

Wetland data point wgro001f_w facing north.



Wetland data point wgro001f_w facing west.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP	_ City/County: Greensv: 11e Sampling Date: 6-8-	-16
Applicant/Owner: Dominion	State: VA Sampling Point: Wars 00	1-W
Investigator(s): ESI(W. Vaughan, S. Bryan)	_ Section, Township, Range: _ Nonc	
Landform (hillslope, terrace, etc.); hillslope	_ Local relief (concave, convex, none):Slope (%):Slope (%):S	-3
Subregion (I BB or MI BA): / RBP Lat: 30	625172 Long: -77.552905 Datum: WG	,504
Soil Map Unit Name: Slagle fine Sandy loa	m NWI classification: NA	
Are climatic / hydrologic conditions on the site typical for this time of	Vice Vos (If no explain in Remarks)	
Are Vegetation, Soil, or Hydrology significar		
Are Vegetation, Soil, or Hydrology naturally		
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point locations, transects, important features,	etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No	
HYDROLOGŸ		
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two require	<u>+d)</u>
Primary Indicators (minimum of one is required: check all that app		
Surface Water (A1)		»)
High Water Table (A2) Marl Deposits (E Saturation (A3) Hydrogen Sulfid		
	pheres along Living Roots (C3) Dry-Season Water Table (C2)	
Sediment Deposits (B2)	duced Iron (C4) Crayfish Burrows (C8)	5.3
	fuction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)	2011년 전 1월 1917년 1월 1917년 1월 1917년 1월 1917년 1월 1917년 🛶 - 1917년 1월 191	
Iron Deposits (B5)	n Remarks) Grant Shallow Aquitard (D3) FAC-Neutral Test (D5)	51-62
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)	
Field Observations:		
Surface Water Present? Yes No Depth (inch	nes): NA	
Water Table Present? Yes No Depth (inch	nes): 720 inches	
Saturation Present? Yes No V Depth (inch (includes capillary fringe)	nes): 720 inches Wetland Hydrology Present? Yes No	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	iotos, previous inspections), if available:	
Remarks:		
		1.1.3
		18.14
Service and the walk of the service	B) Second and the second of the second se Second second se Second second sec	the second second

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

Sampling Point: waro 001-4

		-	1 1 1	De de la construcción de la constru
Tree Stratum (Plot size: 30ft - 30ft)		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30++ + 30++)		Species	Facus	Number of Dominant Species
1. Liriodendron tul: pifera	40	Yes	FACU	That Are OBL, FACW, or FAC: (A)
2. Pinus taeda	20	ves	FAC	a contraction of the second se
3. Acer rubrum	10	no	FAC	Total Number of Dominant Species Across All Strata:
S. ALCI PACIFARTI	10	Transported and contrast of	FAC	Species Acioss Ali Strata.
4. Liquidambar styraciflue	10	no	FAC	Percent of Dominant Species
5		Land Parks	Citation of	That Are OBL, FACW, or FAC: (A/B)
6.				
	STATE COMPLETE	Contractors Sciencist of	C PALET ANGLES	Prevalence Index worksheet:
7	5.7.29 (CT 100) (%)	SHAD AN DEVEN	A TETTE SALVA	Total % Cover of: Multiply by:
8		Contraction of the second	And a second second	OBL species x 1 =
	86	= Total Co	ver Lr	Complete Statements of the Analytic Statement and the Analytic
50% of total cover:	20% of	total cover	. 16	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			A BARTER MAR	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: BO(PR BO(P))	20	Yes	FAC	FACU species x 4 =
1. Acer rubrum	20	19	THE	UPL species x 5 =
2. L'Enidambar styraciflua	25	yes	FAC	11. 14. (学校) 新聞 金融市での時代: 10. 1. (19.14) 11. (19.14) 11. (19.14) 12. (19.14) 13. (19.14) 14. (19.14)
3.		Selence:		Column Totals: (A) (B)
And the second	No. Section of the		A THE REAL	
4				Prevalence Index = B/A =
5		-		Hydrophytic Vegetation Indicators:
6.			A LANDALLE	1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		CALCULATION OF THE OWNER	107301005-6	
8	1.0	ter and a state		3 - Prevalence Index is ≤3.0 ¹
		= Total Co		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 22.	5 20% of	total cover	: 9	
Herb Stratum (Plot size: 30ft x 30ft)				to an
	2-		EM	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Para thelyptoris noveboracensis		In barries, https://www.mith.org.		Independent of the second s
2. Toxicodendron vadicans	35	Ves .	FAL	Definitions of Four Vegetation Strata:
3. Woodwardia arcolata	5	no	OBL	T Mandu stanta auchuding uines 2 in (7.6 cm) or
4. Liquidambar Styraciflua	5	ho	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
(2) 新闻和自然力、例如# # 20 小規模的の時間、10 他们相對時間的後半時本力結果在時间的。而且不同的時間的有效的時間,所以他们的時間的時間。20 同時來上的時間的「100」			The second second	height.
5			And and a second second	neight
6				Sapling/Shrub - Woody plants, excluding vines, less
7.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
AND AND A COMPACT AND	the stage of the stage in the stage of	NEW COLLEGE STREET, ST	Contraction of the second	
8				Herb – All herbaceous (non-woody) plants, regardless
9	- altraite le la			of size, and woody plants less than 3.28 ft tall.
10			Sala Bar	Woody vine - All woody vines greater than 3.28 ft in
11.				height.
	A SHATTANIAN AND			neight.
12.				
	15			
		= Total Co		
50% of total cover: <u>32</u> .				
50% of total cover: <u>32</u> .				
50% of total cover: <u>32.</u> Woody Vine Stratum (Plot size: <u>30.Pr. × 30.Pr.)</u>				•
50% of total cover: <u>32.</u>				•
50% of total cover: <u>32.</u> Woody Vine Stratum (Plot size: <u>30.Pr. × 30.Pr.)</u>				•
50% of total cover: 32. <u>Woody Vine Stratum</u> (Plot size: <u>30ft. x 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. Vitis rotundifolia				•
50% of total cover: <u>32</u> . <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinquefolia</u> 2. <u>Vitis rotundifolia</u> 3.				•
50% of total cover: 32. <u>Woody Vine Stratum</u> (Plot size: <u>30ft. x 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. Vitis rotundifolia				•
50% of total cover: <u>32</u> . <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinquefolia</u> 2. <u>Vitis rotundifolia</u> 3.				Hydrophytic
50% of total cover: <u>32</u> . <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus</u> <u>quingduefolia</u> 2. <u>Vitis</u> rotundifalia 3	<u>5</u> 20% of <u>5</u> 	Ves	<u>74cu</u> FACU FAC	Vegetation
50% of total cover: <u>32</u> . <u>Woody Vine Stratum</u> (Plot size: <u>30fr. x 30fr.</u>) 1. <u>Par thenocissus quingdrefolia</u> 2. <u>Vitis ratundifalia</u> 3 4 5	<u>5</u> 20% of <u>5</u> <u>5</u> <u>10</u>	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32</u> . <u>Woody Vine Stratum</u> (Plot size: <u>30fr. x 30fr.</u>) 1. <u>Par thenocissus quingdrefolia</u> 2. <u>Vitis ratundifalia</u> 3 4 5	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation
50% of total cover: <u>32.</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft. × 30ft.</u>) 1. <u>Par thenocissus quinguefolia</u> 2. <u>Vitis ratundifolia</u> 3 4 5 50% of total cover: <u>5</u>	5 20% of 5 5 /0 20% of	Ves Ves Ves	r: <u>13</u> <u>FACU</u> FAC	Vegetation

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Atlantic and Gulf Coastal Plain Region - Version 2.0

SOIL

		to the depth r				or confirm th	e absence of indicat	ors.)	
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	× Features %	Type'	Loc ²	Texture	Remarks	
O-2	2.5, 3/2	100	2 2 / (/ (/ (/ (/ (/ (/ (/ (/ (L		
2-6	2.5, 4/3	Contractor of an in the	A STATE AND AND AND				L		
		100					1		
6-20	2.5, 5/3	100 _	A CONTRACTOR OF THE OWNER			-			
The second of the				RECENT		· · · · · · · · · · · · · · · · · · ·			100000000
		Contraction of the			ALCO PERSON	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1			
					-		Alte Paulies March		
				A Constant			2.		
¹ Type: C=C	Concentration, D=Dep	pletion, RM=Re	educed Matrix, M	S=Masked	Sand Gr	ains.	² Location: PL=Pore Indicators for Probl	Lining, M=Matrix.	ils ³ :
	Indicators: (Applic	able to all LR				PPS T IN	1 cm Muck (A9)		
Histoso	l (A1) pipedon (A2)		Polyvalue Be			LRR S, T, U) , T, U)	2 cm Muck (A10)	(LRR S)	
	listic (A3)		Loamy Muck				Reduced Vertic	(F18) (outside ML	RA 150A,B)
Hydrog	en Sulfide (A4)		Loamy Gley	ed Matrix (I				plain Soils (F19) (L	
	ed Layers (A5)		Depleted Ma Redox Dark	Control of the Control of the Control of	6)		(MLRA 153B)	ht Loamy Soils (F2	.0)
	Bodies (A6) (LRR F ucky Mineral (A7) (L		Depleted Da	to the standing of the standards of the			Red Parent Mate	erial (TF2)	
	resence (A8) (LRR L		Redox Depr	essions (Fi			Very Shallow Da	ark Surface (TF12)	
1 cm M	uck (A9) (LRR P, T)		Marl (F10) (I	LRR U)		541	Other (Explain in	n Remarks)	
the second statements of a statements	ed Below Dark Surface	ce (A11)	Depleted Oc			151) (LRR O, P, T)	³ Indicators of h	ydrophytic vegetal	lion and
	Dark Surface (A12) Prairie Redox (A16) (MLRA (150A)	Contract Construction Collaboration Contract				wetland hydr	ology must be pre-	sent,
	Mucky Mineral (S1) (Delta Ochric	(F17) (ML	RA 151)			bed or problemation	
Sandy	Gleyed Matrix (S4)		Reduced Ve						
	Redox (S5)) (MLRA 1494 (F20) (MLRA	A) 149A, 153C, 153D)		
	d Matrix (S6) urface (S7) (LRR P,	S, T, U)	Anomalous	angrit Lud.	, oona	() (merca			
	Layer (if observed)		Construction of the second		and the second	CONTRACTOR IN			
Type:									/
Depth (in	nches):						Hydric Soil Present	7 Yes	No_
Remarks:				and a strength of the					
11 13 1 1 1 1 1 1 1									



Upland data point wgro001_u facing south.



Upland data point wgro001_u facing east.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/C	county: Greensville Sampling Date: 6-8-16
Applicant/Owner: Dominion	State: UA Sampling Point: ware OOZF.
Investigator(s): ESI (W. Vaushen, S. Bryan) Section	on, Township, Range:
Landform (hillslope, terrace, etc.): drainage Local Subregion (LRR or MLRA): LRP Lat: 36.625 Soil Map Unit Name: Slagle Fine Sandy Loam	286 Long: -77.598958 Datum: WCS89
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	ipling 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
NCWAM: Headwater Forest	
HYDROLOGŸ	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRI Saturation (A3) Hydrogen Sulfide Odor (C Water Marks (B1) Oxidized Rhizospheres a Sediment Deposits (B2) Presence of Reduced Iron Drift Deposits (B3) Recent Iron Reduction in Algal Mat or Crust (B4) Thin Muck Surface (C7) Inon Deposits (B5) Other (Explain in Remark) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Depth (inches):/	C1) Moss Trim Lines (B16) Ilong Living Roots (C3) Dry-Season Water Table (C2) In (C4) Crayfish Burrows (C8) I Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Ks) Shallow Aquitard (D3) FAC-Neutral Test (D5) Sphagnum moss (D8) (LRR T, U)
Water Table Present? Yes No Depth (inches): Gi Saturation Present? Yes No Depth (inches): Science	2
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	

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

Sampling Point: Wgro002f.w

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: BOAX 304)	% Cover	Species?	Status	Number of Dominant Species 4
1. Liquidambar Styraciflue	35	yes	FAC	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	40	yes	RAC	This design H
3. Pinus tacda	10	no	FAC	Total Number of Dominant Species Across All Strata: (B)
4	CONTRACTOR AND A		1000 S. CT. 199	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6	Post receiption	the second second second		Prevalence Index worksheet:
7		1. 1985 TAR		Total % Cover of: Multiply by:
8		and the state	Sen March 1	OBL species x1 =
		= Total Co		- 「「「「「「「」」」「「」」」「「」」」「「」」」「「」」」「「」」」」「「」」」」
50% of total cover: 42	5 20% of	total cover	: 17	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 36 F+ x304)				FAC species x 3 =
1. Nyssa Sylvatica	5	no	FAC	FACU species x 4 =
2. Acer rubrum	20	ves	FAC	UPL species x 5 =
			TA(1)	Column Totals: (A) (B)
3. Megnolia Virginiana		no	FACW	
4		A. BURGLA		Prevalence Index = B/A =
5	1.2 1. 1. 1. 1. 1.	ALL STREET		Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7.				2 - Dominance Test is >50%
8.	ing at unit			\square 3 - Prevalence Index is $\leq 3.0^{1}$
	21-	= Total Cov	105	
15				Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 15	20% of	total cover	<u></u>	
Herb Stratum (Plot size: 301+ x 30f+)	-			¹ Indicators of hydric soil and wetland hydrology must
1. Clethra alnifolia	50	yes	FACW	be present, unless disturbed or problematic.
2. Liquidamber Styraciflua	5	no	FAC	Definitions of Four Vegetation Strata:
3.	Call States	- Markette		
- 2017 Second address of the second second and the second s second second s second second se			STORY OF	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
4			- seconda	height.
5	Contraction of the second			
6				Sapling/Shrub - Woody plants, excluding vines, less
7			A Constant of the	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8	A Charles		- Andrewski	Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10.				with the Alline devices seates than 2.29 ft in
The second se		Contraction of the		Woody vine – All woody vines greater than 3.28 ft in height.
11	American	Transmitter up		neight.
12		201020-0014-0	Togenerate and	
		= Total Co		and the second secon
50% of total cover: 27	20% of	total cover	:_//	
Woody Vine Stratum (Plot size: 3014-3014)				
1. More	S. Martine	Section of		
2.		den de la constata des de la constata		
3	PL CHARGE	E SECTOR.	State of the last	
		The Participal State		
4.	and the second second	and the second s	1.000012.0002	
5	-	CANCEL SER	Charles State States	Hydrophytic
	0	= Total Co	ver	Vegetation Present? Yes No No
50% of total cover:	20% of	total cover	· ····································	Fresentr Tes no
Remarks: (If observed, list morphological adaptations belo	w).	Carl Stock of All	an the state of the	
and the second	and the second	landra I.M	handabhlich	and the second of the second
	the state of the state of the	ACT REPORTED AND INCOME	ST 10.045 (1995)	

SOIL



Wetland data point wgro002f_w facing north.



Wetland data point wgro002f_w facing west.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP	_ City/County: _ Greensville_ Sampling Date: _ G-8-16
Applicant/Owner: Dominion	State: VA Sampling Point: Wgro002-4
Investigator(s): ESI (W. Vaughen, S. Bryan)	
Landform (hillslope terrare etc.): dratog 94	Local relief (concave, convex, none): CONVEX Slope (%): 2-5
Subregion (IRB or MIRA): LRRP Lat: 3	6.625287 Long: -77.549367 Datum: WGS84
Sublegion (Error MERG). Electron Carl	a mNWI classification:NA
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
HYDROLOGŸ	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	
Surface Water (A1)	
High Water Table (A2)	
Saturation (A3)	
	spheres along Living Roots (C3) 🔲 Dry-Season Water Table (C2)
Sediment Deposits (B2)	duced Iron (C4) Crayfish Burrows (C8)
	duction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	방법이 있는 것 같은 김 사람은 것 같은 것
Iron Deposits (B5)	in Remarks) FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7)	Sphagnum moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations:	
Surface Water Present? Yes No Depth (inc	hes) NA
Water Table Present? Yes No Depth (inc	hes): 220 in
Saturation Present? Yes No Depth (inc	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	notos, previous inspections), ir available:
Remarks:	
가지, 말은 것과 물건적인 것 것 같아요. 것 것 같아요. 것 것 같아요. 말 안 가지 않는 것 같아요. 나는 것	

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

Sampling Point: 100000204

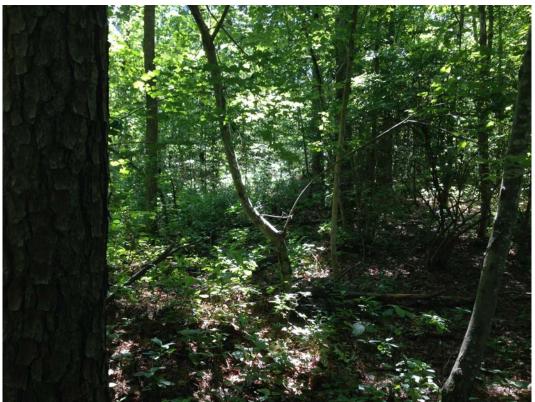
	Absoluto	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30Ft x 30Ft)		Species?		2
	30	Ves	FACU	Number of Dominant Species 5 (A)
1. Quercus alba	Contraction of the local division of the loc	A Treasure and the second second		That Are OBL, FACW, or FAC: (A)
2. Liquidantar Styraciflua	10	no	FAC	Total Number of Dominant
3. Pinus treda	30	yes	FAC	Species Across All Strata: (B)
4. Acer rubrum	10	no	FAC	
2. 化合理器 网络加加达 A A META MARK A A A META MARKAN A META MARKAN AND A META MARKAN AND A META AND A META AND A META AND A META AND A META AND A META A META AND A META A META AND A META AND A META AND A META AND A META AND AND AND AND AND AND AND AND AND AN		The sector states for	Protein Station (1997)	Percent of Dominant Species 75
5				That Are OBL, FACW, or FAC: (A/B)
6	Sand Kalka			
7.				Prevalence Index worksheet:
· 是一些生物的生物的,在我们是我们的意思,在我们的方法,我们在这些人的是我们就能能能能。我们就能一个你们是我们的不能能能。"	HAR THE	12 M (3 12 12 31 1	CINCLES OF	Total % Cover of: Multiply by:
8	A		Station in the second	OBL species x 1 =
		= Total Cov		1. Calculation of the South Control of the Associated Astronomy and Control of the Control of
50% of total cover: 40	20% of	f total cover	: 16	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30ft-30ft)			General Land	FAC species x 3 =
	10		tor	FACU species x 4 =
1. Nyssa Sylvatica		YES	1-176	UPL species x 5 =
2.	Markie a			
3.				Column Totals: (A) (B)
- 1012年1月1日日本市场市场中国市场、1913年1月1日本市场市场市场市场市场市场市场市场市场市场市场市场市场市场市场市场市场市场市场			ACCURATE ACT OF	
4				Prevalence Index = B/A =
5	aller aller		Cast Statistics	Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7.				2 - Dominance Test is >50%
		CONTRACTOR OF THE	THE REAL PROPERTY.	
8			An De la de La de se	3 - Prevalence Index is ≤3.0 ¹
	10	= Total Cov	/er	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:5	20% of	f total cover	. 2	
Herb Stratum (Plot size: 30F1 - 30F1)		total coro.		
Herb Stratum (Plot size:)	50	1	Co	¹ Indicators of hydric soil and wetland hydrology must
1. Clethra almifelia	50	yes	FACW	
2. L'Quidenbor Styracifluce	5	no	FAC	Definitions of Four Vegetation Strata:
	A Leisebootherist	Constant to realize an external	Second Prants Children	
3				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
4	The set the co			more in diameter at breast height (DBH), regardless of
5.				height.
6.				Sapling/Shrub - Woody plants, excluding vines, less
The second s				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				
8	and the second	a shide		Herb - All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				
· '이 같은 것, 이 가슴에 제공에서 있었는 것에서 한 것에서 한 것이 있는 것이 있는 것이 것이 같은 것이 있다. 것이 있는 것이 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 가슴이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 것이 있는 것이 있다. 것이 있는 것이 있다. 것이 있는 것이 있다. 것이 있는 것이 있다. 것이 있는 것이 있 같이 있는 것이 있	Statute and state			Woody vine - All woody vines greater than 3.28 ft in
11		ESSPECIAL AND		height.
12	Charles Controls	Addin and	La	
	55	= Total Cov	/er	
50% of total cover: 27.4				
	_ 20% 0	i total cover		
Woody Vine Stratum (Plot size: 30F1 = 30F1)				
1. Mone	Section and	and the state	(Constant)	
2.				
	Conversition of	a esteration	THE OWNER	
3	Contraction of the second second	ALL AND ALL ALL ALL ALL ALL ALL ALL ALL ALL AL	199200-12900 1995-1996-1996	이 방법을 위해 가지 않는 것이 같은 것을 통하는 것 같아. 이 것을 것 같아.
4	and shares	Contraction of the	in particular	
5.				Hydrophytic
	0	Talalo	Section States	Vagatation
	THE PROPERTY AND LODGED TO THE REAL	The standard second		Present? Yes No
50% of total cover:	_ 20% of	f total cover		
Remarks: (If observed, list morphological adaptations belo	w).	and the second	No. States	and the second
richands. (il observed, ilst morphological dauptations bolo				
and a subsection of the second se	And the second	Line Par	and states	
				A STATE AND

