10YR 7/4	95	2.5YR 4/8	5	С	PL/M	S	
10-18	10YR 4/2	98	10YR 4/6	2	С	PL	SL	
			·					
			·		·			
		. <u> </u>			·			
					·			
		<u> </u>						
	concentration, D=Depl	etion, RN	I=Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
	Indicators:						Indicators for Problematic Hydric S	oils":
Histoso	. ,		Dark Surface	. ,	(2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be					
	listic (A3)		Thin Dark Su			47, 148)	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	d Layers (A5)		✓ Depleted Mat	. ,	-0)		(MLRA 136, 147)	
	uck (A10) (LRR N)	(Redox Dark S	•	,		Very Shallow Dark Surface (TF12	2)
-	d Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre		,			
-	Mucky Mineral (S1) (L A 147, 148)	RR N,	Iron-Mangan MLRA 13		es (F12) (I	_RR N,		
	Gleyed Matrix (S4)		Umbric Surfa		(MI DA 12)	6 122)	³ Indicators of hydrophytic vegetatior	and
	Redox (S5)		Piedmont Flo	. ,	•			
	d Matrix (S6)		Red Parent N	•	• •	•		ι,
	Layer (if observed):			(.		,	, <u> </u>	
Type:	, , , , , , , , , , , , , , , , , , ,							
<u> </u>	nches):						Hydric Soil Present? Yes 🖌 No	
Remarks:								
Hydric soil pr	resent							



Photo 1 Wetland data point WDIC005f_w facing west



Photo 2 Wetland data point WDIC005f_w facing north

Project/Site: Atlantic Coast Pipeline	City/County: Dinw	viddie County	_ Sampling Date: <u>12/14/2015</u>
Applicant/Owner: DOMINION		State: VA	Sampling Point: wdic005_u
Investigator(s): Team C	Section, Township	o, Range: <u>No PLSS in this are</u>	a
Landform (hillslope, terrace, etc.): slight slope		, convex, none): <u>none</u>	Slope (%): <u>5</u>
Subregion (LRR or MLRA): P	Lat: <u>37.04962293</u>	Long: -77.82311899	Datum: WGS 1984
Soil Map Unit Name: Cecil sandy loam, 7 to 15 per	cent slopes	NWI classif	ication: None
Are climatic / hydrologic conditions on the site typic	al 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 map showing sampling point locations, transects, important features, etc.

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

HYDROLOGY

	rs:	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 Aeri Water-Stained Leaves (B Aquatic Fauna (B13)	True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck Su Other (Expla	Plants (B14) Sparsely Vegetated Concave Surface (B8) fide Odor (C1) Drainage Patterns (B10) cospheres on Living Roots (C3) Moss Trim Lines (B16) Reduced Iron (C4) Dry-Season Water Table (C2) Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Field Observations:		
Surface Water Present?	Yes No 🔽 Depth (inche	s):
Water Table Present?	Yes No 🔽 Depth (inche	s):
Saturation Present? (includes capillary fringe)	Yes No 🔽 Depth (inche	s): Wetland Hydrology Present? Yes No _ ✓
(includes capillary fringe)		s): Wetland Hydrology Present? Yes No tos, previous inspections), if available:

Sampling Point: wdic005_u

	Abaaluta	- Dominant li	adiaatar	Deminence Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	Absolute	Dominant In Species?	Status	Dominance Test worksheet:
	40	Yes	FAC	Number of Dominant Species
1. Liquidambar styraciflua				That Are OBL, FACW, or FAC: (A)
2. Quercus rubra	20	Yes	FACU	Total New Area of Developed
3. Pinus taeda	10	No	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
			·	Species Across All Strata. (D)
4			<u> </u>	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 33.33333333 (A/B)
6.				
				Prevalence Index worksheet:
7	70	·	·	Total % Cover of: Multiply by:
	:	= Total Cove		
50% of total cover: 35	20% of	total cover:	14	
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 x 2 = 0$
1 Liquidambar styraciflua	30	Yes	FAC	FAC species 80 x 3 = 240
				65 260
2. Ilex opaca	15	Yes	FACU	FACU species $x 4 = $
3				UPL species x 5 =
			·	Column Totals:145 (A)500 (B)
4				
5				Prevalence Index = $B/A = $ 3.44
6				
				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				
	45	= Total Cove	r	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:22.5		total cover:	9	4 - Morphological Adaptations ¹ (Provide supporting
-	20 % 01	total cover.		data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Dendrolycopodium obscurum	20	Yes	FACU	
2. Polystichum acrostichoides	10	Yes	FACU	
2				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				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
			·	more in diameter at breast height (DBH), regardless of
7		·	<u> </u>	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
10		<u> </u>	·	
11				Herb – All herbaceous (non-woody) plants, regardless
	30	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of	total cover:	6	
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
				height.
1		. <u> </u>		
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	neet.)			

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of ind	licators.)	
Depth	Matrix		Redo	x Features	S				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	6
0-4	10YR 3/3	100					SL		
4-12	2.5Y 6/6	100					SL		
12-18	2.5Y 6/8	100					SL		
¹ Type: C=C	oncentration, D=Depl	etion. RM=R	educed Matrix. M	S=Masked	I Sand Gra	ains.	² Location: PL=Por	e Lining. M=Matrix	κ.
Hydric Soil		,	,					for Problematic H	
Histosol	(A1)		Dark Surface	e (S7)				uck (A10) (MLRA	-
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	ILRA 147,	148) Coast F	Prairie Redox (A16	6)
Black Hi	istic (A3)		Thin Dark Su	Irface (S9)	(MLRA 1	47, 148)	(MLF	RA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		Piedmo	nt Floodplain Soil	s (F19)
Stratifie	d Layers (A5)		Depleted Ma	trix (F3)			(MLF	RA 136, 147)	
2 cm Mi	uck (A10) (LRR N)		Redox Dark	Surface (F	6)		Very SI	nallow Dark Surfac	ce (TF12)
	d Below Dark Surface	e (A11)	Depleted Da		,			Explain in Remark	
·	ark Surface (A12)	()	Redox Depre		. ,		(,
	/ucky Mineral (S1) (L	RR N.	Iron-Mangan		,	LRR N.			
-	A 147, 148)	,	MLRA 13			,			
	Gleyed Matrix (S4)		Umbric Surfa	•	MI RA 13	6, 122)	³ Indicator	s of hydrophytic ve	edetation and
	Redox (S5)		Piedmont Flo					hydrology must be	•
	Matrix (S6)		Red Parent N	•	. ,	•	•	isturbed or proble	•
	Layer (if observed):			natorial (i		A 127, 147			
Type:									
Depth (in	ches):		_				Hydric Soil Pres	ent? Yes	No 🖌
Remarks:	,								
No hydria agil	Inrocent								

No hydric soil present



Photo 1 Upland data point WDIC005_u facing northwest



Photo 2 Upland data point WDIC005_u facing northeast

Project/Site: Atlantic Coast Pipeline	_ City/County: D	inwiddie County	Sampling Date: <u>12/14/2015</u>		
Applicant/Owner: DOMINION		State: VA			
Investigator(s): Team C	_ Section, Towns	ship, Range: <u>No PLSS in this ar</u>			
Landform (hillslope, terrace, etc.): Floodplain		ive, convex, none): <u>none</u>			
Subregion (LRR or MLRA): <u>P</u> Lat: <u>37.04808588</u>		Long: <u>-77.82505318</u>	Datum: WGS 1984		
Soil Map Unit Name: Appling sandy loam, 7 to 15 percent slopes		NWI classi	fication: PFO1A		
Are climatic / hydrologic conditions on the site typical for this time of y	/ear?Yes 🖌 🗸	_ No (If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrology significant	ly disturbed?	Are "Normal Circumstances'	' present? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology naturally p	oroblematic?	(If needed, explain any answ	vers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showin	g sampling p	point locations, transect	s, important features, etc.		

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ Yes _ Yes _	ン ン ン	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks: Bottomland Hardwood Forest - PFO with	in flood	plain				

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

HYDROLOGY

Sampling Point: wdic004f_w

	Absolute	Dominant I		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>) 1 Liquidambar styraciflua	<u>% Cover</u> 60	<u>Species?</u> Yes	<u>Status</u> FAC	Number of Dominant Species
2. Quercus rubra	15	No	FACU	That Are OBL, FACW, or FAC: (A)
3. Acer rubrum	10	No	FAC	Total Number of Dominant
3. 1001 10010111				Species Across All Strata: / (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7	85			Total % Cover of:Multiply by:
50% of total cover: 42.5		= Total Cove total cover:	er 17	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)	2070.01			FACW species $0 x 2 = 0$
1. Liquidambar styraciflua	15	Yes	FAC	FAC species 120 x 3 = 360
2. Fagus grandifolia	10	Yes	FACU	FACU species 55 x 4 = 220
3. Ilex opaca	10	Yes	FACU	UPL species $0 \times 5 = 0$
4. Juniperus virginiana	5	No	FACU	Column Totals: 175 (A) 580 (B)
5. Quercus rubra	5	No	FACU	
			1400	Prevalence Index = B/A =3.31
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	45			3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 22.5		= Total Cove	er 9	4 - Morphological Adaptations ¹ (Provide supporting
	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:5) 1. Athyrium asplenioides	20	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
	10	Yes	FAC	
2. Lonicera japonica	10			¹ Indicators of hydric soil and wetland hydrology must
3. Polystichum acrostichoides	5	Yes	FACU	be present, unless disturbed or problematic.
4. Smilax rotundifolia		No	FAC	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				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
		= Total Cove	•	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 22.5	20% of	total cover:	9	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes Vo No
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	heet.)			

nches)			11040	x Features	5				
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	S
0-8	10YR 5/4	100					SL		
8-18	2.5Y 5/3	97	7.5YR 4/6	3	С	PL	SL		
	oncentration, D=Deple	ation RM	-Reduced Matrix M	S-Masked	Sand Gra	ains	² Location: PL-E	Pore Lining, M=Matri	
vdric Soil I				0=maskea				rs for Problematic	
Black His Hydroge Stratified 2 cm Mu Depleted Thick Da	pipedon (A2)		Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Depleted Da Redox Depre Iron-Mangan	elow Surfac urface (S9) ed Matrix (F trix (F3) Surface (F rk Surface essions (F8	(MLRA 1 F2) (6) (F7) 3)	47, 148)	148) Coas (N Pied (N Very	Muck (A10) (MLRA st Prairie Redox (A10 ILRA 147, 148) mont Floodplain Soi ILRA 136, 147) Shallow Dark Surfa er (Explain in Remark	6) Is (F19) ce (TF12)
	147, 148)	,	MLRA 13		55 (1 12) (,			
	leyed Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 13	6, 122)	³ Indicat	tors of hydrophytic v	egetation and
_ Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) wetlar	nd hydrology must be	e present,
	Matrix (S6)		Red Parent	Material (F	21) (MLR /	A 127, 147	7) unless	s disturbed or proble	matic.
estrictive L	.ayer (if observed):								
Туре:									
Depth (inc	ches):						Hydric Soil Pre	esent? Yes 🖌	No



Photo 1 Wetland data point WDIC004f_w facing north



Photo 2 Wetland data point WDIC004f_w facing south

Project/Site: Atlantic Coast Pipeline	City/County:	Dinwiddie County	Sampling Date: 12/14/2015
Applicant/Owner: DOMINION		State: VA	Sampling Point: wdic004_u
Investigator(s): Team C	Section, Tow	vnship, Range: <u>No PLSS in this are</u>	a
Landform (hillslope, terrace, etc.): hill slope		ncave, convex, none): <u>none</u>	10
Subregion (LRR or MLRA): P Lat: 37.0479	4221	Long: <u>-77.82520416</u>	Datum: WGS 1984
Soil Map Unit Name: Appling sandy loam, 7 to 15 percent slope	s	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology signifi	icantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natura	ally problematic?	(If needed, explain any answe	ers in Remarks.)

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

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

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 R	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	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):	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No ✓	
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Yes No _ Depth (inches):	
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches):	
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Yes No _ Depth (inches):	
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	
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	
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	
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	
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	
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	
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	
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	
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	

Sampling Point: wdic004_u

	Absolute	Dominant In	ndicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>) 1. <i>Quercus rubra</i>	<u>% Cover</u> 50	<u>Species?</u> Yes	Status FACU	Number of Dominant Species
2 Liquidambar styraciflua	30	Yes	FAC	That Are OBL, FACW, or FAC:3 (A)
2. <u>Liquidanibal styracilida</u> 3				Total Number of Dominant Species Across All Strata: 7 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.85714285</u> (A/B)
6				
7				Prevalence Index worksheet:
	80	= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 40	20% of	total cover:	16	OBL species $x_1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = 0$
1. Fagus grandifolia	20	Yes	FACU	FAC species $x_3 = $
2. Carpinus caroliniana	10	Yes	FAC	FACU species x 4 = 400
3. Quercus alba	10	Yes	FACU	UPL species $0 x 5 = 0$
4				Column Totals:(A)(B)
5				Prevalence Index = B/A =3.66
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	40	= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20	20% of	total cover:	8	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				. ,
1. Polystichum acrostichoides	20	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
_{2.} Lonicera japonica	10	Yes	FAC	
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
5		·		Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				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		. <u> </u>	<u> </u>	m) tall.
11	20		<u> </u>	Herb - All herbaceous (non-woody) plants, regardless
		= Total Cove	-	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>15</u>	20% of	total cover:	6	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	heet.)			•

Profile Desc	cription: (Describe t	o the dept	h needed to docur	ment the i	ndicator	or confirm	the absence	of indicato	rs.)	
Depth	Matrix	<u> </u>		x Features	5					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 3/3	100					SL			
4-12	2.5Y 6/6	100					SL			
12-18	2.5Y 6/8	100					SL			
		·		·						
			<u> </u>	·		·				
¹ Type: C=C	oncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.	² Location: P	L=Pore Liniı	ng, M=Matrix.	
Hydric Soil	Indicators:						Indica	ators for Pr	oblematic Hy	dric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A	(MLRA 1	47)
Histic E	pipedon (A2)		Polyvalue Be	elow Surfa	ce (S8) (N	ILRA 147,	148) C	oast Prairie	Redox (A16)	
Black H	istic (A3)		Thin Dark Su	urface (S9)	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		P	iedmont Flo	odplain Soils	(F19)
	d Layers (A5)		Depleted Ma		,			(MLRA 13		. ,
	uck (A10) (LRR N)		Redox Dark	. ,	6)		V	•	Dark Surface	(TF12)
	d Below Dark Surface	(A11)	Depleted Da	•				•	n in Remarks)	· · ·
Thick D	ark Surface (A12)	· · ·	Redox Depre					· ·	,	
	/ucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.				
	A 147, 148)		MLRA 13		· / ·					
	Gleyed Matrix (S4)		Umbric Surfa	•	MLRA 13	6. 122)	³ Ind	icators of hy	drophytic veg	etation and
-	Redox (S5)		Piedmont Flo						ogy must be p	
	Matrix (S6)		Red Parent M	•	• •	•	•	•	ed or problema	
	Layer (if observed):				, τ					
Type:										
Depth (in	ches):						Hydric Soil	Present?	Yes	No 🖌
Remarks:										



Photo 1 Upland data point WDIC004_u facing west



Photo 2 Upland data point WDIC004_u facing south

	City/County: Linu.ddie	Sampling Date: 3/16/16			
Project/Site: <u>ACP</u>		_ State: VA Sampling Point:Sampling Point:			
nvestigator(s): ESI (L. Roper, W.1	Valashas) Section Townshin Range	nace			
andform (hillsland torrace ata): deoperst		ne): <u>Concave</u> Slope (%): <u>0-</u>			
		77.82.556 Datum: WGS84			
Soil Map Unit Name: <u>Apoling</u> Sandy loan	and the second se	NWI classification:PFo			
Are climatic / hydrologic conditions on the site typic					
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are "Norma	al Circumstances" present? Yes No			
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If needed,	explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site	e map showing sampling point locati	ons, transects, important features, etc.			
Hydric Soil Present? Yes	X No Is the Sampled Area X No within a Wetland?	Yes No			
Remarks:					
NCWAM : Headwater Fore	st				
HYDROLOGY		a sente da la construcción de la c			
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; c		Surface Soil Cracks (B6)			
	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
	Oxidized Rhizospheres on Living Roots (C3)	Moss Thin Lines (BT6) Dry-Season Water Table (C2)			
	Presence of Reduced Iron (C4) 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:					
Field Observations: Surface Water Present? Yes No	Depth (inches):				
Field Observations: Surface Water Present? Yes No	Depth (inches): <u>Surface</u>				
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No	Depth (inches): Surface	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Yes No	Depth (inches): <u>Surface</u>	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Yes No	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes <u>×</u> No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes <u>×</u> No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) No Describe Recorded Data (stream gauge, monitor)	Depth (inches): Surfall Wetland	Hydrology Present? Yes X No			

