DUKE- WALTON TO BIG BONE

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Walton- Big Bone	Natural Gas Pipeline	City/County:	Boone	Sampling	Date: 3/29/16
Applicant/Owner: Duke Energy		State:	Kentucky	Sampling	Point W003-PEM
Investigator(s): Sarah Miloski, Juli	e Freer	Section	n, Township, Ra	nge: No PLSS i	in Area
Landform (hillslope, terrace, etc.):	bottom land	Local relief (co	ncave, convex,	none): conca	ve Slope (%): 0
Subregion (LRR or MLRA): LRR M	Lat.:	38.88759	Long .:	-84.742106	Datum: WGS 84
Soil Map Unit Name No-Nolin silt lo	am, 0 to 2 percent slope	es, occasionally	flooded NV	VI Classification	N/A
Are climatic/hydrologic conditions of	of the site typical for this	time of the year'	? Yes X	No (If	no, explain in remarks)
Are vegetation , soil	, or hydrology	significantl	y disturbed?	Are "normal	Yes
Are vegetation, soil	, or hydrology	naturally p	roblematic?	circumstances (If needed, exp	" present? plain any answers in remarks

SUMMARY OF FINDINGS

Hydrophytic vegetation present? Hydric soil present?	Yes Yes	is the sampled area within a wetland?	Yes
Wetland hydrology present?	Yes		W003-PEM
Remarks:			

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PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PEM portion

Wetland Hydrology Indi	cators:	100			Seco	ondary Indicators (minimum of two required)		
Primary Indicators (minimu	im of one	is requi	red; check	all that apply)	5	Surface Soil Cracks (B6)		
X Surface Water (A1)			True A	quatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)		
X High Water Table (A2)			Hydrog	gen Sulfide Odor (C1)		Drainage Patterns (B10)		
X Saturation (A3)			Oxidiz	ed Rhizospheres on Living	N	Noss Trim Lines (B16)		
Water Marks (B1)			X Roots			Dry-Season Water Table (C2)		
Sediment Deposits (B2)		Preser	nce of Reduced Iron (C4)	Crayfish Burrows (C8)			
Drift Deposits (B3)			Recen	Iron Reduction in Tilled		Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)			Soils (C6)		Stunted or Stressed Plants (D1)		
Iron Deposits (B5)			Thin M	luck Surface (C7)		Geomorphic Position (D2)		
Inundation Visible on A	erial		Other	(Explain in Remarks)	5	Shallow Aquitard (D3)		
Imagery (B7)			100		N	Aicrotopographic Relief (D4)		
Water-Stained Leaves	(B9)					X FAC-Neutral Test (D5)		
Aquatic Fauna (B13)								
Field Observations:				Constant Porce	19669			
Surface water present?	Yes	X	No	Depth (inches):	1	Wetland		
Water table present?	Yes	X	No	Depth (inches):	2	hydrology		
Saturation present?	Yes	X	No	Depth (inches):	0	present? Y		
(includes capillary fringe)								
Describe recorded data (st	ream dall		itoring well	aerial obotos, previous i	repection	ns) if available:		
Describe recorded data (Si	ican yau	ye, moi	mornig wen	, aenai priotos, previous il	nspection	ia), il avaliable.		
Remarks:	Refer Tupel	: 何日 月	1-4-53		1957.94			

VEGETATION - Use scientific names of plants

GETATION - Use scientific nar	nes or plan				Sampling Pol		3-PEM
Tree Stratum Plot Size (30 ft.)	Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds Tree Stratum Sapling/Shrub Stratum	20% 0 0	50% 0 0
					Herb Stratum Woody Vine Stratum	20 0	50 .0
					Dominance Test Worksho	eet	
					Number of Dominant Species that are OBL,		
					FACW, or FAC: Total Number of Dominant		(A)
		0=	Total Cover		Species Across all Strata: Percent of Dominant	4	(B)
Sapling/Shrub Plot Size (15 ft.)	Absolute % Cover	Dominant Species	Indicator Status	Species that are OBL, FACW, or FAC:	100.00	<u>%</u> (A/E
	-				Prevalence Index Worksh	neet	•
					Total % Cover of: OBL species 20 x 1	-	
					FACW species70x 2FAC species5x 3	= 15	5
			<u> </u>		FACU species 0 x 4 UPL species 0 x 5	= 0	
					Column totals 95 (A) Prevalence Index = B/A =	17 1.84	5 (B)
		0 =	Total Cover		and the second		
Herb Stratum Plot Size (5ft.)	Absolute	Dominant	Indicator	Hydrophytic Vegetation I X Rapid test for hydrophy		
Cyperus esculentus	5ft.)	% Cover 25	Species	Status FACW	X Dominance test is >50 X Prevalence index is <3		
Lysimachia nummularia Epilobium coloratum		25	Y Y	FACW	Morphological adaptati supporting data in Rem	ons* (pro	
Persicaria sagittata	·	20	Y	OBL	separate sheet)		
Rumex crispus Solidago sp.		5	N	FAC	Problematic hydrophyti (explain)	ic vegetal	tion*
				UIS .	*Indicators of hydric soil and wetla present, unless disturbed or probl		gy must l
21 0 1 - 1 1 <u>1</u>					Definitions of Vegetation	Strata:	-0
					Tree - Woody plants 3 in. (7.6 cm breast height (DBH), regardless of		n diamete
					Sapling/shrub - Woody plants les greater than 3.28 ft (1 m) tall,	ss than 3 in	. DBH and
			Total Cover		Herb - All herbaceous (non-wood size, and woody plants less than a		gardless
Woody Vine Plot Size (3 Stratum	30 ft.)	Absolute % Cover	Dominant Species	Indicator Status	Woody vines - All woody vines g height.		3.28 ft in
			Total Cover		Hydrophytic vegetation present? Y		

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Depth	Matrix		Red	ox Feat	ures	11	Texture	Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	and the second se	Rendiks
0-18	10YR 4/2	80	10YR 5/6	20	С	PL/M	silt loam	
	oncentration, D= PL=Pore Lining,			d Matrix	k, CS=C	overed o	r Coated Sand Grains	
Histisol Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy (LRR N Sandy Sandy Sandy Sandy	pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR d Below Dark Su hark Surface (A12 Mucky Mineral (S Mucky Mineral (S MLRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	urface (2) 51) 3) 4)	Deplete Redox I Iron-Ma Umbric Piedmoi Red Par	Je Belon 147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Depress nganes Surface nt Flooc rent Ma	w Surface 8) Matrix (f (F3) rface (F Surface e Masse e (F13) (Iplain So terial (F)	F2) 6) (F7) 9) es (F12) (MLRA 13 pils (F19) 21) (MLR	2 cm Muck (A Coast Prairie Piedmont Floc (MLRA 136, 1 Very Shallow Other (Explair	Dark Surface (TF12) n in Remarks)
Restrictive Type: Depth (inch	Layer (if observe es):	d):					Hydric soil present?	9 <u>Y</u>
Remarks:								

DUKE- WALTON TO BIG BONE

Applicativone: Duke Energy State: Sampling Point W003-PSS Investigator(s): Sarah Mlöski, Mile Feer Section, Township, Range: No PLSS in Area Landform (hilkippe, terrace, etc): bottom land Local relief (concave, convex, none): Biope (%): 0 Soil Mep Unit Name LkB-Licking silt leam, 2 to 6 percent slopes NWI Classification: N/A Datum: WGS 84 Are eignation . soil or hydrology significantly disturbed? Are "normal Yes Are vegetation . soil or hydrology significantly disturbed? Are "normal Yes SUMMARY OF FINDINGS . or hydrology is the sampled area within a wetland? Yes Wes Hydrophytic vegetation present? Yes . state sampled area within a wetland? Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion Surface Nate: Concave Surface (86) Surface Soil Cracks (86) Surface Soil Cracks (86) X High Water Table (A2) . Hydrogen surface Soil Cracks (86) Surface Nate: Concave Surface (86) Surface Soil Cracks (86) Surface Soi	Project/Site: Walton- Big	Bone Natur	al Gas Pipeline	City/County:	Boone	Sampling Date:	3/29/16
Landform (hillslöpe, terrace, etc.)::::::::::::::::::::::::::::::::::::							
Subregion (LRR or MLRA): LRR N LRR: LRI: 38.887415 Long: -94.7416822 Datum: WGS 84. Soil Map Unit Name LkB-Licking silt loam, 2 to 6 percent slopes NVM Classification: N/A NVM Classification: N/A Are climatic/hydrologic conditions of the site typical for this time of the year? Yes No (If no, explain in remarks) Are vegetation . soil . or hydrology							
Soil Map Unit Name LkB-Licking silt loam, 2 to 6 percent slopes NWI Classification: N/A Are usedation , soil , or hydrology significantly disturbed? Are "normal Yes Are vegetation , soil , or hydrology significantly disturbed? Are "normal Yes Are vegetation , soil , or hydrology naturally problematic? (If needed, explain any answers in remarks) SUMMARY OF FINDINGS							
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (ff no, explain in remarks) Are "normal Yes Are vegetation , soil , or hydrology				The second se			
Are vegetation	Soil Map Unit Name LKB-Lic	king silt loar	n, 2 to 6 percent	slopes	N	WI Classification: N/A	
Are vegetation	Are climatic/hydrologic cond	litions of the	site typical for th	is time of the year	? Yes X	No (If no, ex	xplain in remarks)
Are vegetation, soil, or hydrologynaturally problematic?	Are vegetation , so	pil	, or hydrology	significant	ly disturbed?	Are "normal	Yes
(If needed, explain any answers in remar SUMMARY OF FINDINGS Hydrophytic vegetation present? Yes Is the sampled area within a wetland? Yes Wetland hydrology present? Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion Hydrophytic vegetation present? Wetand Hydrology Indicators: Secondary Indicators (minimum of one is required; check all that apply) X Surface Water (A1)		pil 🗌 🗌	, or hydrology	naturally p	roblematic?	circumstances" pres	ent?
Hydrophytic vegetation present? Yes Yes Is the sampled area within a wetland? Yes W003-PSS Remarks: Yes Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion Secondary Indicators (minimum of two required) Hydrophytic vegetation (Ad) True Aquatic Plants (B14) Secondary Indicators (minimum of two required) X Surface Water (A1) True Aquatic Plants (B14) Surface Soil Cracks (B6) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) X Saturation (A3) Oxidized Rhizospheres on Living Moss Trim Lines (B16) Water Marks (B1) X Roots (C3) Drainage Patterns (B10) Offit Deposits (B2) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Iron Deposits (B2) Train Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B3) Thin Muck Surface (C7) Geomorphic Position (D2) Magery (B7) Yes X No Aquatic Faune (Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Faune (B7) Yes X No Depth (inches); 1 Hydrology St		1. 31.				(If needed, explain a	iny answers in remark
Hydrophytic vegetation present? Yes Yes Is the sampled area within a wetland? Yes W003-PSS Remarks: Yes Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion Secondary Indicators (minimum of two required) Hydrophytic vegetation (Ad) True Aquatic Plants (B14) Secondary Indicators (minimum of two required) X Surface Water (A1) True Aquatic Plants (B14) Surface Soil Cracks (B6) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) X Saturation (A3) Oxidized Rhizospheres on Living Moss Trim Lines (B16) Water Marks (B1) X Roots (C3) Drainage Patterns (B10) Offit Deposits (B2) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Iron Deposits (B2) Train Muck Surface (C7) Geomorphic Position (D2) Iron Deposits (B3) Thin Muck Surface (C7) Geomorphic Position (D2) Magery (B7) Yes X No Aquatic Faune (Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Faune (B7) Yes X No Depth (inches); 1 Hydrology St	SUMMARY OF FINDIN	GS					
Hydric soil present? Yes Is the sampled area within a wetland? Yes Wetland hydrology present? Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1)		is much in	26	1945 - 1955 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 - 1969 -			18 2
Wetland hydrology present? Yes W003-PSS Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Pimary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (86) X Surface Water (A1)	· · · · · · · · · · · · · · · · · · ·			is the san	noled area with	in a wetland? Ye	s ·
Remarks: PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1)					ipieu ureu inu.		
PEM / PSS/ PFO wetland located in Big Bone Lick State Park. Pit dug in PSS portion HyDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of one is required; check all that apply) X Surface Water (A1)	Wetland Hydrology present			A Second -			00-1 00
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Soil Cracks (86) Surface Soil Cracks (86) X Surface Vater (A1)	Remarks:						
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Wetland Hydrology Indicators: Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Y Surface Water (A1)							
Primary Indicators (minimum of one is required; check all that apply)	HYDROLOGY						
Primary Indicators (minimum of one is required; check all that apply)	Wetland Hydrology Indica	ators:	THE SEARCH		Secor	ndary Indicators (minim	num of two required)
X High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) X Saturation (A3) Oxidized Rhizospheres on Living Moss Trim Lines (B16) Water Marks (B1) X Roots (C3) Dry-Season Water Table (C2) Sediment Deposits (B3) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Algal Mat or Crust (B4) Soils (C6) Sturation Visible on Aerial Imagery (C9) Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Other (Explain in Remarks) Shallow Aquitard (D3) Field Observations: Microtopographic Relief (D4) FAC-Neutral Test (D5) Sufface water present? Yes X No Depth (inches): 1 Water table present? Yes X No Depth (inches): 2 hydrology Saturation present? Yes X No Depth (inches): 0 hydrology Saturation present? Yes X No Depth (inches): 0 hydrology Saturation present? Yes X No Depth (inches): 0 hydrology De	Primary Indicators (minimum	n of one is re	quired; check al	that apply)			
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Water Marks (B1) X 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 Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Soils (C6) Saturation Visible on Aerial Imagery (C9) Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Other (Explain in Remarks) Shallow Aquitard (D3) Imagery (B7) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Aquatic Fauna (B13) Yes X No Field Observations: Surface water present? Yes X No Saturation present? Yes X No Depth (inches): 1 Wetland Mater table present? Yes X No Depth (inches): 0 present? Y Saturation present? Yes X No Depth (inches): 0 present? Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Y Y							
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Tilled Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Soils (C6) Stunted or Stressed Plants (D1) Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Other (Explain in Remarks) Shallow Aquitard (D3) Imagery (B7) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: Surface water present? Yes Saturation present? Yes X No Depth (inches): 1 Water table present? Yes X No Depth (inches): 0 Saturation present? Yes X No Depth (inches): 0 Includes capillary fringe) Depth (inches): 0 Present? Y				and a second s	area and a second	and the second	(C2)
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Imagery (B7) Microtopographic Relief (D4) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: Surface water present? Yes Yes X No Depth (inches): 1 Water table present? Yes Yes X No Depth (inches): 2 Microtopographic Relief (D4) How the table present is the present? Yes Yes X No Depth (inches): 2 Imagery (B7) Wetland Microtopographic Relief (D4) Hydrology Yes X No Depth (inches): 0 Water table present? Yes Yes X No Depth (inches): 0 Present? Y (includes capillary fringe) Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Iron Deposits (B5)		Thin Mu	k Surface (C7)	G	eomorphic Position (D2))
Imagery (B7) Microtopographic Relief (D4) Water-Stained Leaves (B9) FAC-Neutral Test (D5) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Surface water present? Yes Surface water present? Yes X No Depth (inches): 1 Wetland Water table present? Yes X No Depth (inches): 2 Saturation present? Yes X No Depth (inches): 0 Present? Saturation present? Yes X No Depth (inches): 0 Present? Y Saturation present? Yes X No Depth (inches): 0 Present? Y (includes capillary fringe) Depth (inches): 0 Present? Y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Statiable:	Inundation Visible on Aer	rial	Other (E	xplain in Remarks)	St	hallow Aquitard (D3)	
Aquatic Fauna (B13) Field Observations: Surface water present? Yes X No Depth (inches): 1 Water table present? Yes X No Depth (inches): 2 Saturation present? Yes X No Depth (inches): 0 hydrology Saturation present? Yes X No Depth (inches): 0 present? Y (includes capillary fringe) Vestand gauge, monitoring well, aerial photos, previous inspections), if available: Y Y	Imagery (B7)				M	icrotopographic Relief (I	D4)
Field Observations: Surface water present? Yes X No Depth (inches): 1 hydrology Water table present? Yes X No Depth (inches): 2 hydrology Saturation present? Yes X No Depth (inches): 0 present? Y Saturation present? Yes X No Depth (inches): 0 present? Y (includes capillary fringe) Vestand No Depth (inches): 0 y y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Y Y Y	Water-Stained Leaves (B	39)			F#	AC-Neutral Test (D5)	
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Water table present? Yes X No Depth (inches): 2 hydrology Saturation present? Yes X No Depth (inches): 0 present? Y (includes capillary fringe) Depth (inches): 0 0 y y Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Image: Constraint of the stream gauge is a constream gauge is a constraint of the stream gaug	Field Observations:						
Saturation present? Yes X No Depth (inches): 0 present? Y (includes capillary fringe)							
(includes capillary fringe) Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
		Yes _>	<u> </u>	Depth (inches)	:	present?	<u> </u>
Remarks:	Describe recorded data (stre	am gauge, r	monitoring well, a	aerial photos, prev	ious inspections	s), if available:	
remarks.	Bernadia		1999 - 1992 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -				
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	and the second			the second se		and an and a second	