SOIL

Profile Desc	ription: (Describe	to the depth	needed to docu	ment the i	indicator	or confirm	the absence of in	dicators.)	
Depth	Matrix		Redo	x Feature	5			Remark	
(inches)	Color (moist)		Color (moist)	%	Type'	_Loc ²		Kemark	3
0-3	2.5x 3/2	100							
3-10	2.5, 5/4	100		a desta series		-	SL_		
10-20	2.546/6	100				-	SL_	a haral and a said	
	the second second second								
	HARD CONTRACTOR OF	and a second second		TRATE IS		10.71	The second s	1000	
	And the second s				1.200				
		-			And the base of	Accile sure services			and the second
And the second state			and a second second second		-				
¹ Type: C=Ce	oncentration, D=Dep	pletion, RM=R	educed Matrix, M	S=Masked	d Sand Gr	ains.	² Location: PL=	Pore Lining, M=M Problematic Hydr	atrix.
and the second state of th	Indicators: (Applic	cable to all LF							10 30115 .
Histosol			Polyvalue B					(A9) (LRR 0) (A10) (LRR S)	
	bipedon (A2) stic (A3)		Thin Dark S Loamy Much						ie MLRA 150A,B)
	en Sulfide (A4)		Loamy Gley			. 0,		loodplain Soils (F	
	Layers (A5)		Depleted Ma		¢ -/		Anomalous	Bright Loamy Soi	ils (F20)
	Bodies (A6) (LRR F	P, T, U)	Redox Dark	Surface (F6)		(MLRA 1		
	ucky Mineral (A7) (L		Depleted Da					Material (TF2)	
	esence (A8) (LRR I		Redox Depr		8)			w Dark Surface (11-12)
	Jck (A9) (LRR P, T)		Marl (F10) (-41	Other (Exp	lain in Remarks)	
 Annual Protocol et al all'anterioritation 	d Below Dark Surface	ce (A11)	Depleted Or Iron-Manga				T) ³ Indicator	s of hydrophytic ve	egetation and
	ark Surface (A12) rairie Redox (A16) (MI RA 150A)	Contract Contractor Contractor Contractor					hydrology must b	
in the second state of the second sec	Aucky Mineral (S1)	Control and the Weight of the Application of the	Delta Ochrie	where they can't and the first states, y				disturbed or proble	
	Gleyed Matrix (S4)	(Reduced Ve						
	Redox (S5)		Piedmont F						
	Matrix (S6)		Anomalous	Bright Loa	my Soils ((F20) (MLR	A 149A, 153C, 15	3D)	
	rface (S7) (LRR P,								
A THE REPORT OF THE PARTY OF	Layer (if observed):							
Туре:			- 2011				Undele Call Dra	sent? Yes	No V
A REAL PROPERTY AND ADDRESS AND ADDRESS ADDRES	ches):				and the	Sector 1	Hydric Soli Fie	Senti Tes	
Remarks:									
A. 1966									
Sec. Star									
Stern Leven									
1.5.1									
4.01.000.00									



Upland data point wgro002_u facing southeast.



Upland data point wgro002_u facing east.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/C	ounty: Greenswille Sampling Date: 6-8-16
Applicant/Owner: Dominicon	State: UA Sampling Point: W9700034-w
Investigator(s): EST (W. Vaushen, S. Bryan) Section	on, Township, Range: <u>None</u>
Landform (hillslope, terrace, etc.): dra.nage Local	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes Vo Hydric Soil Present? Yes Vo Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks: NCWAM: Headwater forest	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1)	C1) Moss Trim Lines (B16) long Living Roots (C3) Dry-Season Water Table (C2) n (C4) Crayfish Burrows (C8) Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
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) No Depth (inches): // Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	Wetland Hydrology Present? Yes No
Remarks:	

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

Sampling Point: who 003f-w

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30F+ + 30F+)	% Cover	Contraction of the second s		Number of Dominant Species	
1. Liriodendron tul:pifera	30	yes	FACU	That Are OBL, FACW, or FAC: (A)	
2. Nyssa Sylvatica	25	Ves	PAC		
	20	yes	FAC	Total Number of Dominant 9	
3. Ilex opaca		The second second		Species Across All Strata: (B)	
4. Pinus tecda	15	no	FAC	Percent of Dominant Species	
5. Acer rubrum	10	no	FAC	Percent of Dominant Species (AV That Are OBL, FACW, or FAC: (AV	B)
6.			Carlos Carlos		
7			1	Prevalence Index worksheet:	
	1.12	122.000		Total % Cover of: Multiply by:	
8	10			OBL species x 1 =	
		= Total Cov		FACW species x 2 =	
50% of total cover: 50	_ 20% of	total cover	20	FAC species x 3 =	
Sapling/Shrub Stratum (Plot size: 30ff = 30ff)					
1. Ilex opaca	10	Ves	FAC	FACU species x 4 =	
2. Naccintum conjumboshm	15	705	FACW	UPL species x 5 =	
는 이제 가슴에 가슴에 안 이었다. 이 전 전 전 등 전 전 이는 것 된 것 가슴에 드 이 것 되어야 한다. 것 수가 있다. 것 수가 있다. 것 같아요. 이 것 같아요. 이 것 같아요. 이 것 같아요.				Column Totals: (A) (F)	3)
3					
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7.				2 - Dominance Test is >50%	
	ALC: NOT THE			The second second second second second second second the second second second second second second second second	
B	ne			3 - Prevalence Index is ≤3.0 ¹	213
한 것은 말 같아요. 것은 것 것은 것입니? 것은 것은 것이 같아. 것은 것 같아. 같이 많아. 것은 것이 많아. 것은 것이 같아. 것이 없는 것이 같이 많아. 것이 같아. 같아. 것이 않 않 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)	
50% of total cover: 12.5	_ 20% of	total cover	<u> </u>		
Herb Stratum (Plot size: 304 = 304)				¹ Indicators of hydric soil and wetland hydrology must	t
1. Clethra alnifolia	30	yes	FACW	be present, unless disturbed or problematic.	83
2. Osmunda Spectabilis	5	nu	OBL	Definitions of Four Vegetation Strata:	11111
			OBL	Allowed of the providence of the second s	
3. Woodwardia arcolata	-0	yes	UDL	Tree - Woody plants, excluding vines, 3 in. (7.6 cm)	or
4			10. A	more in diameter at breast height (DBH), regardless	of
5	a share and		<u></u> .	height.	
6				Sapling/Shrub - Woody plants, excluding vines, les	s
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
					1.18
8				Herb – All herbaceous (non-woody) plants, regardle of size, and woody plants less than 3.28 ft tall.	55
9	Lange of the bold of a			of size, and woody plants less than 5.20 it tail.	
10	and the second	110812-009		Woody vine - All woody vines greater than 3.28 ft in	n
11		. In all the day		height.	
12.					
	45	= Total Cov	or	and the second	1
72 5			PD		
50% of total cover: <u>22-5</u>	_ 20% of	total cover			
Woody Vine Stratum (Plot size: 30ft - 30ft)					
1. Smilat rotaridifalia	10	Yes	FAC	승규는 것이 아무는 것이 같아요. 이렇게 말했는 것이 없는 것이 없이 않이 않이 않이 않이 않지? 않이	
2. Vitis rotundifolia	10	ves	FAC	양한 김 씨는 가지 않는 것을 받았다. 것은 것은 것이 같아요.	
2					
3.	all and a second	- Transferrer	The second second		
4.	and all and a second		Telling and the second se		
5			HERE BALL	Hydrophytic	
	20	= Total Cov	/er	Vegetation	
50% of total cover: 10	20% of	total cover	: 4	Present? Yes No	
	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	Andread State of the			
Remarks: (If observed, list morphological adaptations below	v).				
철정 그는 그는 것은 것 것을 받는 것이 없는 것이 것을 물었다.					
		A service and service			NILLING!

SOIL

Sampling Point: Wars 003 F-w

Depth (inches)							the absence of in	
	Color (moist)	%	Redo Color (moist)	ox Feature %	s _Type'	Loc ²	Texture	Remarks
0-20	10yr 3/1	100					ML	
							<u></u>	
<u>a la na anual.</u> But Mittle (1997)				-		<u>1999</u>		
	oncentration, D=Depl					ains.		Pore Lining, M=Matrix.
	Indicators: (Applica	able to all L	.RRs, unless othe Polyvalue Be			RRSTI		Problematic Hydric Soils ³ : (A9) (LRR O)
Histosol Histic Ep	bipedon (A2)		Thin Dark Su	urface (S9	(LRR S,	T, U)	2 cm Muck	(A10) (LRR S)
Black Hi			Loamy Muck			0)		ertic (F18) (outside MLRA 150A,B loodplain Soils (F19) (LRR P, S, T)
A COMPANY OF THE PARTY OF THE P	n Sulfide (A4) Layers (A5)		Loamy Gleye Depleted Ma		F2)		 A second s	Bright Loamy Soils (F20)
Organic	Bodies (A6) (LRR P,		Redox Dark				(MLRA 1	53B) Material (TF2)
	icky Mineral (A7) (LR esence (A8) (LRR U)		Depleted Da Redox Depresentation					w Dark Surface (TF12)
1 cm Mu	ick (A9) (LRR P, T)		Marl (F10) (I	LRR U)			Other (Exp	lain in Remarks)
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Oc Iron-Mangar				T) ³ Indicators	s of hydrophytic vegetation and
Coast Pr	rairie Redox (A16) (N) Umbric Surfa	ace (F13)	LRR P, T		wetland	hydrology must be present,
A REAL PROPERTY OF A REAL PROPER	lucky Mineral (S1) (L Bleyed Matrix (S4)	.RR O, S)	Delta Ochric Reduced Ve			0A. 150B)	unless o	listurbed or problematic.
Contraction of the second state of the second se	ledox (S5)		Piedmont Fle	oodplain S	oils (F19)	(MLRA 149		
CONTRACTOR CONTRACTOR	Matrix (S6)	T III	Anomalous I	Bright Loa	my Soils (I	=20) (MLRA	A 149A, 153C, 153	3D)
The second	rface (S7) (LRR P, S Layer (if observed):		an a		an a			and the second
reamenver						열린다. 그렇다 다음에서		
Type:		Sector Leaves						
Type: Depth (inc	ches):		_				Hydric Soil Pre	sent? Yes 🥢 No
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	sent? Yes <u>/</u> No
Type: Depth (ind Remarks:) inches de	ep			Hydric Soil Pre	sent? Yes <u>/</u> No
Type: Depth (ind Remarks:	ches):) inches de	ер			Hydric Soil Pre	sent? Yes <u>/</u> No
Type: Depth (ind Remarks:	ches):		- inches de	.ер			Hydric Soil Pre	sent? Yes <u> </u>
Type: Depth (ind Remarks:	ches):) inches de	ep			Hydric Soil Pre	sent? Yes <u>Vo</u> No
Type: Depth (ind Remarks:	ches):		 > inches de	ep			Hydric Soil Pre	sent? Yes <u> No </u> No <u> </u>
Type: Depth (ind Remarks:	ches):) inches de	.ер			Hydric Soil Pre	sent? Yes <u> No </u>
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	sent? Yes <u> No </u>
Type: Depth (ind Remarks:	ches):) inches de	.ep			Hydric Soil Pre	sent? Yes <u>V</u> No
Type: Depth (ind Remarks:	ches):		- inches de				Hydric Soil Pre	sent? Yes <u>No</u>
Type: Depth (ind Remarks:	ches):) inches de	.eβ			Hydric Soil Pre	sent? Yes <u>V</u> No
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	sent? Yes <u>No</u>
Type: Depth (ind Remarks:	ches):			εp			Hydric Soil Pre	sent? Yes <u>V</u> No
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	sent? Yes <u>No</u>
Type: Depth (ind Remarks:	ches):		-) inches de	eρ			Hydric Soil Pre	sent? Yes <u>K</u> No <u></u>
Type: Depth (ind Remarks:	ches):						Hydric Soil Pre	sent? Yes <u>No</u>
Type: Depth (ind Remarks:	ches):			eρ			Hydric Soil Pre	sent? Yes <u>No</u>



Wetland data point wgro003f_w facing north.



Wetland data point wgro003f_w facing west.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP	City/County: Gr	eensville.	_ Sampling Date: <u>6-8-16</u>
Applicant/Owner: Domanian		State: VA	Sampling Point: Waro 003-4
Investigator(s): EST (Vaushan / Rryan)		Range: none	
Landform (hillslope, terrace, etc.):	Characterization and a state of the state of	with the state of the second state of the second state of the second state of the	electron a residue to the set of the set of the star of the set of
Landform (nillslope, terrace, etc.): <u>Charnage</u>	CO22250	Long: -77.5418	SO Datum: WGSB-
The second s	0 6 63 630		ication:NA
Soil Map Unit Name: Craven Clay Loam	/		
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes No	(If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology signification	antly disturbed? A	re "Normal Circumstances"	present? Yes No No
Are Vegetation, Soil, or Hydrology naturally	y problematic? (II	f needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling poin	t locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Samp	lad Area	
Hydric Soil Present? Yes No	within a Wet	led Area	No
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	within a we		
HYDROLOGY	The second second second	Secondary India	cators (minimum of two required)
Wetland Hydrology Indicators:	-hà	States and a state the second states and a state of the second states and the	il Cracks (B6)
Primary Indicators (minimum of one is required; check all that ap Surface Water (A1)		with the partners have been presented and the state	egetated Concave Surface (B8)
L Surface Water (A1) Aquatic Fauna High Water Table (A2) Marl Deposits		Contraction of the second state of the seco	attems (B10)
Saturation (A3)		Moss Trim	
The second many many many many many many many many	spheres along Living Ro	oots (C3) 🔲 Dry-Seasor	n Water Table (C2)
	educed Iron (C4)	Crayfish Bu	
	eduction in Tilled Soils (C	ward a first of the Collection of States in the New York and the States	Visible on Aerial Imagery (C9) c Position (D2)
Algal Mat or Crust (B4) Thin Muck Sur Iron Deposits (B5) Other (Explain	Y 2014년 1월 2014년 1월 2014년 일 전에 관심하는 1940년 1970년 1971년 197	Shallow Aq	
Iron Deposits (B5) U Other (Explain Inundation Visible on Aerial Imagery (B7)	in Remarks)	FAC-Neutra	A SUBARINE CONTRACTOR OF A CON
Water-Stained Leaves (B9)		2.5 Constraints and a state of the state	moss (D8) (LRR T, U)
Field Observations:		an a series of the second second	An officer and the second s
Surface Water Present? Yes No Depth (inc	thes): NA		
Water Table Present? Yes No Depth (inc	ches): 720 in		
Saturation Present? Yes No Depth (includes capillary fringe)	ches): <u>>20 in</u>	Wetland Hydrology Press	ent? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspecti	ons), if available:	
Remarks:	alle a de part d'ar d'ar estat d'ar estat de la seconda de la seconda de la seconda de la seconda de la second Reference de la seconda de l		
Nemarka.			
	The state of a state of a state of the	NEAR PROPERTY OF AN AND A STREET AND A DRIVE AND A	CALIFORNIA CONTRACTOR AND

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

Sampling Point: upro003-4

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 Ft x 30 Ft)	% Cover	Species?		Number of Dominant Species
1. Quercus Velutina	30	yes	UPL	That Are OBL, FACW, or FAC: (A)
2. Iler Opaca	20	ves	FAC	Total Number of Dominant
3. Liriodendron tul: Difera	10	no	FACU	Species Across All Strata: (B)
4. Quereus alba	10	no	FACU	
5. Pinus taeda	15	ho	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7</u> (A/B)
6.				
			and and the second second	Prevalence Index worksheet:
	Contraction of the	1.11.11.11.1	J. STANS	Total % Cover of: Multiply by:
8	85	= Total Cov		OBL species x 1 =
50% of total cover; <u>42</u> .	5 200% -	- Total Cov	. 17	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 304+304)	20% 01	total cover.		FAC species x 3 =
1. Acer rubrum	5	1.00	the	FACU species x 4 =
2. Vaccinium corumbosum	10	405	FACU	UPL species x 5 =
2. Valeniam Corymposium		765	FRICK	Column Totals: (A) (B)
3	Sugaran and	Service and the service of the servi	D WO COMPANY	
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7		THE REAL PROPERTY OF		2 - Dominance Test is >50%
8				☐ 3 - Prevalence Index is ≤3.0 ¹
75		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 7.5	_ 20% of	total cover	5	
Herb Stratum (Plot size: 304 -30ft)	~		P	¹ Indicators of hydric soil and wetland hydrology must
1. Vaccinium Corymbosum	20		PACW	be present, unless disturbed or problematic.
2. Clethra aln: Folia	15	yes	FACW	Definitions of Four Vegetation Strata:
3. Osmundastrum Cinnamomeur	15	no	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
4,		- Contraint in	- Williams	more in diameter at breast height (DBH), regardless of
5				height.
6		and the second second second		Sapling/Shrub - Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb - All herbaceous (non-woody) plants, regardless
9.		ANTERIAL DE	196.2.00	of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
11.				height.
12.	MANATAN	NUMBER OF	TAX STOR	
The second restriction of the second s	40	= Total Cov	er	
50% of total cover: 20	20% of	total cover	8	
Woody Vine Stratum (Plot size: 30f4=30f4)	100000		States and	
1. Smilax rotundifolia	5	ves	FAC	
2	The second second	THE STATE		
3	Contractor of			
4		-		
F.	The second			U. deselvate
5	5	= Total Cov		Hydrophytic Vegetation
50% of total cover: 2.5		total cover		Present? Yes No
characterization of the second s	Contra (Contractor Contra	total cover		
Remarks: (If observed, list morphological adaptations below	w).			
A hard of the second			new Standard	en de gefans, kieler i werde i Diskie is medere i diskie die die die die die die die die die d

SOIL

Sampling Point: waro 003_u

		e depth needed to document the indicator or o	confirm the absence of indicators.)
Depth (inches)	Matrix Color (moist)	Redox Features % Color (moist) % Type ¹ L	Loc ² Texture Remarks
0-4	the second design of the second se	00	SL
4-8		00	SL
8-14	and the second s	00	SL
		00	SLS
14-20	2.5, 5/6 11		
S.A. in white-	- William State		
		and the second s	
Type: C=0	Concentration, D=Depletion	n, RM=Reduced Matrix, MS=Masked Sand Grains	s. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
		e to all LRRs, unless otherwise noted.)	
Histoso		Polyvalue Below Surface (S8) (LRR Thin Dark Surface (S9) (LRR S, T, U	
100000000000000000000000000000000000000	Epipedon (A2) Histic (A3)	Loamy Mucky Mineral (F1) (LRR O)	
The second second	en Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
	ed Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
and the second second second second	c Bodies (A6) (LRR P, T, I		(MLRA 153B) Red Parent Material (TF2)
	lucky Mineral (A7) (LRR P	P, T, U) Depleted Dark Surface (F7) Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
	Presence (A8) (LRR U) luck (A9) (LRR P, T)	Marl (F10) (LRR U)	Other (Explain in Remarks)
	ed Below Dark Surface (A		
Thick I	Dark Surface (A12)	Iron-Manganese Masses (F12) (LR	
Constant Constant of Article Provide	Prairie Redox (A16) (MLR.	가 많은 사람들은 것은 것 같은 것 같은 것은 것 같아요. 이 것은 가려지 않는 것은 것은 것은 것은 것은 것 같아요. 것은 것 같아요. 것은 것 같아요. 것은 것은 것 같은 것 것 같은 것 것 같이 것 같아요. 것은 것 같아요. 것 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?) wetland hydrology must be present, unless disturbed or problematic.
	Mucky Mineral (S1) (LRR	LO, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A	
Contraction of the second second	Gleyed Matrix (S4) Redox (S5)	Piedmont Floodplain Soils (F19) (M	
	ed Matrix (S6)	Anomalous Bright Loamy Soils (F20	0) (MLRA 149A, 153C, 153D)
Dark S	urface (S7) (LRR P, S, T,	, U)	
Restrictive	e Layer (if observed):		
Type: _	stands for the second state of the second state of the		Hydric Soil Present? Yes No
A Contract Cont Public Co.	nches):		Hydric Son Present 1 1es 110
Remarks:			



Upland data point wgro003_u facing southeast.