Sampling Point: wd: 030f_w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 304x 30ft)	and the second se	Species?	the second s	Number of Dominant Species 3
1. Liquidambar Styraciflua	5	ves	FAC	That Are OBL, FACW, or FAC: (A)
2		C C A A A C C C C C C C C C C C C C C C	CT STERN	
3				Total Number of Dominant 5 (B)
[[2] [2] 2 · 2 · 2 · 2 · 2 · 2 · 2 · 2 · 2 · 2				
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				Prevalence Index worksheet:
7				
	5	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:2.5	20% of	total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 30ft = 30ft)				FACW species x 2 =
1. Carpinus caroliniana	10	yes	FAC	FAC species x 3 =
2. Ilex opaca	5	Yes	FACU	FACU species x 4 =
3			1	UPL species x 5 =
				Column Totals: (A) (B)
4			The second secon	
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7	The second second	11 10 10 10 10 10 10 10 10 10 10 10 10 1		1 - Rapid Test for Hydrophytic Vegetation
8		B. S. C.L.		2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^{\circ}$
	15 .	= Total Cove	er	
50% of total cover: 7-5	20% of	total cover:	3	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 30ft x 30ft)				data in Remarks or on a separate sheet)
1. Polystichum acrostichoides	5	Ves	FACL	Problematic Hydrophytic Vegetation ¹ (Explain)
Will have not control of the environment to come there it is an environment of the interview of the inter		CONTRACTOR AND ADDRESS AND ADDRESS		
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4		1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -		Definitions of Four Vegetation Strata:
5		<u></u>		
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9,				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
10	International			
11	r			Herb - All herbaceous (non-woody) plants, regardless
7 -		Total Cove	er I	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>2.5</u>	_ 20% of	total cover:_		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 3) F+ x 3) F+)	_			height.
1. Lonicera japonica	5	Ves	FAC	
2			Sale and	
3				
4	CONTRACTOR CONTRACT	Phartic and the second	The second	
	TREE TREE	Contraction of the	Contract (Sec. Val.)	Hydrophytic
5	F			Vegetation Present? Yes V No
700/ -11-11		Total Cove		
50% of total cover:	and a state of the part of the	total cover:_	1	
Remarks: (Include photo numbers here or on a separate sh	eet.)			

SOIL

Sampling	Point:	Welio	030f-w

epth	cription: (Describe Matrix			ox Features				
nches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
05-20	10YR4/1	90	10YR 4/10	10	<u> </u>	M	<u>SCL</u>	
	Concentration, D=Dep	bletion, RM	I=Reduced Matrix, N	IS=Masked	Sand Gra	ains.		Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histoso Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D			Dark Surfac Polyvalue E Thin Dark S Loamy Gley Depleted M Redox Dark Depleted D Redox Dep Iron-Manga	elow Surfac (urface (S9) (ed Matrix (F atrix (F3) (a Surface (F ark Surface (F8)	(MLRA 1 =2) 6) (F7) 3)	47, 148)	2 c , 148) Co Pie Re Ve	em Muck (A10) (MLRA 147) east Prairie Redox (A16) (MLRA 147, 148) edmont Floodplain Soils (F19) (MLRA 136, 147) ed Parent Material (TF2) ery Shallow Dark Surface (TF12) her (Explain in Remarks)
MLR Sandy Sandy Strippe	A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		MLRA 1 Umbric Sur Piedmont F	36) face (F13) (MLRA 13	6, 122)	48) we	cators of hydrophytic vegetation and etland hydrology must be present, lless disturbed or problematic.
Туре:	nches):	-					Hydric Soil	Present? Yes No
emarks:								

Environmental Field Surveys Wetland Photo Page



Wetland data point wdio030f_w facing west.



Wetland data point wdio030f_w facing south.

Project/Site: ACP	City/C	ounty: Dinwiddie	Sampl	ing Date: 3-16-16		
Applicant/Owner: Dominion			State: VIA Sam	pling Point: wd:0030_c		
	Un a la Castia					
Investigator(s): ESI (L. Roper, W	. Un us her Sectio	in, Township, Range.	i Com d	Star (1) 5-7		
Landform (hillslope, terrace, etc.): H: 11 slope	Local reli	ef (concave, convex, non	e): CONVER	Slope (%):		
Subregion (LRR or MLRA): LRRP L						
Soil Map Unit Name: APPling Sandy Lo	am 7-15% slop	e	NWI classification:	NA		
Are climatic / hydrologic conditions on the site typica	al for this time of year? Y	es No (If no, explain in Remarks	.)		
Are Vegetation, Soil, or Hydrology _						
Are Vegetation, Soil, or Hydrology _			xplain any answers in Re			
SUMMARY OF FINDINGS – Attach site						
		iping point locatio	ns, transects, impo			
	No	Is the Sampled Area				
	No _X	within a Wetland?	Yes No	X		
Wetland Hydrology Present? Yes	No	Constant of the second second				
				2		
HYDROLOGY Wetland Hydrology Indicators:	<u>. NY 2</u>		Secondary Indicators (m	inimum of two required)		
Primary Indicators (minimum of one is required; cl	neck all that apply)		Surface Soil Cracks (B6)			
	True Aquatic Plants (Sparsely Vegetated			
	Hydrogen Sulfide Od		Drainage Patterns (
	Oxidized Rhizospher					
	Presence of Reduced	d Iron (C4)	Dry-Season Water	Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Burrows (C			
	Thin Muck Surface (0			n Aerial Imagery (C9)		
	Other (Explain in Rei	marks)	Stunted or Stressed			
Iron Deposits (B5)			Geomorphic Position Shallow Aquitard (E)			
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)			Microtopographic R			
Aquatic Fauna (B13)			FAC-Neutral Test (
Field Observations:				,		
	X Depth (inches):	IA				
	✓ Depth (inches): >.					
	M Depth (inches):		Hydrology Present? Y	'es No 🗶		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitori			ailable:			
Describe Recorded Data (stream gauge, moniton	ng weil, aenai photos, ph	evious inspections), if avi				
Remarks:		Communication of the second se				

Eastern Mountains and Piedmont - Version 2.0

Sampling Point: welis 030_u

 $\left(\right)$

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30ft = 30ft)	and the second the second second second	and the second se	Status	Number of Dominant Species //
1. Fagus grandiGlia	10	yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Pinus tacda	15	yes	FAC	
	Concernance of the second s		FAC	Total Number of Dominant 7 (B)
3. Liquidamber Styraciflua		yes	FAC	Species Across All Strata: (B)
4				Percent of Dominant Species
5	-			That Are OBL, FACW, or FAC: 57.1 (A/B)
6				
7		in the second second	A state of the sta	Prevalence Index worksheet:
	35	= Total Cove	21	Total % Cover of:Multiply by:
50% of total cover:/7.5	20% of	total cover:	7	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 30 # + 30 P+			101000	FACW species x 2 =
	10	yes	FACU	FAC species x 3 =
1. Tlex opaca			the second se	FACU species x 4 =
2. Carpinus caroliniana	10	yes	FAC	UPL species
3. Liquidamber Styreciflue	_5	yes	FAC	1. この時間のであると思いためである。当時代はないためになったからのためでいたが、「日本アンだいたいないないないない」、、、、、、、、、、、、、、、、、、、、、、、、、、、、
4				Column Totals: (A) (B)
5				Dravialance Index = P/A =
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				12 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 12.5	20% of	total cover:_	5	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 30ft , 30ft)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Polystichum acrostichoides	10	ves	FACU	
2				
3				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7		<u></u>	<u>eddal (Car</u> y	height.
8				Carling/Shruh Weadu plants excluding vises less
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
	THE PROPERTY PARTY		CRETTANCE I	
11	10			Herb – All herbaceous (non-woody) plants, regardless
	diversity of the local	= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 5	20% of	total cover:_	4	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 36 ft + 36 ft)				height.
1. None	di sintatun		in and	And the state of the
2				
3				
4.				
	A state and shares a	10 11 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10	Succession of	Hydrophytic
5	CORPORATION INTO A			Vegetation Present? Yes No
		Total Cove		
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate sh	neet.)			

Sampling Point:	wo	10	030.	u

hes)	Color (moist)	%	Color (moist)	x Feature	Tupol	Loc ²	Textur	0	Remarks	
	10-15 3/2	100			Type		LS	<u> </u>	Remarks	
5		100					5			
20	1045 5/4	100								
		-		<u></u>		· · · · · ·	. <u></u>			
				-			-			
1										
		epletion, RM	=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		n: PL=Pore Linir		
Histosol			Dark Surfac Polyvalue B		100 (SR) (and all	ndicators for Pr 2 cm Muck (/ Coast Prairie	A10) (MLRA	147)
Black Hi	pipedon (A2) istic (A3) en Sulfide (A4)		Thin Dark S Loamy Gley	urface (S9) (MLRA			(MLRA 14 Piedmont Flo	7, 148)	
Stratified	d Layers (A5) uck (A10) (LRR N)		Depleted Ma Redox Dark	atrix (F3)				(MLRA 13 Red Parent 1	6, 147) Material (TF2))
	d Below Dark Surfa ark Surface (A12)	ace (A11)	Depleted Da Redox Depr	essions (F	-8)				Dark Surfact	
	Aucky Mineral (S1) A 147, 148)	(LRR N,	Iron-Manga MLRA 1	36)						
				(E42)	/8.81 DA 4	36 1221		³ Indicators of h	ydrophytic ve	getation an
Sandy G Sandy R	Gleyed Matrix (S4) Redox (S5)		Umbric Surf Piedmont F				48)	wetland hydr	ology must b	e present,
Sandy G Sandy R Stripped	Redox (S5) d Matrix (S6) Layer (if observed	10.25	Piedmont F				48)	wetland hydr		e present,
Sandy G Sandy R Stripped strictive I Type:	Redox (S5) d Matrix (S6)		Piedmont F					wetland hydr	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped trictive I Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped trictive I Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped trictive I Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive I Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive I Type:	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive I Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.
Sandy G Sandy R Stripped strictive Type: Depth (in	Redox (S5) 1 Matrix (S6) Layer (if observed		Piedmont F					wetland hydr unless distur	bed or proble	e present, ematic.

Environmental Field Surveys Wetland Photo Page



Upland data point wdio030_u facing north.



Upland data point wdio030_u facing east.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

		City/County: Dinwiddie	Sampling Date: 3-16-16 State: 1/A Sampling Point: Wdio 029 f.
pplicant/Owner: Dominion			
nvestigator(s): EST (L. Roper, W	. Valighan)	Section, Township, Range:	10/2
andform (hillslope, terrace, etc.):	rssion Lo	ocal relief (concave, convex, nor	e): Slope (%):
			77. 82499 Datum: WGS 84
soil Map Unit Name: Appling Sar	ndy loan 7-150	% slope	NWI classification:PF0
are climatic / hydrologic conditions on the s	site typical for this time of v	ear? Yes No	(If no, explain in Remarks.)
			Circumstances" present? Yes Ves No
			explain any answers in Remarks.)
we Vegetation, Soil, or Hyd			ons, transects, important features, etc.
	Yes No		/
	Yes No Yes No		Yes No
Wetland Hydrology Present? Remarks:	Yes V No	•	
NCWAM: Headwate	, Forest		
TYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is rec	quired; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic I		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sul		Drainage Patterns (B10)
Saturation (A3)		ospheres on Living Roots (C3)	Moss Trim Lines (B16) Dry-Season Water Table (C2)
Water Marks (B1)	Presence of F	Reduced from (C4) Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Su		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain		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)	ne fail a break station		FAC-Neutral Test (D5)
Field Observations:	/	1	
	_ No Depth (inche		
	No Depth (inche		
(includes capillary fringe)	_ No Depth (inche		Hydrology Present? Yes No
Describe Recorded Data (stream gauge,	monitoring weil, aerial pro	nos, previous inspections), il av	anabie.
Remarks:			

Sampling Point: 100:0029 F-W

2.6. 2.6	Absolute	Dominant		Dominance Test worksheet:	Da San Roman	186133
Tree Stratum (Plot size: 30 ft x 30 ft) 1. Acer rubrum		Species? Yes	<u>Status</u> FA c	Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
2. Carpinus caroliniana	10			Total Number of Dominant Species Across All Strata:	4	(B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)
6				Prevalence Index worksheet:		
7		-		Total % Cover of:	Multiply by:	
24		= Total Cove	-	OBL species x	A CONTRACTOR PROPERTY AND A CONTRACTOR	
50% of total cover: 20	20% of	total cover:	8	FACW species x		
Sapling/Shrub Stratum (Plot size: 3074 x 3074)	-		<i>T</i> 1 <i>t</i> 1	FAC species x		
1. These opaca			TACU			
2. Corpinus conditiona		A sure of the sure of the	FAC	FACU species X		
3				UPL species x		
4				Column Totals: (A))	- (B)
5				Prevalence Index = B/A =	ender her te	
6				Hydrophytic Vegetation Indicat	tors:	-
7		<u></u>		- 1 - Rapid Test for Hydrophyt	ic Vegetation	
8				2 - Dominance Test is >50%		
9			<u></u>	3 - Prevalence Index is ≤3.0 ¹		
		= Total Cove		4 - Morphological Adaptation		norting
50% of total cover: 75	_ 20% of	total cover:_	3	data in Remarks or on a s		
Herb Stratum (Plot size: 30fL x 30fL)				Problematic Hydrophytic Veg		
1. none	<u></u>	A. Marchalor	<u>and sharp</u>	Problematic Hydrophytic Veg	jetation (Expla	mi)
2						
3				¹ Indicators of hydric soil and weth be present, unless disturbed or p		nust
4				Definitions of Four Vegetation	To all the project constraints of the second	
5				Deminions of Pour Vegetation	Stiata.	
6				Tree - Woody plants, excluding v		
7				more in diameter at breast height height.	(UBH), regardi	ess or
8						
9.			CONTRACTOR OF THE PARTY OF THE	Sapling/Shrub – Woody plants, of than 3 in. DBH and greater than 6		
10			DOMESTIC: NOTION OF A DESCRIPTION	m) tall.	Ji Equal to 5.20	
11.	STATISTICS.		ATTERNAL TO			1
····	6 =	Total Cove		Herb – All herbaceous (non-wood of size, and woody plants less that		rdless
50% of total cover:						
Woody Vine Stratum (Plot size: 3044 x 304)			1000	Woody vine - All woody vines gr	reater than 3.28	ft in
1. NONe				height.		
	0.000.000	The second second	- a firm from			
			11000000			
	Compared Southerport Of	1775-05002-091-0	1000 100 100 100 100 100 100 100 100 10			
4		1000 000000000000000000000000000000000		Hydrophytic		
5	CONSTRUCTION OF STR			Vegetation Present? Yes	No	
50% of total cover:		Total Cove	Sector and the sector of the			
Remarks: (Include photo numbers here or on a separate sh	CONTRACTOR AND A CONTRACTOR	enteringen erstennen i Erstennen i Erstennen i Stater erstennen i Stater erstennen i Stater erstennen i Stater Erstennen stater erstennen i Stater				2011 C 1940
······································						

Sampling Point: Wd: 029 F-W

pth .	Matrix		-		x Features				Demote
ches)	Color (moist)			(moist)	%	Type	Loc ²	Texture	Remarks
- 20+	10, r 4/1	95	loyr	4/3			M	LS	
	ncentration, D=Dep	letion RM	A=Reduce	d Matrix, M	S=Masker	Sand G	ains.	² Location:	PL=Pore Lining, M=Matrix.
	ndicators:	Jetion, rea		a matrix, n	io muonee	ound of		Ind	icators for Problematic Hydric Soils
Black His Hydroger Stratified 2 cm Mu Depleted	ipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) ck (A10) (LRR N) I Below Dark Surfac Irk Surface (A12)			hin Dark S oamy Gley epleted M Redox Dark epleted D Redox Dep	elow Surfa aurface (S9 ved Matrix (atrix (F3) s Surface (F ark Surface ressions (F	(MLRA (F2) (F2) (F7) (F7) (F7)	147, 148)		2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Sandy M MLRA Sandy G Sandy R Stripped	lucky Mineral (S1) (A 147, 148) ileyed Matrix (S4) edox (S5) Matrix (S6)			MLRA 1 Imbric Sur	nese Mass 36) face (F13) loodplain S	(MLRA 1	36, 122)		ndicators of hydrophytic vegetation an wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped	A 147, 148) ileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	(MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)		wetland hydrology must be present,
Sandy M MLRA Sandy G Sandy R Stripped strictive I Type:	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped Strictive L Type: Depth (inc	A 147, 148) ileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present,
Sandy M MLRA Sandy G Sandy R Stripped strictive I Type:	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped strictive I Type: Depth (inc	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped Strictive I Type: Depth (inc	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped Strictive I Type: Depth (inc	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped strictive I Type: Depth (inc	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.
Sandy M MLRA Sandy G Sandy R Stripped strictive I Type: Depth (inc	A 147, 148) sileyed Matrix (S4) edox (S5) Matrix (S6) Layer (if observed)):	L	MLRA 1 Imbric Sur	36) face (F13)	(MLRA 1	36, 122)	48)	wetland hydrology must be present, unless disturbed or problematic.