	Jse scientific	names of	plants			Sampling Poi	nt: WO	03-PSS
			Abaaluta	Deminent	Indiantas	50/20 Thresholds	000/	500/
Tree Stratum	Plot Size (30 ft.) Absolute % Cover	Dominant	Indicator	True Otratum	20%	50%
			% Cover	Species	Status	Tree Stratum	0	0
				·		Sapling/Shrub Stratum	20	50
						Herb Stratum	6	15
	4 /					Woody Vine Stratum	0	0
						Demission Test Markets		
						Dominance Test Workshe Number of Dominant	90L	
						Species that are OBL,		
							2	(4)
						FACW, or FAC:	3	(A)
	15 11					Total Number of Dominant Species Across all Strata:	4	(8)
			0	= Total Cover			4	(B)
				- TOLAI COVEI		Percent of Dominant		
						Species that are OBL,	-	
Sapling/Shrub	Plot Size (15 ft.) Absolute	Dominant	Indicator	FACW, or FAC:	75.00	<u>%</u> (A/E
Stratum			/ % Cover	Species	Status		0.001	
Acer negundo	,		85	· Y	FAC	Prevalence Index Worksh	neet	
Populus delto	ides	Qii	15	Y	FAC	Total % Cover of:		
						OBL species 0 x 1	= ()
						FACW species 20 x 2		
						FAC species 100 x 3	= 30	00
						FACU species 10 x 4	= 4	0
	e en récure					UPL species 0 x 5	= ()
						Column totals 130 (A)	38	0 (B)
					1000	Prevalence Index = B/A =	2.92	
and whether a		- 1				and the second second second second		
	5 - 11		100	= Total Cover		and the second second		
						Hydrophytic Vegetation In	ndicator	s:
			, Absolute	Dominant	Indicator	Rapid test for hydrophy		
Herb Stratum	Plot Size (5 ft.) % Cover	Species	Status	X Dominance test is >50°	%	
Lysimachia nu	ummularia		20	Y	FACW	X Prevalence index is ≤3.	.0*	
Alliaria petiola	nta		10	Y	FACU	Morphological adaptati	ons* (pro	ovide
						supporting data in Rem	arks or o	on a
	「「「「金田」					separate sheet)		
	M	al men	2 10 10		Constrained to	Problematic hydrophyti	c vegeta	tion*
	1 . Et 4 . W		and the second			(explain)		
					The second second	*Indicators of hydric soil and wetla	and hydrolo	gy must b
		1	ATE CONTRACTOR		15 66 7	present, unless disturbed or probl	ematic	
	Wincer, Les , L				Contraction of the			110
and the		THE SER		3901.10		Definitions of Vegetation	Strata:	
	ME COLLET					Tree - Woody plants 3 in. (7.6 cm		
		1.4. 10. 20.				breast height (DBH), regardless o		n clamete
ALC: NAME OF A DESCRIPTION OF A DESCRIPR	- In a straight of	日本に登出	कर्म के मुख्य का स्थित			broast hoight (BBH), régal dioss e	i noight.	
		123.11	et al de la company			Sapling/shrub - Woody plants les	s than 3 ir	. DBH an
		1111				greater than 3.28 ft (1 m) tall.		
	11 Mar 199		30	= Total Cover	1241			
			- 30			Herb - All herbaceous (non-wood	y) plants, r	egardiess
			1.11			size and woody plante less than "	3 28 ft tall	
Woody Vine	Plot Size (30 ft	Absolute	Dominant	Indicator	size, and woody plants less than 3	3.28 ft tall.	
	Plot Size (30 ft.	1.11	Dominant Species	Indicator Status	size, and woody plants less than 3 Woody vines - All woody vines g		3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.	Absolute					3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.	Absolute			Woody vines - All woody vines g		3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.	Absolute			Woody vines - All woody vines g		3.28 ft in
Woody Vine	Plot Size (30 ft.	Absolute			Woody vines - All woody vines g height.		3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.	Absolute			Woody vines - All woody vines gr height. Hydrophytic		3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.) Absolute % Cover	Species		Woody vines - All woody vines gr height. Hydrophytic vegetation		3.28 ft in
Woody Vine Stratum	Plot Size (30 ft.	Absolute			Woody vines - All woody vines gr height. Hydrophytic		3.28 ft in
Woody Vine Stratum) Absolute % Cover	Species		Woody vines - All woody vines gr height. Hydrophytic vegetation		3.28 ft in
Woody Vine Stratum) Absolute % Cover	Species		Woody vines - All woody vines gr height. Hydrophytic vegetation		3.28 ft in
Woody Vine Stratum) Absolute % Cover	Species		Woody vines - All woody vines gr height. Hydrophytic vegetation		3.28 ft in
Stratum) Absolute % Cover	Species		Woody vines - All woody vines gr height. Hydrophytic vegetation		3.28 ft in

	Matrix		e depth needed t	lox Feat		Indicato	T	
Depth (Inches)	Color (moist)	%	Color (moist)	lox ⊦eat %	tures Type*	Loc**	Texture	Remarks
0-18	10YR 5/2	90	10YR 5/4	10		PL/M	silt loam	
0-10	10110.012	50				F D m	Sill Ivan	
			1		+ +		lt	
			1		++		l t	
2010			1 1		+ +			
	1				1			
	-				1			
5735 -50				Sec. 1				
				$\pi \in \mathbb{R}$				
	1		States and					
				1				
			Fill Kong fil					
				d Matrix	x, CS=Cr	overed o	or Coated Sand Grains	
**Location:	PL=Pore Lining,							
Hydric Soil	I Indicators:						Indicators for P	Problematic Hydric Soils:
			Dark Su			(20)		
Histisol					w Surface	e (S8)		A10) (MLRA 147) B Redox (A16) (MI RA 147, 148)
the second se	pipedon (A2) listic (A3)		(MLRA) Thin Da		48) ace (S9)			e Redox (A16) (MLRA 147, 148) oodplain Soils (F19)
	en Sulfide (A4)		(MLRA				(MLRA 136,	
	ed Layers (A5)				Matrix (F	-2)		w Dark Surface (TF12)
2 cm M	uck (A10) (LRR		X Deplete	d Matrix	x (F3)			ain in Remarks)
Deplete	ed Below Dark Su	urface ((A11) Redox D	Dark Su	urface (F6			
Thick D	ark Surface (A12	2)	Depleter		Surface (
	Mucky Mineral (S				sions (F8)			A. P. LANDAR
	I, MLRA 147, 14						(LRR N, MLRA 136)	
	Gleyed Matrix (Se Redox (S5)	4)			e (F13) (N dolain So		(MLRA 148)	
	d Matrix (S6)						RA 127, 147)	the state of the s
C	1 INIGHT 05 ()				ie			
*Indicators	of hydrophytic ve	egetatic	on and wetland hy	/drology	y must be	e preser	nt, unless disturbed or pro	oblematic
						-H.C.		
	11 - Langu							
	Layer (if observe	.d):					Hydric soil present	
Type: Depth (inch	ec).			10.2	-		nyune son present	
Deput (es)				-			Note to the second
						16-11		
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								
Remarks:								

DUKE- WALTON TO BIG BONE

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

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Project/Site: vvalton-Big Bone N	atural Gas Pipeline	City/County:	Boone	Sampling Date: 3	
Applicant/Owner: Duke Energy	F		Kentucky	Sampling Point V	
Investigator(s): Sarah Miloski, Julie				ange: No PLSS in Area	
Landform (hillslope, terrace, etc.):	the second s	And a second sec		none): concave -84.740982	Slope (%): 0 Datum: WGS 84
Subregion (LRR or MLRA): LRR N Soil Map Unit Name No- Nolin silt lo		and the second se		VI Classification: PFO	
Are climatic/hydrologic conditions of		Contraction of the second		No (If no, ex	and the second second
	, or hydrology		disturbed?	Are "normal	Yes
Are vegetation, soil	, or hydrology	naturally pr	oblematic?	circumstances" prese	
				(If needed, explain a	ny answers in remar
SUMMARY OF FINDINGS				12	
Hydrophytic vegetation present?	Yes				
Hydric soil present?	Yes	is the sam	pled area with	in a wetland? Yes	S
Wetland hydrology present?	Yes			WOO	03-PFO
Remarks:					
Remarks.					
PEM / PSS/ PFO wetland loo	ated in Big Bone I	ick State Park.	Pit dua in PF	O portion	
				- Perment	
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
HYDROLOGY Wetland Hydrology Indicators:			Secon	dary Indicators (minim	um of two required)
Primary Indicators (minimum of one	is required: check all	that apply)		urface Soil Cracks (B6)	un or two required)
		atic Plants (B14)		arsely Vegetated Conca	No Surface (DP)
X Surface Water (A1)		Sulfide Odor (C1)			ave Sullace (DO)
X High Water Table (A2)				ainage Patterns (B10)	
X Saturation (A3)		Rhizospheres on Li		oss Trim Lines (B16)	(00)
Water Marks (B1) Sediment Deposits (B2)	X Roots (C	of Reduced Iron (C		y-Season Water Table (ayfish Burrows (C8)	(02)
Drift Deposits (B3)		on Reduction in Tille	Page 100	turation Visible on Aeria	limageny (CQ)
Algal Mat or Crust (B4)	Soils (C6	E Contraction of the second		unted or Stressed Plants	
Iron Deposits (B5)		k Surface (C7)		eomorphic Position (D2)	
		cplain in Remarks)		allow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)		(pidin in recinance)		crotopographic Relief (D	14)
Water-Stained Leaves (B9)			Childrentown	C-Neutral Test (D5)	,
Aquatic Fauna (B13)					
Field Observations:					
Surface water present? Yes	X No	Depth (inches):	1	Wetland	
Water table present? Yes	X No	Depth (inches):		hydrology	
Saturation present? Yes	X No	Depth (inches):		present?	Y
(includes capillary fringe)					
				Sec. Aller A.	
Describe recorded data (stream gau	ige, monitoring well, a	erial photos, previo	ous inspections), if available:	
Remarks:					

	lse scientific i	names of	f plan	(S			Sampling Point: W003-PF
	1. A.						50/20 Thresholds
Tree Stratum	Plot Size (30 ft.	1	Absolute	Dominant	Indicator	20% 50%
nee Suatum	FIUL SIZE (50 IL.)	% Cover	Species	Status	Tree Stratum 19 48
Acer negundo				80	Y	FAC	Sapling/Shrub Stratum 0 0
Populus deltoi				15	N	FAC	Herb Stratum 9 23
	005				<u> </u>	FAC	
							Woody Vine Stratum 0 0
							Dominance Test Worksheet
	10 Aug		_				
3							Number of Dominant
			-				Species that are OBL,
	18 11	1.1.1					FACW, or FAC: 3 (A
				And the second second	-2014 2 A	Statistics of a	Total Number of Dominant
	Store Jan 2 1	15 23	122	1.1. E. 1.	ALC: A DESCRIPTION	Mart Minister	Species Across all Strata: 3 (E
				95	= Total Cover		Percent of Dominant
				-			The second s
0				Abashda	Deminent	Indiantan	Species that are OBL,
Sapling/Shrub	Plot Size (15 ft.)	Absolute	Dominant	Indicator	FACW, or FAC:100.00% (A
Stratum				% Cover	Species	Status	
							Prevalence Index Worksheet
2							Total % Cover of:
3							
							FACW species 45 x 2 = 90
5		1.13		A STATE IN			FAC species 95 x 3 = 285
6		- Alter - N	100	The state of the s			FACU species 0 x 4 = 0
7				C.3 104 10			UPL species 0 x 5 = 0
3							Column totals 140 (A) 375 (E
	and the second				The second second		Prevalence Index = B/A = 2.68
5							
		-			= Total Cover		
					- Total Cover		Living a but a Magnetation indicate set
							Hydrophytic Vegetation Indicators:
Herb Stratum	Plot Size (5 ft.)	Absolute	Dominant	Indicator	Rapid test for hydrophytic vegetation
	A CONTRACTOR		'	% Cover	Species	Status	X Dominance test is >50%
1 Lysimachia nu	mmularia			25	Y	FACW	X Prevalence index is ≤3.0*
2 Mentha spicat	9	2		20	Y	FACW	Morphological adaptations* (provide
3		ALC: N			The second	10011784	supporting data in Remarks or on a
4	1.00 10.00			Coll Martin	0.000		separate sheet)
							Problematic hydrophytic vegetation*
	ALL						(explain)
6							
							*Indicators of hydric soil and wetland hydrology mus
							present, unless disturbed or problematic
- Ti							
	10.1	NOT ALL			10 10 ECO	<u></u>	Definitions of Vegetation Strata:
	12 6 4 3	1. 1- A		1. The second second	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Tree - Woody plants 3 in. (7.6 cm) or more in diame
2		NE W	Crant 1	Ale Sector	7 SADAWI	San Schuller	breast height (DBH), regardless of height.
		Conductor S		CONTRACTOR AS		The State of State	and a set of the set o
	Martin and				and the strength		Sapling/shrub - Woody plants less than 3 in. DBH
5	A MAR AND A		10	Base Street			greater than 3.28 ft (1 m) tall.
				45	= Total Cover		
							Herb - All herbaceous (non-woody) plants, regardle
				Absolute	Dominant	Indicator	size, and woody plants less than 3.28 ft tall.
Moody Vine		30 ft.)	% Cover			
Woody Vine	Plot Size (% Cover	Species	Status	Woody vines - All woody vines greater than 3.28 ft
Stratum	Plot Size (- C		height.
Stratum	Plot Size (and a	_				
Stratum 1	Plot Size (_				
Stratum 12	Plot Size (4	_				
Stratum 1 2 3							Hydrophytic
Stratum 1 2 3 4	Plot Size (Hydrophytic
Stratum 1 2 3							vegetation
Stratum				0	= Total Cover		
Stratum 1 2 3 4 5 5			_		= Total Cover		vegetation
Stratum			_		= Total Cover		vegetation
Stratum			_		= Total Cover		vegetation
Stratum			_		Total Cover		vegetation
Stratum			_		Total Cover		vegetation