Upland data point wgro003_u facing east.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Greensville		Sampling Date: 11/13/2014
Applicant/Owner: Dominion		State: VA	Sampling Point: WGRB003f_w
Investigator(s): TP, SP	Section, Township, Rang	ge: <u>No PLSS in this area</u>	
Landform (hillslope, terrace, etc.): drainage way	ocal relief (concave, conve	ex, none): <u>concave</u>	Slope (%): <u>1</u>
Subregion (LRR or MLRA): <u>P</u> Lat: <u>36.60437105</u>	Long	-77.53440098	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, frequently	/ flooded	NWI classific	ation: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of y	ear?Yes 🖌 No 🔄	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "N	lormal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If nee	ded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point lo	cations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
PFO wetland dominated by swamp tupe	o and red map	le. Drainage pattern	s and standing water present.		

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)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Saturation Present? Yes <u>Ves</u> No Depth (inches): 2 (includes capillary fringe)	

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

Sampling Point: WGRB003f_w

· · · ·		• •		
Tree Stratum (Plot size: <u>30</u>)	Absolute	Dominant Ir Species?	dicator Status	Dominance Test worksheet:
1 Nyssa biflora	<u>35</u>	Yes	FACW	Number of Dominant Species
··	30	Yes	FAC	That Are OBL, FACW, or FAC:9 (A)
2. Acer rubrum				Total Number of Dominant
3. <u>Ilex opaca</u>	15	No	FACU	Species Across All Strata: 10 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 90 (A/B)
6.				
7				Prevalence Index worksheet:
/	80			Total % Cover of: Multiply by:
50% of total cover: 40		= Total Cover	. 16	OBL species 20 x 1 = 20
15	20% of	total cover:	10	FACW species $\frac{80}{x^2} = \frac{160}{x^2}$
Sapling/Shrub Stratum (Plot size:)				45 405
1. Clethra alnifolia	15	Yes	FAC	FAC species $x_3 = 100$
_{2.} Magnolia virginiana	10	Yes	FACW	FACU species x 4 =
3. Ilex verticillata	10	Yes	FACW	UPL species x 5 =
4. Ilex opaca	10	Yes	FACU	Column Totals:(A)(A)(B)
5				Prevalence Index = B/A =2.44
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				\checkmark 3 - Prevalence Index is $\leq 3.0^{1}$
	45	= Total Cover		
50% of total cover: 22.5		total cover:	9	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size:5)				data in Remarks or on a separate sheet)
Arundinaria gigantea	15	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Woodwardia virginica	10	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Woodwardia areolata	10	Yes	FACW	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				Herb – All herbaceous (non-woody) plants, regardless
	35	= Total Cover		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 17.5		total cover:	7	· · · · · · · · · · · · · · · · · · ·
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in
Smilax laurifolia	10	Yes	OBL	height.
1		100	ODL	
2				
3				
4				Undrank tio
5.				Hydrophytic Vegetation
	10	= Total Cover		Present? Yes <u>V</u> No
50% of total cover: 5		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Descrip	tion: (Describe to	the dep	th needed to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5 10	0YR 3/1	95	10YR 4/6	5	С	PL	SL	
5-12 10	0YR 2/1	95	10YR 4/6	5	С	PL	SCL	
						·		
<u> </u>	·					·		
						. <u> </u>		
						·		
						·		
						<u> </u>		
¹ Type: C=Conc	entration, D=Deple	tion, RM:	=Reduced Matrix, MS	S=Masker	Sand Gra	ains	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil Ind								ators for Problematic Hydric Soils ³ :
Histosol (A1	1)		Dark Surface	(S7)			2	2 cm Muck (A10) (MLRA 147)
Histic Epipe			Polyvalue Be		ce (S8) (N	LRA 147,		Coast Prairie Redox (A16)
Black Histic			Thin Dark Su		· / ·		,	(MLRA 147, 148)
Hydrogen S	. ,		Loamy Gleye	. ,	•		F	Piedmont Floodplain Soils (F19)
Stratified La	()		Depleted Mat		,			(MLRA 136, 147)
	(A10) (LRR N)		Redox Dark \$, ,	-6)		١	/ery Shallow Dark Surface (TF12)
	elow Dark Surface	(A11)	Depleted Dar		,			Other (Explain in Remarks)
	Surface (A12)	~ /	Redox Depre		. ,			
Sandy Muc	ky Mineral (S1) (LR	RN,	Iron-Mangan	ese Mass	es (F12) (I	_RR N,		
MLRA 14			MLRA 13		. , .			
Sandy Gley	red Matrix (S4)		Umbric Surfa	ce (F13) ((MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation and
Sandy Red	ox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) we	etland hydrology must be present,
Stripped Ma			Red Parent M	Aaterial (F	21) (MLR	A 127, 147	7) ur	nless disturbed or problematic.
Restrictive Lay	er (if observed):							
Туре:								
Depth (inche	s):						Hydric Soi	l Present? Yes 🖌 No
Remarks:								



Photo 1 Wetland data point WGRB003f_w facing east



Photo 2 Wetland data point WGRB003f_w facing west

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Greer	nsville	Sampling Date: 11/13/2014
Applicant/Owner: Dominion		State: VA	Sampling Point: WGRB003_u
Investigator(s): TP, SP	Section, Township,	, Range: <u>No PLSS in this are</u>	a
Landform (hillslope, terrace, etc.): hill slope		convex, none): <u>none</u>	_
Subregion (LRR or MLRA): P	Lat: <u>36.60455212</u>	Long: <u>-77.53458966</u>	Datum: WGS 1984
Soil Map Unit Name: Craven clay loam, 6 to 12 p	ercent slopes, severely eroded	NWI classifi	cation: PFO1A
Are climatic / hydrologic conditions on the site typ	vical for this time of year? Yes N	lo (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrolog	y significantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrolog	y 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 <u>v</u> No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland point taken in a recent clearcut.					

HYDROLOGY

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

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

Sampling Point: WGRB003_u

,	Absolute	- Dominant I	ndiaator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Dominant I Species?		
				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
1				
2				Total Number of Dominant
3		. <u> </u>		Species Across All Strata: 4 (B)
4				
5				Percent of Dominant Species That Are OBL EACW or EAC: 25 (A/B)
				That Are OBL, FACW, or FAC: 25 (A/B)
6		·		Prevalence Index worksheet:
7	0	·		Total % Cover of: Multiply by:
		= Total Cove		
50% of total cover: 0	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =0
Pinus taeda	10	Yes	FAC	FAC species 10 x 3 = 30
2. Ilex opaca	10	Yes	FACU	FACU species $\frac{60}{x 4} = \frac{240}{x}$
			17100	
3		·		70 270
4				Column Totals: (A) (B)
5				2.95
				Prevalence Index = B/A =3.85
6		·	·	Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8		. <u> </u>		2 - Dominance Test is >50%
9				
	20	= Total Cove	r	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:10		total cover:	4	4 - Morphological Adaptations ¹ (Provide supporting
	2070 01			data in Remarks or on a separate sheet)
	40	N	FAOL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Andropogon virginicus		Yes	FACU	
2. Eupatorium capillifolium	10	Yes	FACU	The disertence of the distance is an element of the distance of the second second
3				¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
				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
	50	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 25	20% of	total cover:	10	
Woody Vine Stratum (Plot size: 30)		_		Woody vine – All woody vines greater than 3.28 ft in
<u>·····</u> (· ···· <u>·</u>)				height.
1				
2	. <u> </u>	·	<u> </u>	
3				
4				the beauted a
		·		Hydrophytic
5				Vegetation Present? Yes No
		= Total Cove		
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 to	o the dept	h needed to docur	nent the indi	cator o	r confirm	the absence of in	ndicato	rs.)	
Depth			Redox Features							
(inches)	Color (moist)	%	Color (moist)	<u>%</u> T	ype ¹	Loc ²	Texture		Remarks	6
0-5	10YR 5/4	100					SL			
5-12	10YR 5/6	100					SCL			
				<u> </u>						
	oncentration, D=Deple	etion, RM=I	Reduced Matrix, MS	S=Masked Sa	nd Grai	ns.	² Location: PL=Po			
Hydric Soil	Indicators:						Indicators	s for Pr	oblematic I	Hydric Soils ³ :
<u> </u>	(A1)		Dark Surface	e (S7)			2 cm	Muck (A	10) (MLRA	147)
Histic E	pipedon (A2)		Polyvalue Be	low Surface (S8) (ML	.RA 147,	148) Coast	Prairie	Redox (A16	6)
Black H	istic (A3)		Thin Dark Su	urface (S9) (M	LRA 14	7, 148)	(MI	RA 14	7, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedm	nont Flo	odplain Soil	s (F19)
Stratifie	d Layers (A5)		Depleted Ma	trix (F3)			(MI	_RA 13	6, 147)	
2 cm M	uck (A10) (LRR N)		Redox Dark	. ,			•		Dark Surfa	ce (TF12)
	d Below Dark Surface	(A11)		rk Surface (F7	7)				n in Remarl	
	ark Surface (A12)	()	Redox Depre		/			V I S		- /
	Aucky Mineral (S1) (L I	RR N.		ese Masses (F12) (L	RR N.				
-	A 147, 148)		MLRA 13		, ,	,				
Sandy (Gleyed Matrix (S4)		Umbric Surfa	ice (F13) (ML	RA 136	, 122)	³ Indicato	ors of hy	drophytic v	egetation and
Sandy Redox (S5)			Piedmont Floodplain Soils (F19) (MLRA 14				•	d hydrol	ogy must be	e present,
	d Matrix (S6)		Red Parent N	Material (F21)	(MLRA	127, 147) unless	disturbe	ed or proble	matic.
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):						Hydric Soil Pre	sent?	Yes	No
Remarks:										



Photo 1 Upland data point WGRB003_u facing northeast



Photo 2 Upland data point WGRB003_u facing northwest

••••

Project/Site: ACP	City/County: Greens	sampling Date: 6/16/15
Applicant/Owner: Dominion		State: VA Sampling Point: war p 004 f.w
Investigator(s): ESI (Roper, Markhan	Section, Township, Range:	none
Landform (hillslope terrace etc.): drain all	Local relief (concave, conve	ex none). CONCAVE Slope (%): () -3%
Landform (hillslope, terrace, etc.): drainage Subregion (LRR or MLRA): LLR P	at: 3(0, 10001)	77.53193 Datum W(584
Soil Map Unit Name: <u>Roanoke loan</u> , ($2 - 2^{2} l_{1} \le l_{2} \ge l_{2} \le l_{2}$	
Are climatic / hydrologic conditions on the site typical for this		
Are Vegetation, Soil, or Hydrology s		
Are Vegetation, Soil, or Hydrology r	aturally problematic? (If needed	d, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point loca	tions, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		
Hydric Soil Present? Yes	Is the Sampled Are	
	lo within a Wetland?	Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all		Surface Soil Cracks (B6)
	Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
	eposils (B15) (LRR U) jen Sulfide Odor (C1)	Drainage Patterns (B10)
	ed Rhizospheres along Living Roots (C	
	ice of Reduced Iron (C4)	Crayfish Burrows (C8)
	t Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
	luck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5)	(Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Sphagnum moss (D8) (LRR T, U)
Field Observations:	epth (inches): NA	
Water Table Present? Yes Van D	epth (inches): <u>8</u> epth (inches): <u>SVT-Fa</u> (L) Wetla	and Hydrology Present? Yes No
Saturation Present? Yes <u>✓</u> No D (includes capillary fringe)	eptri (inches): <u>501 + a IL</u> wetta	and Hydrology Present? Yes V. No
Describe Recorded Data (stream gauge, monitoring wel	, aerial photos, previous inspections), i	if available:
Remarks:		
Tremarko.		
1		
	· .	

30 ft 20h	Absolute D	ominant Indicator	Dominance Test worksheet:
Tree Stratum (Piot size: ろのけょろのトチ)	<u> % Cover </u>	Species? Status	Number of Dominant Species
1. Ilex opaca	D	Y FAC	That Are OBL, FACW, or FAC: (A)
2. Pinus taeda	2	N FAC	
			Total Number of Dominant
3. Aler rubrum	15_	Y FAC	Species Across All Strata: [D] (B)
4. Liriodendron tulipifera	ID	Y FAW	· · · · · · · · · · · · · · · · · · ·
5. Liuvidambar styraliflua	0	Y FAC	Percent of Dominant Species
	· <u> </u>	- <u>f</u> <u>FnO</u>	That Are OBL, FACW, or FAC: (A/B)
6			
7			Prevalence Index worksheet:
^			Total % Cover of: Multiply by:
8,	· ····		
	<u> </u>	Total Cover	OBL species x 1 =
50% of total cover: 23	5 20% of to	stal cover: 9,4	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30ff x 30ff)	<u></u> 2010 01 K	nai cover. <u> </u>	FAC species x 3 =
Sapling/Shrup Stratum (Plot size: SVTI AOVIT)	~		1
1. Vaccinium corymbosum		Y FACW	FACU species x 4 =
2. Ilex opara	5	Y FAC	UPL species x 5 =
			Column Totals: (A) (B)
3			
4			Prevalence Index = B/A =
5			
6			Rapid Test for Hydrophytic Vegetation
7			
			2 - Dominance Test is >50%
8			3 - Prevalence Index is ≤3.0 ¹
		Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>5</u>	20% of t	otal cover: Z	
	20,0010		
Herb Stratum (Plot size: 30 ft x 30 ft)		<u>.</u> Л.	¹ Indicators of hydric soil and wetland hydrology must
1. Woodwardia aredata	10	Y OBL	be present, unless disturbed or problematic.
2. Clethra alnifolia	10	Y FACW	Definitions of Four Vegetation Strata:
3. Arundinaria gigantea		Y FACH	r = 1 (rep $= 100000000000000000000000000000000000$
4. Osmondastrum Cinhamome	a 5	N FACH	more in diameter at breast height (DBH), regardless of
5 Microsterium uminaum		Y FAC.	height.
5. Microstegium vimineum		<u>Y</u> FAC	, height.
5 <u>Microstegium vimineum</u> 6.	10		height.
6J	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
6	10	· · · · · · · · · · · · · · · · · · ·	height. Sapling/Shrub – Woody plants, excluding vines, less
6 7 8	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
6 7 8	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
6 7 8 9			 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6 7 8 9 10	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6 7 8 9 10	10		 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6			 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12	<u>10</u>	= Total Cover	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12 50% of total cover: <u>22</u>	<u>10</u>	= Total Cover	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12 50% of total cover: <u>22</u>	<u>10</u>	= Total Cover	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	<u>10</u>	= Total Cover	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12 <u>50% of total cover: 22</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft x 30ft</u>) 1. <u>nonc</u>	<u>10</u> <u>45</u> <u>10</u>	= Total Cover total cover:	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	<u>10</u> <u>45</u> <u>10</u>	= Total Cover total cover:	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12 <u>50% of total cover: 22</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft x 30ft</u>) 1. <u>none</u> 2	<u>10</u> <u>45</u> <u>15</u> 20% of	= Total Cover total cover:	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	<u>10</u> <u>45</u> <u>20% of</u>	= Total Cover total cover:	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6 7 8 9 10 11 12 <u>50% of total cover: 22</u> <u>Woody Vine Stratum</u> (Plot size: <u>30ft x 30ft</u>) 1. <u>none</u> 2	<u>10</u> <u>45</u> <u>20% of</u>	= Total Cover total cover:	 height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	<u>10</u> <u>45</u> <u>20% of</u>	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6 7 8 9 10 11 12 $\underbrace{50\% \text{ of total cover: } \underline{22}}_{Woody Vine Stratum} (Plot size: 30ft \times 30ft))1. none234$	<u>45</u> <u>5</u> 20% of	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 <u>Woody Vine Stratum</u> (Plot size: $30ft \times 30ft$) 1. <u>nonc</u> 2 3 4 5	<u>10</u> <u>45</u> <u>15</u> 20% of	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 $\underbrace{\text{Woody Vine Stratum}}_{1. \text{ No NC}} (\text{Plot size: } 30ft x 30ft) \\ 1. \underline{\text{No NC}}_{2. }$ 3 4	<u>10</u> <u>45</u> <u>15</u> 20% of	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonC. 2 3 4 5 $50\% \text{ of total cover: }}$	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 <u>Woody Vine Stratum</u> (Plot size: $30ft \times 30ft$) 1. <u>nonc</u> 2 3 4 5	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonC. 2 3 4 5 50% of total cover:	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonc. 2 3 4 5 50% of total cover:	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonc. 2 3 4 5 50% of total cover:	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonC. 2 3 4 5 50% of total cover:	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
6 7 8 9 10 11 12 50% of total cover: 22 <u>Woody Vine Stratum</u> (Plot size: $30\text{ft} \times 30\text{ft}$) 1. nonC. 2 3 4 5 $50\% \text{ of total cover: }}$	10 	= Total Cover total cover:	height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic

VEGETATION (Four Strata) – Use scientific names of plants

Sampling Point: wgrpD04f.w

SOIL

Sampling Point: warp 004 f.w

Profile Desc	ription: (Describe (to the depth r	leeded to docu	ment the i	ndicator	or confirn	n the absence (of indicators.)
Depth	Matrix			x Features		<u> </u>	.	
(inches)	Color (moist)		Color (moist)	%	_Type ¹ _	Loc ²	<u>Texture</u>	Remarks
0-8	IC IL II	100				·	5:1	<u> </u>
8-14	101R 4/1	100				<u> </u>	LS	
14-16	104K 21	100					5:5	
16-20	IDVR 51	00					<u>5:5</u> 5:5	
		· ·	u .				·····	
<u> </u>					·		<u> </u>	
		· <u> </u>						
	oncentration, D=Dep					ains.		PL=Pore Lining, M=Matrix.
	Indicators: (Applic	able to all LR			•			for Problematic Hydric Soils ³ :
[_] Histosol			Polyvalue B					luck (A9) (LRR O)
	pipedon (A2) stic (A3)		Thin Dark S Loamy Much					fuck (A10) (LRR S)
	en Sulfide (A4)		Loamy Gley			(0)		ed Vertic (F18) (outside MLRA 150A,B) ont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Ma		(12)			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P	, T, U)	Redox Dark		-6)			RA 153B)
📃 5 cm Mi	ucky Mineral (A7) (LF	R P, T, U)	Depleted Date				Red Pi	arent Material (TF2)
	resence (A8) (LRR U	1)	Redox Depr		8)			shallow Dark Surface (TF12)
	uck (A9) (LRR P, T)		Marl (F10) (Other	(Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	e (A11)	Depleted Or		-	•) T) ³ lmatia	
	rairie Redox (A16) (I	MI RA 150A)	Umbric Sur		• •	• •		cators of hydrophytic vegetation and tland hydrology must be present,
	Aucky Mineral (S1) (I		Delta Ochrie					ess disturbed or problematic.
	Gleyed Matrix (S4)	•••	Reduced Vo					·····
	Redox (S5)		Piedmont F					
	d Matrix (S6)		Anomalous	Bright Loa	amy Soils	(F20) (ML	.RA 149A, 153C	C, 153D)
	urface (S7) (LRR P, S					····		· •······
	Layer (if observed)				÷		l.	
Type:								\sim
	iches):						Hydric Sol	I Present? Yes <u>X</u> No
Remarks:								
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1								
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1								



Wetland data point wgrp004f_w facing west.



Wetland data point wgrp004f_w facing north.