Environmental Field Surveys Wetland Photo Page



Wetland data point wdio029f_w facing southeast.



Wetland data point wdio029f_w facing northwest.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP	City/County:	Dinwiddie	Sampling Date: 3-16-16
Applicant/Owner Dessiding		State: VA	Sampling Point: Wdin 029_U
Investigator(s): EST (L. Roper, W. Vaugh	sa) Section, Towns	hip, Range: Nonc	
Landform (hillslope, terrace, etc.):F/a +	Local relief (conca	ve. convex. none): none	Slope (%):
Subregion (LRR or MLRA): LRLP Lat:	37.0460)	Long: -77.82476	Datum: 1JG584
Soil Map Unit Name: // Appling Sandy loan			
Are climatic / hydrologic conditions on the site typical for			
Are climatic / hydrologic conditions on the site typical for	this time of year? Tes		No.
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?		
Are Vegetation, Soil, or Hydrology		(If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site ma	p showing sampling p	oint locations, transects	, important features, etc.
Hudrophytic Vegetation Brocont?			
	tic Vegetation Present? Yes No Is the Sampled Area vithin a Wetland?		No ×
Wetland Hydrology Present? Yes	No within a	a Wetland? Yes	
Remarks:	10.00 P310 P32 2		
HYDROLOGY			
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil	
	True Aquatic Plants (B14)		getated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)		atterns (B10)
	Dxidized Rhizospheres on Liv Presence of Reduced Iron (C4		Water Table (C2)
	Recent Iron Reduction in Tiller		
	Thin Muck Surface (C7)		/isible on Aerial Imagery (C9)
	Other (Explain in Remarks)	the second se	Stressed Plants (D1)
Iron Deposits (B5)			c Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	
Water-Stained Leaves (B9)		Microtopogr	raphic Relief (D4) al Test (D5)
Aquatic Fauna (B13) Field Observations:			
	Depth (inches): NA		
	Depth (inches): >20		
Saturation Present? Yes No _/	Depth (inches): >20	Wetland Hydrology Prese	ent? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w	ell aerial photos, previous in:	spections), if available:	
Remarks:			

Sampling Point: Undia 029_u

2-01 2 01	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30ft x 30 ft)		Species?	Construction of the American State	Number of Dominant Species 2
1. Liriodendron tulipifera	15	yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Carpinus Caroliniana	15	yes	FAC	Total Number of Dominant
3. Quercus alba	15	yes	FACU	Species Across All Strata: (B)
4. Fague grandifalia	10	<u>no</u>	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 28, 6 (A/B)
6		1		
7.				Prevalence Index worksheet:
	55	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: _27.5				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 30F4 × 30F4)				FACW species x 2 =O
1. Carpinus caroliniana	15	Ves	FAC	FAC species 30 x 3 = 90
2. Ilex ODarg	5	ves	FACU	FACU species 70 x 4 = 260
3. Fagues grandifalia	5	yes	FACU	UPL species x 5 =
4				Column Totals: 100 (A) 370 (B)
5	CARLENCE AND CONSIGNATION	TRANS C		37
6				Prevalence Index = B/A =3,7
7				Hydrophytic Vegetation Indicators:
8		COLORADA	10000	1 - Rapid Test for Hydrophytic Vegetation
이 가슴에 들어 아들 것은 것은 것을 하는 것 같아요. 한 것은 것을 하는 것 같아요. 것 같아요. 것 같아요. 것은 것을 것을 것 같아요. 것은 것을 하는 것을 것 같아요. 가슴이 가슴이 있는 것 같아요. 것은 것 같아요. 것 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?		TT THE WAY	100000	2 - Dominance Test is >50%
9	25	Total Cove		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 12.5				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 30 ft x 304)	20 % 01	total cover		data in Remarks or on a separate sheet)
1. Polystichum acrostichoides	20	Ver	FACIN	Problematic Hydrophytic Vegetation ¹ (Explain)
		405	TACK	
2	SCHOLDER STREET			¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6				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	William State of		Madanasa	m) tall.
11	C. S.	1.10		Herb – All herbaceous (non-woody) plants, regardless
		Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:/O	_ 20% of	total cover:	4	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 F+ + 30 F+)				height.
1. none	<u></u>			
2		the second	1.	
3				
4			TAL SAL	Hydrophytic
5				Vegetation
	Contraction and the second second second	Total Cove	-	Present? Yes No V
50% of total cover:	and the second second second			
Remarks: (Include photo numbers here or on a separate sh	eet.)		Service States	
and the standard and a standard standard standard standard at the standard standard standard standard standard				

Sampling Point: Wel:0029-4

nches)	Color (moist)		Color (moist)	0/0	Type	Loc ²	Texture		Remarks		
	1041 43	100					LS				2
		· <u> </u>								<u></u>	
			<u> </u>								
			1								
								-			-
		·	ilia and a destruction I - A - I - I - I - I - I - I - I - I -	-							
										11.2	
							2				- 24
pe: C=Con dric Soil In	ncentration, D=Dep idicators:	letion, RM=R	educed Matrix, N	IS=Masked	Sand Gr	ains.	² Location: P Indic	ators for Pro			oils
Black Histi	pedon (A2)		Dark Surface Polyvalue B Thin Dark S Loamy Gley	elow Surfac urface (S9)	(MLRA		148)	2 cm Muck (A Coast Prairie (MLRA 147 Piedmont Flo	Redox (A16 7, 148)	5)	
Stratified L	Layers (A5)		Depleted M	atrix (F3)			104	(MLRA 136	5, 147)		
	k (A10) (LRR N) Below Dark Surfac	e (A11)	Redox Dark				Ξ.	Red Parent M Very Shallow	Dark Surfac	ce (TF12))
Sandy Mu	rk Surface (A12) ucky Mineral (S1) (LRR N,	Redox Dep Iron-Manga	nese Mass		LRR N,	_	Other (Explai	n in Remark	(S)	
	147, 148) eyed Matrix (S4)		MLRA 1		MLRA 1	36, 122)	³ In	dicators of hy	drophytic v	egetation	and
Sandy Re	edox (S5)		Piedmont F					wetland hydro unless disturt			nt,
	Matrix (S6) ayer (if observed)	:			Yest		1		bed of probl	ematic.	
Туре:											
	hes):						Hydric So	il Present?	Yes	_ No	1

Environmental Field Surveys Wetland Photo Page



Upland data point wdio029_u facing north.



Upland data point wdio029_u facing east.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site:	City/County: Dinwiddie Sampling Date: 3-16-16
Applicant/Owner Damining	State: VA Sampling Point: Wdio 028F.w
Investigator(s): FST - (1. Roper W. Vausha	Section, Township, Range: <u>None</u>
Landform (hillolong torrage ato): Decisions	Local relief (concave, convex, pone); (Concave, Slope (%); 3-5
Landrorm (ninsiope, terrace, etc.). <u>Ovanage</u>	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>3-5</u>
	39 Long: -77.825 Datum: WGS84
	% slopeNWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time	
Are Vegetation, Soil, or Hydrology signifi	icantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Vo Hydric Soil Present? Yes No Wetland Hydrology Present? Yes Vo	Is the Sampled Area No
logging activity preservices	F
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	apply) Surface Soil Cracks (B6)
Surface Water (A1) True Aqu	uatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	n Sulfide Odor (C1) Drainage Patterns (B10)
· · · · · · · · · · · · · · · · · · ·	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
	e of Reduced Iron (C4) Dry-Season Water Table (C2)
	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) ck Surface (C7) Saturation Visible on Aerial Imagery (C9)
	ck Surface (C7)
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 (Water Table Present? Yes No Depth (inches): <u>1 inch</u>
Saturation Present? Yes Vo Depth (inches): <u>Servface</u> Wetland Hydrology Present? Yes V No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if available:
Remarks:	
	$-\frac{1}{2}(2+2)^{n-1}$
in the second distribution of parts	$= \frac{1}{10000000000000000000000000000000000$
	the second se

US Army Corps of Engineers

Sampling Point: Wdio028F-W

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30.F1 x 30.F1)	% Cover			Number of Dominant Species	8	
1. Acer rubrum	10	ves	FAC	That Are OBL, FACW, or FAC:	0	(A)
2. Pinus tarda	5	Ves	FAC	Total Number of Dominant	6	
3		J		Species Across All Strata:	8	(B)
4						
5			in the second	Percent of Dominant Species	100	(A/B)
			•	That Are OBL, FACW, or FAC:		(AVB)
6			-	Prevalence Index worksheet:	a contraction of the	C. C
7	15			Total % Cover of:	Multiply by:	
75		= Total Cov	-	OBL species x		
50% of total cover: 7.5	20% of	total cover	:	FACW species x		
Sapling/Shrub Stratum (Plot size: 30 F4)						
1. Actor rubrum				FAC species X		
2. Liquidamber Styraciflue	10	yes	FAL	FACU species x		
3		A DECEMBER	1.1.1.1.1.1.1.1	UPL species x	5 =	-
4				Column Totals: (A	·)	_ (B)
5						
6			THE REAL	Prevalence Index = B/A =	Second Street, Second Street Street	-
			CONTRACTOR OF STATE	Hydrophytic Vegetation Indica		
7			•	1 - Rapid Test for Hydrophy	tic Vegetation	
8			·	2 - Dominance Test is >50%		
9		The second second	•	3 - Prevalence Index is ≤3.0	1	
· · · · · · · · · · · · · · · · · · ·		Total Cov		4 - Morphological Adaptation	ns ¹ (Provide sup	porting
50% of total cover: _/O	20% of	total cover:	-1	data in Remarks or on a		
Herb Stratum (Plot size: 30F4 x 30F4)				Problematic Hydrophytic Ve	엄마에는 사망가 많기에서 영향되었다. 한 번째로 4	
1. Juncus effusus	40	Ves	FACW	Problematic Hydrophytic ver	getation (CApia)
2. Chasmarthium laxum	20	no	FAC			
3. Dicharthelium acuminatum	30	Ves	FAC	¹ Indicators of hydric soil and wet be present, unless disturbed or p	land hydrology r	nust
4. Ludwinia alternitolia	10	no	FACW	A MARK THE COMPANY OF THE CASE OF A MARK THE TAXABLE AND A MARK THE TAXABLE AND A MARK THE A MARK THE TAXABLE A	STATISTICS AND	a de cara a c
5. Rubus argutas		no	FACU	Definitions of Four Vegetation	Strata:	
NE DE LA CARLE EN LA CARLES DE LE CONTRACTOR DE LA CONSTRUCTION DE LA CARLES DE LA CARLES DE LA CONTRACTÓRIA DE LA CONTRACTÓR DE LA C		A supervision of the lat	1-11-00	Tree - Woody plants, excluding	vines, 3 in. (7.6	cm) or
6				more in diameter at breast heigh	t (DBH), regard	ess of
7				height.		
8			-	Sapling/Shrub - Woody plants,	excluding vines	less
9		A State State		than 3 in. DBH and greater than	or equal to 3.28	ft (1
10	<u> </u>			m) tall.		
11		STERNAR.		Herb - All herbaceous (non-woo	dv) plants rega	rdless
	110 =	Total Cov	er	of size, and woody plants less th		laiooo
50% of total cover: 53						
Woody Vine Stratum (Plot size: 30 ft x 30 AL)				Woody vine - All woody vines g	reater than 3.28	s ft in
1. Lonicera japonica	20	Ves	FAC	height.		
2. Smilex rotundifolia	Contraction of the local division of the loc	1	A Los Provide construction for			
The state of the second sec	10	yes_	FAC			
3						
4	A Station		<u></u>	Hydrophytic		
5			1.11.2.2.1.	Vegetation	, 	
	30 =	Total Cov	er	Present? Yes	No	
50% of total cover:/S						
Remarks: (include photo numbers here or on a separate sh	neet)					
rightands. (include prioto numbers here of on a separate si	icci.)					

Sampling Point: 4:0028F.w

	ription: (Describe to Matrix	o the depth		lox Feature		or confirm	the absence	or mulcator	5.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type1	Loc ²	Texture	The shall of	Remarks	al particular in
0-12	10 yr 4/2	90	Syr ul6	8	C	m	C			
			5 yr 4/6	2	C	PL	C			
			<i>yr 110</i>						11.11.11.1	
				-						
				_				-		
	N. P. Sandara								100 million (100	a hora a hora
	Sunday and the second second		Collected and							
		an Silver				1.4		all second		
Contraction of the second	The second second second		2430 J 1 8 2 5	_				1.0		and the second
the second se	oncentration, D=Depl	etion, RM=R	educed Matrix,	MS=Masked	d Sand Gr	ains.	² Location: Pl		g, M=Matrix. oblematic Hyd	ric Soile ³
Hydric Soil			Dorth Curfo	ac (67)					(MLRA 14	
Histosol	pipedon (A2)		Dark Surfa	ce (S7) Below Surfa	Ce (S8) (AL RA 147.			Redox (A16)	")
	istic (A3)			Surface (S9			,	(MLRA 14		
Hydroge	en Sulfide (A4)			yed Matrix	(F2)		F		odplain Soils (F	-19)
	d Layers (A5)		V Depleted N					(MLRA 13		
	uck (A10) (LRR N)	(111)	the second se	k Surface (I Dark Surface					Aaterial (TF2) Dark Surface	(TE12)
	d Below Dark Surface ark Surface (A12)	= (ATT)		pressions (F					in in Remarks)	
	Aucky Mineral (S1) (L	RR N,		anese Mass		LRR N,				
A CONTRACTOR OF A CONTRACTOR O	A 147, 148)		MLRA							
	Gleyed Matrix (S4)			rface (F13)					ydrophytic vege	
Sandy F			Piedmont	Floodplain S	Soils (F19)	(MLRA 14		1. (C. 1.	ology must be bed or problem	
	d Matrix (S6) Layer (if observed):						1	Iniess distui	bed of problem	
Type:	Layer (il observeu).								,	
	nches):						Hydric Soi	I Present?	Yes_	No
Remarks:									1.1.1	
			Out	12 1-	1 .	1	4			
	0 1		re past	12 17	iens	aue	10			
	Cannot	retriev								
	Cannot high we	retriev ter tabl	e							
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Environmental Field Surveys Wetland Photo Page



Wetland data point wdio028f_w facing west.