SOIL					1	-	Sam	pling Point: W003-PFO
Depth	Matrix		Red	ox Feat	tures		r or confirm the absence of Texture	of indicators.) Remarks
(Inches)	Color (moist) 10YR 4/2	%	Color (moist) 10YR 5/4	% 5	Type*	Loc**		
0-18		95	1011(3)4			PL/M	silt loam	
	oncentration, D= PL=Pore Lining,			d Matrix	x, CS=Co	vered o	r Coated Sand Grains	
Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy (LRR N Sandy Sandy Sandy	pipedon (A2) listic (A3) en Sulfide (A4) id Layers (A5) uck (A10) (LRR id Below Dark Su park Surface (A12 Mucky Mineral (S Mucky Mineral (S Mucka 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	urface (. 2) 51) 8) 4)	(MLRA) Thin Dar (MLRA) Loamy (C X Depleted A11) Redox D Depleted Redox D Iron-Mar Umbric S Piedmor Red Par	e Belo 147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Surface ot Flood ent Ma	w Surface 18) ace (S9) 18) Matrix (F2 x (F3) urface (F6 Surface (F6 Surface (F6) e Masses e (F13) (N dplain Soi terial (F2)	2)) F7) iLRA 1; is (F19) 1) (MLR	2 cm Muck (A Coast Prairie Piedmont Floc (MLRA 136, 1 Very Shallow Other (Explain	Dark Surface (TF12) n in Remarks)
Restrictive Type: Depth (inch	Layer (if observe es):	id):					Hydric soll present?	7 <u>Y</u>
Remarks:								

DUKE- WALTON TO BIG BONE

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Walton-Big	Bone Na	tural Gas Pipeline	City/County:	Boone	Sampling	Date: 3/29/16
Applicant/Owner: Duke I			State:	Kentucky		Point: U003
Investigator(s): Sarah Milo	ski, Julie	Freer	Sectio	on, Township,	Range: No PLSS	in Area
Landform (hillslope, terrace	, etc.): t	bottom land	Local relief (c	oncave, conve	ex, none): none	Slope (%): 0
Subregion (LRR or MLRA):		Lat			g.: -84.742109	Datum: WGS 84
Soil Map Unit Name No-No	lin silt loar	n, 0 to 2 percent sl	opes, occasionally	flooded	NWI Classificatio	n: N/A
Are climatic/hydrologic con	ditions of t	the site typical for the	his time of the year	r? Yes	(No (I	f no, explain in remarks)
Are vegetation, s	oil	, or hydrology		tly disturbed?	Are "normal	Yes
Are vegetation, s	oil	, or hydrology	naturally p	problematic?	circumstance	
					(If needed, e)	plain any answers in remark
SUMMARY OF FINDIN	IGS					
Hydrophytic vegetation pres	sent?	No	1 1 1 1 V 40			
Hydric soil present?		No	is the sar	mpled area wi	ithin a wetland?	No
Wetland hydrology present	? -	No		Upland	for W003	
Remarks:						
Upland pit for wetland						
HYDROLOGY Wetland Hydrology India				Sec		(minimum of two required)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu				Sec	Surface Soil Crack	(S (B6)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1)		True Aq	juatic Plants (B14)	_	Surface Soil Crack Sparsely Vegetate	ks (B6) Ind Concave Surface (B8)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2)		True Aq		_	Surface Soil Crack Sparsely Vegetate Drainage Patterns	ss (B6) d Concave Surface (B8) (B10)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3)		True Aq Hydroge Oxidized	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I	,	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (ss (B6) d Concave Surface (B8) (B10) B16)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	m of one is	True Aq Hydroge Oxidized Roots (0	juatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3)) Living	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water	ss (B6) d Concave Surface (B8) (B10) B16) r Table (C2)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	m of one is	True Aq Hydroge Oxidized Roots (0 Presend	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron () Living (C4)	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (ss (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	m of one is	True Aq Hydroge Oxidized Roots (0 Presend Recent	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti) Living (C4)	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible	is (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	m of one is	True Aq Hydroge Oxidized Roots ((Presenc Recent Soils (C	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6)) Living (C4)	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse	ks (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	m of one is	True Aq Hydroge Oxidized Roots ((Presend Recent Soils (C Thin Mu	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6) uck Surface (C7)) Living (C4) illed	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows Saturation Visible Stunted or Stresse Geomorphic Positi	iss (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ad Plants (D1) ion (D2)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae	m of one is	True Aq Hydroge Oxidized Roots ((Presend Recent Soils (C Thin Mu	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6)) Living (C4) illed	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi Shallow Aquitard (ks (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2) D3)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Imagery (B7)	m of one is erial	True Aq Hydroge Oxidized Roots ((Presend Recent Soils (C Thin Mu	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6) uck Surface (C7)) Living (C4) illed	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi Shallow Aquitard (Microtopographic	ks (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2) D3) Relief (D4)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aa Imagery (B7) Water-Stained Leaves (m of one is erial	True Aq Hydroge Oxidized Roots ((Presend Recent Soils (C Thin Mu	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6) uck Surface (C7)) Living (C4) illed	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi Shallow Aquitard (ks (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2) D3) Relief (D4)
HYDROLOGY Wetland Hydrology India Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aa Imagery (B7) Water-Stained Leaves (Aquatic Fauna (B13)	m of one is erial	True Aq Hydroge Oxidized Roots ((Presend Recent Soils (C Thin Mu	uatic Plants (B14) en Sulfide Odor (C1 d Rhizospheres on I C3) ce of Reduced Iron (Iron Reduction in Ti 6) uck Surface (C7)) Living (C4) illed	Surface Soil Crack Sparsely Vegetate Drainage Patterns Moss Trim Lines (Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi Shallow Aquitard (Microtopographic	ks (B6) d Concave Surface (B8) (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) ion (D2) D3) Relief (D4)
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Remarks:

se scientific r		-	Selled			Sampling Poi		3
			Absolute	Dominant	Indicator	50/20 Thresholds	20%	50%
Plot Size (30 ft.)				Trees Eterntum		
			76 COVEI	Species	Status			0
								0
								50
						Woody Vine Stratum	0	0
					<u></u>	Deminance Test Western		
							et	
						The second		
						and the second		
								(A)
		<u> </u>		1.00	10.22			
The second of			LI CHENOTRES			Species Across all Strata:	4	(B)
			0	= Total Cover		Percent of Dominant		
						Species that are OBL.		
			Absolute	Dominant	Indicator	and the second	0.00%	A/E
Plot Size (15 ft.)	% Cover	Species	Status			-
						Provalance Index Worksh	ant	
							eet	
			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					
							= _0	
	11.1	A		C. T. S. T.		FACW species 0 x 2	= 0	
Aug St. Dall Water		Sec. 2	Constant of the second second		The second second	FAC species 10 x 3	= 30)
	-		ALC: TOTAL TALK			FACU species 85 x 4	= 34	0
					THE SULL	UPL species 0 x 5	= 0	11. 1
ALL STREET	1000		The states					0 (B)
		-					3.80	<u> </u>
					-	Trevalence index - biA -	5.03	
			- 0	Total Cover		and the second second		
				- Total Cover		Hudrophytic Vegetation In	diestor	
			Absoluto	Dominant	Indiantor			
Plot Size (5 ft.)						ation
		_				services the second		
and a strength of the strength					and the second se			
Im		100			The second se		arks or c	na
		-			the second se			
Semigraph Lating			10		FACU	Problematic hydrophytic	c vegetat	tion*
n usan sa sa		10.00		N	FAC	(explain)		
	THE MAR	10.00	5	N	- LILE DE	*Indicators of hydric soil and wetta	nd hydrolo	av must b
	11/2012		30 TO 15 1	States and the second second				
		-				Definitions of Vegetation	Strata:	-
15 (S) (S)	21 V		D. WHERE THE	A TRUE TO A	C. Level and Market			14-15
La condición y	1.4			10 M 10 2 1	A SHARE HAVE THE			diameter
THE PROPERTY OF	NIST.	112 12		1, 141, 140, 121	224 9 00 1	ureast neight (UBH), regardless of	rneight.	
	in the second			A CARLEND	States and	Sapling/shrub - Woody plants les	s than 3 in	DBH an
	11 2 17 3		La sul	BALL SALE	A Standy Lice I	greater than 3.28 ft (1 m) tall.		
	1. T. M. C.		100 :	Total Cover				
								gardless
	20.4		Absolute	Dominant	Indicator	size, and woody plants less than 3	.28 ft tall.	
Plot Size (30 π.)	% Cover	Species	Status	Woody vines - All woody vines or	eater then	3 28 ft in
						height.		5.20 It III
) in 11 1				Lo-suit lu			
		100				for your protection with	-0.5	
1			100			Hudronhutia		
1.1.1	No. Contract					Hydrophytic		
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				= Total Cover		present? N		
oto numbers he	ere or on a	a sepa	rate sheet)	997 T 010				-
to numbers he	ere or on a	a sepa	rate sheet)	Ħ.				
ito numbers he	ere or on a	a sepa	rate sheet)	the state			june,	
	Plot Size (Plot Size (nacea	Plot Size (15 ft.	Plot Size (15 ft.) Plot Size (5 ft.) Plot Size (5 ft.)	Plot Size (30 ft.) % Cover	Plot Size (30 ft.) % Cover Species	Plot Size (30 ft.) % Cover Species Status	Plot Size (30 ft.) % Cover Species Status Status	Plot Size (30 ft.) % Cover Species Status Tree Stratum 0

Depth (Inches)	Matrix							
(Inches) I	Color (moist)	%	Color (moist)	x Feat %	Type*	Loc**	Texture	Remarks
0-18	10YR 5/4	100	- 1		1 Start	No Car	silt loam	
		a de la		Ball K.	2 10 Etabl	14 3		
		È - Vi			1.11	81 A.Z		
		113		11.3				
10-14 A			Burn Starley	10.554	从一般结	1.75		
			2010-00-00-00-00-00-00-00-00-00-00-00-00-		1.57.00	1.16		
		1000	Carl Contraction		1000			
					2010014-0			
		0						
-								
Type: C=C	oncentration D=	-Deplet	on, RM=Reducer	Matrix	CS=Co	overed o	r Coated Sand Grains	
	PL=Pore Lining,				.,			
ydric Soil	Indicators:			Augura .			Indicators for Pro	oblematic Hydric Soils:
			Dark Su					
Histisol			Polyvalu			e (S8)		10) (MLRA 147)
and a second	pipedon (A2)		(MLRA '					Redox (A16) (MLRA 147, 14
	listic (A3) en Sulfide (A4)		Thin Dar (MLRA 1				(MLRA 136, 1	odplain Soils (F19)
	d Layers (A5)		Loamy C			2)		Dark Surface (TF12)
	uck (A10) (LRR	N)	Depleted			-,	Other (Explain	
	d Below Dark Si					5)		
	ark Surface (A1:		Depleted					
	Mucky Mineral (S		Redox D					
	, MLRA 147, 14						LRR N, MLRA 136)	
	Gleyed Matrix (S Redox (S5)	4)	Umbric S				(MLRA 148)	
	d Matrix (S6)						A 127, 147)	
			· · · · · · · · · · · · · · · · · · ·					
ndicators of	of hydrophytic ve	egetatio	n and wetland hy	drology	must be	e present	t, unless disturbed or prob	lematic
estrictive l	Layer (if observe	d):						
ype:		-,-					Hydric soil present?	N
epth (inche	es):							
emarks:				1.1	No. Co			

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big	Bone Natur	al Gas Pipeline	City/County:	Boone	Sampling Date:	3/30/16
Applicant/Owner: Duke E			State:	Kentucky	Sampling Point:	W004
Investigator(s): Sarah Milo			and the second division of the second divisio		ange: No PLSS in Area	
Landform (hillslope, terrace		and the second se			none): concave	Slope (%): 0
Subregion (LRR or MLRA):		Lat.			-84.727106	Datum: WGS 84
Soil Map Unit Name EdE2-I	Eden silty cla	ay loam, 20 to 35	percent slopes, ero	ded N	VI Classification: N/A	
Are climatic/hydrologic cond	ditions of the	site typical for th	is time of the year?	Yes X	No (If no, ex	oplain in remarks)
Are vegetation, se	oil	, or hydrology	significantly	disturbed?	Are "normal	Yes
	oil	, or hydrology	naturally pr	oblematic?	circumstances" pres	ent?
					(If needed, explain a	ny answers in remar
SUMMARY OF FINDIN	IGS					
Hydrophytic vegetation pres	Carrier III	es				
Hydric soil present?		es l	is the same	pled area with	in a wetland? ·Ye	ic i
Wetland hydrology present		es	is the sum	piou aroa with	WO	
vvetianu nyurulogy present	r <u> </u>	<u>es</u>			**0	04
Remarks:						
	1 DOW					
PEM wetland along ro	bad ROW					
	-					
HYDROLOGY			and an effective sector			
Wetland Hydrology India	ators:	Sector Sector		Secon	dary Indicators (minim	um of two required)
Primary Indicators (minimur	m of one is n	equired; check al	I that apply)	Su	urface Soil Cracks (B6)	
X Surface Water (A1)		True Aq	uatic Plants (B14)	Sp	parsely Vegetated Conc	ave Surface (B8)
X High Water Table (A2)			n Sulfide Odor (C1)		ainage Patterns (B10)	
X Saturation (A3)			Rhizospheres on Li		oss Trim Lines (B16)	
Water Marks (B1)		X Roots (C			y-Season Water Table	(C2)
Sediment Deposits (B2)			e of Reduced Iron (C		ayfish Burrows (C8)	()
Drift Deposits (B3)			ron Reduction in Tille		turation Visible on Aeri	al Imagery (C9)
Algal Mat or Crust (B4)		Soils (C	6)	St	unted or Stressed Plant	s (D1)
Iron Deposits (B5)		Thin Mu	ck Surface (C7)	Ge	eomorphic Position (D2)	
Inundation Visible on Ae	rial	Other (E	xplain in Remarks)	St	allow Aquitard (D3)	
Imagery (B7)	A I KAI				crotopographic Relief (I	04)
Water-Stained Leaves (B9)			Contraction of the local division of the loc	C-Neutral Test (D5)	
Aquatic Fauna (B13)						
Field Observations:	The second second					
Surface water present?	Yes	X No	Depth (inches):	1	Wetland	
Water table present?		X No	Depth (inches):		hydrology	
Saturation present?		X No	Depth (inches):		present?	Y
(includes capillary fringe)						
	1.5	, at man	C. Str. Solks			
Describe recorded data (str	eam gauge,	monitoring well,	aerial photos, previo	ous inspections	a), if available:	
Remarks:						
			17 19 10	and set of		