Photo Sheet 1 of 2

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: <u>ACP</u>	City/County: Greensville Sampling Date: 6/16/15
Applicant/Owner: Dominion	City/County: <u>Greensville</u> Sampling Date: <u>6/16/15</u> State: <u>VA</u> Sampling Point: <u>wyrp004-u</u>
Investigator(s): ESI (Roper, Markham)	Section, Township, Range: NONE
Landform (hillslope, terrace, etc.): drainage	
Subregion (LRR or MLRA): LFR P Lat: 36	60004 Long: -77.53185 Datum: W6589
Soil Map Unit Name: Poanoke loam, 0-21	
Are climatic / hydrologic conditions on the site typical for this time of y	
Are Vegetation, Soil, or Hydrology significantly	
Are Vegetation, Soil, or Hydrology naturally pi	
	g sampling point locations, transects, important features, etc.
All of the store of the store store the store	g sumpling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
Renarks.	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply	Secondary Indicators (minimum of two required)
Surface Water (A1)	
High Water Table (A2)	
Saturation (A3)	
	pheres along Living Roots (C3) 🔲 Dry-Season Water Table (C2)
Sediment Deposits (B2)	luced Iron (C4)
	uction in Tilled Soils (C6)
Algal Mat or Crust (B4)	
L Iron Deposits (B5) Dther (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks) Li Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inch	es): <u>NA</u>
Water Table Present? Yes No Depth (inch	es): <u>>20</u>
Saturation Present? Yes No Depth (inch	hes): Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial ph	potos, previous inspections), if available:
Remarks:	

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

Sampling Point:	ωq	ri	p004-n

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30ft x 30ft)		Species?		Number of Dominant Species
1. Pinus trieda	20	¥	FAC	That Are OBL, FACW, or FAC: (A)
2. Liquidambar styrauifla	JD	<u> </u>	FAC	
3. avereus niara	<u> </u>		FAC	Total Number of Dominant
3. uou wo nigra		<u> </u>		Species Across All Strata: (B)
4. Lividendron tulipitera	10		FACU	Percent of Dominant Species
5				That Are OBL, FACW, or FAC:(A/B)
6				
7				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
8	45			OBL species x 1 =
		= Total Co	o ver	FACW species x 2 =
50% of total cover: 22	• ::: 20% of	f total cove	r: <u>1</u>	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: 30ft x30ft)				1
1. Vaccinium corymbosum	. 5_	<u> </u>	FACM	FACU species x 4 =
· ·				UPL species x 5 =
				Column Totals: (A) (B)
3				
4		· 		Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8	6	= Total Co	<u> </u>	3 - Prevalence Index is ≤3.0 ⁴
1		-		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 2	<u>></u> 20% c	of total cove	er:	
Herb Stratum (Plot size: 30++x30++)				¹ Indicators of hydric soil and wetland hydrology must
1. <u>Clethra alnifolia</u>	15	Y	FACW	be present, unless disturbed or problematic.
2. Pteridium aguilinum		- <u>- y</u>	PACU	Definitions of Four Vegetation Strata:
3				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5		_ <u></u>		height.
6				Sapling/Shrub - Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				- Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				- Woody vine – All woody vines greater than 3.28 ft in
11				height.
. 12				
	20	= Total (Cover	
	<u>10 20%</u>	of total co	ver:	-
Woody Vine Stratum (Plot size: 30ft × 30ft)				
1. Smilax rotundifolia	<u> </u>	<u> </u>	<u>FAC</u>	_
2				
				-
3				- [
4				-
5				– Hydrophytic
	סן	= Total	Cover	Vegetation
50% of total cover:	~	6 of total co		Present? Yes No
		-		—
Remarks: (If observed, list morphological adaptations	pelow).			
· · · · · · · · · · · · · · · · · · ·				

SOIL	•
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Sampling Point: Wgrp 004-U

Profile Description: (Describe to the depth needed to document the indicator or confirm	the absence of Indicators.)
Depth Matrix Redox Features (inches) Color (moist) % Type ¹ Loc ²	Tautura
$\frac{1}{0} - \frac{1}{0} \frac{1}{1} $	Remarks
	<u></u>
	<u> </u>
12-15 104K 4/3 60 104K312 20 D M	
15-20 104 R 5/2 100	<u></u>
· · · · · · · · · · · · · · · · · · ·	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)	J) 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S)
Black Histic (A3)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5) Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U) Image: Redox Dark Surface (F6) 5 cm Mucky Mineral (A7) (LRR P, T, U) Image: Depleted Dark Surface (F7)	(MLRA 153B)
Muck Presence (A8) (LRR U)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	D Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	
Image: Thick Dark Surface (A12) Image: Thick Dark Surface (A12) Image: Thick Dark Surface (A12) Image: Thick Dark Surface (F12) (LRR O, P, C, P) Image: Thick Dark Surface (A12) Image: Thick Dark Surface (F12) (LRR O, P, C, P) Image: Thick Dark Surface (A12) Image: Thick Dark Surface (F12) (LRR O, P, C, P) Image: Thick Dark Surface (A12) Image: Thick Dark Surface (F13) (LRR P, T, U) Image: Thick Dark Surface (Thick Dark Surface (F13) (LRR P, T, U) Image: Thick Dark Surface (Thick Dark Surfac	 T) ³Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B))
Sandy Redox (S5)	
Image: Stripped Matrix (S6) Image: Stripped Matrix (S6) Image: Dark Surface (S7) (LRR P, S, T, U)	RA 149A, 153C, 153D)
Restrictive Layer (if observed):	
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
Remarks:	

Environmental Field Surveys Wetland Photo Page



Upland data point wgrp004_u facing south.



Upland data point wgrp004_u facing east.

Project/Sile: <u>ACP</u>	_ City/County: Greensville Sampling Date: 6/16/15
Applicant/Owner: Dominion	State: VA Sampling Point: $\sqrt{40003}L\omega$
Investigator(s): ESI (Roper, Markham)	Section Township Range: NONE
Subregion (LRR or MLRA): <u>LRR P</u> Lat: <u>31</u>	Local relief (concave, convex, none): <u>CONCAVE</u> Stope (%): <u>2-5'1.</u> 0: 59794 Long: <u>-77.53060</u> Datum: W6584
Sublegion (LRR of MLRA): E [Lat: Lat:	61. Slopes NWI classification: PFD
Soil Map Unit Name: Craven Clay Loam, 2-	
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation, Soll, or Hydrology significa	
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes Ho Wetland Hydrology Present? Yes No	within a Wetland? Yes 🔨 No
Wetland Hydrology Present? Yes <u>No</u> No No	
Nemana.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	
Surface Water (A1)	
High Water Table (A2)	
Saturation (A3)	
Water Marks (B1)	ospheres along Living Roots (C3)
	educed Iron (C4)
	eduction in Tilled Soils (C6)
Algai Mat or Crust (B4) Image: Algai Mat or Crust (B4) Image: Crust (B5) Image:	
Inundation Visible on Aerial Imagery (B7)	n in Remarks) L Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (in	ches): <u>NH</u>
Water Table Present? Yes No Depth (in	iches):
Saturation Present? Yes No Depth (in	iches): <u>>20</u> Wetland Hydrology Present? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial	nhotos previous inspections) if available:
Remarks:	
	· · · · ·
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		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30++ x 30++)		Species?		Number of Dominant Species
1. Pinus taeda	_2	<u>_N</u>	FAC.	That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	15	<u> </u>	FAC	Total Number of Dominant
3. Liquidambar styraciflua	15	<u>.</u> Y	PAL	Species Across All Strata: 7 (B)
4. Ilex opaca	10	<u> </u>	<u>FAC</u>	
5				Percent of Dominant Species That Are OBL, FACW, or FAC:
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	42	= Total Cov	er	OBL species x 1 =
50% of total cover: 21				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 30ftx 30ff)			·	FAC species x 3 =
1. Ilex opaca	D	Y	FAC	FACU species x 4 =
· ·				UPL species x 5 =
2				Column Totals: (A) (B)
3				
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				Rapid Test for Hydrophytic Vegetation
7	•		·	2 - Dominance Test is >50%
8		.——		☐ 3 - Prevalence Index is ≤3.0 ¹
		- = Total Co	ver	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 50%	20% o	f total cover	<u> </u>	
Herb Stratum (Plot size: 30ft x 30ft)	-			¹ Indicators of hydric soil and wetland hydrology must
1. Toxicodendron radicans		<u>N</u>	FAC	be present, unless disturbed or problematic.
2. Clethra alnitolia	10	<u> </u>	FACW	Definitions of Four Vegetation Strata:
3. Athyrium asplenoides	5	N	FAC	
4. Microstegium vimineum	ID	-y	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5. Woodwardin areolata	סו	Y	DBL	height,
6				
7				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11				height.
12		•		
	<u> </u>	_ = Total Co		
50% of total cover: 2	20%	of total cove	er: <u>0</u>	-
Woodv Vine Stratum (Plot size: <u>30</u> ff × 30 ff)				
1. none		-		
2		_		
3				
4				
5				-
	- <u>D</u>	= Total C	over	- Hydrophytic Vegetation
E0% of total power				Present? Yes No
50% of total cover:			G1	-
Remarks: (If observed, list morphological adaptations be	⊧IOW).			

Sampling Point: <u>wg p003f</u> w

SOIL								Sampling Point: <u>W9 P003F</u> w
	cription: (Describe t	o the dep				or confirm	the absence o	f Indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	K Feature	s Type ¹	Loc ²	Texture	Remarks
0-Z	10YR412	00						
2-8	10YR4/2	95	107R4/6	5	<u> </u>	M		
8-18	107R3/1	95	10 F 3/6	5	<u>C</u>	PL	<u> </u>	
18-20	104R2/1	001			<u> </u>			
	· · · · · · · · · · · · · · · · · · ·	·				<u> </u>		
			<u></u>			. <u> </u>		
				. <u></u>	. <u></u>			
	oncentration, D=Dep					ains.		PL=Pore Lining, M=Matrix.
	Indicators: (Applic	able to all				000 7 1		or Problematic Hydric Soils ³ :
Histoso	pipedon (A2)		Polyvalue Be					uck (A9) (LRR O) uck (A10) (LRR S)
Black H	listic (A3)		🔲 Loamy Muck	y Mineral	(F1) (LRF		Reduce	d Vertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye		(F2)			Int Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5) Bodies (A6) (LRR P	. т. u)	Depleted Ma		F6)			lous Bright Loamy Soils (F20) A 153B)
=	ucky Mineral (A7) (Li	•						irent Material (TF2)
	resence (A8) (LRR U	Ŋ	Redox Depre	•	-8)			nallow Dark Surface (TF12)
	uck (A9) (LRR P, T) ed Below Dark Surfac	- (A11)	Marl (F10) (L			E4)	Uther (Explain in Remarks)
	ark Surface (A12)	e (ATT)		-			. T) ³ Indic	ators of hydrophytic vegetation and
	Prairie Redox (A16) (I	MLRA 150				-		and hydrology must be present,
= .	Mucky Mineral (S1) (LRR O, S)						ess disturbed or problematic.
	Gleyed Matrix (S4) Redox (S5)		Reduced Ve					
	d Matrix (S6)						/ RA 149A, 153C	, 153D)
	urface (S7) (LRR P,		· · ·	-				
	Layer (if observed)	:						
Type: Depth (i	nches):						Hydric Soil	Present? Yes No
Remarks:								
1								
ł								

Environmental Field Surveys Wetland Photo Page



Wetland data point wgrp003f_w facing northwest.



Wetland data point wgrp003f_w facing northeast.

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Project/Site: ACP	City/County: <u>Greensville</u> Sampling Date: <u>10/10/15</u> State: <u>VA</u> Sampling Point: <u>warp003_u</u>
Applicant/Owner: Dominion	State: VA Sampling Point: war 003-u
Investigator(s): ESI (Roper, Markham)	Section, Township, Range: NONC
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none): <u>CONCAVE</u> Slope (%): 2-5/1
Subregion (LRR or MLRA): LFR P Lat: 36.	Local relief (concave, convex, none): <u>CONCAVE</u> Slope (%): 2-5/, 59785 Long: -77.53053 Datum: W6584
Soil Map Unit Name: Craven Clay loam, 2-6	1. Slodes NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of y	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes 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? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Yes Yes	Is the Sampled Area within a Wetland? Yes No
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	
High Water Table (A2)	
Saturation (A3)	
Water Marks (B1)	oheres along Living Roots (C3)
Sediment Deposits (B2)	
	uction in Tilled Soils (C6)
Algai Mat or Crust (B4)	
L Iron Deposits (B5) Dther (Explain in Inundation Visible on Aerial Imagery (B7)	Remarks) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inch	
Water Table Present? Yes No Depth (inch	
Saturation Present? Yes No Depth (inch (includes capillary fringe)	es): >2. Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	

Sampling Point: wgcp003~~

20fl 20fl		Dominant		Dominance Test worksheet:
Tree Stratum (Piot size: 30ft x30ft)	<u>Cover</u>	Species?		Number of Dominant Species
1. Ilex opaca	<u> </u>	<u></u>	<u>F</u> ŬČ	That Are OBL, FACW, or FAC: (A)
2. Pinus taeda	15	<u> </u>	FAC	Total Number of Dominant
3. Liquidambar styraliflua	<u>0</u>	<u> </u>	FAC	Species Across All Strata:(B)
4. Heer rubrum '	<u> </u>	<u>N</u>	<u>PAC</u>	Descent of Development
5. Nyssa sylvatica	5	N.	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: DD (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
ö	μp	= Total Co		OBL species x 1 =
50% of total cover: 22				FACW species x 2 =
	<u>20%</u> of	total cover	··	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			,	FACU species x 4 =
1. Liquidambar styraciflua		<u>}</u>	<u>FHC</u>	
2				UPL species x 5 =
3	<u> </u>		·	Column Totals: (A) (B)
4,				Prevalence Index = B/A =
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
8	- 10			☐ 3 - Prevalence Index is ≤3.0 ¹
		= Total Co	_	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	<u>)</u> 20% of	f total cove	r:	
Herb Stratum (Plot size: 30ft x30ft)				¹ Indicators of hydric soil and wetland hydrology must
1. Clethra alnifolia		<u> </u>	<u>FACW</u>	be present, unless disturbed or problematic.
2				Definitions of Four Vegetation Strata:
3				
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5				height.
6				
				Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				
8				Herb - All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
11				height.
12				
	10	_ = Total C	over	
50% of total cover:	<u>5 </u>	of total cov	er: 2_	
Woody Vine Stratum (Plot size: 30 ft x 30 ft)				
1. Smilax rotunditolia	<u> </u>	У	FAC	
2				-
2				-
				-
4	<u> </u>			-
j 5				- Hydrophytic
	<u></u>	_ = Total (Cover	Vegetation
50% of total cover: 2	.5 20%	of total cov	ver:	Present? Yes V No
Remarks: (If observed, list morphological adaptations t		•		
	,.			

SOIL

Profile Desc	ription: (Describe	to the depth	needed to docu	ment the i	ndicator	or confirm	the absence of in	dicators.)	
Depth	Matrix			ox Features		,	-	_	
0-4	<u>Color (moist)</u>	<u> % </u>	Color (moist)	%	<u>Type¹</u>	Loc ²	Texture	Remarks	
		• • • • • • • • • • • • • • • • • • •			<u> </u>		<u>SL</u>	<u> </u>	
9-17	104K 6/3	100					Fine SL		<u> </u>
14-20	10YR 5/4	100				<u> </u>			
	· · · · · · · · · · · · · · · · · · ·								
							· ·		
	····								· · · · · · · · · · · · · · · · · · ·
¹ Type: C=C	oncentration, D=Dep	bletion. RM=R	educed Matrix. M	S=Masked	Sand Gr	ains.	² l ocation: Pl =	Pore Lining, M=Matri	×
	Indicators: (Applic							Problematic Hydric S	
Histosol	(A1)		Polyvalue B					(A9) (LRR O)	
	pipedon (A2)		Thin Dark S					(A10) (LRR S)	
	istic (A3) en Sulfide (A4)		Loamy Much			τO)		ertic (F18) (outside f loodplain Soils (F19)	
	d Layers (A5)		Depleted Mi		(2)			Bright Loamy Soils (F19)	
	Bodies (A6) (LRR F	Ρ, Τ, U)	Redox Dark		F6)		(MLRA 1		. 20)
	ucky Mineral (A7) (L		Depleted Da					t Material (TF2)	
	resence (A8) (LRR I		Redox Depr	•	8)			w Dark Surface (TF1	2)
	uck (A9) (LRR P, T) d Below Dark Surfa		Mari (F10) (51)	L Other (Exp	lain in Remarks)	
	ark Surface (A12)		Iron-Manga				T) ³ Indicator	s of hydrophytic vege	tation and
	rairie Redox (A16) ((MLRA 150A)	Umbric Sur	face (F13)	(LRR P, 1	r, U)		hydrology must be p	
	Mucky Mineral (S1)	(LRR O, S)	Delta Ochri					disturbed or problema	atic.
	Gleyed Matrix (S4)		Reduced V		-				
	Redox (S5) d Matrix (S6)		Piedmont F	•			49A) RA 149A, 153C, 15	וחצ	
	urface (S7) (LRR P,	S, T, U)		5.1.9.11 200	any cono	(1 20) (112	, 1407, 1000, 10	,	
Restrictive	Layer (if observed):							
Type:									
	nches):		<u> </u>				Hydric Soil Pre	esent? Yes	No
Remarks:									
1									
1									
ļ									
Ì									

Sampling Point: Wgr DO3_a

Environmental Field Surveys Wetland Photo Page



Upland data point wgrp003_u facing southwest.



Upland data point wgrp003_u facing southeast.

Project/Site: Atlantic Coast Pipeline		City/County: Greensville			_ Sampling Date: <u>10/3/2014</u>		
Applicant/Owner: Dominion			State: VA	Sampling Po	oint: WGRB001f_w		
Investigator(s): TP, KB		Section, Township, Range:	No PLSS in this are	a			
Landform (hillslope, terrace, etc.): drainage way		Local relief (concave, conve	x, none): <u>concave</u>		Slope (%): 2		
Subregion (LRR or MLRA): P							
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes							
Are climatic / hydrologic conditions on the site typical for th Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach site map	nis time of ye significantly naturally pr	ear? Yes <u>V</u> No y disturbed? Are "Norm oblematic? (If needed	_ (If no, explain in F nal Circumstances" , explain any answe	Remarks.) present? Yes ers in Remark	s No s.)		
Hydrophytic Vegetation Present? Yes M Hydric Soil Present? Yes M Wetland Hydrology Present? Yes M Remarks: wetland point taken in drainage way below ag. fields	No	within a Wetland?		, No		_	
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)
	RR U) Sparsely Vegetated Concave Surface (B8) (C1) Drainage Patterns (B10) (C1) Moss Trim Lines (B16) along Living Roots (C3) Dry-Season Water Table (C2) ron (C4) Crayfish Burrows (C8) in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)) Geomorphic Position (D2) arks) FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes No Depth (inches):11 Water Table Present? Yes No Depth (inches):6 Saturation Present? Yes No Depth (inches):6 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr Remarks: Remarks:	Wetland Hydrology Present? Yes No

Sampling Point: WGRB001f_w

Trop Stratum (Plat aiza: 30)		Dominant		Dominance Test worksheet:
		Species?	Status	Number of Dominant Species
1. Liriodendron tulipifera	25 20	Yes	FACU	That Are OBL, FACW, or FAC:6 (A)
2. Acer rubrum		Yes	FAC	Total Number of Dominant
3. Liquidambar styraciflua	20	Yes	FAC	Species Across All Strata:8 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 75 (A/B)
6				Prevalence Index worksheet:
7				
8				$\begin{array}{c c} \underline{\text{Total } \% \text{ Cover of:}} \\ \hline \text{OPL encoded} \\ 10 \\ \hline \text{v 1} = 10 $
	65	= Total Cov		
50% of total cover:32.5	20% of	total cover:	13	FACW species $x^2 = \frac{20}{180}$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $x^3 = 160$
1. Liriodendron tulipifera	15	Yes	FACU	FACU species X 4 =
2. Acer rubrum	10	Yes	FAC	UPL species $x_5 = $
3. Clethra alnifolia	10	Yes	FACW	Column Totals: (A) (B)
4. Ilex opaca	10	Yes	FAC	Prevalence Index = B/A = 3.08
	·			
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7	. <u> </u>			✓ 2 - Dominance Test is >50%
8	45			$_$ 3 - Prevalence Index is $\leq 3.0^1$
22.5		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:22.5	' 20% of	total cover:	9	
Herb Stratum (Plot size:5)	40		0.01	¹ Indicators of hydric soil and wetland hydrology must
1. Woodwardia areolata	10	Yes	OBL	be present, unless disturbed or problematic.
2				Definitions of Four Vegetation Strata:
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				
11				Woody vine – All woody vines greater than 3.28 ft in height.
12.	······			neight.
12	10	= Total Cov		
50% of total cover: 5			•	
	20% of	total cover:		
Woody Vine Stratum (Plot size: 30)				
1				
2	·			
3				
4				
5				Hydrophytic
	0	= Total Cov	er	Vegetation
50% of total cover:0	20% of	total cover:	0	Present? Yes <u>No</u>
Remarks: (If observed, list morphological adaptations belo	w).			1