Wetland data point wdio028f_w facing east.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: <u>ACP</u> Applicant/Owner: <u>Domination</u> nvestigator(s): <u>ESI (L. Roper, U</u> andform (hillslope, terrace, etc.): <u>H. II sto</u> Subregion (LRR or MLRA): <u>LRR P</u> Soil Map Unit Name: <u>Cccil Sandy</u> Are climatic / hydrologic conditions on the si Are Vegetation <u>K</u> , Soil <u>Soil</u> , or Hydrolegic	N. Vaughan) Sea pe Local of Lat: <u>37.639/5</u> loa m 2-7% SLop te typical for this time of year? rology significantly dis	ction, Township, Range: relief (concave, convex, nor Long:7 de Yes No (turbed? Are "Normal	State: <u>VA</u> none e): <u>Convex</u> 7. 82 5 3 9 NWI classificati If no, explain in Ren Circumstances" pre	Sampling Point: <u>Jud: 0 028.</u> Slope (%): <u>3-5</u> Datum: <u>WGS 84</u> ion:NA narks.) sent? Yes No
Are Vegetation, Soil, or Hyd SUMMARY OF FINDINGS – Attac			xplain any answers	
Hydrophytic Vegetation Present?	Yes No Yes No	Is the Sampled Area within a Wetland?		No_ <u>×</u>
Remarks: logging activity				
HYDROLOGY				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is req	and the second		Surface Soil C	rs (minimum of two required) racks (B6) tated Concave Surface (B8)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposite (B2) 	Presence of Redu	Odor (C1) neres on Living Roots (C3)	Drainage Patte	erns (B10) es (B16) /ater Table (C2)
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (Weber Obtioned Leaves (D2)	Thin Muck Surface Other (Explain in F	e (C7)	Saturation Visit Stunted or Strophic P Shallow Aquita	ible on Aerial Imagery (C9) essed Plants (D1) losition (D2)
Water-Stained Leaves (B9) Aquatic Fauna (B13)			FAC-Neutral T	
Water Table Present? Yes	No Depth (inches): _ No Depth (inches): _ No Depth (inches): _	>17	Hydrology Present	7 Yes No X
(includes capillary fringe) Describe Recorded Data (stream gauge,				
Remarks:	, , , , , , , , , , , , , , , , , , ,			

Sampling Point: web 028_4

Number of Dominant Species
Total Number of Dominant Species Across All Strata:
Total Number of Dominant Species Across All Strata:
Species Across All Strata:
Percent of Dominant Species 66.7 (A/B) Prevalence Index worksheet:
Frevelence index worksheet:
Prevalence Index worksheet:
Total % Cover of: Multiply by: OBL species x 1 =
Total % Cover of: Multiply by: OBL species x 1 =
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FAC species x 3 =
C FACU species x 4 = C_U UPL species x 5 = Column Totals: (A) (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
UPL species x 5 =
Column Totals: (A) (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
$\frac{1}{2} = 2 \cdot \text{Bormanice restrictions}$
4 - Morphological Adaptations ¹ (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation ¹ (Explain)
1 Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.
C Definitions of Four Vegetation Strata:
Bennitons of Four Vogetation on data.
Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
more in diameter at breast height (DBH), regardless of
height.
Sapling/Shrub – Woody plants, excluding vines, less
than 3 in. DBH and greater than or equal to 3.28 ft (1
m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
of size, and woody plants leas that o zo it tall.
Woody vine – All woody vines greater than 3.28 ft in
height.
<u> </u>
Vegetation Present? Yes No

Sampling Point: Wd to 028_U

Prome Description	n: (Describe	to the dept	h needed to docu			or confirm	the absence	of indicators	i.)		
Depth	Matrix		Red	ox Feature	Tunc	Loc ²	Texture		Remarks		
	olor (moist)		Color (moist)	1	LO NEICHARD		LS	1111111	Remains		_
0-12 104	r 5/3	100					_63_				1
	Contraction of the second				_					and the second	
<u></u>											
						1	<u></u>	and the second second			
									the second		1000
									Low I - 1	par yili	
		1.0					-		and the second	1	
								1 a 2 ano	1	1.00	
				-					1		
				-							
							2				
¹ Type: C=Concent	and the second se	pletion, RM=	Reduced Matrix, N	/IS=Maske	d Sand Gr	ains.	² Location: PL	=Pore Lining ators for Pro		dric Soil	s ³ :
Hydric Soil Indica Histosol (A1)	tors:		Dark Surfac	e (S7)				cm Muck (A1			
Histic Epipedo	n (A2)		Polyvalue E		ce (S8) (I	ALRA 147.		oast Prairie F			
Black Histic (A			Thin Dark S					(MLRA 147	, 148)		
Hydrogen Sulf			Loamy Gley		(F2)		— P	iedmont Floo		(F19)	
Stratified Laye 2 cm Muck (A1			Depleted M		E6)		5	(MLRA 136 led Parent Ma			
Depleted Below		ce (A11)	Depleted D	The second s				ery Shallow [
Thick Dark Su			Redox Dep	ressions (F	8)			ther (Explain			
Sandy Mucky		(LRR N,	Iron-Manga		ses (F12)	LRR N,					
MLRA 147,			MLRA 1			1221	3100	licators of hyd	tranhutic ve	notation a	nd
Sandy Gleyed			Umbric Sur Piedmont F					vetland hydro			
Stripped Matri				looupidiin	50115 (1 10)	(nless disturb			
									the second s		
Restrictive Layer):						201,001,001,001,001			
Restrictive Layer Type:	(if observed	la se de constantes									¥
Restrictive Layer Type: Depth (inches):	(if observed	la se de constantes					Hydric Soi	l Present?	Yes	_ No _	×
Restrictive Layer Type: Depth (inches): Remarks:	(if observed			17		1	1000			_ No _	4
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			_ No _	¥
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			_ No _	×
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	4
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	×
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			_ No _	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			_ No	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*
Restrictive Layer Type: Depth (inches): Remarks:	(if observed		ve past	12	inches	due	1000			<u>No</u>	*



Upland data point wdio028_u facing west.



Upland data point wdio028_u facing south.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP		City/County: Diamidd	e.	Sampling Date: 3-16-16
Applicant/Owner: Dominian			State: VA	Sampling Point: Wdio 027f.
	(being)			
Investigator(s): EST (L. Roper, W.	(talghan)	_ Section, Township, Range.	rione	Class (P()) () 3
Landform (hillslope, terrace, etc.): Depression				
Subregion (LRR or MLRA): LRP				
Soil Map Unit Name: Cecil Sandy 1	0 m 2-7% s	lope	NWI classific	cation: PFO
Are climatic / hydrologic conditions on the site ty	pical for this time of	year? Yes No	_ (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrolog	iv significant	ly disturbed? Are "Norr	nal Circumstances" r	present? Yes No
Are Vegetation, Soil, or Hydrolog			d, explain any answe	
SUMMARY OF FINDINGS – Attach s	ite map showing	ng sampling point loca	tions, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes	V No			
Hydric Soil Present? Yes	No	 Is the Sampled Are within a Wetland? 	Yes	No
Wetland Hydrology Present? Yes	No		103	
Remarks:	an the short for	a is manifesting and succession in		
NCWAM: Headwater For	t			
HYDROLOGY	051	No		
Wetland Hydrology Indicators:	terre and a state of the second second		Secondary Indic:	ators (minimum of two required)
Primary Indicators (minimum of one is required	t: check all that appl	v)	Surface Soil	Cracks (B6)
Surface Water (A1)	True Aquatic	50 12 4 10 1 2 4 10 M		getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Su		Drainage Pa	
Saturation (A3)		izospheres on Living Roots (C		
Water Marks (B1)	Presence of	Reduced Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	Recent Iron	Reduction in Tilled Soils (C6)	Crayfish Bu	
Drift Deposits (B3)	Thin Muck S			/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Expla	in in Remarks)		Stressed Plants (D1)
Iron Deposits (B5)			Geomorphic Shallow Aqu	c Position (D2)
 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) 			and the second sec	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	
Field Observations:				
	Depth (inch	es): NA		
	Depth (inch			
Saturation Present? Yes V	Depth (inch	ves): 4 Wetlar	nd Hydrology Prese	ent? Yes No
(includes capillary fringe)	and the second second			
Describe Recorded Data (stream gauge, mon	itoring well, aerial ph	iotos, previous inspections), if	available:	
Remarks:				
and the state of the second		an a		And Young Street, North

Sampling Point: Wd: 0027 F_W

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30f+ x 30f+)	% Cover	Species?		Number of Dominant Species
1. Liquidambar styraciflue	10	yes	FAC	That Are OBL, FACW, or FAC: (A)
2. Platanus orcidentalis	5	yes	FACW	Total Number of Dominant 8
3. Acer rubrum	5	yes	FAC	Species Across All Strata: (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:(DO(A/B)
6				Prevalence Index worksheet:
7		-		Total % Cover of: Multiply by:
50% of total cover:/o		= Total Cov		OBL species x 1 =
	20% 01	total cover.		FACW species x 2 =
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30ft x 30ft</u>) 1. <u>Liqu:dambar</u> Styrac: flua	15	1.01	FAC	FAC species x 3 =
2. Pinus taeda	-13	Yes	TAC	FACU species x 4 =
		yes	FAC	UPL species x 5 =
3				Column Totals: (A) (B)
4		1. <u></u>		
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7		10000000000000000000000000000000000000	The second	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	- 20	= Total Cov	ALC OF BUILD	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: _ 10		total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 30ft x 30ft)	2070 01	total cover.		data in Remarks or on a separate sheet)
1. Juneus effusus	50	yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Eupatorium capillifolium	50	ni	FACU	
3. Ludwigia alternifolia	5	hu	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Woodwardia arcolata		no	FACW	be present, unless disturbed or problematic.
5. Andropogan Virginicus	10	no	FACU	Definitions of Four Vegetation Strata:
6. Dicharthelium acuminatum	15	no	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Rubus argutus	5	no	FACU	more in diameter at breast height (DBH), regardless of height.
8	1.000		1110-	
9			1121212	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	/00 =	Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover:		
Woody Vine Stratum (Plot size: 30 ft x 30 ft)				Woody vine – All woody vines greater than 3.28 ft in height.
1. Lonicera japonica	16	yes	FAC	
2. Smilax rotundifolia	10	yes	FAC	
3.				
4.				Hudesekudia
5.	The second second	Contraction of the second	The second	Hydrophytic Vegetation
	20 =	Total Cove	er	Present? Yes No No
50% of total cover: 10	_ 20% of t	otal cover:_	4	
50% of total cover: <u>10</u> Remarks: (Include photo numbers here or on a separate sh	一,一,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1	otal cover:_	<u> </u>	

(

Sampling Point: wd: D27F-w

Depth	Matrix	and the second	A MARTINE A	Redox	x Feature	S	p-month?				
(inches)	Color (moist)	%	Color (r	noist)	%	Type	Loc ²	Textur	e	Remarks	3
0-20	10yr 5/1	95	10yr	4/6	5	٢		SCL			
Type: C=C	Concentration, D=Dep										
lydric Soil Histoso	Indicators:	pietion, RM	Dai	rk Surface	e (S7)		MLRA 147,	k _	n: PL=Pore Lin ndicators for 2 cm Muck Coast Prai	Problematic (A10) (MLRA	Hydric Soils ³ A 147)
Hydric Soil Histoso Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D	Indicators: I (A1)	ce (A11)	Dat Pol Thi Loa Det Ret Ret	rk Surface yvalue Be n Dark Su army Gleye pleted Ma dox Dark pleted Da dox Depre	e (S7) elow Surfa urface (S9 ed Matrix trix (F3) Surface (rk Surface essions (F	ace (S8) (f)) (MLRA (F2) F6) e (F7)	MLRA 147, 147, 148)	 	ndicators for 2 cm Muck Coast Prai (MLRA Piedmont (MLRA Red Parer Very Shall	Problematic (A10) (MLRA rie Redox (A1 147, 148) Floodplain Soi 136, 147)	Hydric Soils ³ A 147) 6) ils (F19) 2) ace (TF12)
Hydric Soil Histoso Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy MLR Sandy Sandy Sandy	Indicators: I (A1) ipipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) luck (A10) (LRR N) ed Below Dark Surface Dark Surface (A12)	ce (A11)	Dat Pol Thi Loa Det Ret Ret Ret Iron	rk Surface yvalue Be n Dark Su amy Gleye pleted Ma dox Dark pleted Da dox Depre n-Mangan MLRA 13 nbric Surfa	e (S7) elow Surfa urface (S9 ed Matrix trix (F3) Surface (rk Surfac essions (F nese Mass (6) ace (F13)	ace (S8) (f 9) (MLRA (F2) F6) e (F7) F8) ses (F12) (MLRA 1	MLRA 147, 147, 148) (LRR N,	 , 148) _ - - - -	Adicators for 2 cm Muck Coast Prai (MLRA Piedmont (MLRA Red Parer Very Shall Other (Exp ³ Indicators of wetland hy	Problematic (A10) (MLRA rie Redox (A1 147, 148) Floodplain Soi 136, 147) tt Material (TF ow Dark Surfa	Hydric Soils ³ (6) (15 (F19) (7) (7) (7) (7) (7) (7) (7) (7
Hydric Soil Histoso Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy Sandy Sandy Sandy Sandy Sandy	Indicators: I (A1) ipipedon (A2) distic (A3) en Sulfide (A4) ed Layers (A5) luck (A10) (LRR N) ed Below Dark Surface Oark Surface (A12) Mucky Mineral (S1) (A 147, 148) Gleyed Matrix (S4) Redox (S5)	ce (A11) (LRR N,	Dat Pol Thi Loa Det Ret Ret Ret Iron	rk Surface yvalue Be n Dark Su amy Gleye pleted Ma dox Dark pleted Da dox Depre n-Mangan MLRA 13 nbric Surfa	e (S7) elow Surfa urface (S9 ed Matrix trix (F3) Surface (rk Surfac essions (F nese Mass (6) ace (F13)	ace (S8) (f 9) (MLRA (F2) F6) e (F7) F8) ses (F12) (MLRA 1	MLRA 147, 147, 148) (LRR N, 36, 122)	 , 148) _ - - - -	Adicators for 2 cm Muck Coast Prai (MLRA Piedmont (MLRA Red Parer Very Shall Other (Exp ³ Indicators of wetland hy	Problematic (A10) (MLRA rie Redox (A1 147, 148) Floodplain Soi 136, 147) at Material (TF ow Dark Surfa plain in Remar	Hydric Soils ³ (6) (15 (F19) (7) (7) (7) (7) (7) (7) (7) (7
Hydric Soil Histoso Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy Sandy Sandy Strippe Restrictive	Indicators: I (A1) ipipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) luck (A10) (LRR N) ed Below Dark Surface Oark Surface (A12) Mucky Mineral (S1) (A 147, 148) Gleyed Matrix (S4) Redox (S5) ed Matrix (S6)	ce (A11) (LRR N,	Dan Pol Thi Loa Den Ren Ren Iron Iron Urn Pie	rk Surface yvalue Be n Dark Su amy Gleye pleted Ma dox Dark pleted Da dox Depre n-Mangan MLRA 13 nbric Surfa	e (S7) elow Surfa urface (S9 ed Matrix trix (F3) Surface (rk Surfac essions (F nese Mass (6) ace (F13)	ace (S8) (f 9) (MLRA (F2) F6) e (F7) F8) ses (F12) (MLRA 1	MLRA 147, 147, 148) (LRR N, 36, 122)	 , 148) _ - - - -	Adicators for 2 cm Muck Coast Prai (MLRA Piedmont (MLRA Red Parer Very Shall Other (Exp ³ Indicators of wetland hy	Problematic (A10) (MLRA rie Redox (A1 147, 148) Floodplain Soi 136, 147) at Material (TF ow Dark Surfa plain in Remar	Hydric Soi A 147) 6) ils (F19) 2) ace (TF12) ks) vegetation a be present

Environmental Field Surveys Wetland Photo Page



Wetland data point wdio027f_w facing west.