Plot Size (EAGA Thurshills		
Plot Size (00.0			1000		50/20 Thresholds		
	30 ft.)	Absolute	Dominant	Indicator		20%	50%
		'	% Cover	Species	Status	Tree Stratum	0	0
						Sapling/Shrub Stratum	0	0
1.00	10.10				1.11	Herb Stratum	16	40
	1000			10000		Woody Vine Stratum	0	0
104			1000			Dominance Test Worksh	eet	
				1000		Number of Dominant		
						Species that are OBL,		
14.2.2.1	3.H. 1003			MARKEN T			-	(A)
Service at				A STATE	5 - 1 - 1	Contraction and the second probability of the second probability of the second s	0.6	
		1111	HERE STREET	ALCONTRACT.	1.1222402.1	Species Across all Strata:	2	(B)
			0 :	= Total Cover		Percent of Dominant		
						Species that are OBL,		
Diet Cine (15.4		Absolute	Dominant	Indicator	FACW, or FAC:	100.00	% (A/
Plot Size (15 ft.)	% Cover	Species	Status			111
			P			Prevalence index Works	heet	
12.1		_						
							-	
		-						
		_		1.10.11.00				
						· · · · · · · · · · · · · · · · · · ·		
		_			And the second second			85 (B)
	27.0.3	_	10000	1 <u></u>	201 201	Prevalence Index = B/A =	2.31	
	202 611		1. Tel		1.			
			0 :	Total Cover		made to a la section of the		-10
						Hydrophytic Vegetation I	ndicator	S:
Plat Size (5.0	1	Absolute	Dominant	Indicator			tation
FIOL 5120 (5 11.	,	% Cover	Species	Status	X Dominance test is >50	%	
us			30	Y	FACW	X Prevalence index is ≤3	.0*	
nularia			20	Y	FACW	Morphological adaptati	ions* (pro	vide
	196 - F		15 .	N	FAC			
	7.005 115	15		N .	terror of the local division of the local di			
and the second se	States and	_			and the second se		ic veneta	tion*
aonnonann						and the second sec	ic vegeta	lion
	-							-
	11/2							ogy must
						present, unless disturbed of prob	Internation	
			-			Definitions of Vegetation	Strata:	-
				Constant of	1000	CONTRACTOR OF A STARL		
				The States	With the loss			n diamete
Seron and	- 10 10 10	5.6		The states		breast height (DBH), regardless o	of height.	
Art Louis		11		C. C. U.C. Surray	and the second	Sapling/shrub - Woody plants le	ss than 3 in	. DBH an
에르니하니			The second second			greater than 3.28 ft (1 m) tall.		
. 2			80 =	Total Cover	1.11	Herb - All berbassaus (see	u) planta -	ocordia
								egardies
Plot Size (30 ft)	Absolute	Dominant	Indicator	and woody plants loss than		
		'	% Cover	Species	Status	Woody vines - All woody vines g	reater than	3.28 ft in
						height.		
		-						
		-		1	- Incard And			
						Hydrophytic		
						vegetation		
			0	Total Cover	The second second	V Change		
			0 =	Total Oovor		present? Y		
				Total Cover		present? 1	•	
o numbers he	re or on a	separ				present? 1	-	
) numbers he	e or on a	separ				present?		
) numbers he	re or on a	separ				present <u>T</u>		
) numbers he	e or on a	separ				present T		
numbers he	ere or on a	separ					<u>.</u>	
	Plot Size (Plot Size (us nularia a cea saemifolium Plot Size (Plot Size (5 ft. us nularia a cea saemifolium	Plot Size (5 ft.) us nularia a cea saemifolium	Plot Size (15 ft.) Absolute % Cover	Plot Size (15 ft.) Absolute Species Dominant Species	Plot Size (15 ft.) Absolute % Cover Species Status	Plot Size (15 ft.)) Absolute % Cover Dominant Species Across all Strata: Percent of Dominant Species that are OBL, FACW, or FAC: Plot Size (15 ft.)) Absolute % Cover Dominant Species is that are OBL, FACW, or FAC: Prevalence Index Worksi Total % Cover of: OBL species 0 x 1 FAC wy species 0 x 2 FAC wy species 0 x 2 FAC wy species 0 x 2 FAC species 0 x 2 FAC species 0 x 2 FAC species 0 x 5 FAC species 0 x 5 FAC species 0 x 5 FAC upecies 15 x 3 Worphological adaptat supporting data in Ren spearate sheet) Problematic hydrophy image infolium The FAC wy FAC wy	Image: Section of the set of the se

***Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils Histisol (A1) Dark Surface (S7) Histic Epipedon (A2) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) Hydrogen Sulfide (A4) (MLRA 147, 148) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) (LRR N) X Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147)	No. of Concession, Name of Street, or other Designation, or other		be to th				indicato	r or confirm the absence of	of indicators.)
0-18 10YR 4/2 90 10YR 5/6 10 C PL/M silty clay loam 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td< th=""><th></th><th>and the second se</th><th>~</th><th></th><th></th><th></th><th>1</th><th>Texture</th><th>Remarks</th></td<>		and the second se	~				1	Texture	Remarks
Image: Solution of the second seco	An announce of	· · · · · · · · · · · · · · · · · · ·				T		- ilter a la se la servi	
***Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils Histisol (A1) Dark Surface (S7) Histic Epipedon (A2) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) Hydrogen Sulfide (A4) (MLRA 147, 148) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Very Shallow Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147)	0-18	10YR 4/2	90	10YR 5/6	10	C		siity clay loam	
***Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils Histisol (A1) Dark Surface (S7) Histic Epipedon (A2) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) Hydrogen Sulfide (A4) (MLRA 147, 148) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) (LRR N) X Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147)		1.							
Histisol (A1)Dark Surface (S7)Histisol (A1)Polyvalue Below Surface (S8)2 cm Muck (A10) (MLRA 147)Histic Epipedon (A2)(MLRA 147, 148)Coast Prairie Redox (A16) (MLRA 147)Black Histic (A3)Thin Dark Surface (S9)Piedmont Floodplain Soils (F19)Hydrogen Sulfide (A4)(MLRA 147, 148)(MLRA 136, 147)Stratified Layers (A5)Loamy Gleyed Matrix (F2)Very Shallow Dark Surface (TF12)2 cm Muck (A10) (LRR N)XDepleted Matrix (F3)Other (Explain in Remarks)Depleted Below Dark Surface (A11)Redox Dark Surface (F6)Other (Explain in Remarks)Thick Dark Surface (A12)Depleted Dark Surface (F7)Sandy Mucky Mineral (S1)Redox Depressions (F8)(LRR N, MLRA 147, 148)Iron-Manganese Masses (F12) (LRR N, MLRA 136)Umbric Surface (F13) (MLRA 136, 122)Sandy Redox (S5)Piedmont Floodplain Soils (F19) (MLRA 148)Stripped Matrix (S6)Red Parent Material (F21) (MLRA 127, 147)									
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Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147)			4)						
*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic	Outppe					tenai (i z		G (27, 147)	
	*Indicators	of hydrophytic ve	getatio	n and wetland hy	drology	must b	e presen	t, unless disturbed or prob	lematic
							1-3-10		
이 방법에 가지 않는 것을 가지 않는 것을 하는 것을 하는 것이 같이 많은 것이 같이 가지 않는 것이 같이 많이 많이 많이 많이 많이 많이 없다.	Next an					DI E N A	的一把一次		I STATE IN THE PARTY OF
Restrictive Layer (if observed):		Layer (if observe	d):			1.0	1000		
Type: Hydric soll present? Y						-	26.25	Hydric soil present	<u> </u>
Depth (inches):	Depth (Inch	les):				1. 11 La 1			
Remarks:							COLUMN STR		
	Remarks:		-		11 (14) 10, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1				

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big Bo Applicant/Owner: Duke Ener	gy	Gas Pipeline	City/County: State:	Boone Kentucky	Sampling Date:	the second se
Investigator(s): Sarah Miloski,					ange: No PLSS in Area	
Landform (hillslope, terrace, etc		and the second se	and the second se		none): concave	Slope (%): 0
Subregion (LRR or MLRA): LR		Lat	PARTY IN CONTRACTOR OF THE OWNER		: -84.724071	Datum: WGS 84
Soil Map Unit Name EdE2-Ede	n silty clay le	bam, 20 to 35	percent slopes, ei	oded N	WI Classification: N/A	
Are climatic/hydrologic conditio	ns of the sit	e typical for the	his time of the year	? Yes X	No(If no, e>	plain in remarks)
Are vegetation, soil		r hydrology		ly disturbed?	Are "normal	Yes
Are vegetation, soil	, 0	r hydrology	naturally p	roblematic?	circumstances" pres	
					(If needed, explain a	ny answers in remarks
SUMMARY OF FINDINGS	5					
Hydrophytic vegetation present	? Yes					
Hydric soil present?	Yes		is the san	npled area with		
Wetland hydrology present?	Yes				WO	05
Remarks:						
PEM wetland along road	ROW. D	rains into st	ream S014			
HYDROLOGY						
Wetland Hydrology Indicato	ors:			Seco	ndary Indicators (minim	um of two required)
Primary Indicators (minimum of	f one is requ	ired; check a	II that apply)	S	urface Soil Cracks (B6)	
X Surface Water (A1)		True Aq	uatic Plants (B14)	S	parsely Vegetated Conc	ave Surface (B8)
X High Water Table (A2)		Hydroge	en Sulfide Odor (C1)	D	rainage Patterns (B10)	
X Saturation (A3)		Oxidized	d Rhizospheres on L	iving M	oss Trim Lines (B16)	
Water Marks (B1)		X Roots (-	ry-Season Water Table	(C2)
Sediment Deposits (B2)		Presenc	e of Reduced Iron (C4) C	rayfish Burrows (C8)	
Drift Deposits (B3)		Recent	Iron Reduction in Til	led S	aturation Visible on Aeria	al Imagery (C9)
Algal Mat or Crust (B4)		Soils (C	6)	S	tunted or Stressed Plant	s (D1)
Iron Deposits (B5)		Thin Mu	ick Surface (C7)	G	eomorphic Position (D2)	
Inundation Visible on Aerial		Other (E	Explain in Remarks)	S	hallow Aquitard (D3)	
Imagery (B7)				M	icrotopographic Relief (I	04)
Water-Stained Leaves (B9)				X F	AC-Neutral Test (D5)	
Aquatic Fauna (B13)			and a second second			
Field Observations:		and the second				
A STATE OF THE S	es X	No	Depth (inches)		Wetland	
	es X	No	Depth (inches)		hydrology	V
Saturation present? Y (includes capillary fringe)	res X	No	Depth (inches)): 0	present?	<u> </u>
Describe recorded data (stream	n gauge, mo	nitoring well,	aerial photos, prev	ious inspections	s), if available:	
Remarks:						
						the hard and h

OLIANON O	se scientific i	numee of	pium				Sampling Po		-
							50/20 Thresholds		
Tree Stratum	Plot Size (30 ft.)	Absolute	Dominant	Indicator			50%
	1 101 0120 (00 11.	,	% Cover	Species	Status	Tree Stratum	0	0
							Sapling/Shrub Stratum	0	0
Constraint and	Te an			1		161 5 112.04	Herb Stratum	20	50
	-10.9V						Woody Vine Stratum	0	0
		A 44	0.77				and the second second second	DEAL P.	
		1 1 St. St. 1					Dominance Test Worksh	eet	
	3 mar 1 1 2			12	CONT. IN TH		Number of Dominant		
		and the second					Species that are OBL,		
							FACW, or FAC:	3	(A)
		- F- F		in a nitis	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The second second	Total Number of Dominant		
The set of the	STATES IN	ille Contra	. 1	(611) 12 (12) 2 (1	SURVIELA LUC		Species Across all Strata:	3	(B)
	and the state of the state			0 =	Total Cover		Percent of Dominant	25000	
							Species that are OBL,		
apling/Shrub				Absolute	Dominant	Indicator	FACW, or FAC:	100.009	6 (A/
Stratum	Plot Size (15 ft.)	% Cover	Species	Status	TAON, OTTAO.	100.007	0 (~~
Suatum				78 COVE	opecies	Status			
							Prevalence Index Works	neet	
							Total % Cover of:		
							OBL species 0 x 1	= 0	
							FACW species 70 x 2	= 140)
Contraction in the second		1	_				FAC species 30 x 3	= 90	
						The second	FACU species 0 x 4	= 0	
					1226		UPL species 0 x 5	= 0	
		1					Column totals 100 (A)	230	(B)
				1.00	15 2 3 -	The second se	Prevalence Index = B/A =	2.30	
Light of the second									
				0 =	Total Cover				
							Hydrophytic Vegetation I	ndicators	:
		Absolute	Dominant	Indicator	Rapid test for hydrophy				
erb Stratum Plot Size (5 ft.))	% Cover	Species	Status	X Dominance test is >50				
		40	Y	FACW	X Prevalence index is <3				
Cyperus esculentus Carex grayi		30	Y	FACW	Morphological adaptati		ido		
Juncus tenuis				30	Y	FAC	supporting data in Ren		
Juncus tenuis					<u> </u>		separate sheet)	and of or	ia
							Problematic hydrophyt	ie vogeteti	
······································								ic vegetati	on
							(explain)		
			_				*Indicators of hydric soil and wetl		y must l
							present, unless disturbed or prob	lematic	
- Mindeline			-			F	D. C. W	01	
We net to the second	(1)	1.1.1.1				18 a 11 a 14	Definitions of Vegetation	Strata:	
	1						Tree - Woody plants 3 in. (7.6 cm) or more in	diamete
	A STREET	15. 192 HE	_				breast height (DBH), regardless of		uluinoite
				A. H. Competence	and a state		Sapling/shrutb - Woody plants le	ss than 3 in.	DBH an
Congress of the		91,				0.0557 (1997)	greater than 3.28 ft (1 m) tall.		
				100 =	Total Cover		Harth All bertrassour (nor was		andless
							Herb - All herbaceous (non-wood size, and woody plants less than		Jaruless
Woody Vine	Plot Size (30 ft.)	Absolute	Dominant	Indicator	site, and nover plants loss than	14 1641.	
Stratum	1 101 0120 (00 11.	'	% Cover	Species	Status	Woody vines - All woody vines g	reater than 3	3.28 ft in
4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1							height.		
									- 3
	S Shirt (Sub	-194-1			No. 10				11
						1231	Hydrophytic		
					States and the		vegetation		
				0 =	Total Cover		present? Y		
					Total Cover		hiesenri T		
nadka (lealuda - 4	oto number b		0.00	rate abacti					
narks: (Include ph	oto numbers h	ere or on a	a sepa	rate sheet)					