SOIL

Profile Desc	ription: (Describe to	the dept	n needed to docun	nent the in	dicator	or confirm t	he absence	of indicato	ors.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	10YR 3/2	95	10YR 4/6	5	С	PL	SCL			
							,			
¹ Type: C=C	oncentration, D=Deple	etion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore L	ining, M=Matrix	κ.
Hydric Soil	Indicators: (Applica	ble to all L	RRs, unless other	wise note	d.)		Indicators	for Proble	matic Hydric S	Soils ³ :
Histosol	(A1)		Polyvalue Be	low Surfac	e (S8) (L	RR S. T. U)	1 cm N	Muck (A9) (L	LRR O)	
	pipedon (A2)		Thin Dark Su					Muck (A10)		
	stic (A3)		Loamy Mucky						18) (outside N	ILRA 150A.B)
	en Sulfide (A4)		Loamy Gleye			-,			ain Soils (F19)	
	d Layers (A5)		Depleted Mat		_,				Loamy Soils (I	
	Bodies (A6) (LRR P,	τ.υ)	 Redox Dark S 		3)			RA 153B)		20)
	icky Mineral (A7) (LRI		Depleted Dar	•	,			arent Mater	ial (TF2)	
	esence (A8) (LRR U)		Redox Depre						k Surface (TF1)	2)
	ick (A9) (LRR P, T)		Marl (F10) (L)			(Explain in F		-)
	d Below Dark Surface	(Δ11)	Depleted Och	•		(1)			Kelliarks)	
-	ark Surface (A12)	(,,,,)	Iron-Mangane			•	3 ³ India	patore of hyr	drophytic veget	ation and
	. ,				• • •			-		
	rairie Redox (A16) (M					, 0)		-	ogy must be pr	
-	lucky Mineral (S1) (Lf	(K U, S)	Delta Ochric			04 4500)	uni	ess disturbe	ed or problemat	IC.
	Bleyed Matrix (S4)		Reduced Ver				•			
-	Redox (S5)		Piedmont Flo							
	Matrix (S6)		Anomalous B	right Loam	iy Solis (I	-20) (MILRA	149A, 153C	, 153D)		
	rface (S7) (LRR P, S,	I, U)								
Restrictive	Layer (if observed):									
Туре:										
Depth (in	ches):						Hydric Soil	Present?	Yes 🔽	No
Remarks:										



Photo 1 Wetland data point WGRB001f_w facing south



Photo 2 Wetland data point WGRB001f_w facing north

Project/Site: Atlantic Coast Pipeline	City/County:	Greensville	Sampling Date: 10/3/2014
Applicant/Owner: Dominion		State: VA	Sampling Point: WGRB001_u
Investigator(s): TP, KB	Section, Tow	nship, Range: <u>No PLSS in this area</u>	
Landform (hillslope, terrace, etc.): hillslope		oncave, convex, none): <u>none</u>	-
Subregion (LRR or MLRA): P Lat: 36.5	8773796	Long: <u>-77.53010334</u>	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, frequen	tly flooded	NWI classifica	ation: None
Are climatic / hydrologic conditions on the site typical for this time of	fyear?Yes 🔽	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed?	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling	point locations, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌 Yes 🖌 Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No <u>′</u>
Remarks: upland point taken near ag. field					

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is require		Surface Soil Cracks (B6)			
Surface Water (A1)		Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Marl Deposits (B15) (LRR U)		Drainage Patterns (B10)		
Saturation (A3)	Hydrogen Sulfide Odor (C1)		Moss Trim Lines (B16)		
Water Marks (B1)	Oxidized Rhizospheres along Living F	Roots (C3)	Dry-Season Water Table (C2)		
Sediment Deposits (B2)	Presence of Reduced Iron (C4)		Crayfish Burrows (C8)		
Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils	(C6)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic Position (D2)		
Iron Deposits (B5)	Other (Explain in Remarks)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7	<i>)</i>)		FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)			Sphagnum moss (D8) (LRR T, U)		
Field Observations:					
Surface Water Present? Yes N	No Depth (inches):				
Water Table Present? Yes N	No Depth (inches):				
Saturation Present? Yes N (includes capillary fringe)	No <u>/</u> Depth (inches):	Wetland H	ydrology Present? Yes No		
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspec	tions), if avai	lable:		
Remarks:					

Sampling Point: WGRB001_u

Trop Stratum (Plat aiza: 30)		Dominant		Dominance Test worksheet:
	<u>% Cover</u> 10	<u>Species?</u> Yes	<u>Status</u> FAC	Number of Dominant Species
1. Liquidambar styraciflua	10			That Are OBL, FACW, or FAC:6 (A)
2. Acer rubrum		Yes	FAC	Total Number of Dominant
3. Liriodendron tulipifera	10	Yes	FACU	Species Across All Strata: 8 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 75 (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	30	= Total Cov	er	OBL species x 1 =
50% of total cover: 15		total cover:	6	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15)			·	FAC species 65 x 3 = 195
Ligustrum sinense	15	Yes	FAC	FACU species20 x 4 =80
2. Liriodendron tulipifera	10	Yes	FACU	UPL species $0 x 5 = 0$
3. Liquidambar styraciflua	10	Yes	FAC	Column Totals: (A) (B)
4. Acer rubrum	10	Yes	FAC	
				Prevalence Index = B/A =3.23
5				Hydrophytic Vegetation Indicators:
6	. <u> </u>			1 - Rapid Test for Hydrophytic Vegetation
7			. <u> </u>	✓ 2 - Dominance Test is >50%
8				3 - Prevalence Index is $≤3.0^{1}$
	45	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:22.5	20% of	total cover:	9	
Herb Stratum (Plot size: <u>5</u>)				¹ Indicators of hydric soil and wetland hydrology must
, Microstegium vimineum	10	Yes	FAC	be present, unless disturbed or problematic.
2			·	Definitions of Four Vegetation Strata:
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of height.
5				
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10			. <u> </u>	Woody vine – All woody vines greater than 3.28 ft in
11				height.
12				
	10	= Total Cov	er	
50% of total cover:5	20% of	total cover:	2	
Woody Vine Stratum (Plot size: 30)				
1				
2				
3				
4			·	
5			<u> </u>	Hydrophytic
0		= Total Cov		Vegetation Present? Yes <u>Ves</u> No
50% of total cover:0		total cover:		
Remarks: (If observed, list morphological adaptations belo	w).			

Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/2	100					SL	
3-6	10YR 4/3	100					SCL	
6-12	10 YR 4/2	95	10YR 4/6	5	С	М	SCL	
				·				
	oncentration, D=Dep					ains.		_=Pore Lining, M=Matrix. r Problematic Hydric Soils ³ :
Black H Hydroge Stratifie Organic 5 cm Mi Muck Pi 1 cm Mi Deplete Thick D Coast P Sandy N Sandy C Sandy F Strippec Dark Su	pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) c Bodies (A6) (LRR P ucky Mineral (A7) (LR resence (A8) (LRR U uck (A9) (LRR P, T) d Below Dark Surfac tark Surface (A12) Prairie Redox (A16) (I Mucky Mineral (S1) (I Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, S	RR P, T, U) I) Ie (A11) MLRA 150A LRR O, S) S, T, U)	 Redox Depres Marl (F10) (L Depleted Ocl Iron-Mangan Umbric Surfa Delta Ochric Reduced Ver Piedmont Flo 	rface (S9) (y Mineral (F ed Matrix (F2 trix (F3) Surface (F6) rk Surface (F6) rk Surface (F6) rk Surface (F6) essions (F8) RR U) nric (F11) (N rese Masses ice (F13) (L] (F17) (MLR tic (F18) (M podplain Soi	LRR S, 1) (LRR 2) =7) (F12) (i RR P, T A 151) LRA 15 is (F19)	T, U) O) LRR O, P, ⁻ , U) 0A, 150B) (MLRA 149	 2 cm Muc Reduced Piedmont Anomalou (MLRA Red Pare Very Sha Other (Ex T) ³ Indicate wetlar unless	ent Material (TF2) llow Dark Surface (TF12) cplain in Remarks) ors of hydrophytic vegetation and nd hydrology must be present, s disturbed or problematic.
	Layer (if observed):							
Туре:							Hydric Soil Pr	esent? Yes 🖌 No



Photo 1 Upland data point WGRB001_u facing east



Photo 2 Upland data point WGRB001_u facing west

Project/Site: Atlantic Coast Pipeline	City/C	ounty: Greensville		Sampling Date:	10/3/2014
Applicant/Owner: Dominion			_ State: VA	Sampling Point:	WGRB002f_w1
Investigator(s): TP, KB	Sectio	on, Township, Range:	No PLSS in this are	a	
Landform (hillslope, terrace, etc.): drainage way	Local	relief (concave, conve	ex, none): <u>concave</u>	Sloj	pe (%): <u>2</u>
Subregion (LRR or MLRA): P	Lat: <u>36.58620043</u>	Long:	-77.52983187	Da	atum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slope					
Are climatic / hydrologic conditions on the site typical for t	his time of year? Y	es 🖌 No	_ (If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly distur	oed? Are "Norn	nal Circumstances"	present? Yes	✓ No
Are Vegetation, Soil, or Hydrology	_naturally problema	tic? (If needed	l, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	o showing sam	pling point locat	tions, transects	s, important f	eatures, etc.
Hydrophytic Vegetation Present? Yes ✓ Hydric Soil Present? Yes ✓ Wetland Hydrology Present? Yes ✓ Remarks: PFO wetland in NWI polygon. Mixed hardwoods with swa	No No	Is the Sampled Area within a Wetland? r areas. Logged about	Yes		 a SMZ

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) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Marl Deposits (B15) (LRR U)	✓ Drainage Patterns (B10)
✓ Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1)	Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils	(C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>Ves</u> No Depth (inches): 4	
Saturation Present? Yes <u>V</u> No Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes No
(includes capillary fringe)	· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

Sampling Point: WGRB002f_w1

Trop Stratum (Plat size: 30)		Dominant		Dominance Test worksheet:
		Species?		Number of Dominant Species
1. Acer rubrum	40	Yes	FAC	That Are OBL, FACW, or FAC:7 (A)
2. Nyssa biflora	10	Yes	OBL	Total Number of Dominant
3				Species Across All Strata: 8 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC:87.5 (A/B)
6				
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
0	-0	= Total Cov		OBL species x 1 =15
50% of total covor: 25			10	FACW species $30 \times 2 = 60$
	20% 01	total cover:		FAC species $50 \times 3 = 150$
Sapling/Shrub Stratum (Plot size: 15)	15	Yes	FACU	FACU species 15 x 4 = 60
1. Liriodendron tulipifera				UPL species $0 \times 5 = 0$
2. Ilex verticillata	10	Yes	FACW	110 285
3. Ilex opaca	10	Yes	FAC	Column Totals: (A) (B)
4. Clethra alnifolia	10	Yes	FACW	Prevalence Index = $B/A = 2.59$
5. Magnolia virginiana	10	Yes	FACW	Hydrophytic Vegetation Indicators:
6				
7				 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
8				
0	55	= Total Cov		\checkmark 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:27.5			4.4	Problematic Hydrophytic Vegetation ¹ (Explain)
-	20% of	total cover:		
	~			¹ Indicators of hydric soil and wetland hydrology must
1. Woodwardia areolata	5	Yes	OBL	be present, unless disturbed or problematic.
2				Definitions of Four Vegetation Strata:
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				
				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
9				
10				Woody vine – All woody vines greater than 3.28 ft in
11	·			height.
12				
		= Total Cov	er	
50% of total cover: 2.5	20% of	total cover:	1	
Woody Vine Stratum (Plot size:30)				
1				
2				
3.				
4	·			
5				Hydrophytic
		= Total Cov	•	Vegetation Present? Yes Vo
50% of total cover:0	20% of	total cover:	0	
Remarks: (If observed, list morphological adaptations belo	w).			

Depth	cription: (Describe Matrix			ox Feature				,
(inches)	Color (moist)	%	Color (moist)	<u>3x i eature</u> %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 2/1	95	10YR 4/6	5	C	PL	L	
6-12	10 YR 4/1	95	10YR 4/6	5	С	PL	SCL	
	Concentration, D=Dep					 ains.		PL=Pore Lining, M=Matrix.
-	Indicators: (Applic	able to al						or Problematic Hydric Soils ³ :
Black H Hydrog Stratifie Crganie 5 cm M Muck F 1 cm M Deplete Thick D Coast F Sandy Sandy Sandy Sandy Sandy Dark S	Epipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) c Bodies (A6) (LRR P lucky Mineral (A7) (LR Presence (A8) (LRR U luck (A9) (LRR P, T) ed Below Dark Surfac Dark Surface (A12) Prairie Redox (A16) (I Mucky Mineral (S1) (I Gleyed Matrix (S4) Redox (S5) d Matrix (S6) urface (S7) (LRR P, S	RR P, T, U) e (A11) /ILRA 150 .RR O, S) 5, T, U)	 Redox Depr Marl (F10) (i Depleted Oc Iron-Mangar Umbric Surf Delta Ochric Reduced Ve Piedmont Fl 	urface (S9) ky Mineral ed Matrix (atrix (F3) Surface (F ark Surface essions (F- LRR U) chric (F11) nese Mass ace (F13) (c (F17) (ML ertic (F18) (oodplain S) (LRR S, (F1) (LRF F2) 6) (F7) 8) (MLRA 1 (LRR P, T .RA 151) (MLRA 15 oils (F19)	T, U) 2 O) 1 LRR O, P, 7, U) 50A, 150B) (MLRA 14	2 cm Mu Reduced Piedmor Anomald (MLR/ Red Par Very Sha Other (E T) ³ Indicat wetla unles	uck (A9) (LRR O) uck (A10) (LRR S) d Vertic (F18) (outside MLRA 150A,B nt Floodplain Soils (F19) (LRR P, S, T) ous Bright Loamy Soils (F20) A 153B) rent Material (TF2) allow Dark Surface (TF12) Explain in Remarks) tors of hydrophytic vegetation and and hydrology must be present, as disturbed or problematic.
Type:	Layer (if observed):							
Depth (ir	nches):						Hydric Soil P	Present? Yes 🖌 No
Remarks:								



Photo 1 Wetland data point wgrb002f_w1 facing north



Photo 2 Wetland data point wgrb002f_w1 facing south

Project/Site: Atlantic Coast Pipeline	City/County: Greensville		Sampling Date: <u>10/3/2014</u>			
Applicant/Owner: Dominion		_ State: VA	Sampling Point: WGRB002f_w2			
Investigator(s): TP, KB	Section, Township, Range:	No PLSS in this are	а			
Landform (hillslope, terrace, etc.): drainage way						
Subregion (LRR or MLRA): P La	t: <u>36.58061184</u> Long	061184 Long: -77.52865248 Datum: WGS				
Soil Map Unit Name: Roanoke silt loam, 0 to 2 percent slope	s, ponded	NWI classific	cation: PFO1A			
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes 🖌 No	_ (If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydrology sig	gnificantly disturbed? Are "Norr	y disturbed? Are "Normal Circumstances" present? Yes				
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If needed	d, explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map s	howing sampling point loca	tions, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes No	Is the Sampled Are	2				
Hydric Soil Present? Yes 🖌 No			No			
Wetland Hydrology Present? Yes <u>Ves</u> No						
Remarks:						
PFO wetland in NWI polygon. Additional data point taken at Hydrology is seasonally flooded with a braided stream system		d canopy dominated	by swamp and water tupelo.			

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) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Marl Deposits (B15) (LRR U)	 Drainage Patterns (B10)
✓ Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres along Living F	Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
✓ Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes <u>V</u> No Depth (inches): <u>4</u>	
Saturation Present? Yes <u>V</u> No Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes 🖌 No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

Sampling Point: WGRB002f_w2

20	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?	Status	Number of Dominant Species
1. Nyssa biflora	30	Yes	OBL	That Are OBL, FACW, or FAC: 7 (A)
_{2.} Nyssa aquatica	30	Yes	OBL	
3				Total Number of Dominant Species Across All Strata: 7 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				
8				Total % Cover of: Multiply by: OBL appaging 80 x 1 = 80
		= Total Cov	er	OBL species 25 $x = 50$
50% of total cover:30	20% of	total cover:	12	FACW species $x_2 = 000$
Sapling/Shrub Stratum (Plot size: 15)				FAC species $10 \times 3 = 30$
1. Fraxinus pennsylvanica	10	Yes	FACW	FACU species $0 x 4 = 0$
2. Ilex opaca	10	Yes	FAC	UPL species $0 \times 5 = 0$
				Column Totals: 115 (A) 160 (B)
3. <u>Ilex verticillata</u>	10	Yes	FACW	
4. Clethra alnifolia	5	No	FACW	Prevalence Index = B/A = 1.39
5				Hydrophytic Vegetation Indicators:
6				
				1 - Rapid Test for Hydrophytic Vegetation
7			<u> </u>	∠ 2 - Dominance Test is >50%
8	05			\checkmark 3 - Prevalence Index is ≤3.0 ¹
(= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:17.5	20% of	total cover:	7	
Herb Stratum (Plot size: 5)				¹ Indicators of hydric soil and wetland hydrology must
1. Saururus cernuus	10	Yes	OBL	be present, unless disturbed or problematic.
2. Woodwardia areolata	10	Yes	OBL	Definitions of Four Vegetation Strata:
				Deminions of Four Vegetation of data.
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub – Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				
				Woody vine – All woody vines greater than 3.28 ft in
11			<u> </u>	height.
12			. <u> </u>	
		= Total Cov		
50% of total cover:10	20% of	total cover:	4	
Woody Vine Stratum (Plot size:30)				
1				
2				
3			<u> </u>	
4				
5				Hydrophytic
	0	= Total Cov	er	Vegetation
50% of total cover: 0	20% of	total cover:	0	Present? Yes No No
Remarks: (If observed, list morphological adaptations belo				1
	vv).			

SOIL

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	K Features	5			
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 2/1	100					SCL	
				<u> </u>				
							·	
1								
	oncentration, D=Depl					ains.		PL=Pore Lining, M=Matrix.
-	Indicators: (Applica							for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Bel	ow Surfac	ce (S8) (L	.RR S, T, U) 1 cm M	luck (A9) (LRR O)
Histic E	pipedon (A2)		Thin Dark Su	rface (S9)	(LRR S,	T, U)	2 cm M	luck (A10) (LRR S)
Black H	istic (A3)		Loamy Mucky	/ Mineral ((F1) (LRR	(O)	Reduce	ed Vertic (F18) (outside MLRA 150A,B)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (I	F2)		Piedmo	ont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)		Depleted Mat		,			lous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P,	т ш)	Redox Dark S		6)			RA 153B)
-	ucky Mineral (A7) (LR		Depleted Dar		,			arent Material (TF2)
	resence (A8) (LRR U)		Redox Depre)			hallow Dark Surface (TF12)
	uck (A9) (LRR P, T)		Marl (F10) (L				Other (Explain in Remarks)
-	d Below Dark Surface	e (A11)	Depleted Och					
	ark Surface (A12)		Iron-Mangane					ators of hydrophytic vegetation and
	rairie Redox (A16) (N		Umbric Surface	ce (F13) (LRR P, T	, U)	wetl	land hydrology must be present,
Sandy M	/lucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) (ML	RA 151)		unle	ess disturbed or problematic.
Sandy C	Gleyed Matrix (S4)		Reduced Ver	tic (F18) (MLRA 15	0A, 150B)		
Sandy F	Redox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 149	9A)	
-	Matrix (S6)						A 149A, 153C,	. 153D)
	Inface (S7) (LRR P, S	τ.υ)					,	,,
	Layer (if observed):	, ., .,						
Type:								
	ches):		_				Hydric Soil	Present? Yes 🖌 No
	cnes).						Tryane Son	
Remarks:								
1								



Photo 1 Wetland data point WGRB002f_w2 facing southeast



Photo 2 Wetland data point WGRB002f_w2 facing northwest

Project/Site: <u>Atlantic Coast Pipeline</u>	City/County: Gree	nsville	_ Sampling Date: 10/3/2014
Applicant/Owner: Dominion		State: VA	Sampling Point: WGRB002_u
Investigator(s): TP, KB	Section, Township	o, Range: <u>No PLSS in this are</u>	
Landform (hillslope, terrace, etc.): hillslope		ve, convex, none): <u>none</u>	Slope (%): 2
Subregion (LRR or MLRA): P Lat: 2	36.5864559	Long: <u>-77.52987564</u>	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, freq	uently flooded	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for this tim	e of year? Yes 🔽 I	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology signif	icantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natur	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	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Oxidized Rhizospheres along Living R Sediment Deposits (B2) Presence of Reduced Iron (C4) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C1) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7)	 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) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Field Observations:	Sphagnum moss (D8) (LRR T, U)
Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Remarks:	

Sampling Point: WGRB002_u

<u>Tree Stratum</u> (Plot size: <u>30</u>) 1 <i>Pinus taeda</i>		Dominant Species? Yes		Dominance Test worksheet: Number of Dominant Species
2 Acer rubrum	10	Yes	FAC	That Are OBL, FACW, or FAC:3 (A)
3				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:
8				$\begin{array}{c} \hline \hline \\ $
25	50	= Total Cov		FACW species $5 \times 2 = 10$
50% of total cover:25	20% of	total cover	10	FAC species $60 \times 3 = 180$
Sapling/Shrub Stratum (Plot size: 15)				FACU species 20 x 4 = 80
1. Liriodendron tulipifera	20	Yes	FACU	UPL species $0 \times 5 = 0$
2. Ilex opaca	10	Yes	FAC	85 270
3. <u>Clethra alnifolia</u>	5	No	FACW	Column Totals: (A) (B)
4				Prevalence Index = B/A = 3.17
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				✓ 2 - Dominance Test is >50%
8				3 - Prevalence Index is $\leq 3.0^{1}$
	25	= Total Cov	rer	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:17.5	20% of	total cover	7	
Herb Stratum (Plot size:5)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				Definitions of Four Vegetation Strata:
3				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4 5				more in diameter at breast height (DBH), regardless of height.
6 7				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8 9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in height.
12.				
	0	= Total Cov	er	
50% of total cover:0		total cover		
Woody Vine Stratum (Plot size: 30)			·	
1)				
2				
3				
4		·	·	
5			<u> </u>	Hydrophytic Venetation
0		= Total Cov		Vegetation Present? Yes Vo
50% of total cover:		total cover		
Remarks: (If observed, list morphological adaptations below	w).			