Wetland data point wdio027f_w facing east.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP	City/County: Din	widdie	Sampling Date: 3-16-16
Applicant/Owner:		State: VA	_ Sampling Point: Wd:0027-4
Investigator(s): ESI (Roper, Vaughen)	Section, Township,	Range: None	
Landform (hillslope, terrace, etc.):hillslope			
Subregion (LRR or MLRA): <u>LRP</u> Lat			
			and the second
Soil Map Unit Name: _ Cecil Sundy Loan		NWI classifica	
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" pr	esent? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site n	ap showing sampling poin	nt locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes	No X Is the Same within a We		No ×
Wetland Hydrology Present? Yes	_ No _ K		
HYDROLOGY			
Wetland Hydrology Indicators:			tors (minimum of two required)
Primary Indicators (minimum of one is required; chee	k all that apply)	Surface Soil (
	True Aquatic Plants (B14)		etated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)	Drainage Pat	
	Oxidized Rhizospheres on Living P		
	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So		Vater Table (C2)
	Thin Muck Surface (C7)		sible on Aerial Imagery (C9)
	Other (Explain in Remarks)		ressed Plants (D1)
Iron Deposits (B5)		Geomorphic	
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	tard (D3)
Water-Stained Leaves (B9)			phic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)
Field Observations:	44.15		
	_ Depth (inches):		
	_ Depth (inches): > 12		
Saturation Present? Yes No (includes capillary fringe)	_ Depth (inches): > 12	Wetland Hydrology Preser	t? Yes No_X
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:	and the second
Remarks: Could not retrieve	Dast 12 inches due to	o compution	
Calla Hor Terriese		- conformation	
The Second Second Second Second			
김 김 영국 영웅 김 태			

Sampling Point: ud: 027_ u

	Abaalida	Deminant	Indiantas	Deminence Test westsheet
Tree Stratum (Plot size: 30ft = 30ft)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1. Pinus tacda	5	n.	FAC	Number of Dominant Species
	10	The second and the second		
		yes	the second second second	Total Number of Dominant
The second se		STATISTICS IN CONTRACTOR	LAC	Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50 (A/B)
6				
7				Prevalence Index worksheet:
	30	= Total Cove		Total % Cover of: Multiply by:
50% of total cover: 15	20% of	total cover:	6	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 304 - 304)		total cover.		FACW species x 2 =
. 0				FAC species 35 x 3 = (05
1. None		Provide the second second second		FACU species $50 \times 4 = 200$
2	1.0.0.0.000		- Constants	3. Strik statistical statistics on experimental statistics of the statistic of the statistic statistics and the statistics.
3	A			UPL species x 5 =
4				Column Totals: 85 (A) 305 (B)
5				3 58
				Prevalence Index = B/A =3,58
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9		Constantine P	1	3 - Prevalence Index is ≤3.0 ¹
	0:	Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	_ 20% of	total cover:_		
Herb Stratum (Plot size: 3aft x 3aft)				data in Remarks or on a separate sheet)
1. Andropogon Virginicus	10	no	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Aralia spinosa	5	no	FAC	
2. Alalia Spinesa	20		-	¹ Indicators of hydric soil and wetland hydrology must
3. Eupatorium copillifolium	and the second se	yes	FACU	be present, unless disturbed or problematic.
4. Rubus argutus	20	yes	FACU	Definitions of Four Vegetation Strata:
5				
6		The state of		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				neight
8				Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10	Chine Lawrence		141. 12 (Int	m) tall.
11			2.50.00	Herb – All herbaceous (non-woody) plants, regardless
2. Comparison of the second system of the s	55 =	Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 27.5	20% of 1	otal cover:	11	
Woody Vine Stratum (Plot size: 30ft + 30ft)				Woody vine – All woody vines greater than 3.28 ft in
1. None				height.
	CELEVILLE S	and the second second	The second second	
2	The second s		1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 	
3				
4		Part and the second	18.1.19	Hydrophytic
5				Vegetation
	6 =	Total Cove	r .	Present? Yes No
50% of total cover:				
	- CAMP DISTRIBUTION			
Remarks: (Include photo numbers here or on a separate sh	eel.)			

Sampling Point: udia027_u

Depth	scription: (Describe Matrix		Redo	x Features							
inches) D-12	$\frac{Color (moist)}{10_{\gamma r} 3/1}$	108	Color (moist)			Loc ²	<u> </u>		Remarks		
					·						
ydric Soi _ Histoso		pletion, RM=F	Reduced Matrix, M Dark Surfac Polyvalue B	e (S7)			_ 2 c	ors for Pro m Muck (A	oblematic H	Hydric Soi 147)	ils ³ :
Black H Hydrog Stratifi 2 cm M Deplet Thick I Sandy MLF Sandy Sandy	Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) Muck (A10) (LRR N) ted Below Dark Surfa Dark Surface (A12) Mucky Mineral (S1) RA 147, 148) Gleyed Matrix (S4) Redox (S5) ed Matrix (S6)		Polyvalue B Thin Dark S Loarny Gley Depleted Mi Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 1: Umbric Surf Piedmont F	urface (S9) (ed Matrix (F atrix (F3) Surface (F6 ark Surface (ressions (F8) nese Masse 36) ace (F13) (f	(MLRA 1 2) 6) (F7)) s (F12) (I MLRA 13	47, 148) LRR N, 6, 122)	— Pie — Re — Ve — Otl ³ Indic	MLRA 147 edmont Flo MLRA 136 d Parent M ry Shallow her (Explain eators of hy tland hydro	odplain Soil	ls (F19) 2) ce (TF12) ks) egetation a be present	and
estrictive	e Layer (if observed):	_	7							
Depth (emarks:	inches):						Hydric Soil I	Present?	Yes	No	
	NR past la			1							

Environmental Field Surveys Wetland Photo Page



Upland data point wdio027_u facing south.



Upland data point wdio027_u facing east.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipelin	ie	City/County: Dinwiddie		_ Sampling Date: <u>10/24/2016</u>
Applicant/Owner: Dominion			State: VA	Sampling Point: wdia401f_w
Investigator(s): GB, AS		Section, Township, Ran	ge:	
Landform (hillslope, terrace, etc.):	Swale	_ Local relief (concave, conv	ex, none): <u>concave</u>	Slope (%): <u>3</u>
Subregion (LRR or MLRA):	Lat:	Long	:	Datum:
Soil Map Unit Name:			NWI classif	ication: PFO
Are climatic / hydrologic conditions	s on the site typical for this time	of year? Yes 🖌 No	(If no, explain in	Remarks.)
Are Vegetation, Soil	_, or Hydrology signific	antly disturbed? Are "N	Iormal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil	_, or Hydrology natura	lly problematic? (If nee	eded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS	- Attach site map show	wing sampling point lo	cations, transect	s, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	ン ン ン	No No No	Is the Sampled Area within a Wetland?	Yes _	~	No
Remarks:							
Saturated to tomporarily flooded DEO wa	tland loog	atad in	o owolo within o ni	no plantation: thora is no abon	nol prog	ont only	diffuse drainage patterne:

Saturated to temporarily flooded PFO wetland located in a swale within a pine plantation; there is no channel present, only diffuse drainage patterns; NCWAM key = headwater forest.

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) High Water Table (A2) Saturation (A3) Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No 🔽 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes <u>V</u> No
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:

Sampling Point: wdia401f_w

	Absolute	Dominant Ir	dicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)			Status	
Quercus phellos	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:10(A)
2. Liquidambar styraciflua	15	Yes	FAC	
3. Ulmus rubra	15	Yes	FAC	Total Number of Dominant Species Across All Strata:11 (B)
4. Pinus taeda	8	No	FAC	
5. Acer rubrum	6	No	FAC	Percent of Dominant Species
		·		That Are OBL, FACW, or FAC: 90.90909090 (A/B)
6		<u> </u>		Prevalence Index worksheet:
1	74	Tatal Cause		Total % Cover of: Multiply by:
50% of total cover: 37		= Total Cover total cover:	14.8	OBL species 0 x 1 = 0
15	20 % 01	total cover.		FACW species $5 \times 2 = 10$
Sapling/Shrub Stratum (Plot size:)	0	Vaa		FAC species $132 \times 3 = 396$
1. <u>Ulmus rubra</u>	8	Yes	FAC	11 14
2. Liquidambar styraciflua		Yes	FAC	FACU species 11 x 4 = 44
3. Acer rubrum	6	Yes	FAC	UPL species $x_5 = \frac{148}{450}$
4. Ligustrum sinense	5	No	FACU	Column Totals: (A) (B)
5 <u>.</u> Sambucus nigra	5	No	FAC	Prevalence Index = B/A = 3.04
6. Ilex decidua	5	No	FACW	
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	36	= Total Cover		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 18		total cover:	7.2	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size:5_)	2070 01		<u> </u>	data in Remarks or on a separate sheet)
1 Phytolacca americana	6	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Persicaria virginiana	4	Yes	FAC	
3. Chasmanthium laxum	3	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
		103	TAO	be present, unless disturbed or problematic.
4			<u> </u>	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				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
	13	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 6.5		total cover:	2.6	
Woody Vine Stratum (Plot size:30)				Woody vine – All woody vines greater than 3.28 ft in height.
1. Lonicera japonica	15	Yes	FAC	linght
2. Smilax rotundifolia	10	Yes	FAC	
3.				
4				
		<u> </u>		Hydrophytic
5				Vegetation Present? Yes <u>Ves</u> No
50% of total cover: 12.5		= Total Cover	5	
		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Donth	Motrix		Dede	x Feature				
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 3/3	100					L	Rendine
3-8	2.5Y 5/2	100					CL	
8-20	2.5Y 5/2	94	10YR 5/8	6	С	PL/M	SCL	
							·	
			·				<u> </u>	
			·					
					<u> </u>		. <u></u> , <u></u> ,	
				_				
		_						
¹ Tupo: C-(alation PN	I=Reduced Matrix, M	S-Mooko	d Sand Cr		² Location: DL-Dor	e Lining, M=Matrix.
	il Indicators:			S=IVIASKE	u Sanu Gia	ans.		for Problematic Hydric Soils ³ :
Histoso			Dark Surface	e (S7)				uck (A10) (MLRA 147)
	Epipedon (A2)		Polyvalue Be		ace (S8) (N	ILRA 147,		Prairie Redox (A16)
Black I	Histic (A3)		Thin Dark Su	urface (S9) (MLRA 1	47, 148)	(MLI	RA 147, 148)
	gen Sulfide (A4)		Loamy Gleye		(F2)		Piedmo	ont Floodplain Soils (F19)
Stratifie	ed Layers (A5)		Depleted Ma	trix (F3)			(MLI	RA 136, 147)
	/luck (A10) (LRR N)		Redox Dark	```	,			nallow Dark Surface (TF12)
·	ed Below Dark Surface	ce (A11)	Depleted Da				Other (Explain in Remarks)
	Dark Surface (A12)		Redox Depre		,			
	Mucky Mineral (S1) (LRR N,	Iron-Mangan		ses (F12) (LRR N,		
	RA 147, 148)		MLRA 13					
	Gleyed Matrix (S4)		Umbric Surfa	· ,	•			s of hydrophytic vegetation and
Sandy	Redox (S5)		Piedmont Flor	odplain S	Soils (F19)	(MLRA 14	8) wetland	hydrology must be present,
Strippe	ed Matrix (S6)		Red Parent I	Material (F	-21) (MLR	A 127, 147	') unless d	isturbed or problematic.
	e Layer (if observed)):						
Type:	none							
Depth (i	inches):						Hydric Soil Pres	ent? Yes 🖌 No
Remarks:								



Wetland data point WDIA401f_w facing south



Wetland data point WDIA401f_w facing northwest

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County:	Dinwiddie County	_ Sampling Date: 10/24/2016
Applicant/Owner: Dominion		State: VA	
Investigator(s):B, AS	Section, Tow	nship, Range: <u>No PLSS in this are</u>	
Landform (hillslope, terrace, etc.): gentle slope		cave, convex, none): <u>none</u>	_
Subregion (LRR or MLRA): P Lat: 37.032	9959	Long: <u>-77.82839646</u>	Datum: WGS 1984
Soil Map Unit Name:		NWI classif	fication: UPLAND
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes	No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrologysign	ificantly disturbed?	Are "Normal Circumstances"	' present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natu	rally problematic?	(If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	owing sampling	point locations, transect	s, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	_ No
Remarks: Upland data point taken on a gentle slo	pe above the to	e of slope for a satu	rated PFO wetland located in	a swale within a	a pine plantation.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	y) Surface Soil Cracks (B6)
Surface Water (A1) True Aquati	Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen S	ulfide Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rh	izospheres 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 Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck S	Surface (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 Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (incl	es):
Water Table Present? Yes No 🖌 Depth (incl	es):
Saturation Present? Yes No <u>'</u> Depth (incl (includes capillary fringe)	es): Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	
no hydrology indicators present	

Sampling Point: wdia401_u

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
1 Pinus taeda	70	Yes	FAC	That Are OBL, FACW, or FAC:4 (A)
2. Liquidambar styraciflua	5	No	FAC	
				Total Number of Dominant
3				Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 66.66666666 (A/B)
6				
7				Prevalence Index worksheet:
/·	75			Total % Cover of: Multiply by:
50% of total cover: 37.5		= Total Cove	er 15	$OBL species \qquad 0 \qquad x \ 1 = 0$
15	20% of	total cover:	10	
Sapling/Shrub Stratum (Plot size:)				FACW species $0 x^2 = 0$
1. Liquidambar styraciflua	15	Yes	FAC	FAC species X 3 =
_{2.} Ulmus alata	8	Yes	FACU	FACU species x 4 =136
3. Quercus phellos	5	No	FAC	UPL species $0 \times 5 = 0$
4. Carya glabra	5	No	FACU	Column Totals: 156 (A) 502 (B)
5. Acer rubrum	5	No	FAC	Prevalence Index = $B/A = 3.21$
_{6.} Quercus falcata	3	No	FACU	
7. Quercus alba	3	No	FACU	Hydrophytic Vegetation Indicators:
8. Ulmus rubra	2	No	FAC	1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 23	20% of	total cover:	9.2	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
1. Chasmanthium laxum	5	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				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.				
	5	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 2.5		total cover:		
	20 % UI	total COVER.		Woody vine – All woody vines greater than 3.28 ft in
	4 -	Ma a	FAOL	height.
1. Vitis aestivalis	15	Yes	FACU	
2. Lonicera japonica	15	Yes	FAC	
3.				
4.				
				Hydrophytic
5				Vegetation
		= Total Cove	•	Present? Yes Vo No
50% of total cover: 15	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Des	cription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence of in	dicators.)	
Depth	Matrix			x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	i
0-5	2.5Y 4/3	100					SL		
5-11	2.5Y 5/3	100					SL		
11-20	2.5Y 5/4	100					SL		
¹ Type: C=C	concentration, D=Dep	etion. RM=	Reduced Matrix. MS	S=Masked	Sand Gra	ains.	² Location: PL=Po	ore Lining, M=Matrix	۲.
	Indicators:	,						for Problematic H	
Black H Hydrog Stratifie 2 cm M Deplete Thick D	I (A1) pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR N) ed Below Dark Surface ark Surface (A12) Mucky Mineral (S1) (L	. ,	Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Depleted Dai Redox Depre	elow Surfac Inface (S9) d Matrix (I trix (F3) Surface (F k Surface essions (F8	(MLRA 1 F2) 6) (F7) 3)	47, 148)	148) Coast (ML Piedm (ML Very S	Muck (A10) (MLRA Prairie Redox (A16 .RA 147, 148) ont Floodplain Soil: .RA 136, 147) Shallow Dark Surfac (Explain in Remark	s) s (F19) ce (TF12)
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) ice (F13) (oodplain So	MLRA 13 oils (F19)	6, 122) (MLRA 14	(8) wetland	rs of hydrophytic ve I hydrology must be disturbed or proble	present,
	Layer (if observed):								
Type: no									
Depth (in	nches):						Hydric Soil Pres	sent? Yes	No
Remarks:									



Upland data point WDIA401_u facing east



Upland data point WDIA401_u facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Dinwiddie		Sampling Date: 11/6/2014
Applicant/Owner: DOMINION		State: VA	Sampling Point: WDIC001f_w
Investigator(s): Team C	Section, Township, Range:	No PLSS in this area	
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex,		Slope (%): <u>0</u>
Subregion (LRR or MLRA): P	at: <u>37.01415519</u> Long: _ ⁻	77.83616356	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent s	slopes, occasionally flooded	NWI classific	cation: PFO1/EM1Eb, PFO5Fb
Are climatic / hydrologic conditions on the site typical	I for this time of year? Yes No	(If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Nor	mal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If neede	d, explain any answe	ers in Remarks.)
			• • • • • •

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u> </u>	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:			d - d		
PFO wetland associated with Beaver Po	nd Creek. Wetla	and is temporarily flo	Doded.		