SOIL							Samı	pling Point: W005
Profile Des Depth	cription: (Descri Matrix	be to th		o docu ox Feat		indicato	r or confirm the absence o	and the second second
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-18	10YR 5/2	70	10YR 5/6	30	С	PL/M	silty clay loam	
	concentration, D= PL=Pore Lining,			d Matrix	k, CS=C	overed o	r Coated Sand Grains	
Histisol Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy (LRR N Sandy Sandy Strippe	Epipedon (A2) distic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR d Below Dark Su bark Surface (A12 Mucky Mineral (S Mucky Mineral (S I, MLRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	urface (2) 51) 8) 4)	(MLRA Thin Da (MLRA Loamy (X Deplete A11) Redox (Deplete Redox (Iron-Ma Umbric Piedmo Red Pau	ue Belo 147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Depress nganes Surface nt Floor rent Ma	w Surfac (8) (8) (8) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	52) 6) (F7))) ss (F12) (MLRA 1: 0ils (F19) 21) (MLR	2 cm Muck (A Coast Prairie F Piedmont Floo (MLRA 136, 1 Very Shallow I Other (Explain	Dark Surface (TF12) in Remarks)
Restrictive Type: Depth (inch	Layer (if observe es):	id):					Hydric soil present?	Υ <u>Υ</u>
Remarks:								

DUKE- WALTON TO BIG BONE

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site:	Walton-Big Bone N	atural Gas Pipeline	City/County:	Boone	Sampling Date:	3/30/16
Applicant/Owne	r: Duke Energy		State:	Kentucky	Sampling Point	W006
Investigator(s):	Sarah Miloski, Julie	Freer	Section	n, Township, Ra	nge: No PLSS in Are	a
Landform (hillsle	ope, terrace, etc.):	depression	Local relief (co	ncave, convex,	none): concave	Slope (%): 0
	or MLRA): LRR N		38.885757		-84.722932	Datum: WGS 84
Soil Map Unit N	ame EdE2-Eden silt	y clay loam, 20 to 35 p	percent slopes, er	oded NV	VI Classification: N/A	
Are climatic/hyd	Irologic conditions of	the site typical for this	s time of the year?	Yes X	No (If no, ex	xplain in remarks)
Are vegetation	, soil	, or hydrology	significantly	y disturbed?	Are "normal	Yes
Are vegetation	, soil	, or hydrology	naturally p	roblematic?	circumstances" pres (If needed, explain a	sent? any answers in remarks)

SUMMARY OF FINDINGS

Hydric soil present? Wetland hydrology present?	Yes Yes	Is the sampled area within a wetland?	Yes W006	
Remarks:				

PEM wetland along road ROW. Drains into stream located outside of study area

Netland Hydrology India	ators:				Seco	ondary Indicators (minimum of two required
Primary Indicators (minimum	n of one i	s requi	ired; check	all that apply)	1	Surface Soil Cracks (B6)
X Surface Water (A1)			True A	Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)
X High Water Table (A2)			Hydro	gen Sulfide Odor (C1)	1	Drainage Patterns (B10)
X Saturation (A3)			Oxidiz	ed Rhizospheres on Living	S 110	Moss Trim Lines (B16)
Water Marks (B1)			X Roots	a descent of a local state of a local state of the second state of the second state of the second state of the		Dry-Season Water Table (C2)
Sediment Deposits (B2)			Prese	nce of Reduced Iron (C4)		Crayfish Burrows (C8)
Drift Deposits (B3)			Recer	t Iron Reduction in Tilled		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	14		Soils (C6)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)			Thin N	luck Surface (C7)	(Geomorphic Position (D2)
Inundation Visible on Ae Imagery (B7) Water-Stained Leaves (Sec. di		Other	(Explain in Remarks)	300	Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Aquatic Fauna (B13)						
ield Observations:	S- 657		5 - 1 - 1			
Surface water present?	Yes	X	No	Depth (inches):	1	Wetland
Vater table present?	Yes	Х	No	Depth (inches):	2	hydrology
Saturation present? includes capillary fringe)	Yes -	<u>x</u>	- ^{No} —	Depth (inches):	0	present? <u>Y</u>
Describe recorded data (str	eam daud	ne mor	nitoring wel	aerial photos previous i	inspection	ns) if available:
	ourrigues	,	interning tree	, contri priotoc, protroad i	inopeou o	
		st. 4-	16 Jak			
Remarks:						

Size (30 ft.)	Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds Tree Stratum	20% 50% 0 0
			<u> </u>		0 0
		<u></u>		the second se	21 53
				Woody Vine Stratum	0 0
				Dominance Test Workshe	et
				Number of Dominant	
				Species that are OBL,	
		<u></u>			<u>3</u> (A)
	54- 38/1-				2 (D)
		Total Cover			<u> </u>
	Absolute	Dominant	Indicator		100.00% (A/
Size (15 ft.)	% Cover	Species	Status		100.0070 (141
				Prevalence Index Worksh	leet
				The second s	
				OBL species 30 x 1	= 30
				FACW species 75 x 2	= 150
				FAC species 0 x 3	
				And a second sec	television and the second seco
					and the second s
				· ·	180 (B) 1.71
				Trevalence index - bix -	1.71
	0 :	Total Cover			
				Hydrophytic Vegetation In	
Size (5ft.)					
				second	
			second		
	10	N	FACW		and or on a
			12.0016	Problematic hydrophytic	c vegetation*
A U A MAS	2 CONTRACTOR	CT-THE AVE		(explain)	
	10000 1000 1000 1000 1000 1000 1000 10		<u> </u>	*Indicators of hydric soil and wetla	
				present, unless disturbed or proble	ematic
				Definitions of Vegetation	Strata:
NEW YORK MARKS		Statistics States	THE PROPERTY.		
	and the second second	ALL PRODUCTS	- The second		
				Diseast neight (DDH), regelatess o	i neigric.
		anat 7		Sapling/shrub - Woody plants les	is than 3 in. DBH an
	105	Total Cover	· · · · · · · · · · · · · · · · · · ·	greater than 3.28 ft (1 m) tall.	
		Total COVEL		Herb - All herbaceous (non-wood)	
Sine / DOA	Absolute	Dominant	Indicator	size, and woody plants less than 3	3.28 ft tall.
Size (30 π.)	% Cover	Species	Status	Woody vines - All woody vines gr	eater than 3.28 ft in
				height.	
		Total Cover			
				presenti T	
	parate sheet)				
mbers here or on a se					
mbers here or on a se	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
mbers nere or on a se					
	Size (5 ft.)	Image: Size (15 ft.) Absolute % Cover Image: Size (5 ft.) Absolute % Cover Image: Size (5 ft.) Absolute % Cover Image: Size (5 ft.) Absolute % Cover Image: Size (5 ft.) Absolute % Cover Image: Size (30 ft.) 10 Image: Size (30 ft.) Absolute % Cover Image: Size (30 ft.) Absolute % Cover Image: Size (30 ft.) Absolute % Cover	Image: Size (15 ft.) Absolute Mominant Species Size (15 ft.) Absolute Mominant Species Image: Size (5 ft.) Absolute Mominant Species Image: Size (5 ft.) Absolute Mominant Species Image: Size (5 ft.) Absolute Mominant Species Image: Size (5 ft.) Mosolute Mominant Species Image: Size (5 ft.) Mosolute Mominant Species Image: Size (30 ft. Y Image: Species Image: Size (30 ft.) Absolute Mominant Species Image: Size (30 ft.) Absolute Mominant Species Image: Size (30 ft.) Mosolute Mominant Species Image: Size (30 ft.) Mosolute Mominant Species Image: Size (30 ft.) Mosolute Mominant Species	Size (15 ft.) Absolute % Cover Species Status <u>0</u> = Total Cover <u>0</u> = Total Cover Size (5 ft.) Absolute % Cover Species Y <u>10</u> N <u>10</u> N <u>105</u> = Total Cover <u>105</u> = Total Cover	Saping/Shub Stratum Saping/Shub Stratum Herb Stratum Woody Vine Stratum Umber of Dominant Species Stratum Umber of Dominant Species Across all Stratus Prevent of Dominant Size (15 ft.) Absolute Woody Vine Stratum Umber of Dominant Size (15 ft.) Absolute Dominant Indicator Size (5 ft.) Absolute Dominant Size (5 ft.) Size (5 ft.) Absolu

	Contraction of the local data and the local data an	be to th	and the second se		the second se	indicato	r or confirm the absence of	findicators.)
Depth	Matrix Color (moint)	0/		ox Feat %		Loc**	Texture	Remarks
(Inches) 0-18	Color (moist) 10YR 5/2	% 95	Color (moist) 10YR 5/8	5	Type*	PL/M	silty clay loam	
		Dealet						
	PL=Pore Lining,			d Matri	x, CS=C	overed o	r Coated Sand Grains	
Histisol Histic E Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy ((LRR N Sandy Sandy) Strippe	pipedon (A2) listic (A3) en Sulfide (A4) id Layers (A5) uck (A10) (LRR de Below Dark Su bark Surface (A12 Mucky Mineral (S Mucky Mineral (S Mucky Mineral (S Mucky Matrix (S6)	urface (2) 51) - 8) 4)	Depleted Redox D Iron-Mar Umbric S Piedmor Red Par	e Belo 147, 14 rk Surf 147, 14 Gleyed d Matri Dark Su d Dark Depress nganes Surface nt Floor ent Ma	w Surface (8) Matrix (f x (F3) urface (F) Surface e Masse e (F13) (dplain So terial (F)	F2) 6) (F7))) 95 (F12) (MLRA 1: 0)ils (F19) 21) (MLR	2 cm Muck (A1 Coast Prairie F Piedmont Floo (MLRA 136, 14 Very Shallow D Other (Explain	Dark Surface (TF12) in Remarks)
Restrictive Type: Depth (inch	Layer (if observe es):	d):					Hydric soil present?	<u> </u>
Remarks:								

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big Bor		Sas Pipel	ine	_City/County:	Boone		Sampling Date: 3/30/16		
Applicant/Owner: Duke Energy		19190			Kentuck		Sampling Po		
nvestigator(s): Sarah Miloski,			,				ge: No PLSS in A		
Landform (hillslope, terrace, etc Subregion (LRR or MLRA): LRI			Lat .:	Local relief (co 38.885673			-84.727121	Slope (%): 20 Datum: WGS 84	
Soil Map Unit Name EdE2-Eden		am 20 t	A STREET				I Classification: N		
	-	Volter		the state					
Are climatic/hydrologic condition								, explain in remarks)	
Are vegetation, soil		r hydrolo		significant	-		Are "normal	Yes	
Are vegetation, soil	, 0	r hydrolo	ду	naturally p	roblemati		circumstances" p		
							(If needed, expla	in any answers in rema	
SUMMARY OF FINDINGS	State La		- Aller					and the second second	
Hydrophytic vegetation present?	No		1. 10			1	- Martin Martin		
Hydric soil present?	No		- 49	is the sam	noled are	a within	a wetland?	No	
Wetland hydrology present?	No		1.1				vithin a wetland? <u>No</u>		
vetiand nydrology present?		· · ·			Opi		004-0		
Remarks:				And the second second					
Upland pit for wetlands W	004-006	located	along	road ROW					
		Г		_ 3- 7-14,				de la marchada	
HYDROLOGY									
Wetland Hydrology Indicator	(8:	1		10000	12.10	Second	ary Indicators (mi	nimum of two required)	
Primary Indicators (minimum of		ired: che	ck all ti	hat apply)			ace Soil Cracks (E	and the second se	
Surface Water (A1)				tic Plants (B14)	· · · ·		and the second second second	oncave Surface (B8)	
High Water Table (A2)			14 The Party of th	Sulfide Odor (C1)		Drainage Patterns (B10)			
Saturation (A3)					in the second	Moss Trim Lines (B16)			
				hizospheres on L	.iving	Dry-Season Water Table (C2)			
Water Marks (B1) Sediment Deposits (B2)			ots (C3)	of Reduced Iron (C4)	Crayfish Burrows (C8)			
Drift Deposits (B3)				n Reduction in Til		Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)			Is (C6)		ieu .	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)			
Iron Deposits (B5)				Surface (C7)		Geomorphic Position (D2)			
				lain in Remarks)		Geomorphic Position (D2) Shallow Aquitard (D3)			
Inundation Visible on Aerial					1		승규는 것이 같은 물질을 가 들고 있는 것	of (D4)	
Imagery (B7) Water-Stained Leaves (B9)							otopographic Relig -Neutral Test (D5)		
						FAC			
Aquatic Fauna (B13)	1.229					1 side			
Field Observations:				Denth Court			104-41		
· · · · · · · · · · · · · · · · · · ·	es	- No	<u>X</u>	Depth (inches)	ALA		Wetland		
	es	- No	X	_ Depth (inches)			hydrology	N	
	es	- No	<u>X</u>	_ Depth (inches)	: <u>NA</u>		present?	<u>N</u>	
(includes capillary fringe)						1.1			
Describe recorded data (stream		nitoring v	vell 20	rial photos prev		ections)	if available:		
Describe recorded data (stream	gauge, mo	intoring v	ven, ae	nai protos, prev	ious mape	ections),	ii avaliabie.		
Remarks:		- 16			1.0				
			1.2	1	111				