SOIL

Profile Desc	ription: (Describe f	to the depth	needed to docur	nent the in	dicator	or confirm	the absence	of indicato	rs.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-3	10YR 3/2	100					SL			
3-12	10YR 5/4	100					SCL			
				· ·						
·				· ·		<u> </u>				
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ains.	² Location:	PL=Pore Li	ning, M=Matri	х.
Hydric Soil	Indicators: (Applica	able to all LF	RRs, unless other	wise note	d.)				natic Hydric	
Histosol	(A1)		Polyvalue Be	low Surfac	e (S8) (L	RR S, T, U)	1 cm N	luck (A9) (L	RR O)	
Histic Ep	oipedon (A2)		Thin Dark Su	rface (S9)	(LRR S,	T, U)	2 cm N	luck (A10) (LRR S)	
	stic (A3)		Loamy Muck			0)				MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye	ed Matrix (F	2)					(LRR P, S, T)
	d Layers (A5)		Depleted Ma	. ,				-	Loamy Soils (F20)
	Bodies (A6) (LRR P,		Redox Dark	•			•	RA 153B)		
	ucky Mineral (A7) (LR		Depleted Date		. ,			arent Materia	, ,	
	esence (A8) (LRR U))	Redox Depre)				Surface (TF1	2)
	uck (A9) (LRR P, T)		Marl (F10) (L				Other (Explain in R	temarks)	
	d Below Dark Surface	e (A11)	Depleted Ocl				- 3			
	ark Surface (A12)		Iron-Mangan						rophytic vege	
	rairie Redox (A16) (N		Umbric Surfa			, U)		-	gy must be pi	
-	/lucky Mineral (S1) (L	.RR O, S)	Delta Ochric				unle	ess disturbe	d or problema	tic.
	Bleyed Matrix (S4)		Reduced Ver	· / ·		•				
	Redox (S5)		Piedmont Flo	•	• •	•	•			
	l Matrix (S6)		Anomalous E	Bright Loam	iy Soils (I	F20) (MLRA	149A, 153C	, 153D)		
	rface (S7) (LRR P, S	, T, U)								
Restrictive I	Layer (if observed):									
Туре:			_							
Depth (in	ches):						Hydric Soil	Present?	Yes	No 🔽
Remarks:										



Photo 1 Upland data point WGRB002_u facing south



Photo 2 Upland data point WGRB002_u facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Greer	nsville	Sampling Date: 3/19/2015
Applicant/Owner: DOMINION		State: VA	Sampling Point: wgrc012f_w
Investigator(s): Team C	Section, Township	, Range: <u>No PLSS in this are</u>	
Landform (hillslope, terrace, etc.): Slight Depression		convex, none): <u>concave</u>	Slope (%): <u>2</u>
Subregion (LRR or MLRA): P Lat: 36.5775	93138	Long: <u>-77.52728654</u>	Datum: WGS 1984
Soil Map Unit Name: Slagle fine sandy loam, 0 to 3 percent slo	pes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes 🔽 N	lo (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	owing sampling poir	nt locations, transects	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:						

Wetland area is located with a clear-cut. The area contains several large ruts with standing water in them. No hydric soil was found in any of the test pits throughout the wetland, including the rutted areas. The lack of hydric soil may indicate a newly forming wetland as a result of the logging activities. The wetland also contains some areas that appear to lack hydrology indicators which may also have resulted from the logging activities.

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3) Oxidized Rhizospheres on Living Roo	ots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils	(C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
$\mathcal{M}_{\text{start}}$ Table Density (instance) 10	
Water Table Present? Yes <u>/</u> No Depth (inches): 10	
Water Table Present? Yes V Depth (inches): Saturation Present? Yes V Depth (inches):	/etland Hydrology Present? Yes _ ✔ No
Water Table Present? Yes v No Depth (inches): Saturation Present? Yes v No Depth (inches): (includes capillary fringe) W	
Water Table Present? Yes V Depth (inches): Saturation Present? Yes V Depth (inches):	
Water Table Present? Yes v No Depth (inches): Saturation Present? Yes v No Depth (inches): (includes capillary fringe) W	
Water Table Present? Yes v No Depth (inches): Saturation Present? Yes v No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	
Water Table Present? Yes _ No Depth (inches): W Saturation Present? Yes _ No Depth (inches): W (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection Remarks:	

Sampling Point: wgrc012f_w

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7	0			Total % Cover of: Multiply by:
		= Total Cove		$\begin{array}{c} \hline \hline \\ OBL species \\ \hline \\ \hline \\ \end{array} \begin{array}{c} 0 \\ x \\ 1 \\ \hline \\ \end{array} \begin{array}{c} \hline \\ x \\ 1 \\ \hline \\ \end{array} \begin{array}{c} \hline \\ 0 \\ \end{array}$
50% of total cover:0	20% of	total cover:	0	20 40
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = \frac{10}{25}$
_{1.} Liquidambar styraciflua	5	Yes	FAC	FAC species $x_3 = $
2				FACU species5 x 4 =20
3				UPL species x 5 =
				Column Totals: 110 (A) 315 (B)
4 5				
6				Prevalence Index = B/A = 2.86 Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
	5	= Total Cove	r	\checkmark 3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 2.5		total cover:	1	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5_)	2070 01	10101 00 001.		data in Remarks or on a separate sheet)
<u>1</u> Microstegium vimineum	80	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
			FACW	
2. Scirpus cyperinus	20	No		¹ Indicators of hydric soil and wetland hydrology must
3. Apocynum androsaemifolium	5	No	FACU	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.
				neight.
8			<u> </u>	Sapling/Shrub – Woody plants, excluding vines, less
9			<u> </u>	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				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: 52.5	20% of	total cover:	21	We advise All we advising a second start them 2,20,45 in
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight
2				
3				
4				Hydrophytic
5	-			Vegetation Present? Yes <u>V</u> No
		= Total Cove	•	Present? Yes V No
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
This wetland was still	foractor	Lin 0/001	2	1
	IULESIEC	1111 2/201	э.	

Profile Desc	cription: (Describe to	o the dep	th needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-16	2.5 Y 5/3	98	10 YR 4/6	2	С	М	LS	
						<u> </u>		
1 .			De duce d Matrix MC				² Leasting DL David Lining M. Matrix	
Hydric Soil	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils	_ ³ _
			Dorle Curfood	(07)			•	5.
Histosol	pipedon (A2)		Dark Surface	· ,	co (S8) (N		2 cm Muck (A10) (MLRA 147) 148) Coast Prairie Redox (A16)	
	istic (A3)		Thin Dark Su		· / ·		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye			41, 140)	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)	
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		Other (Explain in Remarks)	
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy N	/lucky Mineral (S1) (Lf	RR N,	Iron-Mangan	ese Mass	es (F12) (I	_RR N,		
	A 147, 148)		MLRA 13	,			<u>_</u>	
-	Gleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation ar	nd
	Redox (S5)		Piedmont Flo					
	Matrix (S6)		Red Parent N	Aaterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present? Yes No	<u> </u>
Remarks:							1	
No hydric soil	l indicators present							



Photo 1 Wetland data point wgrc012f_w facing north



Photo 2 Wetland data point wgrc012f_w facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline	City/County: Green	sville	_ Sampling Date: 3/19/2015
Applicant/Owner: DOMINION		State: VA	Sampling Point: wgrc012_u
Investigator(s): Team C	Section, Township,	Range: No PLSS in this are	
Landform (hillslope, terrace, etc.): Slight Slope		convex, none): <u>none</u>	Slope (%): <u>2</u>
	6.5777875	Long: <u>-77.52697939</u>	Datum: WGS 1984
Soil Map Unit Name: Slagle fine sandy loam, 0 to 3 perce	ent slopes	NWI classifi	cation: None
Are climatic / hydrologic conditions on the site typical for t	his time of year? Yes N	o (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology	_significantly disturbed?	re "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	_naturally problematic? (I	f 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 in a clear-cut area that has been planted with loblolly pine seedlings.							

, , , , , , , , , , , , , , , , , , , ,	ors:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum	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)	-	Oxidized Rhizospheres on Living	g Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	-	Presence of Reduced Iron (C4)		Dry-Season Water Table (C2)
Sediment Deposits (B2)	-	Recent Iron Reduction in Tilled	Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	-	Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	-	Other (Explain in Remarks)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)				Geomorphic Position (D2)
Inundation Visible on 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)	Yes No _	Depth (inches):	Wetland H	lydrology Present? Yes No
Describe Recorded Data (stre	eam gauge, monitorir	ng well, aerial photos, previous inspe	ections), if ava	ilable:
Remarks:				
Remarks: No hydrology present				

Sampling Point: wgrc012_u

, ,	Abaaluta	- Dominant Ir	diaatar	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Ir Species?		
/	70 00101	000000	Olalas	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
2				Total Number of Deminent
				Total Number of Dominant
3				Species Across All Strata: (B)
4		·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6		·		Prevalence Index worksheet:
7				
	0	= Total Cover	r	Total % Cover of: Multiply by:
50% of total cover: 0			0	OBL species x 1 =0
15	207001			FACW species x 2 =0
Sapling/Shrub Stratum (Plot size:)				
1				FAC species $x_3 = $
2				FACU species $\frac{65}{x 4} = \frac{260}{x 4}$
				UPL species 0 x 5 = 0
3		·		73 284
4				Column Totals: (A) (B)
5				Prevalence Index = $B/A = 3.89$
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
	0	= Total Cover	r	
50% of total cover:0		total cover:	0	4 - Morphological Adaptations ¹ (Provide supporting
F	20% 0	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				
1. Sorghastrum nutans	30	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Apocynum androsaemifolium	20	Yes	FACU	
		·		¹ Indicators of hydric soil and wetland hydrology must
3. Andropogon virginicus	15	Yes	FACU	be present, unless disturbed or problematic.
4. Liquidambar styraciflua	5	No	FAC	
5. Pinus taeda	3	No	FAC	Definitions of Four Vegetation Strata:
5		INU	FAC	Tree Weeds rights and since 2 in (7.0 cm) or
6				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.				m) tall.
10:		·		
11		·		Herb – All herbaceous (non-woody) plants, regardless
	73	= Total Cover	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 36.5	20% of	total cover:	14.6	
		total 00101.		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				
2				
		·		
3		·		
4				I hudron hudio
5				Hydrophytic
5		· · · · · · · · · · · · · · · · · · ·		Vegetation Present? Yes No
	-		•	
	0	= Total Cover		
50% of total cover: 0	0			
	0 20% of	= Total Cover total cover:		
50% of total cover:0 Remarks: (Include photo numbers here or on a separate sh	0 20% of			
	0 20% of			

Depth	Matrix		Redo	ox Features	3			
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	2.5 Y 5/4	70	10 YR 4/6	5	С	Μ	S	
	2.5 Y 6/1	25					S	
							·	
						<u> </u>		
		·				·		
						·		
vne C-	Concentration, D=Deple	-tion RM	-Reduced Matrix M	S-Masked	Sand Gra	ains	² Location: PL =Po	re Lining, M=Matrix.
	il Indicators:			<u>e-maenea</u>				for Problematic Hydric Soils ³ :
Histos	ol (A1)		Dark Surface	e (S7)			2 cm N	/luck (A10) (MLRA 147)
	Epipedon (A2)		Polyvalue Be	· · ·	ce (S8) (N	ILRA 147,		Prairie Redox (A16)
_	Histic (A3)		Thin Dark Su				•	RA 147, 148)
	gen Sulfide (A4)		Loamy Gley	. ,	•		•	ont Floodplain Soils (F19)
- • •	ied Layers (A5)		Depleted Ma	•	,			RA 136, 147)
_	Muck (A10) (LRR N)		Redox Dark	. ,	6)		•	hallow Dark Surface (TF12)
2 cm I		(A11)	Depleted Da	•	,			
	ted Below Dark Sufface			in Sunace				(Explain in Remarks)
_ Deplet	ted Below Dark Surface Dark Surface (A12)	(,)						(Explain in Remarks)
_ Deplet _ Thick I	Dark Surface (A12)		Redox Depr	essions (Fa	3)	RR N.		(Explain in Remarks)
_ Deplet _ Thick I _ Sandy	Dark Surface (A12) ⁄ Mucky Mineral (S1) (Ll		Redox Depro	essions (Fa nese Masse	3)	LRR N,		(Explain in Remarks)
Deplet Thick I Sandy	Dark Surface (A12) [/] Mucky Mineral (S1) (Ll RA 147, 148)		Redox Depro Iron-Mangar MLRA 13	essions (F8 nese Masse 66)	3) es (F12) (I			
_ Deplet _ Thick I _ Sandy _ MLF _ Sandy	Dark Surface (A12) 7 Mucky Mineral (S1) (Ll RA 147, 148) 7 Gleyed Matrix (S4)		Contemporary Redox Deprovement Contemporary Iron-Mangar MLRA 13 Contemporary Umbric Surfa	essions (Fa nese Massa 8 6) ace (F13) (3) es (F12) (I MLRA 13	6, 122)	³ Indicato	rs of hydrophytic vegetation and
Deplet Thick I Sandy MLF Sandy Sandy	Dark Surface (A12) v Mucky Mineral (S1) (Ll RA 147, 148) v Gleyed Matrix (S4) v Redox (S5)		Redox Deprovement of the second	essions (F8 nese Masse 8 6) ace (F13) (podplain S	3) es (F12) (I MLRA 13 oils (F19)	6, 122) (MLRA 14	³ Indicator 8) wetland	rs of hydrophytic vegetation and hydrology must be present,
 Deplet Thick I Sandy MLF Sandy Sandy Sandy Strippediate 	Dark Surface (A12) Mucky Mineral (S1) (Li RA 147, 148) Gleyed Matrix (S4) Redox (S5) ed Matrix (S6)		Contemporary Redox Deprovement Contemporary Iron-Mangar MLRA 13 Contemporary Umbric Surfa	essions (F8 nese Masse 8 6) ace (F13) (podplain S	3) es (F12) (I MLRA 13 oils (F19)	6, 122) (MLRA 14	³ Indicator 8) wetland	rs of hydrophytic vegetation and
Deplet Thick I Sandy MLF Sandy Sandy Sandy Strippe estrictive	Dark Surface (A12) v Mucky Mineral (S1) (Ll RA 147, 148) v Gleyed Matrix (S4) v Redox (S5)		Redox Deprovement of the second	essions (F8 nese Masse 8 6) ace (F13) (podplain S	3) es (F12) (I MLRA 13 oils (F19)	6, 122) (MLRA 14	³ Indicator 8) wetland	rs of hydrophytic vegetation and hydrology must be present,
_ Deplet _ Thick I _ Sandy _ Sandy _ Sandy _ Strippe estrictive Type: _	Dark Surface (A12) Mucky Mineral (S1) (Li RA 147, 148) Gleyed Matrix (S4) Redox (S5) ed Matrix (S6)		Redox Deprovement of the second	essions (F8 nese Masse 8 6) ace (F13) (podplain S	3) es (F12) (I MLRA 13 oils (F19)	6, 122) (MLRA 14	³ Indicator 8) wetland	rs of hydrophytic vegetation and hydrology must be present, disturbed or problematic.

Project/Site: Atlantic Coast Pipeline	City/County:	Greensville		_ Sampling D	Date: 10/3/2	014
Applicant/Owner: Dominion			State: VA	Sampling	g Point: wgr	a034f_w
Investigator(s): GB, SP	Section, Tov	vnship, Range: <mark>N</mark>	o PLSS in this are	a	-	
			ne): microtopogra		Slope (%) <u>: 1</u>
Subregion (LRR or MLRA): P Lat: 36.5739893		Long: <u>-77</u>	52399639	[Datum: WG	S 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, frequently	/ flooded		NWI classifi	cation: PFO1	IA, PFO1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🔜	/ No	(If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology significantly	y disturbed?	Are "Norma	I Circumstances"	present? Ye	es 🔽	No
Are Vegetation, Soil, or Hydrology naturally pre-	roblematic?	(If needed,	explain any answe	ers in Remark	ks.)	
SUMMARY OF FINDINGS – Attach site map showing	g samplinç	point location	ons, transects	s, importa	nt featur	es, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ No Yes _ ✔ No Yes _ ✔ No	Is the Sampled Area within a Wetland?	Yes 🖍 No
Remarks:			
Wetland data point for PFO section of a s	saturated to seasonally flood	ed wetland complex located on a f	flat, forested area is 20year old pine plantation

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)	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches): 1 Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Netland Hydrology Present? Yes <u>V</u> No
Remarks:	

	Absolute	Dominant In	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)			Status	
Pinus taeda	70	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
2. Liquidambar styraciflua	6	No	FAC	
3. Fraxinus pennsylvanica	3	No	FACW	Total Number of Dominant
				Species Across All Strata: (B)
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: (A/B)
6		·		Prevalence Index worksheet:
7	79			Total % Cover of: Multiply by:
30.5		= Total Cove	r 15.8	$\begin{array}{c} \hline \hline \\ OBL species \\ \hline \\ 0 \\ \hline \\ x \\ 1 \\ \hline \\ 0 \\ \hline \\ x \\ 1 \\ \hline \\ 0 \\ \hline \\ \end{array}$
50% of total cover: <u>39.5</u>	20% of	total cover:	10.0	12 00
Sapling/Shrub Stratum (Plot size:)				FACW species $x = 272$
1. Liquidambar styraciflua	12	Yes	FAC	FAC species $x_3 = $
2. Vaccinium corymbosum	10	Yes	FACW	FACU species $x 4 = 0$
3. Magnolia virginiana	10	Yes	FACW	UPL species X 5 =
4. Acer rubrum	8	No	FAC	Column Totals: (A) (B)
5. Clethra alnifolia	5	No	FAC	Prevalence Index $= B/A = 2.74$
6. Fraxinus pennsylvanica	5	No	FACW	
7. Quercus nigra	3	No	FAC	Hydrophytic Vegetation Indicators:
7. <u> </u>				1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9	53			\checkmark 3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 26.5		= Total Cove	r 10.6	4 - Morphological Adaptations ¹ (Provide supporting
-	20% of	total cover:	10.0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Arundinaria gigantea	12	Yes	FACW	
2. Carex grayi	3	Yes	FACW	1 a disetera of hudeis esil and wetlend huden have south
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Deminions of Four Vegetation of ata.
6.				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of height.
7		·		neight.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11	45			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:7.5	20% of	total cover:	3	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:30)				height.
1. Campsis radicans	20	Yes	FAC	
2				
3.				
4				
5				Hydrophytic Vegetation
		= Total Cove		Present? Yes <u>V</u> No
50% of total cover:10		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
This wetland was still forested in	2/2013.			

	cription: (Describe t	o the dep				or confirm	the absence of inc	dicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	es Type ¹	Loc ²	Texture	Remarks	
<u>(incries)</u> 0-5	10YR 2/1	100		/0	<u> </u>		SCL	Remains	
			10YR 4/6	7	C	PL/M			
5-15	10YR 4/1	93							
15-20	10YR 5/1	92	7.5YR 4/6	8	C	PL/M	SCL		
						·			
						·	·		
							·		
					.				
					_				
¹ Type: C=C	oncentration, D=Depl	etion RM	=Reduced Matrix MS	S=Maske	d Sand Gr	ains	² Location: PL=Por	e Lining, M=Matrix.	
Hydric Soil				<u>-maono</u>				for Problematic Hy	dric Soils ³ :
Histoso	l (A1)		Dark Surface	e (S7)			2 cm M	luck (A10) (MLRA 1	47)
Histic E	pipedon (A2)		Polyvalue Be				148) Coast F	Prairie Redox (A16)	
	istic (A3)		Thin Dark Su			47, 148)	•	RA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)			ont Floodplain Soils	(F19)
	d Layers (A5)		✓ Depleted Ma	` '			•	RA 136, 147)	(TE40)
	uck (A10) (LRR N) d Below Dark Surface	(A11)	Redox Dark	,	,			hallow Dark Surface Explain in Remarks)	· ,
·	ark Surface (A12)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Redox Depre						
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		,	LRR N,			
MLR	A 147, 148)		MLRA 13	6)					
Sandy (Gleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	³ Indicator	s of hydrophytic veg	etation and
	Redox (S5)		Piedmont Flo	•	. ,	•	•	hydrology must be p	,
	d Matrix (S6)		Red Parent N	Aaterial (I	=21) (MLR	A 127, 147	y unless d	isturbed or problem	atic.
	Layer (if observed):								
Type: no									
Depth (in	ches):						Hydric Soil Pres	ent? Yes 🚩	No
Remarks:									