Wetland Hydrology Indicato	rs:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	of one is required; ch	neck 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)	-	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	Coils (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 Aeri	0, ()		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):1	
		Depth (inches):0	
Water Table Present?		Depth (inches)	
Saturation Present?		Depth (inches):0	Wetland Hydrology Present? Yes <u></u> No
Saturation Present? (includes capillary fringe)	Yes 🖌 No 🔤		
Saturation Present? (includes capillary fringe)	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe)	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	
Saturation Present? (includes capillary fringe) Describe Recorded Data (stre Remarks:	Yes 🖌 No 🔤	Depth (inches):0	

HYDROLOGY

Sampling Point: WDIC001f_w

	Absolute	Dominant	ndiaatar	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Dominant Species?		
	40	Yes	FAC	Number of Dominant Species
1. Acer rubrum				That Are OBL, FACW, or FAC: 5 (A)
_{2.} Betula nigra	10	Yes	FACW	
				Total Number of Dominant
3		· · · · · · · · · · · · · · · · · · ·		Species Across All Strata:5 (B)
4				
		· · · · · · · · · · · · · · · · · · ·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				
		· · · · · · · · · · · · · · · · · · ·		Prevalence Index worksheet:
7		· · · · · · · · · · · · · · · · · · ·		Tatal 0/ Occurrent Malifabele
	50	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: 25	20% of	total cover:	10	OBL species 85 x 1 = 85
15	2078.01	total cover.		$\frac{25}{50}$
Sapling/Shrub Stratum (Plot size:)				FACW species $x = $
1. Alnus serrulata	60	Yes	OBL	FAC species 40 x 3 = 120
···		·		FACU species $0 x 4 = 0$
2				
3				UPL species x 5 =
				Column Totals: 150 (A) 255 (B)
4				Column Totals: (A) (B)
5				47
		·		Prevalence Index = B/A =1.7
6		·		Hydrophytic Vegetation Indicators:
7				
				1 - Rapid Test for Hydrophytic Vegetation
8		·		 2 - Dominance Test is >50%
9				
0	60			\checkmark 3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 30	20% of	total cover:	12	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
	05			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex lupulina	25	Yes	OBL	
2. Agrostis stolonifera	15	Yes	FACW	
		· - <u></u>		¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4		· - <u></u>		Definitions of Four Vegetation Strata:
5		. <u> </u>		
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				
		· · · · · · · · · · · · · · · · · · ·		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
	40	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20		total cover:		
	20 /0 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
1				
2				
3				
4				Hydrophytic
5				Vegetation
	-			Present? Yes <u>No</u>
		= Total Cove	<u> </u>	
50% of total cover:0	20% of	total cover:	0	
Bomarka: (Include abote numbers here or on a congrete a	haat)			
Remarks: (Include photo numbers here or on a separate s	neet.)			

Profile Desc	cription: (Describe to	o the dep	oth needed to docun	nent the i	ndicator of	or confirm	n the absence	of indicators.)
Depth	Matrix			x Features	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	2.5 Y 4/2	95	10 YR 4/6	5	С	PL	SIC	
8-16	5 Y 5/2	95	10 YR 4/6	5	С	PL	SIC	
							·	
	·					. <u> </u>	·	
						·		
						<u> </u>	·	
. <u>.</u>							<u> </u>	
	oncentration, D=Deple	tion, RM	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (M	ILRA 147,	148) C	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su	rface (S9)) (MLRA 1	47, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		P	Piedmont Floodplain Soils (F19)
<u>Stratifie</u>	d Layers (A5)		Depleted Mat	trix (F3)				(MLRA 136, 147)
2 cm Mi	uck (A10) (LRR N)		Redox Dark S	Surface (F	6)		V	ery Shallow Dark Surface (TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		C	Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (Fa	8)			
Sandy N	/lucky Mineral (S1) (LF	RR N,	Iron-Mangan	ese Masse	es (F12) (I	_RR N,		
-	A 147, 148)		MLRA 13		· / ·			
	Gleyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)	³ Ind	licators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent M	•	, ,	•		less disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:								
Hydric soil pro	esent							



Photo 1 Wetland data point WDIC001f_w facing northwest



Photo 2 Wetland data point WDIC001f_w facing northeast

Project/Site: Atlantic Coast Pipeline	City/County: Dinwid	die	_ Sampling Date: 11/6/2014
Applicant/Owner: DOMINION		State: VA	Sampling Point: WDIC001_u
Investigator(s): Team C	Section, Township,	Range: No PLSS in this are	а
Landform (hillslope, terrace, etc.): Hill Slope		onvex, none): <u>none</u>	
Subregion (LRR or MLRA): P	Lat: <u>37.01405053</u> L	_ong:77.83615099	Datum: WGS 1984
Soil Map Unit Name: Cecil sandy loam, 7 to 15 p	ercent slopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typ	ical for this time of year? Yes 🔽 No	o (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	/ significantly disturbed? Ar	re "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	/ naturally problematic? (If	needed, explain any answe	ers in Remarks.)

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

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

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

Sampling Point: WDIC001_u

· ·	AL 1.4	-	P. 7	
Tree Stratum (Plot size: 30)	Absolute	Dominant I		Dominance Test worksheet:
		Species?		Number of Dominant Species
_{1.} Carpinus caroliniana	5	Yes	FAC	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
				(=)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>33.33333333</u> (A/B)
6				Prevalence Index worksheet:
7				
	5	= Total Cove		Total % Cover of: Multiply by:
			1	OBL species x 1 =0
50% of total cover: 2.5	20% of	total cover:		
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\begin{array}{c} 0 \\ x 2 = \\ \end{array}$
Liquidambar styraciflua	40	Yes	FAC	FAC species 45 x 3 = 135
••				110 140
2. Ilex opaca	30	Yes	FACU	FACU species x 4 =
3 Quercus alba	10	No	FACU	UPL species $0 x 5 = 0$
3			17.00	155 575
4				Column Totals: (A) (B)
5				Prevalence Index = $B/A = 3.7$
6				
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	80	= Total Cove	r	
50% of total cover: 40	20% of	total cover:	16	4 - Morphological Adaptations ¹ (Provide supporting
	20 /8 01			data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				· /
1. Dendrolycopodium obscurum	30	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
••	20			
2. Polystichum acrostichoides	20	Yes	FACU	The discrete section of the data are the end over the end the data being encoded.
3. Vaccinium angustifolium	20	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
0				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
7				neight.
8				Conting/Charte Weatherlants such diagonians lass
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	70			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: ³⁵	20% of	total cover:	14	
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	-	= Total Cove		Present? Yes No
			•	· · · · · · · · · · · · · · · · ·
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet)			
Tremains. (include proto numbers here of on a separate s	neet.)			

Profile Des	cription: (Describe t	o the dept	h needed to docur	nent the indi	icator o	or confirm	the absence of ir	dicate	ors.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u> T	ype ¹	Loc ²	Texture		Remarks	
0-3	2.5 Y 4/3	100					S			
3-12	2.5 Y 5/4	100					S			
				<u> </u>						
1							2			
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked Sa	and Gra	ins.	² Location: PL=Pc			
Hydric Soil										lydric Soils ³ :
Histoso	()		Dark Surface						A10) (MLRA	
	pipedon (A2) listic (A3)		Polyvalue Be						e Redox (A16 • 7, 148))
	en Sulfide (A4)		Loamy Gleye			47, 140)	•		odplain Soils	(E10)
	d Layers (A5)		Depleted Ma	· ,					6, 147)	5 (113)
	uck (A10) (LRR N)		Redox Dark	. ,			•		/ Dark Surfac	e (TF12)
	d Below Dark Surface	(A11)	Depleted Da	• • •	7)				in in Remark	
·	ark Surface (A12)	()	Redox Depre	•	,			、 I		,
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	. ,	(F12) (L	.RR N,				
MLR	A 147, 148)		MLRA 13	6)						
Sandy (Gleyed Matrix (S4)		Umbric Surfa	ice (F13) (ML	.RA 13	6, 122)	³ Indicato	rs of h	ydrophytic ve	getation and
Sandy F	Redox (S5)		Piedmont Flo	odplain Soils	(F19)	(MLRA 14	8) wetland	hydro	logy must be	present,
	d Matrix (S6)		Red Parent M	/laterial (F21)	(MLR/	A 127, 147	') unless	disturb	ed or probler	natic.
Restrictive	Layer (if observed):									
Туре:										
Depth (in	iches):						Hydric Soil Pres	sent?	Yes	No
Remarks:							1			
No hydric soi	l present									



Photo 1 Upland data point WDIC001_u facing north



Photo 2 Upland data point WDIC001_u facing south

Project/Site: Atlantic Coast Pipeline		City/County:	Dinwiddie County		_ Sampling Date: <u>4/30/2016</u>
Applicant/Owner: Dominion				State: VA	Sampling Point: <u>wdia400f_w</u>
Investigator(s): <u>GB, CG</u>		Section, Tow	/nship, Range: ^{No F}	PLSS in this are	a
Landform (hillslope, terrace, etc.): _swa	e				Slope (%): <u>3</u>
Subregion (LRR or MLRA): P	Lat: <u>37.01158</u>	386	Long: <u>-77.83</u>	3702373	Datum: WGS 1984
Soil Map Unit Name: Cecil sandy loam					
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	Hydrology signific	cantly disturbed?	Are "Normal C	Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or	Hydrology natura	lly problematic?	(If needed, ex	plain any answ	ers in Remarks.)
SUMMARY OF FINDINGS - A	ttach site map show	wing sampling	j point locatior	ns, transect	s, important features, etc.
Hydrophytic Vegetation Present?	Yes 🖌 No_	L. 4.	0		
Hydric Soil Present?	Yes 🖌 No	is the	e Sampled Area n a Wetland?	Yes 🗸	No
Wetland Hydrology Present?	Yes 🖌 No				
Remarks:					
Saturated to temporarily flooded PFO	wetland located in a swale	: buffered by mixe	d hardwoods surrou	unded by havfie	ld, row crop field, and a recent

Saturated to temporarily flooded PFO wetland located in a swale; buffered by mixed hardwoods surrounded by hayfield, row crop field, and a recent clearcut. Outflow forms a head cut which is the origin of intermittent stream sdia400. NCWAM key = Headwater Forest.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres on Living 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 <u>Depth (inches): 4</u>	
Saturation Present? Yes <u></u>	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:
Remarks:	
Remains.	

Sampling Point: wdia400f_w

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)		Species?	Status	
Acer rubrum	20	Yes	FAC	Number of Dominant Species
2 Liquidambar styraciflua	10	Yes	FAC	That Are OBL, FACW, or FAC: 9 (A)
=-	10	Yes	FAC	Total Number of Dominant
3. Ulmus rubra				Species Across All Strata: 10 (B)
4. Celtis laevigata	5	No	FACW	
5				Percent of Dominant Species
		·		That Are OBL, FACW, or FAC: 90 (A/B)
6		· . <u></u>		Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
		= Total Cove		
50% of total cover: 22.5	20% of	total cover:	9	OBL species X I =
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = 100$
1 Ligustrum sinense	10	Yes	FACU	FAC species $\frac{85}{x 3} = \frac{255}{x 3}$
2. Salix nigra	10	Yes	OBL	FACU species x 4 = 40
3. Platanus occidentalis	5		FACW	0
3. <u>Platanus occidentais</u>		No		UPL species 0 $x = 0$ 200 $(x) = 495$ (b)
4. Sambucus nigra	5	No	FAC	Column Totals: (A) (B)
5. Acer rubrum	5	No	FAC	2.47
··	-	·		Prevalence Index = B/A =2.47
6		·		Hydrophytic Vegetation Indicators:
7	. <u> </u>		<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
8			. <u> </u>	✓ 2 - Dominance Test is >50%
9.				
	35	= Total Cove	r	\checkmark 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:17.5		total cover:	7	4 - Morphological Adaptations ¹ (Provide supporting
	20% 0	total cover.		data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Onoclea sensibilis	30	Yes	FACW	
2. Juncus effusus	20	Yes	FACW	
3 Poa palustris	15	Yes	FACW	¹ 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
7				more in diameter at breast height (DBH), regardless of 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.				
	65	Tatal Caus		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 32.5		= Total Cove		or size, and woody plants less than 5.20 it tail.
	<u>20% of</u>	total cover:	10	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1. Lonicera japonica	25	Yes	FAC	
2. Rubus hispidus	20	Yes	FACW	
3. Toxicodendron radicans	10	No	FAC	
		·		
4		·		Hydrophytic
5		. <u></u>		Vegetation
	55	= Total Cove	r	Present? Yes Vo No
50% of total cover:27.5		total cover:		
Remarks: (Include photo numbers here or on a separate s	neet.)			

Profile Des	cription: (Describe te	o the dep	oth needed to docum	nent the i	ndicator of	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 4/1	100					CL	
6-18	10YR 5/1	85	7.5YR 4/6	15	С	PL/M	SCL	
		. <u> </u>						
¹ Type: C=C	oncentration, D=Deple	etion, RM	=Reduced Matrix, MS	S=Masker	Sand Gra	ains	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil								cators for Problematic Hydric Soils ³ :
Histoso	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be	. ,	ce (S8) (M	LRA 147,		Coast Prairie Redox (A16)
Black H	istic (A3)		Thin Dark Su	rface (S9)) (MLRA 1	47, 148)		(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2)		I	Piedmont Floodplain Soils (F19)
Stratifie	d Layers (A5)		 Depleted Mat 	rix (F3)				(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S	`	,			Very Shallow Dark Surface (TF12)
·	d Below Dark Surface	(A11)	Depleted Dar				(Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre	•				
	Mucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (I	_RR N,		
	A 147, 148)		MLRA 130	,		6 400)	³ In	diastors of hydrophytic vegetation and
	Gleyed Matrix (S4) Redox (S5)		Umbric Surfa Piedmont Flo		•			dicators of hydrophytic vegetation and etland hydrology must be present,
	d Matrix (S6)		Red Parent M	•	, ,	•	•	nless disturbed or problematic.
	Layer (if observed):					A 127, 147) ui	niess distaibed of problematic.
Type: no								
Depth (in							Hydric Soi	il Present? Yes 🖌 No
							Tryunc 30	
Remarks:								



Photo 1 Wetland data point WDIA400f_w facing east



Photo 2 Wetland data point WDIA400f_w facing west

Project/Site: Atlantic Coast Pipeline	City/County:	Dinwiddie County	Sampling Date: 4/30/2016
Applicant/Owner: Dominion		State: V/	A Sampling Point: <u>wdia400_u</u>
Investigator(s): GB, CG	Section, Tov	vnship, Range: <u>No</u> PLSS in th	is area
Landform (hillslope, terrace, etc.): slope		icave, convex, none): <u>none</u>	Slope (%): <u>10</u>
Subregion (LRR or MLRA): P Lat: 37.011676		Long: <u>-77.83703366</u>	Datum: <u>WGS 1984</u>
Soil Map Unit Name: Cecil sandy loam, 7 to 15 percent slopes		NWI c	lassification: None
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes	No (If no, expla	in in Remarks.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed?	Are "Normal Circumsta	nces" present? Yes 🗹 No
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showi	ing sampling	point locations, trans	sects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No 🗸		Is the Sampled Area within a Wetland?	Yes	No	
Remarks: Upland data point taken on a slope in a	a recent clear cu	t for a satu	rated to te	mporarily flooded PFO wetl	and located in	a swale.	