Tree Stratum Plot Size (30 ft. Absolute % Cover Dominant Species Indicator Status	Thresholds Stratum g/Shrub Stratum Stratum y Vine Stratum hance Test Workshee er of Dominant es that are OBL, /, or FAC: Number of Dominant es that are OBL, /, or FAC: Number of Dominant st that are OBL, /, or FAC	0 (A) 2 (B) 0.00% (A/ et 0 0 400
Image: Shrub stratum Plot Size (15 ft.) Absolute species Dominant status Image: Shrub stratum Plot Size (15 ft.) Absolute species Dominant status Image: Shrub stratum Plot Size (15 ft.) Absolute species Dominant status Image: Shrub stratum Plot Size (15 ft.) Absolute species Dominant status Image: Shrub stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Plot Size (5 ft.) Absolute species Status Image: Stratum Image: Stratus Image: Stratus Image: Stratus Image: Stratum Plot Size (30 ft.) Absolute species Status Image: Stra	Stratum y Vine Stratum nance Test Workshee er of Dominant se that are OBL, /, or FAC: Number of Dominant es Across all Strata: nt of Dominant es that are OBL, /, or FAC: lence Index Workshee % Cover of: pecies 0 x1 = / species 0 x3 = species 0 x3 = species 0 x4 = pecies 0 x5 = in totals 100 (A)	20 50 0 0 t 0 (A) 2 (B) 0.00% (A/ et 0 400 0 400 (B)
Hert Woody Vine Plot Size (30 ft.)	Stratum y Vine Stratum nance Test Workshee er of Dominant se that are OBL, /, or FAC: Number of Dominant es Across all Strata: nt of Dominant es that are OBL, /, or FAC: lence Index Workshee % Cover of: pecies 0 x1 = / species 0 x3 = species 0 x3 = species 0 x4 = pecies 0 x5 = in totals 100 (A)	0 0 t 0 (A) 2 (B) 0.00% (A/ et 0 400 0 400 (B)
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Image: Second Stratum Plot Size (15 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (15 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (15 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (5 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (5 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (5 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Plot Size (5 ft.) Absolute Model Dominant Species Indicator Species Image: Second Stratum Image: Second Stratus Second Stratus Second Stratus Second Stratus Sec	er of Dominant es that are OBL, /, or FAC: Number of Dominant es Across all Strata: nt of Dominant es that are OBL, /, or FAC: lence Index Workshe % Cover of: pecies 0 x1 = / species 0 x3 = species 0 x3 = species 0 x5 = n totals 100 (A)	0 (A) 2 (B) 0.00% (A/ et 0 0 400 0 400 (B)
Image: Septing/Shrub Plot Size (15 ft.) Absolute Dominant Indicator Species Stratum Plot Size (15 ft.) Absolute Dominant Indicator Stratum Plot Size (15 ft.) Absolute Dominant Indicator Stratum Plot Size (15 ft.) Absolute Dominant Indicator Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Image: Stratum Image: Stratus Image: Stratus Image: Stratus Image: Stratus	er of Dominant es that are OBL, /, or FAC: Number of Dominant es Across all Strata: nt of Dominant es that are OBL, /, or FAC: lence Index Workshe % Cover of: pecies 0 x1 = / species 0 x3 = species 0 x3 = species 0 x5 = n totals 100 (A)	0 (A) 2 (B) 0.00% (A/ et 0 0 400 0 400 (B)
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ispling/Shrub Plot Size (15 ft.) Absolute % Cover Dominant Indicator FAC Stratum Plot Size (15 ft.) Absolute % Cover Dominant Indicator Stratum Plot Size (15 ft.) Absolute % Cover Dominant Indicator Stratum Plot Size (5 ft.) Absolute % Cover Dominant Indicator Stratum Plot Size (5 ft.) Absolute % Cover Dominant Indicator Poe pratensis 30 Y FACU FACU FACU Tranaxacum officinale 30 Y FACU FACU FACU Plantago major 10 N FACU Fracu Fracu Fracu Indicator 100 = Total Cover Fracu	/, or FAC: Number of Dominant as Across all Strata: Int of Dominant as that are OBL, /, or FAC: lence Index Workshe % Cover of: pecies 0 x1 = / species 0 x3 = pecies 0 x3 = pecies 0 x5 = In totals 100 (A)	2 (B) 0.00% (A/ et 0 0 400 0 400 (B)
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0 = Total Cover Perc Stapling/Shrub Plot Size (15 ft.) Absolute Dominant Indicator Stratum Plot Size (15 ft.) % Cover Species Status	nt of Dominant es that are OBL, /, or FAC: // or FAC: // species 0 x1 = // species 0 x3 = species 0 x3 = species 0 x4 = pecies 0 x5 = in totals 100 (A)	0.00% (A/ et 0 0 400 0 400 (B)
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tapling/Shrub Stratum Plot Size (15 ft. Absolute % Cover Dominant Species Indicator Status FAC	/, or FAC: lence Index Workshe % Cover of: pecies 0 x1 = pecies 0 x2 = pecies 0 x3 = species 100 x4 = pecies 0 x5 = in totals 100 (A)	et 0 0 400 0 400 (B)
Stratum Plot Size (15 ft.) % Cover Species Status	Ience Index Workshe % Cover of: pecies 0 x1 = pecies 0 x2 = pecies 0 x3 = species 100 x4 = pecies 0 x5 = un totals 100	et 0 0 400 0 400 (B)
Stratum Plot Size (15 ft. % Cover Species Status	% Cover of: pecies 0 x 1 = / species 0 x 2 = pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = un totals 100 (A)	et 0 0 400 0 400 (B)
Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Hydi Poa pratensis Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Hydi Image: Status Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Hydi Image: Status Image: Stratum Taraxacum officinale 30 Y FACU FACU Image: Stratum 15 N FACU FACU FACU Image: Stratum 10 N FACU Facu Facu Image: Stratum 10 N FACU Facu Facu Image: Stratum 100 = Total Cover Facu Facu Image: Stratum 100 = Total Cover Facu Facu Facu Image: Stratum Plot Size (30 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (30 ft.) Absolute Dominant Indicator	% Cover of: pecies 0 x 1 = / species 0 x 2 = pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = un totals 100 (A)	0 0 400 0 400 (B)
Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Poa pratensis 30 Y FACU FACU Trifolium repens 15 N FACU FACU Plantago major 10 N FACU F Image: Stratum Plot Size (30 ft. Y For the stratus Indicator Woody Vine Plot Size (30 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (30 ft.) Absolute Sector Sapelia	% Cover of: pecies 0 x 1 = / species 0 x 2 = pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = un totals 100 (A)	0 0 400 0 400 (B)
OBL OBL FAC FAC FAC FAC Image: Stratum Plot Size (5 ft.) Absolute Dominant Indicator Poa pratensis 30 Y FACU FACU Taraxacum officinale 30 Y FACU FACU Trifolium repens 15 N FACU FACU Plantago mejor 10 N FACU Fresuce Indicator 100 N FACU Fresuce Image: Stratum 100 N FACU Fresuce Image: Stratum 100 = Total Cover Sapling reade Image: Stratum Plot Size (30 ft.) Absolute Dominant Indicator Stratum Plot Size (30 ft.) Absolute Dominant Indicator Status	pecies 0 x 1 = / species 0 x 2 = pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = in totals 100 (A)	0 0 400 0 400 (B)
Image: Statum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Hydi Colu Poa pratensis 30 Y FACU Hydi FACU Hydi Species Hydi Status Trifolium repens 15 N FACU FACU FACU Plantago major 10 N FACU Festuca arundinacea Indicator Image: Status 100 N FACU Festuca arundinacea Indicator Image: Status 100 = Image: Status Image: Status Image: Status Image: Stratum Plot Size (30 ft.) Absolute % Cover Dominant Indicator Stratum Plot Size (30 ft.) Absolute % Cover Dominant Indicator	Ø species 0 x 2 = pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = in totals 100 (A)	0 0 400 0 400 (B)
Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Status Hydi Colu Poa pratensis 30 Y FACU FACU Taraxacum officinale 30 Y FACU Image: Species Trifolium repens 15 N FACU Image: Species Image: Species Plantago major 10 N FACU Image: Species Image: Species Species Image: Species 15 N FACU Image: Species Image: Species Image: Species Image: Species 10 N FACU Image: Species Image: Species<	pecies 0 x 3 = species 100 x 4 = pecies 0 x 5 = in totals 100 (A)	0 400 0 400 (B)
Image: Stratum Plot Size (5 ft.) Absolute % Cover Dominant % Cover Indicator Status Hydi % Poa pratensis 30 Y FACU FACU Taraxacum officinale 30 Y FACU FACU Trifolium repens 15 N FACU FACU Plantago major 10 N FACU status Image: Stratum 100 = Total Cover status Image: Stratum Plot Size (30 ft.) Absolute Dominant Indicator Image: Stratum Plot Size (30 ft.) Absolute Dominant Indicator	species 100 x 4 = pecies 0 x 5 = an totals 100 (A)	400 0 400 (B)
Image: constraint of the stratum Plot Size (5 ft.) Absolute of the stratus Indicator Hydi Image: constraint of the stratum Plot Size (5 ft.) Absolute of the stratus Dominant of the stratus Indicator Poa pratensis 30 Y FACU FACU FACU Trifolium repens 15 N FACU FACU FACU Festuca arundinacea 15 N FACU FACU FACU Plantago major 10 N FACU Free Image: constraint of the stratus Image: constraint of the stratus Image: constraint of the stratus Image: constraint of the stratus Image: constraint of the stratus Image: constraint of the stratus Plot Size (30 ft.) Absolute of the stratus Image: constraint of the stratus Image: constraint of the stratus	pecies 0 x 5 = in totals 100 (A)	0 400 (B)
Image: Constraint of the stratum Plot Size (5 ft.) Absolute Dominant % Cover Species % Status Indicator % Cover % Species % Status % Species % Species % Status % Species % Species % Species % Status % Species % Sp	in totals 100 (A)	400 (B)
Image: constraint of the system of the sy		
0 = Total Cover Hydri Herb Stratum Plot Size (5 ft.) Absolute % Cover Dominant Species Indicator Species Hydri Poa pratensis 30 Y FACU FACU Trifolium repens 15 N FACU FACU Festuce arundinacea 15 N FACU s Plantago major 10 N FACU s	lence index = b/A = _	4.00
Herb Stratum Plot Size (5 ft. Absolute Dominant Indicator Poa pratensis 30 Y FACU FACU FACU Taraxacum officinale 30 Y FACU FACU FACU Trifolium repens 15 N FACU FACU FACU Festuca arundinacea 15 N FACU Facu Facu Plantago major 10 N FACU Festuca Facu Freedom		
Herb Stratum Plot Size (5 ft. Absolute Dominant Indicator Poa pratensis 30 Y FACU FACU FACU Taraxacum officinale 30 Y FACU FACU FACU Trifolium repens 15 N FACU FACU FACU Festuca arundinacee 15 N FACU Facu Facu Plantago major 10 N FACU Festuce Facu Facu		
Herb Stratum Plot Size (5 ft. Absolute Dominant Indicator Poa pratensis 30 Y FACU FACU Taraxacum officinale 30 Y FACU FACU Trifolium repens 15 N FACU FACU Plantago major 10 N FACU Facu	phytic Vegetation Inc	licators:
Herb Stratum Plot Size (5 ft.) % Cover Species Status I Poa pratensis 30 Y FACU FACU FACU FACU Trifolium repens 15 N FACU FACU Status Festuce arundinacea 15 N FACU Status Status Plantago major 10 N FACU Status Status Status Image: Status Image: Status Image: Status Image: Status Image: Status Status Status Status Status Image: Status	apid test for hydrophyti	
Poa pratensis 30 Y FACU Taraxacum officinale 30 Y FACU Trifolium repens 15 N FACU Festuca arundinacea 15 N FACU Plantago major 10 N FACU status Image: status 100 N FACU status	ominance test is >50%	regetation
Taraxacum officinale 30 Y FACU Trifolium repens 15 N FACU s Festuca arundinacea 15 N FACU s Plantago major 10 N FACU s Image: second se	evalence index is ≤3.0	•. · · · · ·
Trifolium repens 15 N FACU s Festuca arundinacea 15 N FACU s Plantago major 10 N FACU s	orphological adaptation	
Festuca arundinacea 15 N FACU status Plantago major 10 N FACU	pporting data in Rema	
Plantago major 10 N FACU Image: Second status Image: Second status Image: Second status Image: Second status Image: Second status Image: Second status Image: Second status Image: Second status Image: Second status	parate sheet)	
Image: Second status Image: Second status <td< td=""><td>oblematic hydrophytic</td><td>vegetation*</td></td<>	oblematic hydrophytic	vegetation*
	xplain)	
	ors of hydric soil and wetlan	t hydrology must
Image: Second status Image: Second status <td< td=""><td>, unless disturbed or problem</td><td></td></td<>	, unless disturbed or problem	
Image: Stratum Image: Stratu	tions of Vegetation S	trata:
Image: Stratum Image: Stratu	Voody plants 3 in. (7.6 cm)	r more in diamet
Image: Stratum Image: Stratu	neight (DBH), regardless of	
Image: Stratum Image: Stratu	/shrub - Woody plants less	than 3 in DBH a
Herb Herb Woody Vine Plot Size (30 ft.) Absolute Dominant Indicator size, a Stratum % Cover	than 3.28 ft (1 m) tall.	
Woody Vine Plot Size (30 ft.) Absolute Dominant Indicator Stratum % Cover Species Status wood		alaata araa a
Stratum Plot Size (30 ft.) Absolute Dominant Indicator % Cover Species Status wood	All backage /-	
Stratum % Cover Species Status Wood	All herbaceous (non-woody)	o it tan.
	All herbaceous (non-woody) d woody plants less than 3.	ster than 3.28 ft in
height		
	d woody plants less than 3.	
	d woody plants less than 3.	
	d woody plants less than 3.	
	d woody plants less than 3.	
0 = Total Cover	d woody plants less than 3. v ines - All woody vines gre	
	d woody plants less than 3. vines - All woody vines gre vdrophytic	
marks: (Include photo numbers here or on a separate sheet)	d woody plants less than 3. vines - All woody vines gre vdrophytic getation	
	d woody plants less than 3. vines - All woody vines gre vdrophytic getation	
	d woody plants less than 3. vines - All woody vines gre vinophytic getation	

SOIL

Sampling Point: U004-6

Depth	Matrix			ox Feat			r or confirm the absen					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks				
0-18	10YR 5/3	100	-	1.5		S. 15	silty clay loam	rocky, road wash				
					M.FAT	NICOTAL		and the second of the				
	1. 1. 2012.30	12 31		15 miles								
142.3				8 18 3 S	10	150 000						
	NG TONGS	1		Survey.	1.5							
1200300	CALL AND A REAL				10.24			N. LEANNER STRATE AND AND				
A. 1018 53			A. 7. 1993		10.5070	28° N. I.						
	1.242 2.32	1.11	201 Jan 2000	2.13	2.1.2	122.6						
		a selle			2	「単にで「「」						
A THE	ale de la contra de				NT A	5.000	1 2 1 2 2 2 2 2					
				M 11 -	NE STR							
				Parel	2°04777							
Type: C=C	oncentration, D=	Depleti	on, RM=Reduce	d Matri	x, CS=C	overed o	r Coated Sand Grains					
*Location:	PL=Pore Lining,	M=Mat	rix									
lydric Soi	Indicators:						Indicators for	r Problematic Hydric Solls:				
			Dark Su									
Histisol					w Surfac	æ (S8)		k (A10) (MLRA 147)				
	pipedon (A2)		(MLRA					irie Redox (A16) (MLRA 147, 14				
and the second se	listic (A3)				ace (S9)			Floodplain Soils (F19)				
	en Sulfide (A4) ed Layers (A5)		(MLRA		Matrix (F	2)	(MLRA 13	low Dark Surface (TF12)				
	uck (A10) (LRR	N)	Deplete			2)		plain in Remarks)				
	d Below Dark Si				inface (Fi	5)		plant in remarkey				
	ark Surface (A1				Surface	The second se						
	Mucky Mineral (S			Redox Depressions (F8)								
(LRR N	, MLRA 147, 14	8)					(LRR N, MLRA 136)					
	Gleyed Matrix (S	4)		Umbric Surface (F13) (MLRA 136, 122)								
	Redox (S5)			Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147)								
Strippe	d Matrix (S6)		Red Pa	rent Ma	terial (F2	21) (MLF	RA 127, 147)					
Indicators	of hydrophytic yr	antotio	and watland b	drolog			t unloss disturbed or a	arablematic				
indicators		egetatio	and wettand hy	arolog	/ must be	e presen	t, unless disturbed or p	problematic				
	111	-										
	Layer (if observe	ed):			12.00							
Restrictive						199	Hydric soil pres	ent? N				
Гуре:												
Гуре:	es):		epth (inches):									