Photo 1 Wetland data point WGRA034f_w facing northeast



Photo 2 Wetland data point WGRA034f_w facing northwest

Project/Site: Atlantic Coast Pipeline	City/County: Gr	eensville	Sampling Date: 10/3/2014
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>wgra034f_w</u>
Investigator(s): GB, SP	Section, Towns	hip, Range: <u>No PLSS in this area</u>	
Landform (hillslope, terrace, etc.): <u>flat</u>		ve, convex, none): <u>microtopogra</u>	
Subregion (LRR or MLRA): P Lat: 36.5			
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes,	frequently flooded	NWI classific	cation: PFO1A, PFO1C
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes	_ No (If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology r	aturally problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling p	oint locations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ Yes _ ✔ Yes _ ✔	No No No	Is the Sampled Area within a Wetland?	Yes No
Remarks: Wetland data point for a saturated to sea	sonally flooded	PEM portion of a v	vetland complex. this area is a	a recent clear cut

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) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living R Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soil Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) 	 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 (B9)	 Microtopographic Relief (D4) FAC-Neutral Test (D5)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Yes No Cepth (inches):	
Water Table Present? Yes ✓	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches): 2 Saturation Present? Yes ✓ No Depth (inches): 0 (includes capillary fringe)	

	Abcoluto	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		
			Olaluo	Number of Dominant Species
[l		·		That Are OBL, FACW, or FAC: (A)
2		·		Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				· · · · · · · · · · · · · · · · · · ·
		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC:100 (A/B)
6		·		
7.				Prevalence Index worksheet:
	0	= Total Cove	-	Total % Cover of: Multiply by:
50% of total cover: 0			0	OBL species <u>37</u> x 1 = <u>37</u>
50% of total cover: 0	20% of	total cover:		
Sapling/Shrub Stratum (Plot size: 15)				FACTV species $x = 15$
1				FAC species $x_3 = $
		·		FACU species x 4 =0
2		·		UPL species $0 x 5 = 0$
3		·		127 222
4				Column Totals: (A) (B)
5				4.74
				Prevalence Index = B/A =1.74
6		·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
		·		✓ 2 - Dominance Test is >50%
9		·		\checkmark 3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover:	0	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
Panicum hemitomon	50	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
••				
2. Persicaria hydropiperoides	20	Yes	OBL	¹ Indiastore of hydric coil and watland hydrology must
_{3.} Cyperus diandrus	15	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Scirpus divaricatus	12	No	OBL	
5. Saccharum giganteum	10	No	FACW	Definitions of Four Vegetation Strata:
		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Arundinaria gigantea	10	No	FACW	more in diameter at breast height (DBH), regardless of
7. Rhexia virginica	5	No	OBL	height.
8. Panicum capillare	5	No	FAC	noight
8. <u></u>				Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	127			Herb – All herbaceous (non-woody) plants, regardless
63.5		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:63.5	20% of	total cover:	25.4	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				in ingini
1				
2				
3		·		
4				
		·		Hydrophytic
D		·	<u> </u>	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 s	heet)			
	1000.)			

Profile Des	cription: (Describe to	o the dep	th needed to docun	nent the i	ndicator o	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100					SCL	
4-20	10YR 4/1	90	7.5YR 4/6	10	С	PL/M	SCL	
								· · · · · · · · · · · · · · · · · · ·
17 0 0							2	
Hydric Soil	oncentration, D=Deple	etion, RM=	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
-			Dorle Curtaga	(07)				-
<u> </u>	pipedon (A2)		Dark Surface Polyvalue Be	. ,	00 (S9) (M			2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su				146)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye	. ,	•	47, 140)	F	Piedmont Floodplain Soils (F19)
	d Layers (A5)		 Depleted Mat 		,			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S	``'	6)		\ \	/ery Shallow Dark Surface (TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)			Other (Explain in Remarks)
Thick D	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	Mucky Mineral (S1) (LI	RR N,	Iron-Mangane	ese Mass	es (F12) (I	_RR N,		
	A 147, 148)		MLRA 13	,			0	
	Gleyed Matrix (S4)		Umbric Surfa		•			licators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo	•	• •	•	•	etland hydrology must be present,
	d Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	') un	less disturbed or problematic.
	Layer (if observed):							
Type: <u>no</u>								
Depth (in	ches):						Hydric Soi	I Present? Yes V No
Remarks:								



Photo 1 Wetland data point WGRA034f_w facing southeast



Photo 2 Wetland data point WGRA034f_w facing southwest

WETLAND DETERMINATION	DATA FORM – Atlantic and Gulf Coastal Plain Region
Project/Site:ACP	City/County: Greensville Sampling Date: 1/4/
Applicant/Owner: Dominion	State: VA Sampling Point: Wgra034e_
	1
andform (hillsland torrace atc.): Depression	Section, Township, Range: NH Local relief (concave, convex, none): CONCAVE Slope (%): Slope (%): Slope (%): Concave Slo
Carried Contraction Der Carried Contraction Der Carried Contraction Der Carried Contraction Der Carried Contraction Contractio	Slopes NWI classification: PEM
	time of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sig	
Are Vegetation, Soil, or Hydrology na	turally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	howing sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes Ves No	Is the Sampled Area
Hydric Soil Present? Yes Vo. No	within a Wetland? Yes No
Wetland Hydrology Present? Yes <u>Ves</u> No Remarks:	
IYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all th	a da na na manana ana ana ana ana ana ana a
	auna (B13) Sparsely Vegetated Concave Surface (B8) osits (B15) (LRR U) Drainage Patterns (B10)
	a Sulfide Odor (C1) Moss Trim Lines (B16)
	Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)
	of Reduced Iron (C4) Crayfish Burrows (C8)
	on Reduction in Tilled Soils (C6)
	k Surface (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Ex Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Dept	
Water Table Present? Yes <u>Yes</u> No <u>Dept</u>	
Saturation Present? Yes <u>Ves</u> No <u>Dept</u>	th (inches): Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, as	erial photos, previous inspections), if available:
Remarks:	

Sampling Point: Wgra034e-w

pecies? Status Number of Dominant Species
Total Number of Dominant 4 Species Across All Strata: 4 Percent of Dominant Species 100 That Are OBL, FACW, or FAC: 100 Prevalence Index worksheet: (A/B) Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 =
Percent of Dominant Species That Are OBL, FACW, or FAC: LOD (A/B) Prevalence Index worksheet:
Image: Constraint operation Image: Constraint operation <t< td=""></t<>
Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 =
Prevalence Index worksheet:
Multiply by: iotal Cover OBL species x 1 = al cover: FACW species x 2 =
al cover: FACW species x 2 =
al cover: FACW species x 2 =
FAC species x 3 =
N FAC FACU species x4 =
N FACU UPL species x 5 =
Y FAC Column Totals: (A) (B)
Prevalence Index = B/A =
Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is >50%
otal Cover Problematic Hydrophytic Vegetation ¹ (Explain)
al cover:
Y FALW ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
M DB1 height.
N DBL height.
Sapling/Shrub – Woody plants, excluding vines, less
than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless
of size, and woody plants less than 3.28 ft tall.
Woody vine – All woody vines greater than 3.28 ft in
height.
otal Cover
al cover: 10
Hydrophytic
Total Cover Vegetation
ota

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

wgraD34e-w

SUIL								Sampling Pol	nt:
Profile Des	cription: (Describe	to the de	pth needed to do	ocument the i	indicator	or confirm	the absence of indica	ators.)	
Depth	Matrix		R	edox Feature	S				
(inches)	Color (moist)	%	Color (moist)) %	Type'	Loc ²	Texture	Remark	S
0-5	104R5/1	100		<u> 28. (</u>			SC	Card and	
5-10	10 YR 5/1	90	IDYR 4/6		C	M	SC	S. S. B. S.	
10-20	104R 4/1	80	10 YR 51	6 20	C	M	5C		
	Selection a	and the second	1						
121-12			is repair with the						
	And I have a second				1975 N.				
	-								
	oncentration, D=Dep					ains.	² Location: PL=Pore Indicators for Prob		
	Indicators: (Applic	able to al	and the second se						10 50115 :
Histosol	pipedon (A2)			e Below Surfa k Surface (S9			J) 1 cm Muck (A9) 2 cm Muck (A1)		
hanned .	istic (A3)			lucky Mineral					le MLRA 150A,B)
	en Sulfide (A4)			leyed Matrix (,			19) (LRR P, S, T)
	d Layers (A5)		Depleted	Matrix (F3)			Anomalous Brig	ht Loamy Soil	ls (F20)
	Bodies (A6) (LRR P	5		ark Surface (F			(MLRA 153B		
	ucky Mineral (A7) (LF			Dark Surface			Red Parent Ma		E 10)
	resence (A8) (LRR U uck (A9) (LRR P, T))		epressions (F D) (LRR U)	8)		Other (Explain i		F12)
	d Below Dark Surfac	e (A11)		Ochric (F11)	(MLRA 1	51)		in remarks)	
	ark Surface (A12)	- ()		ganese Mass		and the second second second	T) ³ Indicators of I	ydrophytic ve	getation and
Coast P	rairie Redox (A16) (M	MLRA 150	A) 🔲 Umbric S	Surface (F13)	(LRR P, T	r, U)	wetland hyd	ology must be	e present,
	Aucky Mineral (S1) (L	_RR O, S)	percent of the second s	hric (F17) (ML				bed or proble	matic.
	Gleyed Matrix (S4)			Vertic (F18)					
	Redox (S5) 1 Matrix (S6)			t Floodplain S			9A) A 149A, 153C, 153D)		
	rface (S7) (LRR P, S	5. T. U)		us blight Loa	iny Solis ((1 20) (MER	A 143A, 1330, 133D)		
	Layer (if observed):		Contraction of the second		ne nationes	100	[The State of State
Type:			alia di tati				A DECEMBER AND		/
Depth (in	ches):						Hydric Soil Present	7 Yes _	No
Remarks:		a start and				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997			
6. No.									



Wetland data point wgra034e_w facing northeast.



Wetland data point wgra034e_w facing northwest.

Project/Site: Atlantic Coast Pipeline	City/County: Greens	sville	Sampling Date: 10/3/2014
Applicant/Owner: Dominion		State: VA	_ Sampling Point: <u>wgra034_u</u>
Investigator(s): GB, SP	Section, Township,	Range: No PLSS in this area	
Landform (hillslope, terrace, etc.): slope		onvex, none): <u>none</u>	Slope (%): <u>4</u>
Subregion (LRR or MLRA): P Lat: 36.	57375927 L	_ong:77.52398769	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes	, frequently flooded	NWI classifica	ation: None
Are climatic / hydrologic conditions on the site typical for thi	is time of year? Yes No	o (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? A	re "Normal Circumstances" pr	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If	f needed, explain any answer	s in Remarks.)
			• • • • • •

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland data point for a saturated to seas	sonally flooded	wetland complex loo	cated on a flat		

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

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)		Species?		Number of Dominant Species
1.				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Demonst of Dominant Chaption
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
				Prevalence Index worksheet:
7	0			Total % Cover of: Multiply by:
		= Total Cove		
50% of total cover:0	20% of	total cover:	0	<u> </u>
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x 2 = 10$
_{1.} Liquidambar styraciflua	8	Yes	FAC	FAC species $\frac{93}{x 3} = \frac{279}{x 3}$
2				FACU species27 x 4 =108
2				UPL species $0 \times 5 = 0$
3				125 307
4				Column Totals: (A) (B)
5				Prevalence Index = B/A = 3.17
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
	8	= Total Cove	r	
50% of total cover: 4	20% of	total cover:	1.6	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: <u>5</u>)				data in Remarks or on a separate sheet)
Chasmanthium sessiliflorum	55	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Panicum capillare	30	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Sonchus arvensis	15	No	FACU	be present, unless disturbed or problematic.
4. Eupatorium capillifolium	12	No	FACU	
5. Arundinaria gigantea	5	No	FACW	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				
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	447			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:58.5	20% of	total cover:	23.4	Weedy vine All weedy vince greater than 2.29 ft in
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight.
1				
2				
3		<u> </u>		
4				Hydrophytic
5.				Vegetation
	0	= Total Cove	r	Present? Yes <u>V</u> No
50% of total cover: 0		total cover:	<u>^</u>	
			· · · · ·	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Des	cription: (Describe t	o the dep	th needed to docur	nent the i	indicator	or confirm	the absence of indicators.)	
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-7	10YR 3/3	100					SL	
7-20	10YR 5/3	85	10YR 4/6	15	С	М	SL	
						·		
							·	
							·	
						·	·	
						·		
	oncentration, D=Deple	etion, RM	=Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soi	ls³:
Histoso	()		Dark Surface				2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be				148) Coast Prairie Redox (A16)	
	istic (A3)		Thin Dark Su			47, 148)	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Ma	• •			(MLRA 136, 147)	
	uck (A10) (LRR N)	()	Redox Dark	•	,		Very Shallow Dark Surface (TF12)	
	d Below Dark Surface	(A11)	Depleted Dat				Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L A 147, 148)	KK N,	Iron-Mangan MLRA 13		es (F12) (I	LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa	,	(MI RA 13	6 122)	³ Indicators of hydrophytic vegetation a	nd
	Redox (S5)		Piedmont Flo	. ,	•			na
	d Matrix (S6)		Red Parent N	•	. ,	•	, , , , ,	
	Layer (if observed):			natorial (i	<u> </u>			
Type: no								
							Hudrie Spil Present? Ves No	~
	iches):						Hydric Soil Present? Yes No	
Remarks:								



Photo 1 Upland data point WGRA034_u facing southwest



Photo 2 Upland data point WGRA034_u facing southeast

Project/Site: Atlantic Coast Pipeline	City/County:	Greensville		Sampling Date: <u>10/3/2014</u>		
Applicant/Owner: Dominion			State: VA	Sampling	g Point: wgr	a034f_w
Investigator(s): GB, SP	Section, Tov	vnship, Range: <mark>N</mark>	o PLSS in this are	a	-	
			ne): microtopogra		Slope (%) <u>: 1</u>
Subregion (LRR or MLRA): P Lat: 36.5739893		Long: <u>-77</u>	52399639	[Datum: WG	S 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, frequently	/ flooded		NWI classifi	cation: PFO1	IA, PFO1C	
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🚺	/ No	(If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology significantly	y disturbed?	Are "Norma	I Circumstances"	present? Ye	es 🔽	No
Are Vegetation, Soil, or Hydrology naturally pre-	roblematic?	(If needed,	explain any answe	ers in Remark	ks.)	
SUMMARY OF FINDINGS – Attach site map showing	g samplinç	point location	ons, transects	s, importa	nt featur	es, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ No Yes _ ✔ No Yes _ ✔ No	Is the Sampled Area within a Wetland?	Yes 🖍 No
Remarks:			
Wetland data point for PFO section of a s	saturated to seasonally flood	ed wetland complex located on a f	flat, forested area is 20year old pine plantation

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)	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches): 1 Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Netland Hydrology Present? Yes <u>V</u> No
Remarks:	

	Absolute	Dominant In	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)			Status	
Pinus taeda	70	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
2. Liquidambar styraciflua	6	No	FAC	
3. Fraxinus pennsylvanica	3	No	FACW	Total Number of Dominant
				Species Across All Strata: (B)
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: (A/B)
6		·		Prevalence Index worksheet:
7	79			Total % Cover of: Multiply by:
30.5		= Total Cove	r 15.8	$\begin{array}{c} \hline \hline \\ OBL species \\ \hline \\ 0 \\ \hline \\ x \\ 1 \\ \hline \\ 0 \\ \hline \\ x \\ 1 \\ \hline \\ 0 \\ \hline \\ \end{array}$
50% of total cover: <u>39.5</u>	20% of	total cover:	10.0	12 00
Sapling/Shrub Stratum (Plot size:)				FACW species $x = 272$
1. Liquidambar styraciflua	12	Yes	FAC	FAC species $x_3 = $
2. Vaccinium corymbosum	10	Yes	FACW	FACU species $x 4 = 0$
3. Magnolia virginiana	10	Yes	FACW	UPL species X 5 =
4. Acer rubrum	8	No	FAC	Column Totals: (A) (B)
5. Clethra alnifolia	5	No	FAC	Prevalence Index $= B/A = 2.74$
6. Fraxinus pennsylvanica	5	No	FACW	
7. Quercus nigra	3	No	FAC	Hydrophytic Vegetation Indicators:
7. <u> </u>				1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9	53			\checkmark 3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 26.5		= Total Cove	r 10.6	4 - Morphological Adaptations ¹ (Provide supporting
-	20% of	total cover:	10.0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Arundinaria gigantea	12	Yes	FACW	
2. Carex grayi	3	Yes	FACW	1 a disetera of hudeis esil and wetlend huden have south
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Deminions of Four Vegetation of ata.
6.				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of height.
7		·		neight.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11	45			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:7.5	20% of	total cover:	3	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:30)				height.
1. Campsis radicans	20	Yes	FAC	
2				
3.				
4				
5				Hydrophytic Vegetation
		= Total Cove		Present? Yes <u>V</u> No
50% of total cover:10		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
This wetland was still forested in	2/2013.			

	cription: (Describe t	o the dep				or confirm	the absence of inc	dicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	es Type ¹	Loc ²	Texture	Remarks	
<u>(incries)</u> 0-5	10YR 2/1	100		/0	<u> </u>		SCL	Remains	
			10YR 4/6	7	C	PL/M			
5-15	10YR 4/1	93							
15-20	10YR 5/1	92	7.5YR 4/6	8	C	PL/M	SCL		
						·			
						·	·		
					.				
					_				
¹ Type: C=C	oncentration, D=Depl	etion RM	=Reduced Matrix MS	S=Maske	d Sand Gr	ains	² Location: PL=Por	e Lining, M=Matrix.	
Hydric Soil				<u>-maono</u>				for Problematic Hy	dric Soils ³ :
Histoso	l (A1)		Dark Surface	e (S7)			2 cm M	luck (A10) (MLRA 1	47)
Histic E	pipedon (A2)		Polyvalue Be				148) Coast F	Prairie Redox (A16)	
	istic (A3)		Thin Dark Su			47, 148)	•	RA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)			ont Floodplain Soils	(F19)
	d Layers (A5)		✓ Depleted Ma	` '			•	RA 136, 147)	(TE40)
	uck (A10) (LRR N) d Below Dark Surface	(A11)	Redox Dark	,	,			hallow Dark Surface Explain in Remarks)	· ,
·	ark Surface (A12)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Redox Depre						
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		,	LRR N,			
MLR	A 147, 148)		MLRA 13	6)					
Sandy (Gleyed Matrix (S4)		Umbric Surfa	ice (F13)	(MLRA 13	6, 122)	³ Indicator	s of hydrophytic veg	etation and
	Redox (S5)		Piedmont Flo	•	. ,	•	•	hydrology must be p	,
	d Matrix (S6)		Red Parent N	Aaterial (I	=21) (MLR	A 127, 147	y unless d	isturbed or problem	atic.
	Layer (if observed):								
Type: <u>no</u>									
Depth (in	ches):						Hydric Soil Pres	ent? Yes 🚩	No
Remarks:									



Photo 1 Wetland data point WGRA034f_w facing northeast



Photo 2 Wetland data point WGRA034f_w facing northwest

Project/Site: Atlantic Coast Pipeline	City/County: Gr	eensville	Sampling Date: 10/3/2014	
Applicant/Owner: Dominion		State: VA	Sampling Point: <u>wgra034f_w</u>	
Investigator(s): GB, SP	Section, Towns	hip, Range: <u>No PLSS in this area</u>		
Landform (hillslope, terrace, etc.): <u>flat</u>		ve, convex, none): <u>microtopogra</u>		
Subregion (LRR or MLRA): P Lat: 36.5				
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes,	frequently flooded	NWI classification: PF01A, PF01C		
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes	_ No (If no, explain in R	Remarks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No	
Are Vegetation, Soil, or Hydrology r	aturally problematic?	(If needed, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling p	oint locations, transects	, important features, etc.	