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 Plan	ts (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide	Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizosph	neres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Redu	ced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduc	ction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	e (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in F	Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No <u></u>	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes <u>No</u> Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	
no hydrology indicators present	

Sampling Point: wdia400_u

Tree Stratum (Plot size: 30) % Cover 5 Species? Yes Status FACU Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) 2. Liquidambar styraciflua 5 Yes FAC Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) 3.
1. Juglans nigra3YesFACUThat Are OBL, FACW, or FAC:2(A)2. Liquidambar styraciflua5YesFACTotal Number of Dominant8(B)4Percent of Dominant Species8(B)6Percent of Dominant Species25(A/B)7Percent of Dominant Species25(A/B)6Percent of Dominant Species25(A/B)7Percent of Dominant Species77 </td
2. Explored model 3. Total Number of Dominant 8 (B) 4.
3.
4.Percent of Dominant Species That Are OBL, FACW, or FAC:256.7. 10 $=$ Total Cover 20% of total cover:Prevalence Index worksheet:7. 10 $=$ Total Cover 20% of total cover: 20% of total cover: 2 9. 10 $=$ Total Cover 20% of total cover: 20% of total cover: 20% $FACU1.Rubus argutus20\% Yes= FACU102\% x 4 =408\%= 102= 4 =2.Liriodendron tulipifera20\% Yes= FACUFACU= FACU102\% x 4 =408\%= 0= 03.Ligustrum sinense15\% Yes= FACU177\% (A)623\% (B)= 05.Ulmus alata5\% No= FACUPrevalence Index = B/A =3.51\%= Hydrophytic Vegetation Indicators:$
5. Precent of Dominant Species 25 (A/B) 6. That Are OBL, FACW, or FAC: 25 (A/B) 7. 10 = Total Cover Prevalence Index worksheet: 50% of total cover: 5 20% of total cover: 2 Sapling/Shrub Stratum (Plot size: 15 Yes FACU 1. Rubus argutus 20 Yes FACU 2. Liriodendron tulipifera 20 Yes FACU 3. Ligustrum sinense 15 Yes FACU 4. Liquidambar styraciflua 10 No FAC 5. Ulmus alata 5 No FACU 6. 7 3.51 7 Hydrophytic Vegetation Indicators:
6.Prevalence Index worksheet:7.10= Total Cover50% of total cover:520% of total cover:2Sapling/Shrub Stratum (Plot size:15)1.Rubus argutus20Yes2.Liriodendron tulipifera20Yes3.Ligustrum sinense15Yes4.Liquidambar styraciflua10No5.Ulmus alata5No6.73.517Hydrophytic Vegetation Indicators:
Prevalence Index worksheet:Total Cover 50% of total cover:10 50% of total cover:Total Cover 20% of total cover:Multiply by: 20 Sapling/Shrub Stratum 1. Rubus argutus1520YesFACU FACUFACU FACUFACU species0 $x 1 = 0$ $x 2 = 20$ 2. Liriodendron tulipifera 3. Ligustrum sinense20YesFACU FACUFACU species10 $x 2 = 20$ FAC species4. Liquidambar styraciflua10NoFAC FACU0 $x 5 = 0$ Column Totals:0 $x 5 = 0$ Column Totals:05. Ulmus alata5NoFACU FACUPrevalence Index = B/A = 3.51(B) Hydrophytic Vegetation Indicators:
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
Sapling/Shrub Stratum Sapling/Shrub Stratum (Plot size: 15))20 with that cover.FACU FACUFACW species10 with size with siz
Saping/Shrub Stratum 1. Rubus argutus20YesFACU FACUFACU FACUFAC species 65 $x 3 =$ $x 3 =$ 195 $x 4 =$ 2. Liriodendron tulipifera20YesFACU FACUFACU FACUFACU species 102 $x 4 =$ $x 4 =$ 408 408 3. Ligustrum sinense15YesFACU FACUUPL species 0 $x 5 =$ $x 5 =$ 0 $column Totals:177(A)623623(B)5. Ulmus alata5NoFACUFACUPrevalence Index = B/A =3.516.7710Hydrophytic Vegetation Indicators:$
2. Liriodendron tulipifera20YesFACUFACUFACU species 102 $x 4 =$ 408 3. Ligustrum sinense15YesFACUUPL species0 $x 5 =$ 04. Liquidambar styraciflua10NoFACColumn Totals:177(A)623(B)5. Ulmus alata5NoFACUPrevalence Index = B/A =3.513.516.77710Hydrophytic Vegetation Indicators:
2.Liriodendron tulipitera20YesFACUFACU Species 10 $X 4 = $ 10 3.Ligustrum sinense15YesFACUUPL species0 $x 5 = $ 04.Liquidambar styraciflua10NoFACColumn Totals:177(A)623(B)5.Ulmus alata5NoFACUPrevalence Index = B/A = 3.513.516
3. Ligustrum sinense 15 Yes FACU UPL species $x 5 = $ $x = $ 4. Liquidambar styraciflua 10 No FAC Column Totals: 177 (A) 623 (B) 5. Ulmus alata 5 No FACU Prevalence Index = B/A =3.51 3.51 6. 7 7 7 7 7 7 7 7
4. Liquidambar styraciflua 10 No FAC Column Totals: (A) (A) (B) 5. Ulmus alata 5 No FACU Prevalence Index = B/A =(B) 6 7 Hydrophytic Vegetation Indicators:
S. onno didd Prevalence Index = B/A = 6 7
6. Prevalence Index = B/A = 7 Hydrophytic Vegetation Indicators:
T Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
8 2 - Dominance Test is >50%
9 3 - Prevalence Index is ≤3.0 ¹
= 10tal Cover 4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20% of total cover: data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)
2. Geranium maculatum 5 Yes FACU
3.
4 Definitions of Four Vegetation Strata: 5
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6 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
$\frac{17}{10}$ = Total Cover of size, and woody plants less than 3.28 ft tall.
50% of total cover: 8.5 20% of total cover: 3.4
Woody Vine Stratum (Plot size: 30) Woody vine All woody vines greater than 3.28 ft in height.
1. Lonicera japonica 40 Yes FAC
2. Rubus hispidus 10 No FACW
3. Toxicodendron radicans 10 No FAC
4. Vitis aestivalis 10 No FACU
- Parthenocissus quinquefolia 10 Hydrophytic
Vegetation
50% of total cover: 40 20% of total cover: 16
Remarks: (Include photo numbers here or on a separate sheet.)
Remarks: (Include photo numbers here or on a separate sheet.)
Remarks: (Include photo numbers here or on a separate sheet.)
Remarks: (Include photo numbers here or on a separate sheet.)

Depth	Matrix		Red	ox Features			
inches)	Color (moist)	%	Color (moist)	<u>%</u> Type	¹ Loc ²	Texture	Remarks
0-4	10YR 3/2	100				L	
4-8	10YR 4/3	100				SL	
8-16	10YR 5/3	100		· ·		SL	
16-20	10YR 5/1	100				SL	
lydric Soil	Concentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked Sand	Grains.		or Problematic Hydric Soils
Histoso	ol (A1) Epipedon (A2)		Dark Surface	e (S7) elow Surface (S8)	(MI RA 147		uck (A10) (MLRA 147) rairie Redox (A16)
	Histic (A3)			urface (S9) (MLR			A 147, 148)
	jen Sulfide (A4)			ed Matrix (F2)		•	nt Floodplain Soils (F19)
	ed Layers (A5)		Depleted Ma	()		•	A 136, 147)
	luck (A10) (LRR N)			Surface (F6)			allow Dark Surface (TF12)
_ ·	ed Below Dark Surfac	e (A11)		ark Surface (F7)		Other (E	Explain in Remarks)
	Dark Surface (A12)		Redox Depr	. ,			
-	Mucky Mineral (S1) (I	_RR N,	Iron-Mangar MLRA 13	nese Masses (F12	2) (LRR N,		
	RA 147, 148) Gleyed Matrix (S4)			oo; ace (F13) (MLRA	126 122)	³ Indiactora	of hydrophytic vegetation and
	Redox (S5)			oodplain Soils (F1	•		ivdrology must be present.
	ed Matrix (S6)			Material (F21) (M	<i>,</i> .	•	sturbed or problematic.
	Layer (if observed):				, 141		
Type: n							
	nches):					Hydric Soil Prese	nt? Yes No 🗾
emarks:							



Photo 1 Upland data point wdia400_u facing east



Photo 2 Upland data point wdia400_u facing west

AAD	_ City/County: _ PINWId	die Sampling Date: 12 (8/1	5
Project/Site: ACF	_ City/County: VIII VII 9	Sampling Date: 12/0/1	71.f.
Applicant/Owner: DOMINION		State: VA Sampling Point: Wdio0	60.0
Investigator(s): L-ROPER J. ICIEFU	Section, Township, Range:	NA	C. ol
Landform (hillslone terrace, etc.): FIGHWD001	Local relief (concave, convex, no		10/10
Subregion (LRR or MLRA): LRRP Lat: 37.00)944 Long: -7	7.83771 Datum: W658	4
Soil Map Unit Name: Appling sandy loam,	all much a l	NWI classification:P.FO	
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes V No	(If no, explain in Remarks.)	
		al Circumstances" present? Yes X No	
Are Vegetation, Soil, or Hydrology significant		explain any answers in Remarks.)	
Are Vegetation, Soil, or Hydrology naturally			tc.
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locati	ons, transects, important leatered, o	
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland?	Yes / No	
Remarks:			
×			
8			
HYDROLOGY		Secondary Indicators (minimum of two require	ed)
Wetland Hydrology Indicators:	1.0	Surface Soil Cracks (B6)	
Primary Indicators (minimum of one is required: check all that app		Sparsely Vegetated Concave Surface (B8	B)
	tic Plants (B14) Sulfide Odor (C1)	Drainage Patterns (B10)	
	hizospheres on Living Roots (C3		
	of Reduced Iron (C4)	Dry-Season Water Table (C2)	
	n Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)	
	Surface (C7)	Saturation Visible on Aerial Imagery (C9)	
	plain 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 (in			
Water Table Present? Yes No Depth (in	()	d Hydrology Present? Yes X No	
Saturation Present? Yes <u>Ves</u> No Depth (in (includes capillary fringe)			_
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if a	available:	
Remarks:			

VEGETATION (Four Strata) - L	Jse scientific names of p	olants
------------------------------	---------------------------	--------

ETATION (Four Strata) – Use scientific na		Dominant Indicato	Dominance Test worksheet:
Stratum (Plot size: 2012094)	% Cover	Species? Status	Number of Dominant Species
ter rubrum	6	Y FAL	That Are OBL, FACW, or FAC: (A)
carpinus caroliniana	6	Y FAC	Total Number of Dominant
			_ Species Across All Strata: (B)
			Percent of Dominant Species
			- That Are OBL, FACW, or FAC: (A/B)
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x1 =
	10	= Total Cover	FACW species x 2 =
50% of total cover: 5	20% 0	f total cover:	
ng/Shrub Stratum (Plot size: 30) 2011)	-	V End	FAC species x 3 =
cer rubrum	5	Y FAC	FACU species x 4 = UPL species x 5 =
	511.05		
			Column Totals: (A) (B)
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			_ X 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0 ¹
2	20	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	2 20% 0	f total cover:l	_
b Stratum (Plot size: 2013011)			¹ Indicators of hydric soil and wetland hydrology must
none			be present, unless disturbed or problematic.
			Definitions of Four Vegetation Strata:
and a set of the set o		and the second and a second second	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
			more in diameter at breast height (DBH), regardless of
an a			height.
and a second second second and a second s			Sapling/Shrub - Woody plants, excluding vines, less
We the elements to see a set of the second			than 3 in. DBH and greater than 3.28 ft (1 m) tall.
and the second second			Herb - All herbaceous (non-woody) plants, regardless
The standard and set of the			of size, and woody plants less than 3.28 ft tall.
2			- Woody vine - All woody vines greater than 3.28 ft in
			height.
		a daget	
and a second product of the second product o	0	= Total Cover	
50% of total cover:	20% 0	of total cover:	
ody Vine Stratum (Plot size: 30X 30++)		N	
smilax rotunditolia	20	Y FAI	
			-
	-		_
•	- 1		
	10	= Total Cover	→ Hydrophytic Vegetation ✓
5	2004	of total cover: 2	Present? Yes <u>No</u>
50% of total cover:			_
narks: (If observed, list morphological adaptations be	ow).		

US Army Corps of Engineers

SOIL

ofile Des	cription: (Describe	to the dep	th needed to docum	ent the i	ndicator	or confirm	the absen	ce of indicators	5.)
epth	Matrix			Feature			-		D
nches)	Color (moist)	<u>%</u>	Color (moist)	_%	Type'	Loc	Texture		Remarks
-20	10YR5/1	014	NROND		C	IN	SL		
							10.00.000.000.000		
	·								
			-						
		-							
	Concentration D=Dou	niction PM	=Reduced Matrix, MS	Masker	I Sand G	ains	² Location:	PL=Pore Lining	M=Matrix
	Indicators:	pietion, RM	-Reduced Matrix, Mc	-masket	a Sand Or	2013.			blematic Hydric Soils3:
Histoso			Dark Surface	(S7)					10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (MLRA 147,	148)	Coast Prairie	
	listic (A3)		Thin Dark Su			147, 148)		(MLRA 147	
	en Sulfide (A4)		Loamy Gleye		(F2)				odplain Soils (F19)
	d Layers (A5)		Depleted Mar Redox Dark		56)			(MLRA 136 Red Parent M	
	uck (A10) (LRR N) ed Below Dark Surfa	ce (A11)	Depleted Date						Dark Surface (TF12)
	ark Surface (A12)		Redox Depre					Other (Explain	
	Mucky Mineral (S1)	(LRR N,	Iron-Mangan			(LRR N,			
	A 147, 148)		MLRA 13						
	Gleyed Matrix (S4)		Umbric Surfa						drophytic vegetation and
	Redox (S5)		Piedmont Flo	odplain \$	501IS (F19) (MLRA 14	48)		blogy must be present, bed or problematic.
	d Matrix (S6) Layer (if observed)·					1	unicas distan	
Type:									1
	nches):						Hydric	Soil Present?	Yes X No
marks:									
narka.									

Environmental Field Surveys Wetland Photo Page



Wetland data point wdio026f_w facing southeast.



Wetland data point wdio026f_w facing east.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM -	Eastern Mountains and Piedmont
h c lp	DINWIDDIE Sampling Date: 12/8/15
DOLAS IS A FILA	State: VA Sampling Point: Wdi0026-a
Applicant/Owner: DIMMINION	State: V/A
Investigator(s): L. Roper, C. Joseff Section, Tow	nship, Range: N/A
Landform (hillslope, terrace, etc.): HILLOUPPE Local relief (con	ave, convex, none): <u>ADVL</u> Slope (%): <u>370</u>
Subregion (LRR or MLRA): LRRI Lat: 27.0094	Long: 03_174 Datum: 10.65.91
Soil Map Unit Name: Appling sandy loam, 2-71. 310f	NWI classification: UP and
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 X 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.
SUMMARY OF FINDINGS – Attach site map showing samping	point locations, transcers, imp
Hydrophytic Vegetation Present? Yes No Is the	Sampled Area
	n a Wetland? Yes No No
Wetland Hydrology Present? Yes No	
Remarks:	
HYDROLOGY	Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surface (B8)
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1)	
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 T	Iled 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: VIA	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	- No X
Saturation Present? Yes <u>Ves</u> No <u>Depth (inches)</u> : <u>14</u>	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	inspections), if available:
Remarks:	