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big Bone Na	tural Gas Pipeline	City/County:	Boone	Sampling Date: 3	/30/16
Applicant/Owner: Duke Energy		and the second se	Kentucky	Sampling Point V	
Investigator(s): Sarah Miloski, Julie		the state of the s		nge: No PLSS in Area	
Landform (hillslope, terrace, etc.):	and the second			none): concave	Slope (%): 0
Subregion (LRR or MLRA): LRR N	Lat.:	38.878916		-84.699993	Datum: WGS 84
Soil Map Unit Name FdD3-Faywood s		101 - Part of the		and the second second	
Are climatic/hydrologic conditions of t	he site typical for this	s time of the year	Yes X	_No(If no, ex	plain in remarks)
Are vegetation, soil	, or hydrology	significantl	y disturbed?	Are "normal	Yes
Are vegetation, soil	, or hydrology	naturally p	roblematic?	circumstances" prese	ent?
				(If needed, explain a	ny answers in remarks
SUMMARY OF FINDINGS					1.6.1
Hydrophytic vegetation present?	Yes	and the second	12 19 2		
Hydric soil present?	Yes	is the sam	pled area with	in a wetland? Yes	5
Wetland hydrology present?	Yes			WO	
Remarks:					1. 10 Jack - 1 1 1
					이 것 같은 그 것같은
DEM watered along road POV	Draina into atra	om 6025			
PEM wetland along road ROV	v. Drains into stre	am 5025			
		121 2.1.2			
HYDROLOGY					
Wetland Hydrology Indicators:			Secon	dary Indicators (minim	um of two required)
Primary Indicators (minimum of one is	s required; check all	that apply)	Su	rface Soil Cracks (B6)	
X Surface Water (A1)	True Aqua	atic Plants (B14)	Sp	arsely Vegetated Conca	ave Surface (B8)
X High Water Table (A2)	Hydrogen	Sulfide Odor (C1)	. Dr	ainage Patterns (B10)	
X Saturation (A3)	Oxidized	Rhizospheres on L	iving Ma	oss Trim Lines (B16)	
Water Marks (B1)	X Roots (Ca		-	y-Season Water Table (C2)
Sediment Deposits (B2)	Presence	of Reduced Iron (0	C4) Cr	ayfish Burrows (C8)	
Drift Deposits (B3)	Recent In	on Reduction in Till	ed Sa	turation Visible on Aeria	I Imagery (C9)
Algal Mat or Crust (B4)	Soils (C6)		St	unted or Stressed Plants	s (D1)
Iron Deposits (B5)	Thin Mucl	Surface (C7)	Ģe	eomorphic Position (D2)	
Inundation Visible on Aerial	Other (Ex	plain in Remarks)	Sh	allow Aquitard (D3)	
Imagery (B7)			Mi	crotopographic Relief (D)4)
Water-Stained Leaves (B9)			X FA	C-Neutral Test (D5)	
Aquatic Fauna (B13)					
Field Observations:				P D B B B B B B B B B B B B B B B B B B	
Surface water present? Yes	X No	Depth (inches)	: 1	Wetland	A. The Association
Water table present? Yes	X No	Depth (inches)	Concerning of the local division of the loca	hydrology	
Saturation present? Yes	X No	Depth (inches)		present?	Y
(includes capillary fringe)					
				S. Carlos and	
Describe recorded data (stream gaug	e, monitoring well, a	erial photos, previ	ous inspections), if available:	
Demodes		en die Store			
Remarks:					

EGETATION -	Use scientific	names of	plants		Second Second		Sampling Poi	nt: WO	07
		19.77			10 m - 18		50/20 Thresholds		
Tree Stratum	Plot Size (30 ft.	1	solute	Dominant	Indicator	the second s	20%	50%
nee oracum	1 101 0120 (00 11.	/ %	Cover	Species	Status	Tree Stratum	0	0
							Sapling/Shrub Stratum	0	0
					1000		Herb Stratum	20	50
1. 117. 18.3.1.							Woody Vine Stratum	0	0
		1.			Contraction of the				
							Dominance Test Workshe	ant	
							Number of Dominant	JOL	
		1							
(r			()				Species that are OBL,		
				_			FACW, or FAC:	3	(A)
		- Shark	24	WANTED.D			Total Number of Dominant		
	2017年前各部支援		Actual and a	89 HE 378	HALL PROFESSION	1	Species Across all Strata:	3	(B)
and the state		1.		0 :	= Total Cover	THINK STATES	Percent of Dominant	5000.00	
			100	TATU .			Species that are OBL,		
anline/Chruh			46	solute	Dominant	Indicator	and the second s	100.00	0/ / / /
apling/Shrub	Plot Size (15 ft.					FACW, or FAC:	100.00	0% (A/I
Stratum			%	Cover	Species	Status			1.
							Prevalence Index Worksh	neet	1.0
		1.0.0		1.5			Total % Cover of:		
							OBL species 30 x 1	= 3	0
								-	_
	at at a set						FACW species 50 x 2		00
							FAC species 20 x 3		_
The second second		1					FACU species 0 x 4		
		E					UPL species 0 x 5		
						-	Column totals 100 (A)	19	90 (B)
				1.24	Levis Miles	- C	Prevalence Index = B/A =	1.90	
	2411 C 24-								_
				0 :	= Total Cover				
							Hydrophytic Vegetation I	ndienter	
					Deminant	Indiantas			
Herb Stratum	Plot Size (5 ft.		solute	Dominant	Indicator	Rapid test for hydrophy		tation
			· %	Cover	Species	Status	X Dominance test is >509		
Carex lupulin	a	1		30	Y	OBL	X Prevalence index is ≤3.	.0*	
Phalaris arun	dinacea	A		30	Y	FACW	Morphological adaptation	ons* (pro	ovide
Juncus tenuis	s den al En e	1	S	20	Y .	FAC	supporting data in Rem		
Juncus effusi		•		10	N	FACW	separate sheet)		
Epilobium col				10	N	FACW	Problematic hydrophyti	c venets	tion*
	oratann	10.00		10			(explain)	c vegeta	lion
	The second second second						*Indicators of hydric soil and wetla		ogy must b
		0.00					present, unless disturbed or probl	ematic	
					1				1.1
AND DO THE	Collection (Section						Definitions of Vegetation	Strata:	
a New York Difference									
distant in the second		in the second		10.000	A STATE OF STATE	22 m 33 m	Tree - Woody plants 3 in. (7.6 cm		n diamete
		I Way Have	Less and	The second		1	breast height (DBH), regardless o	it neight.	
	CONTRACTOR OF THE	State and	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		1 The state of the		Septimate Month alerte la	ee then 2 in	
and a set of the set				-			Sapling/shrub - Woody plants les greater than 3.28 ft (1 m) tall.	sa ulditi o li'	i. Don an
	and a state of the			100	Total Course	the second second	Broater trear 5.20 it (1 iii) tall.		
				100 =	= Total Cover		Herb - All herbaceous (non-wood)	v) plants r	ecardiase
							size, and woody plants less than 3		-84.0033
Woody Vine	Plot Size (30 ft.	1	solute	Dominant	Indicator			
Stratum	I IOL DILO (00 n.	%	Cover	Species	Status	Woody vines - All woody vines gr	reater than	3.28 ft in
							height.		
	IT SUBSCIES				I THE REAL PROPERTY	1000			
		-1-3							
					-				
							Hydrophytic		
			1				vegetation		
				0 :	= Total Cover		present? Y		
			100	a Kenya					
marks: (Include p	photo numbers h	ere or on a	separate	heet)					
naina. (include p	noto numbers n		ooparate s	neery					

Depth	cription: (Descri	oe to th	e depth needed	to docu	ment the	indicato	r or confirm the absence o	f indicators.)
	Matrix	1918	Red	lox Feat	tures		Texture	Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-18	10YR 5/1	70	10YR 5/8	30	C	PL/M	silty clay loam	
				-				
		-		200				
100				1.1.1.1	-	_		
		100 100			1.1.1			
						2.4 Q.4 4 3		
		140						
					100 C	Contraction of the		
				100				
				100				
Tune: C=C	Concentration D=	Denlet	ion RM=Reduce	d Matri		wered o	r Coated Sand Grains	
	PL=Pore Lining,			u mau v	l, 00-00	Vereu o	r Cualeu Sanu Grains	
	Indicators:			11			Indicators for Pro	oblematic Hydric Soils:
ly une ee.	manuatoro		Dark Su	urface (S7)			
Histisol	(A1)		and the second se		w Surface	∋ (S8)	2 cm Muck (A	10) (MLRA 147)
	pipedon (A2)		(MLRA	147, 14	18)			Redox (A16) (MLRA 147, 148)
and the second s	listic (A3)				ace (S9)			dplain Soils (F19)
	en Sulfide (A4)		(MLRA				(MLRA 136, 1	
	d Layers (A5)				Matrix (F	2)		Dark Surface (TF12)
	uck (A10) (LRR		X Deplete		x (F3) Irface (F6		Other (Explain	in Remarks)
	ed Below Dark Su Park Surface (A12		and the second se		Surface (Fo			
the second se	Mucky Mineral (S				sions (F8)			
							(LRR N, MLRA 136)	
	, MLRA 147, 148		Limbric		e (F13) (N			
(LRR N Sandy (Gleyed Matrix (Se	4)			Intation One			
(LRR N Sandy (Sandy I	Gleyed Matrix (Se Redox (S5)	4)	Piedmo				(MLRA 148)	
(LRR N Sandy (Sandy I	Gleyed Matrix (Se	4)	Piedmo				(MLRA 148) RA 127, 147)	
(LRR N Sandy C Sandy I Stripped	Gleyed Matrix (S Redox (S5) d Matrix (S6)		Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	RA 127, 147)	
(LRR N Sandy C Sandy I Stripped	Gleyed Matrix (S Redox (S5) d Matrix (S6)		Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR		lematic ·
(LRR N Sandy C Sandy I Stripped	Gleyed Matrix (S Redox (S5) d Matrix (S6)		Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	RA 127, 147)	lematic
(LRR N Sandy (Sandy I Stripped	Gleyed Matrix (S Redox (S5) d Matrix (S6)	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	RA 127, 147)	lematic
(LRR N Sandy (Sandy l Stripped *Indicators Restrictive I Type:	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	RA 127, 147)	
(LRR N Sandy (Sandy l Stripped Indicators Restrictive	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped *Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	
(LRR N Sandy (Sandy I Stripped Indicators Restrictive Type: Depth (inch	Gleyed Matrix (S Redox (S5) d Matrix (S6) of hydrophytic ve Layer (if observe	getatio	Piedmo Red Pa	rent Ma	iterial (F2	1) (MLR	t, unless disturbed or prob	

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big Bone Natur	al Gas Pipeline	City/County:	Boone	Sampling Date:	3/30/16		
Applicant/Owner: Duke Energy		Alexandra and a second s	Kentucky	Sampling Point			
Investigator(s): Sarah Miloski, Julie Fre			and the second sec	ange: No PLSS in Are			
Landform (hillslope, terrace, etc.): hills				none): none	Slope (%): 20		
Subregion (LRR or MLRA): LRR N	Lat.:	38.878928		: -84.699971	Datum: WGS 84		
Soil Map Unit Name FdD3-Faywood silt	An IT IS A STORE MARKED IN THE	and the second second second	O Parts are a c	2			
Are climatic/hydrologic conditions of the	site typical for this	time of the year	? Yes X	No(If no, e	explain in remarks)		
	, or hydrology		y disturbed?	Are "normal	Yes		
Are vegetation, soil	, or hydrology	naturally p	roblematic?	circumstances" pre	sent?		
				(If needed, explain	any answers in remark		
SUMMARY OF FINDINGS							
Hydrophytic vegetation present? N	lo						
	lo	is the sam	pled area with	nin a wetland?	ło ·		
	lo		Upland fo				
	the second second		opiana io				
Remarks:		an stran					
Upland pit for wetland W007							
HYDROLOGY			ALC: NO PARTY				
Wetland Hydrology Indicators:			Seco	ndary Indicators (mini	mum of two required)		
Primary Indicators (minimum of one is re	equired; check all t	hat apply)	S	urface Soil Cracks (B6)			
Surface Water (A1)	True Aqua	tic Plants (B14)	s	parsely Vegetated Con	cave Surface (B8)		
High Water Table (A2)	the second s	Sulfide Odor (C1)	and the second se	rainage Patterns (B10)			
Saturation (A3)		Rhizospheres on L		loss Trim Lines (B16)			
Water Marks (B1)	Roots (C3	a company of the second se		ry-Season Water Table	(C2)		
Sediment Deposits (B2)		of Reduced Iron (and the second se	rayfish Burrows (C8)	()		
Drift Deposits (B3)	Contraction of the second second second	n Reduction in Til		Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)			
Algal Mat or Crust (B4)	Soils (C6)						
Iron Deposits (B5)	Thin Muck	Surface (C7)	G				
Inundation Visible on Aerial	Other (Exp	lain in Remarks)	s	Shallow Aquitard (D3)			
Imagery (B7)		and the states		icrotopographic Relief	(D4)		
Water-Stained Leaves (B9)				AC-Neutral Test (D5)			
Aquatic Fauna (B13)				State of the second			
Field Observations:	n in the second s						
Surface water present? Yes	No X	Depth (inches)	: NA	Wetland			
Water table present? Yes	No X	Depth (inches)	Office of the owner	hydrology			
Saturation present? Yes	No X	Depth (inches)		present?	N		
(includes capillary fringe)							
Describe recorded data (stream gauge,	monitoring well, as	erial photos, prev	ous inspection	s), if available:			
Pomerko:					and a flat as		
Remarks:							