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ Yes _ ✔ Yes _ ✔	No No No	Is the Sampled Area within a Wetland?	Yes No			
Remarks: Wetland data point for a saturated to seasonally flooded PEM portion of a wetland complex, this area is a recent clear cut							

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) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living R Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soil Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) 	 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 (B9)	 Microtopographic Relief (D4) FAC-Neutral Test (D5)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Yes No Cepth (inches):	
Water Table Present? Yes ✓	Wetland Hydrology Present? Yes <u>V</u> No ions), if available:
Water Table Present? Yes ✓ No Depth (inches): 2 Saturation Present? Yes ✓ No Depth (inches): 0 (includes capillary fringe)	

	Abcoluto	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		
			Olaluo	Number of Dominant Species That Are OBL EACW or EAC: 2 (A)
l		·		That Are OBL, FACW, or FAC: (A)
2		·		Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				· · · · · · · · · · · · · · · · · · ·
		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC:100 (A/B)
6		·		
7.				Prevalence Index worksheet:
	0	= Total Cove	-	Total % Cover of: Multiply by:
50% of total cover: 0			0	OBL species <u>37</u> x 1 = <u>37</u>
50% of total cover: 0	20% of	total cover:		
Sapling/Shrub Stratum (Plot size: 15)				FACTV species $x = 15$
1				FAC species $x_3 = $
		·		FACU species x 4 =0
2		·		UPL species $0 x 5 = 0$
3		·		127 222
4				Column Totals: (A) (B)
5				4.74
				Prevalence Index = B/A =1.74
6		·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
		·		✓ 2 - Dominance Test is >50%
9		·		\checkmark 3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover:	0	
Herb Stratum (Plot size: 5)				data in Remarks or on a separate sheet)
Panicum hemitomon	50	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
••				
2. Persicaria hydropiperoides	20	Yes	OBL	¹ Indiastore of hydric coil and watland hydrology must
_{3.} Cyperus diandrus	15	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Scirpus divaricatus	12	No	OBL	
5. Saccharum giganteum	10	No	FACW	Definitions of Four Vegetation Strata:
		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Arundinaria gigantea	10	No	FACW	more in diameter at breast height (DBH), regardless of
7. Rhexia virginica	5	No	OBL	height.
8. Panicum capillare	5	No	FAC	noight
8. <u></u>				Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	127			Herb – All herbaceous (non-woody) plants, regardless
63.5		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover:63.5	20% of	total cover:	25.4	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30)				height.
1				lioigin.
1				
2				
3		·		
4				
		·		Hydrophytic
D		·	<u> </u>	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 s	heet)			
	1000.)			

Profile Des	cription: (Describe to	o the dep	th needed to docun	nent the i	ndicator o	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100					SCL	
4-20	10YR 4/1	90	7.5YR 4/6	10	С	PL/M	SCL	
								· · · · · · · · · · · · · · · · · · ·
				<u> </u>				
17 0 0							2	
Hydric Soil	oncentration, D=Deple	etion, RM=	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
-			Dorle Curtaga	(07)				-
<u> </u>	pipedon (A2)		Dark Surface Polyvalue Be	. ,	00 (S9) (M			2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su				146)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye	. ,	•	47, 140)	F	Piedmont Floodplain Soils (F19)
	d Layers (A5)		 Depleted Mat 		,			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S	``'	6)		\ \	/ery Shallow Dark Surface (TF12)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)			Other (Explain in Remarks)
Thick D	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	Mucky Mineral (S1) (LI	RR N,	Iron-Mangane	ese Mass	es (F12) (I	_RR N,		
	A 147, 148)		MLRA 13	,			0	
	Gleyed Matrix (S4)		Umbric Surfa		•			licators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo	•	• •	•		etland hydrology must be present,
	d Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	') un	less disturbed or problematic.
	Layer (if observed):							
Type: <u>no</u>								
Depth (in	ches):						Hydric Soi	I Present? Yes V No
Remarks:								



Photo 1 Wetland data point WGRA034f_w facing southeast



Photo 2 Wetland data point WGRA034f_w facing southwest

	DATA FORM – Atlantic and Gulf Coastal Plain Region
Project/Site:ACP	City/County: Greensville Sampling Date: 1/4/
Applicant/Owner: Dominion	State: VA Sampling Point: Wgra034e_
andform (hillslope terrace etc.): Depression	Merry Section, Township, Range: NA Local relief (concave, convex, none): CONCAVE Slope (%): 36.5749 Long: -77.5252 Datum: Wess: Slopes NWI classification: PEM
Subragian (I BB or MI BA): LRR P Lat	36.5740 Long -77.5252 Datum Wes;
Lat.	Slopes NWI classification: PEM
	me of year? Yes No (If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology sign	
Are Vegetation, Soil, or Hydrology natu	urally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No_	within a Wetland? Yes No
Wetland Hydrology Present? Yes No _	
Remarks:	
IYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	
Surface Water (A1)	이는 이상에 실패하는 것 같아요. 이번에 있는 것은 이번에 가지 않는 것이 이 🗖 이번에 이렇게 정말했다. 이번에 정말한 것이 가지 않는 것이 있는 것이 가지 않는 것이 가
	sits (B15) (LRR U) Drainage Patterns (B10)
	Sulfide Odor (C1) Moss Trim Lines (B16)
Water Marks (B1)	thizospheres along Living Roots (C3)
	of Reduced Iron (C4)
	n Reduction in Tilled Soils (C6) Surface (C7) Geomorphic Position (D2)
	Surface (C7) Let Geomorphic Position (D2) plain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth	
Water Table Present? Yes Mo Depth	
Saturation Present? Yes <u>Ves</u> No <u>Depth</u>	(inches): <u>surface</u> Wetland Hydrology Present? Yes <u>No</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspections), if available:
Remarks:	

Sampling Point: Wgra034e-w

2-11 7-14	Absolute	Dominant	Indicator	Dominance Test worksheet:	CONT STORE
Tree Stratum (Plot size: 30ft × 30ft)		Species?	The second second second	Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2					
3				Total Number of Dominant Species Across All Strata:	(B)
4					
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	> (A/B)
6					(/// D)
7				Prevalence Index worksheet:	in all works
8		111.281		Total % Cover of:Multiply b	y:
		= Total Cov		OBL species x 1 =	<u> </u>
50% of total cover:	Contraction of the	total cover		FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 30ft × 30ft)	_ 20 % 01	total cover		FAC species x 3 =	
1. I/ex opaca	1	N	FAC	FACU species x 4 =	2
2. Juniperus Virginiana	1	N	FACU	UPL species x 5 =	
3. Pinus taeda	5	Y	FAC	Column Totals: (A)	(B)
			NUMBER OF STREET		
4				Prevalence Index = B/A =	
5				Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	on
7				2 - Dominance Test is >50%	
8	-			\square 3 - Prevalence Index is ≤3.0 ¹	
	1	= Total Cov	ver u	Problematic Hydrophytic Vegetation ¹ (E	xplain)
50% of total cover: 3.5	_ 20% of	total cover	:		
Herb Stratum (Plot size: 30ff × 30ff)				¹ Indicators of hydric soil and wetland hydrol	ogy must
1. Saccharum giganteum	20	<u> </u>	FALW	be present, unless disturbed or problematic.	
2. Andropogon virginicus	5	N	FAC	Definitions of Four Vegetation Strata:	
3. Cyperus odoratus	40	1	FACW	Tree - Woody plants, excluding vines, 3 in.	(7.6 cm) or
4. Cyperus pseudovegetus	20	1_	FACW	more in diameter at breast height (DBH), re-	gardless of
5. Scirpus cyperinus	5	N	DBL	height.	
6	15	<u> </u>		Sapling/Shrub - Woody plants, excluding v	
7				than 3 in. DBH and greater than 3.28 ft (1 m	n) tall.
8				Herb - All herbaceous (non-woody) plants,	regardless
9				of size, and woody plants less than 3.28 ft ta	all.
10				Woody vine - All woody vines greater than	3 28 ft in
11				height.	0.20 11 11
12	Con land				
	90	= Total Co	ver		
50% of total cover: 45	20% of	total cover	18	the second second second second	
Woody Vine Stratum (Plot size: 30 ft x30ft)			TRAM WITC	경망 집안 다. 여행의 관소 이용이 다.	
1. hone					
2					
g					
4	1. 2.6	100			
r	No.	2000	80 F	and the second	
J	0	= Total Co		Hydrophytic Vegetation	
		total cover		Present? Yes X No	_
50% of total cover:	000/ /				

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

wgrad34e-w

SUIL								Sampling Pol	nt:
Profile Des	cription: (Describe	to the dep	pth needed to docu	ment the in	ndicator	or confirm	the absence of indi	ators.)	
Depth	Matrix		Red	ox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	s
0-5	104R5/1	100			10,000		SC		
5-10	10 YR 5/1	90	10YR 4/6	10	C	M	sc		<u></u>
10-20	104R 4/1	80	10 YR 5/6	20	C	M	SC		
	and the second se		Streight were der			-			
1000	And 1005-1021-101	1	The second s		88 M.				
				_	-				1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
1Tune: C=C	oncentration, D=Dep	lation DM		- Maskad	Sand Cr		² Location: PL=Po	ro Lining M-M	atrix
	Indicators: (Applic					ans.	Indicators for Pro		
Histosol		ubio to ui	Polyvalue B			RR S. T. U			17.7.7.1.181 ol
	pipedon (A2)		Thin Dark S				2 cm Muck (A		
	istic (A3)		Loamy Muc	ky Mineral (F1) (LRF				e MLRA 150A,B)
	en Sulfide (A4)		Loamy Gley		-2)				19) (LRR P, S, T)
	d Layers (A5) Bodies (A6) (LRR P	T 10	Depleted Ma Redox Dark		6)		(MLRA 153	ight Loamy Soil	IS (F2U)
	ucky Mineral (A7) (LR						Red Parent M		
	resence (A8) (LRR U		Redox Depr					Dark Surface (T	F12)
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10) (Other (Explain	in Remarks)	
	d Below Dark Surface	e (A11)	Depleted Oc			1			
	ark Surface (A12) rairie Redox (A16) (N	AL DA 160	A) Umbric Surf					hydrophytic ve drology must be	
	Aucky Mineral (S1) (L					, 0,		urbed or probler	
	Gleyed Matrix (S4)		Reduced Ve			OA, 150B)			
Sandy F	Redox (S5)		Piedmont Fl						
	Matrix (S6)		Anomalous	Bright Loan	ny Soils (F20) (MLR	A 149A, 153C, 153D)		
	rface (S7) (LRR P, S				110-11		1		1
and the second second	Layer (if observed):						and the second		/
Type:	chos):	1000					Hydric Soil Presen	t? Yes	No
Depth (in	cites).		_				nyunc son Fresen	ti ies	
Remarks:									
N 1 1 = 1									
1.1.1									
- K.									
· · · ·									
-									



Wetland data point wgra034e_w facing northeast.



Wetland data point wgra034e_w facing northwest.

Project/Site: Atlantic Coast Pipeline	City/County: Greens	sville	Sampling Date: 10/3/2014
Applicant/Owner: Dominion		State: VA	_ Sampling Point: <u>wgra034_u</u>
Investigator(s): GB, SP	Section, Township,	Range: No PLSS in this area	
Landform (hillslope, terrace, etc.): slope		onvex, none): <u>none</u>	Slope (%): <u>4</u>
Subregion (LRR or MLRA): P Lat: 36.	57375927 L	_ong:77.52398769	Datum: WGS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes	, frequently flooded	NWI classifica	ation: None
Are climatic / hydrologic conditions on the site typical for thi	is time of year? Yes No	o (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? A	re "Normal Circumstances" pr	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If	f needed, explain any answer	s in Remarks.)
			• • • • • •

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland data point for a saturated to seas	sonally flooded	wetland complex lo	cated on a flat		

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

	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)		Species?		Number of Dominant Species
1.				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Demonst of Deminant Creation
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
				Prevalence Index worksheet:
7	0			Total % Cover of: Multiply by:
		= Total Cove		
50% of total cover: 0	20% of	total cover:	0	<u> </u>
Sapling/Shrub Stratum (Plot size:15)				FACW species x 2 =
_{1.} Liquidambar styraciflua	8	Yes	FAC	FAC species x 3 = 279
2				FACU species27 x 4 =108
2				UPL species $0 \times 5 = 0$
3				125 397
4				Column Totals: (A) (B)
5				Prevalence Index = $B/A = 3.17$
6				
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^1$
	8	= Total Cove	r	
50% of total cover: 4		total cover:	1.6	4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
Herb Stratum (Plot size:) 1. Chasmanthium sessiliflorum	55	Vee	EVC	Problematic Hydrophytic Vegetation ¹ (Explain)
		Yes	FAC	
2. Panicum capillare	30	Yes	FAC	¹ Indiantara of hydric coll and watland hydrology must
3. Sonchus arvensis	15	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Eupatorium capillifolium	12	No	FACU	
5. Arundinaria gigantea	5	No	FACW	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6		. <u> </u>		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.
				,
11	117			Herb – All herbaceous (non-woody) plants, regardless
50 5		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>58.5</u>	20% of	total cover:	23.4	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 V No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s				
	noot.)			

Profile Des	cription: (Describe t	o the dep	th needed to docur	nent the i	indicator	or confirm	the absence of indicators.)	
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-7	10YR 3/3	100					SL	
7-20	10YR 5/3	85	10YR 4/6	15	С	М	SL	
						·		
							·	
							·	
		<u> </u>				·	·	
						·		
	oncentration, D=Deple	etion, RM	=Reduced Matrix, MS	S=Masked	d Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soi	ls³:
Histoso	()		Dark Surface				2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be				148) Coast Prairie Redox (A16)	
	istic (A3)		Thin Dark Su			47, 148)	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Ma	• •			(MLRA 136, 147)	
	uck (A10) (LRR N)	()	Redox Dark	•	,		Very Shallow Dark Surface (TF12)	
	d Below Dark Surface	(A11)	Depleted Dat				Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L A 147, 148)	KK N,	Iron-Mangan MLRA 13		es (F12) (I	LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa	,	(MI RA 13	6 122)	³ Indicators of hydrophytic vegetation a	nd
	Redox (S5)		Piedmont Flo	. ,	•			na
	d Matrix (S6)		Red Parent N	•	. ,	•	, , , , ,	
	Layer (if observed):			natorial (i	<u> </u>			
Type: no								
							Hudrie Spil Present? Ves No	~
	iches):						Hydric Soil Present? Yes No	
Remarks:								



Photo 1 Upland data point WGRA034_u facing southwest



Photo 2 Upland data point WGRA034_u facing southeast

Project/Site: Atlantic Coast Pipeline	City/County:	Greensville		_ Sampling D	Date: 10/3/	2014
Applicant/Owner: Dominion			State: VA	Sampling	g Point: ^{wg}	jra034f_w
Investigator(s): GB, SP	Section, Tov	vnship, Range: <mark>N</mark>	o PLSS in this are	а		
			ne): microtopogra		Slope (%	6): <u>1</u>
Subregion (LRR or MLRA): P Lat: 36.5739893		Long: <u>-77</u>	52399639		Datum: W	GS 1984
Soil Map Unit Name: Roanoke loam, 0 to 2 percent slopes, frequently	/ flooded		NWI classifi	cation: PFO	1A, PFO10	0
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🚺	/ No	(If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology significantly	y disturbed?	Are "Norma	I Circumstances"	present? Ye	es 🔽	No
Are Vegetation, Soil, or Hydrology naturally pre-	roblematic?	(If needed,	explain any answe	ers in Remarl	ks.)	
SUMMARY OF FINDINGS – Attach site map showing	g samplinç	point location	ons, transects	s, importa	nt featu	res, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ No Yes _ ✔ No Yes _ ✔ No	Is the Sampled Area within a Wetland?	Yes 🖍 No					
Remarks:								
Wetland data point for PFO section of a saturated to seasonally flooded wetland complex located on a flat, forested area is 20year old pine plantation								

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)	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches): 1 Water Table Present? Yes No Depth (inches): 0 Saturation Present? Yes No Depth (inches): 0 (includes capillary fringe) No Depth (inches): 0 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Netland Hydrology Present? Yes <u>V</u> No
Remarks:	

	Absolute	Dominant Ir	dicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u>)			Status		
Pinus taeda	70	Yes	FAC	Number of Dominant Species	
2. Liquidambar styraciflua	6	No	FAC	That Are OBL, FACW, or FAC: (A)	
3. Fraxinus pennsylvanica	3	No	FACW	Total Number of Dominant	
				Species Across All Strata: (B)	
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 100 (A/B)	
6				Dravalance Index werkeheet	
7				Prevalence Index worksheet:	
	79	= Total Cover		Total % Cover of: Multiply by:	
50% of total cover:39.5	5 20% of	total cover:	15.8	OBL species $0 \times 1 = 0$	
Sapling/Shrub Stratum (Plot size: 15)				FACW species $x^2 = 00^{-10}$	
1 Liquidambar styraciflua	12	Yes	FAC	FAC species x 3 = 372	
2. Vaccinium corymbosum	10	Yes	FACW	FACU species x 4 =0	
3. Magnolia virginiana	10	Yes	FACW	UPL species $0 x 5 = 0$	
	8	No	FAC	Column Totals: 167 (A) 458 (B)	
4. <u>Acer rubrum</u>					
5. Clethra alnifolia	5	No	FAC	Prevalence Index = B/A =2.74	
6. Fraxinus pennsylvanica	5	No	FACW	Hydrophytic Vegetation Indicators:	
7. Quercus nigra	3	No	FAC		
8				1 - Rapid Test for Hydrophytic Vegetation	
a				∠ 2 - Dominance Test is >50%	
- S	53	= Total Cover		\checkmark 3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 26.5		total cover:	10.6	4 - Morphological Adaptations ¹ (Provide supporting	
-	20% 0	total cover.		data in Remarks or on a separate sheet)	
Herb Stratum (Plot size:5) 1. Arundinaria gigantea	12	N		Problematic Hydrophytic Vegetation ¹ (Explain)	
· · ·		Yes	FACW		
2. Carex grayi	3	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must	
3				be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5				Demittons of Four Vegetation Strata.	
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
				more in diameter at breast height (DBH), regardless of	
7				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	
	15	= Total Cover		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 7.5	20% of	total cover:	3		
Woody Vine Stratum (Plot size: 30)				Woody vine – All woody vines greater than 3.28 ft in height.	
1. Campsis radicans	20	Yes	FAC	hoght	
2					
3					
4				Hydrophytic	
5				Vegetation Present? Yes <u>Ves</u> No	
		= Total Cover		Present? Yes Vo No	
50% of total cover:10	20% of	total cover:	4		
Remarks: (Include photo numbers here or on a separate s	heet.)				
This wetland was still forested in 2/2013.					

	cription: (Describe t	o the dep				or confirm	the absence of in	dicators.)	
Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (moist)	<u>x Feature</u> %	es Type ¹	Loc ²	Texture	Remarks	
<u>(incries)</u> 0-5	10YR 2/1	100		/0	Type		SCL	Remains	
5-15	10YR 4/1	93	10YR 4/6	7	C	PL/M	SCL		
15-20	10YR 5/1	92	7.5YR 4/6	8	С	PL/M	SCL		
						·			
						·			
						·			
1							2		
Hydric Soil	oncentration, D=Depl	etion, RM	=Reduced Matrix, MS	5=Maske	d Sand Gr	ains.		re Lining, M=Matrix. for Problematic Hy	dria Saila ³
Histosol			Dark Surface	(07)				luck (A10) (MLRA 1	
	pipedon (A2)		Polyvalue Be	· ·				Prairie Redox (A16)	47)
	istic (A3)		Thin Dark Su					RA 147, 148)	
	en Sulfide (A4)		Loamy Gleye			47, 140)	•	ont Floodplain Soils	(F19)
	d Layers (A5)		 Depleted Ma 		()			RA 136, 147)	(,
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6)				Very Shallow Dark Surface (TF12)					
Deplete	d Below Dark Surface	e (A11)	Depleted Date	k Surface	e (F7)		Other	(Explain in Remarks)	
Thick D	ark Surface (A12)		Redox Depre	ssions (F	-8)				
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	ses (F12) (LRR N,			
MLR	A 147, 148)		MLRA 13	,					
	Gleyed Matrix (S4)		Umbric Surfa	. ,	•			rs of hydrophytic veg	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 14				•	hydrology must be p	present,			
	d Matrix (S6)		Red Parent N	/laterial (l	F21) (MLR	A 127, 147	7) unless o	disturbed or problem	atic.
	Layer (if observed):								
Type: <u>no</u>	one								
Depth (in	ches):						Hydric Soil Pres	ent?Yes 🖌	No
Remarks:							•		