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Dominant Species 3 (A) BBL, FACW, or FAC: 3 (A) ber of Dominant cross All Strata: 6 (B) Dominant Species $50'/.$ (A/B) DBL, FACW, or FAC: $50'/.$ (A/B) re Index worksheet: $\frac{6}{20}$ $x_1 = 0$ es 0 $x_2 = 0$ es 30 $x_3 = 90$ cies 35 $x_4 = 140$ es 0 $x_5 = 0$ cies 35 $x_4 = 140$ es 0 $x_5 = 0$ cialence Index = B/A = 3.53 the Vegetation Indicators: upid Test for Hydrophytic Vegetation cominance Test is >50% evalence Index is $\leq 3.0^1$
DBL, FACW, or FAC:
cross All Strata: 0 (B) Dominant Species $50'/.$ (A/B) re Index worksheet: $\frac{\% \text{ Cover of:}}{\% \text{ Cover of:}}$ Multiply by: es 0 $x 1 = 0$ es 0 $x 2 = 0$ es 30 $x 3 = 90$ cies 35 $x 4 = 140$ es 0 $x 5 = 0$ otals: 0 $x 5 = 0$ otals: 0 $x 5 = 0$ the comparison of the comp
cross All Strata: 0 (B) Dominant Species $50'/.$ (A/B) re Index worksheet: $\frac{\% \text{ Cover of:}}{\% \text{ Cover of:}}$ Multiply by: es 0 $x 1 = 0$ es 0 $x 2 = 0$ es 30 $x 3 = 90$ cies 35 $x 4 = 140$ es 0 $x 5 = 0$ otals: 0 $x 5 = 0$ otals: 0 $x 5 = 0$ the comparison of the comp
DBL, FACW, or FAC: $\bigcirc OF_{1}$ (A/B)e Index worksheet: $\%$ Cover of:Multiply by:es \bigcirc $x 1 = \bigcirc$ ecies \bigcirc $x 2 = \bigcirc$ es \bigcirc $x 3 = \bigcirc$ cies \bigcirc $x 5 = \bigcirc$ cies \bigcirc $x 5 = \bigcirc$ otals:(a/5)(A) \bigcirc \bigcirc valence Index = B/A = $_$ \bigcirc alence Index = B/A = $_$ \bigcirc upid Test for Hydrophytic Vegetationominance Test is >50%
DBL, FACW, or FAC: $\bigcirc OF_{1}$ (A/B)e Index worksheet: $\%$ Cover of:Multiply by:es \bigcirc $x 1 = \bigcirc$ ecies \bigcirc $x 2 = \bigcirc$ es \bigcirc $x 3 = \bigcirc$ cies \bigcirc $x 5 = \bigcirc$ cies \bigcirc $x 5 = \bigcirc$ otals:(a/5)(A) \bigcirc \bigcirc valence Index = B/A = $_$ \bigcirc alence Index = B/A = $_$ \bigcirc upid Test for Hydrophytic Vegetationominance Test is >50%
e Index worksheet: <u>% Cover of:</u> es <u>0</u> $x 1 = 0$ ecies <u>0</u> $x 2 = 0$ es <u>30</u> $x 3 = 90$ cies <u>35</u> $x 4 = 140$ es <u>0</u> $x5 = 0$ otals: <u>($a5$ (A) <u>230</u> (B) ralence Index = B/A = <u>3,53</u> the Vegetation Indicators: upid Test for Hydrophytic Vegetation cominance Test is >50%</u>
% Cover of:Multiply by:es \bigcirc $x 1 = \bigcirc$ es \bigcirc $x 2 = \bigcirc$ es $3\bigcirc$ $x 3 = 9\bigcirc$ cies 35 $x 4 = 140$ es \bigcirc $x 5 = \bigcirc$ otals: $(e5)$ (A)Z 30(B)ralence Index = B/A = 3,53rtic Vegetation Indicators:upid Test for Hydrophytic Vegetationominance Test is >50%
es \bigcirc $x 1 = \bigcirc$ ecies \bigcirc $x 2 = \bigcirc$ es $3\bigcirc$ $x 3 = 9\bigcirc$ cies 35 $x 4 = 14\bigcirc$ es \bigcirc $x5 = \bigcirc$ otals: $(a5)$ (A) $\boxed{230}$ (B) ralence Index = B/A = $3,53$ rtic Vegetation Indicators: upid Test for Hydrophytic Vegetation ominance Test is >50%
ecies \bigcirc $x_2 = \bigcirc$ es $3\bigcirc$ $x_3 = 9\bigcirc$ cies 35 $x_4 = 14\bigcirc$ es \bigcirc $x_5 = \bigcirc$ otals: $(a5)$ (A) $\boxed{230}$ (B) ralence Index = B/A = $\underline{3,53}$ rtic Vegetation Indicators: apid Test for Hydrophytic Vegetation ominance Test is >50%
es 30 x3 = 90 cies 35 x4 = 140 es 0 x5 = 0 cialence Index = B/A = $3,53$ (B) ralence Index = B/A = $3,53$ (B) ralence Index = B/A = $3,53$ (Comparison of the set of t
cies 35 x 4 = 140 es 35 x 4 = 140 es 5 x 5 = 0 otals: $(c5$ (A) 230 (B) alence Index = $B/A = 3,53$ ftic Vegetation Indicators: apid Test for Hydrophytic Vegetation cominance Test is >50%
cies 35 x 4 = 140 es 0 x 5 = 0 otals: $(a5)$ (A) 230 (B) ralence Index = B/A = $3,53$ flc Vegetation Indicators: apid Test for Hydrophytic Vegetation cominance Test is >50%
es 3 x 5 = 0 talence Index = B/A = $3,53$ the Vegetation Indicators: apid Test for Hydrophytic Vegetation cominance Test is >50%
the formula f
alence Index = B/A = <u>3,53</u> Alc Vegetation Indicators: apid Test for Hydrophytic Vegetation cominance Test is >50%
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tic Vegetation Indicators: ipid Test for Hydrophytic Vegetation ominance Test is >50%
pid Test for Hydrophytic Vegetation minance Test is >50%
ominance Test is >50%
evalence index is \$10
ematic Hydrophytic Vegetation ¹ (Explain)
emaile Hydrophylic Vegetation (Explain)
at the stand wellend by declary must
s of hydric soil and wetland hydrology must t, unless disturbed or problematic.
as of Four Vegetation Strata:
oody plants, excluding vines, 3 in. (7.6 cm) or
ameter at breast height (DBH), regardless of
hrub - Woody plants, excluding vines, less
DBH and greater than 3.28 ft (1 m) tall.
l herbaceous (non-woody) plants, regardless
nd woody plants less than 3.28 ft tall.
ne – All woody vines greater than 3.28 ft in
ytic on K

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	ription: (Describe f	to the depth	needed to docum	ent the indicator or con	firm the abse	nce of indicator	s.)	
pth	Matrix		Redox	Features				
ches)	Color (moist)	%	Color (moist)	<u>% Type¹ Loc²</u>	Textur	e	Remarks	
-4	IONR 312	00			12			
20	INVIG CIA				CL			
20	1010 512	100 -						
	Particular and a second se							
	· strategy -							
					2	D	M.M.M.	
		letion, RM=F	Reduced Matrix, MS	=Masked Sand Grains.		: PL=Pore Lining		- Colle ³
	Indicators:					ndicators for Pro		
Histoso			Dark Surface			_ 2 cm Muck (A	(10) (MLRA 147)	
	pipedon (A2)			low Surface (S8) (MLRA		Coast Prairie (MLRA 147		
	istic (A3)		Loamy Gleye	rface (S9) (MLRA 147, 14		Piedmont Flo		9)
	en Sulfide (A4)		Depleted Ma			(MLRA 13)		3)
	d Layers (A5)		Redox Dark			Red Parent M		
	uck (A10) (LRR N) d Below Dark Surfac	0 (411)	Depleted Date		-		Dark Surface (T	F12)
	ark Surface (A12)		Redox Depre		-	Other (Explai		
	Mucky Mineral (S1) (I	DDN		ese Masses (F12) (LRR N				
-	A 147, 148)	LINK N ₁	MLRA 13		•,			
	Gleyed Matrix (S4)			ce (F13) (MLRA 136, 122	2)	³ Indicators of hy	drophytic vegeta	tion and
	Redox (S5)		Piedmont Flo	odplain Soils (F19) (MLR	A 148)		ology must be pr	
	d Matrix (S6)				,		bed or problemat	
	Layer (if observed)	·						
								1
					Hudei	Soil Present?	Vor	No X
	nches):				Inyun	, Johr Fresentr	103	
marks:								

Environmental Field Surveys Wetland Photo Page



Upland data point wdio026_u facing north.



Upland data point wdio026_u facing south.

Project/Site: Atlantic Coast Pipeline	City/County: Dinwiddle Sampling Date: 12/3/2014
Applicant/Owner: DOMINION	State: <u>VA</u> Sampling Point: <u>wdic003f_w</u>
Investigator(s): Team C	_ Section, Township, Range: No PLSS in this area
Landform (hillslope, terrace, etc.): Basin	ocal relief (concave, convex, none): <u>concave</u> Slope (%): <u>1</u>
Subregion (LRR or MLRA): P Lat: <u>36.99700055</u>	Long: <u>-77.84011646</u> Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, occasiona	ally flooded NWI classification: PFO1A, PFO1C
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes <u>/</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.

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

Wetland has a channel that runs through it. The channel is about one foot deep and 12 feet across. There is no flow in the channel, no clear OHWM, and the water appears to be stagnant. There is a small open shrub dominated section of the wetland located just outside the corridor.

Wetland Hydrology Indicato	rs:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum of	of one is requi	red; check	call that apply)		Surface Soil Cracks (B6)
Surface Water (A1)			True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)				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 So	oils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)			Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)					Geomorphic Position (D2)
Inundation Visible on Aeri	al Imagery (B	7)			Shallow Aquitard (D3)
Water-Stained Leaves (B)	9)				Microtopographic Relief (D4)
Aquatic Fauna (B13)					 FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes	No 🖌	Depth (inches):		
Water Table Present?	Yes	No 🖌	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes 🖌	No	Depth (inches): 4	Wetland I	Hydrology Present? Yes 🖌 No
Describe Recorded Data (stre	am gauge, mo	onitoring w	vell, aerial photos, previous inspec	tions), if ava	ailable:
wetland hydrology present.					
Remarks: Wetland hydrology present.					

Sampling Point: wdic003f_w

, ,	Abaaluta	Dominant Ir	diaatar	Dominance Test worksheet
Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Ir Species?	Status	Dominance Test worksheet:
Acer rubrum	25	Yes	FAC	Number of Dominant Species
				That Are OBL, FACW, or FAC:5 (A)
2. Liquidambar styraciflua	20	Yes	FAC	Total Number of Deminent
_{3.} Cyrilla racemiflora	15	No	FACW	Total Number of Dominant Species Across All Strata: 5 (B)
4. Ulmus americana	10	No	FACW	
	10	No	FACU	Percent of Dominant Species
5. Celtis occidentalis	10	INO .	TACU	That Are OBL, FACW, or FAC: 100 (A/B)
6				
				Prevalence Index worksheet:
7	80			Total % Cover of: Multiply by:
		= Total Cover		
50% of total cover: 40	20% of	total cover:	16	OBL species $\frac{1}{10}$ $x = \frac{1}{10}$
Sapling/Shrub Stratum (Plot size:15)				FACW species 40 x 2 = 80
Acer rubrum	15	Yes	FAC	FAC species 100 x 3 = 300
1. <u>Acertublum</u>		165	TAC	10 10
2				FACU species $x 4 = $
				UPL species $0 \times 5 = 0$
3				150 420
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =2.8
6		. <u></u>		Hydrophytic Vegetation Indicators:
7				
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9				\checkmark 3 - Prevalence Index is ≤3.0 ¹
	15 _	= Total Cover		
50% of total cover:7.5	20% of	total cover:	3	4 - Morphological Adaptations ¹ (Provide supporting
	2078.01			data in Remarks or on a separate sheet)
				Broblematic Hydrophytic Vegetation ¹ (Evaluin)
_{1.} Lonicera japonica	40	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Cyrilla racemiflora	15	Yes	FACW	
				¹ Indicators of hydric soil and wetland hydrology must
_{3.} Carex sp.	10	No		be present, unless disturbed or problematic.
4				
				Definitions of Four Vegetation Strata:
5		· · ·		Tree Marcharlante and discussions (7.0 cm) cm
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				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
				m) tall.
10		·		
11				Herb – All herbaceous (non-woody) plants, regardless
	55 _	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 32.5		total cover:		
	20% of	total cover:	10	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
2		· · · · · ·		
3				
4				Hydrophytic
5				Vegetation
	0 _	= Total Cover		Present? Yes <u>V</u> No
50% of total cover: 0		total cover:	<u> </u>	
		total cover.		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Des	cription: (Describe t	o the de	pth needed to docum	nent the i	indicator of	or confirm	n the absence of indicators.)	
Depth	Matrix		Redox	Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-9	2.5 Y 5/2	20					CL	
	2.5 Y 5/3	60	10 YR 3/4	20	С	М	CL	
9-14	2.5 Y 6/2	90	10 YR 6/8	10	С	PL/M	CL	
								—
		otion BM	I=Reduced Matrix, MS	Mookor	d Sond Cr	ine	² Location: PL=Pore Lining, M=Matrix.	—
Hydric Soil						1115.	Indicators for Problematic Hydric Soils ³ :	
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Bel	. ,	ce (S8) (M	LRA 147.		
	istic (A3)		Thin Dark Su		· / ·		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye	•		, -,	Piedmont Floodplain Soils (F19)	
	d Layers (A5)		 Depleted Mat 		` ,		(MLRA 136, 147)	
	uck (A10) (LRR N)		Redox Dark S	. ,	-6)		Very Shallow Dark Surface (TF12)	
	d Below Dark Surface	(A11)	Depleted Dar	,	,		Other (Explain in Remarks)	
-	ark Surface (A12)	· /	Redox Depre					
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) (I	_RR N,		
MLR	A 147, 148)		MLRA 136	5)				
Sandy 0	Gleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and	
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) wetland hydrology must be present,	
	d Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present? Yes No	_
Remarks:							-	
Hydric soil pr	esent							



Photo 1 Wetland data point WDIC003f_w facing north



Photo 2 Wetland data point WDIC003f_w facing east



Photo 3 Wetland data point WDIC003f_w facing south



Photo 4 Wetland data point WDIC003f_w facing west

Project/Site: Atlantic Coast Pipeline	City/County: Din	widdie	Sampling Date: 12/3/2014
Applicant/Owner: DOMINION		State: VA	Sampling Point: <u>wdic003_u</u>
Investigator(s): Team C	Section, Townsh	nip, Range: No PLSS in this are	
Landform (hillslope, terrace, etc.): Hill Slope		e, convex, none): <u>none</u>	Slope (%): <u>20</u>
Subregion (LRR or MLRA): P Lat:	36.99764962	Long: <u>-77.84037138</u>	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slop	oes, occasionally flooded	NWI classif	ication: None
Are climatic / hydrologic conditions on the site typical fo	r 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 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:					
Data point taken on a hill slope, next to	a logging road i	n a Loblolly Pine/oal	k stand.		

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 Aerial Imagery (B7) Aquatic Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Remarks: No wetland hydrology present.	

Sampling Point: wdic003_u

, , ,	Abaaluta	Dominant Ir	diaatar	Deminance Test worksheet
Tree Stratum (Plot size:30)	Absolute % Cover		Status	Dominance Test worksheet:
	40	Yes	FAC	Number of Dominant Species
1. Pinus taeda				That Are OBL, FACW, or FAC:3 (A)
2. Quercus rubra	25	Yes	FACU	Total Number of Dominant
_{3.} Celtis occidentalis	15	No	FACU	Species Across All Strata: 4 (B)
4				(-)
				Percent of Dominant Species
5		· ·		That Are OBL, FACW, or FAC: 75 (A/B)
6				
7				Prevalence Index worksheet:
	80	= Total Cover		Total % Cover of: Multiply by:
50% of total cover: 40		total cover:	16	OBL species 0 x 1 = 0
	20% 01	total cover.		FACW species $5 x 2 = 10$
Sapling/Shrub Stratum (Plot size:)				60 190
1. Cyrilla racemiflora	5	Yes	FACW	FAC species $x_3 = $
2				FACU species 45 x 4 = 180
				UPL species $0 x 5 = 0$
3				110 370
4		<u> </u>		Column Totals: (A) (B)
5				Prevalence index $= B/A = 3.36$
6				
				Hydrophytic Vegetation Indicators:
7		· ·		1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	5	= Total Cover		3 - Prevalence Index is ≤3.0 ¹
50% of total accuracy 25			1	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:2.5	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				
1. Lonicera japonica	15	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Smilax bona-nox	5	No	FACU	
3. Smilax rotundifolia	5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
3. 311/1/22 10/2010/10/10			TAC	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7		. <u> </u>		height.
8				Conting/Charles Weather lands and wines lass
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
	-			m) tall.
10		. <u> </u>		
11		. <u> </u>		Herb – All herbaceous (non-woody) plants, regardless
	25	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: ¹⁵	20% of	total cover:	6	
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4		· ·		Hydrophytic
5		<u> </u>		Vegetation
	0	= Total Cover		Present? Yes Ves No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	sneet.)			

Profile Desc	ription: (Describe to	o the depth r	eeded to docun	nent the in	dicator of	or confirm	the absence of indicators.)	
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture Remarks	
0-14	10 YR 3/2	100					LS	
·								
							· · · · · · · · · · · · · _ · · _ /	
·								
¹ Type: C=Co	oncentration, D=Deple	etion. RM=Re	duced Matrix. MS	S=Masked S	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil		, ,	···· , ·				Indicators for Problematic Hydr	ic Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147	
	pipedon (A2)	-	Polyvalue Be		e (S8) (M	LRA 147.		,
Black Hi	,	-	Thin Dark Su				(MLRA 147, 148)	
Hydroge	en Sulfide (A4)	-	Loamy Gleye	. ,	•		Piedmont Floodplain Soils (F	19)
	d Layers (A5)	-	Depleted Mat		,		(MLRA 136, 147)	
2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (F6	5)		Very Shallow Dark Surface (T	F12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface (F7)		Other (Explain in Remarks)	
Thick Da	ark Surface (A12)	_	Redox Depre	ssions (F8))			
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Mangan	ese Masses	s (F12) (I	_RR N,		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	Bleyed Matrix (S4)	_	Umbric Surfa	ce (F13) (N	ILRA 13	6, 122)	³ Indicators of hydrophytic vegeta	ation and
Sandy R	Redox (S5)	_	Piedmont Flo	odplain So	ils (F19)	(MLRA 148	wetland hydrology must be pre	sent,
Stripped	Matrix (S6)	_	Red Parent N	Aaterial (F2	1) (MLR	A 127, 147) unless disturbed or problemation	c.
Restrictive I	Layer (if observed):							
Туре:			_					
Depth (ind	ches):		-				Hydric Soil Present? Yes	No 🖌
Remarks:							1	

No hydric soil present.



Photo 1 Upland data point WDIC003_u facing north



Photo 2 Upland data point WDIC003_u facing east



Photo 3 Upland data point WDIC003_u facing south



Photo 4 Upland data point WDIC003_u facing west