			f plant				Sampling Pol		
							50/20 Thresholds		
Tree Stratum	Plot Size (30 ft.	1	Absolute	Dominant	Indicator	and the second second	20%	50%
nee Suatum	FIUL 3120 (30 n.)	% Cover	Species	Status	Tree Stratum	0	0
							Sapling/Shrub Stratum	0	0
							Herb Stratum	20	50
							Woody Vine Stratum	0	0
	- 11						woody while Stratum	U	U
	100 100 H 100 10						Deal		
							Dominance Test Workshe	et	
Charles and			-	A. 1.			Number of Dominant		
ST 10 Chattak							Species that are OBL,		
		CALCER OF	1.1			Manufacture 1	FACW, or FAC:	0	(A)
Carlo Section	The second second second	The street		No. 10 State	AT INCOMENTATION	The second se	Total Number of Dominant		
When with a line	The second second			SASTA N	THURSDAY PRODUCT	Contraction of the	Species Across all Strata:	3	(B)
	101 T. 112			0	Total Cover		1. 使品牌 计数据2.25 前在15 注意中的		_(0)
							Percent of Dominant		
							Species that are OBL,		
Sapling/Shrub	Diat Cine /	15.8		Absolute	Dominant	Indicator	FACW, or FAC:	0.00%	A/E
Stratum	Plot Size (15 ft.)	% Cover	Species	Status			
							Prevalence Index Worksh	1991	
							Total % Cover of:		
						NIT NOT IN	OBL species 0 x 1	= 0	
			2			75.00	FACW species 0 x 2		
	Sec. 1 . 19		-				FAC species 0 x 3		_
							FACU species 100 x 4		and the second se
							and the second se		and the second se
							UPL species 0 x 5		
		No. Jan	-				Column totals 100 (A)		0 (B)
	L Distant PA						Prevalence Index = B/A =	4.00	
	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1				1000		9.101		
				0	= Total Cover		the second second		
							Hydrophytic Vegetation In	dicators	
				Absolute	Dominant	Indicator			
Herb Stratum	Plot Size (5 ft.)				Rapid test for hydrophy	-	ation
				% Cover	Species	Status	Dominance test is >50%		
Poa pratensis				30	Y	FACU	Prevalence index is ≤3.	.0*	
Trifolium reper	าร	71	1.1	30	Y	FACU	Morphological adaptatio	ons* (pro	vide
Plantago majo			_						
	1			20	Y.	FACU	supporting data in Rem	arks or o	
the second se			(HE A)	the second se			supporting data in Rem separate sheet)	arks or o	arrea.
Taraxacum off	icinale		16	15	N	FACU	separate sheet)		
Taraxacum off Plantago lance	icinale		HE .	the second se			separate sheet) Problematic hydrophytic		
Taraxacum off	icinale			15	N	FACU	separate sheet) Problematic hydrophytic (explain)	c vegetat	tion*
Taraxacum off Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetta	c vegetat	tion*
Taraxacum off Plantago lance	icinale			15	N	FACU	separate sheet) Problematic hydrophytic (explain)	c vegetat	tion*
Taraxacum off Plantago lance	icinale			15	N	FACU	separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble	c vegetat and hydrolog ematic	tion*
Taraxacum off Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble	c vegetat and hydrolog ematic	tion*
Taraxacum off Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation	c vegetat and hydrolog ematic , Strata:	tion* gy must t
Taraxacum ofi Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm)	c vegetat and hydrolog ematic Strata:	tion* gy must t
Taraxacum ofi Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation	c vegetat and hydrolog ematic Strata:	tion* gy must t
Taraxacum ofi Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of	c vegetat and hydrolog ematic 	tion* gy must t n diameter
Taraxacum ofi Plantago lance	icinale			15	N	FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants les	c vegetat and hydrolog ematic 	tion* gy must t n diameter
Taraxacum ofi Plantago lance	icinale			<u>15</u> 5	N N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of	c vegetat and hydrolog ematic 	tion* gy must t n diameter
Taraxacum ofi Plantago lance	icinale				N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetta present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall.	c vegetat ind hydrolog ematic Strata:) or more in f height. is than 3 in.	tion* gy must t n diamete . DBH an
Taraxacum off	icinale			<u>15</u> 5	N N	FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetta present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody	c vegetal Ind hydrolog ematic Strata:) or more in f neight. is than 3 in. () plants, re	tion* gy must b n diameter . DBH an
Taraxacum ofi Plantago lance	ficinale polata			15 5 	N N N N N N N N N N N N Total Cover	FACU FACU	Separate sheet) Problematic hydrophytic (explain) *Indicators of hydric soil and wetta present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall.	c vegetal Ind hydrolog ematic Strata:) or more in f neight. is than 3 in. () plants, re	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	icinale	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and agardless
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 	N N N N N N N N N N N N Total Cover	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and agardless
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and ogardless
Taraxacum off Plantago lance	ficinale polata	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and ogardless
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and agardless
Taraxacum off Plantago lance	ficinale polata	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height.	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. r) plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytia (explain) *Indicators of hydric soil and wetta present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 100 Absolute % Cover	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 100 Absolute % Cover	N N N Total Cover Dominant	FACU FACU	Separate sheet) Problematic hydrophytia (explain) *Indicators of hydric soil and wetta present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapting/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	ficinale polata	30 ft.)	15 5 100 Absolute % Cover	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum off Plantago lance	Ficinale polata))	15 5 	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and
Taraxacum ofi Plantago lance	Ficinale polata))	15 5 	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH an agardless
Taraxacum off Plantago lance	Ficinale polata)) 	15 5 	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and agardless
Taraxacum ofi Plantago lance	Ficinale polata)) 	15 5 	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH and agardless
Taraxacum off Plantago lance	Ficinale polata)) 	15 5 	N N Species	FACU FACU	Separate sheet) Problematic hydrophytie (explain) *Indicators of hydric soil and wetla present, unless disturbed or proble Definitions of Vegetation Tree - Woody plants 3 in. (7.6 cm) breast height (DBH), regardless of Sapling/shrub - Woody plants less greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody size, and woody plants less than 3 Woody vines - All woody vines gr height. Hydrophytic vegetation	c vegetal ind hydrolog ematic 3. Strata:) or more in f height. as than 3 in. () plants, re 3.28 ft tall.	tion* gy must b n diameter . DBH an agardless

Depth	Matrix		e depth needed t Rede	ox Feat			Texture	Remarks
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	
0-18	10YR 5/4	100	-	19-19 12-19			silty clay loam	rocky, road wash
						2000 2000		
				av fil. Géneral	NSEA Milling			
		2 5 5				530) 1055		
					sinta. Nga			
						5-91 Vinns		
	oncentration, D= PL=Pore Lining,			d Matrix	(, CS=Co	overed o	r Coated Sand Grains	
Black H Hydrogu Stratifie 2 cm M Deplete Thick D Sandy I (LRR N Sandy O Sandy I Stripped	pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR d Below Dark Su ark Surface (A12 Mucky Mineral (S , MLRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	urface (<i>/</i> 2) 31) 3) 4)	Depleted Redox D Iron-Mai Umbric s Piedmor Red Par	147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Depress nganes Surface nt Flood ent Ma	8) ace (S9) 8) Matrix (F (F3) rface (F6 Surface cions (F8 e Masse e (F13) (I Iplain So terial (F2	2) 3) (F7)) s (F12) (MLRA 1; ils (F19) :1) (MLR	Coast Pra Piedmoni (MLRA 1: Very Sha Other (Ex	llow Dark Surface (TF12) plain in Remarks)
estrictive /pe: epth (inch	Layer (if observe	d):					Hydric soil pres	ent? <u>N</u>
Remarks:								

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big Bone	Natural (Gas Pipeline	City/County:	Boone	Sampling Date:	3/30/16		
Applicant/Owner: Duke Energy			and the second se	Kentucky	Sampling Point			
nvestigator(s): Sarah Miloski, Ju					ange: No PLSS in Are			
andform (hillslope, terrace, etc.)		the second se			, none): concave	Slope (%): 0		
Subregion (LRR or MLRA): LRR		Lat.:	Concession of the local division of the loca		.: -84.698896 IWI Classification: N/A	Datum: WGS 84		
Soil Map Unit Name FcD-Faywoo	12101-		and the second second second		IVVI Classification: IV/A			
Are climatic/hydrologic conditions	of the sit	e typical for thi	s time of the year	? Yes X	No (If no, e	xplain in remarks)		
Are vegetation , soil	, c	or hydrology	significant	ly disturbed?	Are "normal	Yes		
Are vegetation, soil	, c	or hydrology	naturally p	roblematic?	circumstances" pres	sent?		
					(If needed, explain a	any answers in rema		
SUMMARY OF FINDINGS	CIN IS	大学の特別		12 3 10				
Hydrophytic vegetation present?	Yes		Weiter and the	And the second				
Hydric soil present?	Yes	a an	Is the san	npled area with	hin a wetland? Ye	es		
Wetland hydrology present?	Yes				W008			
	_							
Remarks:								
PEM wetland in stream val	lley							
						A REAL		
HYDROLOGY Wetland Hydrology Indicators		<u>, 1</u>		Sooo	ndan (Indiantom (minin	our of two required		
Primary Indicators (minimum of o		ured: check all	that apply)		ndary Indicators (minin	num or two required)		
	ne is requ				urface Soil Cracks (B6)	Durfage (D0)		
X Surface Water (A1)			atic Plants (B14)		parsely Vegetated Conc	ave Sunace (B8)		
X High Water Table (A2)			n Sulfide Odor (C1)		X Drainage Patterns (B10)			
X Saturation (A3)			Rhizospheres on L		Moss Trim Lines (B16)			
Water Marks (B1) Sediment Deposits (B2)		X Roots (C	the second se		Dry-Season Water Table (C2)			
Drift Deposits (B3)		and the second se	of Reduced Iron (on Reduction in Til	Children of the local division of the local	X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Soils (C6			tunted or Stressed Plan			
X Iron Deposits (B5)			, k Surface (C7)		eomorphic Position (D2			
			plain in Remarks)		hallow Aquitard (D3)	,		
Inundation Visible on Aerial					licrotopographic Relief (DA		
Imagery (B7) Water-Stained Leaves (B9)					AC-Neutral Test (D5)	D4)		
Aquatic Fauna (B13)				<u>~</u> '	AC-INCULIAL LEST (DO)			
	THE SEARCH							
Field Observations: Surface water present? Yes	s X	No	Depth (inches)	: 1	Wetland			
Water table present? Yes		No No	Depth (inches)		hydrology			
Saturation present? Yes		- No	Depth (inches)		present?	Y		
(includes capillary fringe)								
	1. S. M.							
Describe recorded data (stream g	auge, mo	nitoring well, a	erial photos, prev	ious inspection	s), if available:	하지 않던 아니?		
Remarks:								

lants			Sampling Poi	int: W0)8
) Absolute	Dominant	Indicator	50/20 Thresholds	20%	50%
% Cover					5
10	T	FACW		-	0
			and the second		48
			Woody Vine Stratum	0	0
			Dominance Test Wester		_
				eet	
			the second s		
			and the party of the state of the		
					(A)
					-
	- Total Onum	The second second		2	(B)
10	= Total Cover		Percent of Dominant		
			Species that are OBL,		
Absolute	Dominant	Indicator	FACW, or FAC:	100.00	% (A/
% Cover	Species	Status		The second	2 11
			Prevalence Index Workst	neet	
_				3 D.	
				- 1	
					_
			and the second se		_
					-
					0 (B)
			Prevalence index = B/A =	2.00	_
	- Tatal Cause				
	- Total Cover		I had a set of a Manada Manada		
Abashda	Deminant	Indiantes			
					ation
		and the second division of the second divisio	the second s		
		and the second design of the s			
	-	the second se		narks or o	па
	the second se		And and a second s		
10	<u> </u>	FAC	a figure of a figure of the second	ic vegeta	tion*
	A AND A				
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			gy must
			present, unless disturbed or probl	ematic	
					100
		<u> </u>	Definitions of Vegetation	Strata:	
	State of the state		Tree - Monthy plents 3 in (7.6 cm		diamete
		1.2			Gameu
	COPACIENT OF	The Manual Andrews		in noight.	
	and the second	The Third Mark	Sapling/shrub - Woody plants les	ss than 3 in	DBH ar
	nen till till		greater than 3.28 ft (1 m) tall.		
95	= Total Cover				-
					gardless
Absolute	Dominant	Indicator	size, and woody plants less than a	5.20 It tail.	
) % Cover	Species	Status	Woody vines - All woody vines a	reater than	3.28 ft in
			height.		
	Service Course				
the second s			Hudrophytic		
			Hydrophytic		
			vo cototi		
	- Total Course		vegetation		
0	= Total Cover		vegetation present? Y	192	
	= Total Cover				
0 separate sheet)	= Total Cover				
	= Total Cover			<u>.</u>	
	= Total Cover				
) % Cover 10 10 10 10 10 10 10 10 10 10 10 10 10) % Cover 10 Species Y 10 Y 10 Y 10 Y 10 Total Cover 10 Total Cover 10 Portion ant % Cover 10 Total Cover 10 N 10 <t< td=""><td>% Cover Species Status 10 Y FACW 10 Y FACW 10 = Indicator 10 = Total Cover 10 = Total Cover 10 = Total Cover 10 = Total Cover % Cover Species Status Indicator Status Indicator Status Indicator Status Indicator Species Indicator Status Indicator Species Indicator Status Indicator Species Status FACW Indicator Status Indicator Status Indicator Status Indicator Status Indicator Status Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indio In</td><td>Absolute Dominant Indicator 10 Y FACW Sapling/Shrub Stratum 10 Status Dominance Test Worksh Number of Dominant 10 Total Number of Dominant Species Across all Strats: 10 Total Cover FaCW, or FAC: 10 Total Number of Dominant Species Across all Strats: 10 Total Cover FaCW, or FAC: 10 Dominant Indicator % Cover Species Status 10 Total Cover FACW, or FAC: 10 Species 10 x 1 10 FACW Species 55 x 2 10 N FACW 10</td><td>Absolute Dominant Indicator 20% 10 Y FACW Tree Stratum 2 10 Y FACW Sapling/Shrub Stratum 0 10 Y FACW Herb Stratum 0 10 Y FACW Herb Stratum 0 11 Image: Sapling/Shrub Stratum 0 0 12 Image: Sapling/ShrubS</td></t<>	% Cover Species Status 10 Y FACW 10 Y FACW 10 = Indicator 10 = Total Cover 10 = Total Cover 10 = Total Cover 10 = Total Cover % Cover Species Status Indicator Status Indicator Status Indicator Status Indicator Species Indicator Status Indicator Species Indicator Status Indicator Species Status FACW Indicator Status Indicator Status Indicator Status Indicator Status Indicator Status Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indicator Indio In	Absolute Dominant Indicator 10 Y FACW Sapling/Shrub Stratum 10 Status Dominance Test Worksh Number of Dominant 10 Total Number of Dominant Species Across all Strats: 10 Total Cover FaCW, or FAC: 10 Total Number of Dominant Species Across all Strats: 10 Total Cover FaCW, or FAC: 10 Dominant Indicator % Cover Species Status 10 Total Cover FACW, or FAC: 10 Species 10 x 1 10 FACW Species 55 x 2 10 N FACW 10	Absolute Dominant Indicator 20% 10 Y FACW Tree Stratum 2 10 Y FACW Sapling/Shrub Stratum 0 10 Y FACW Herb Stratum 0 10 Y FACW Herb Stratum 0 11 Image: Sapling/Shrub Stratum 0 0 12 Image: Sapling/ShrubS

Profile Des	cription: (Descri		e depui needed i	o aocu	ment the	Indicato	r or confirm the absence of	indicators.)
Depth	Matrix	Red	ox Feat	tures		Texture	Remarks	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Ternarka
0-18	10YR 4/2	70	10YR 5/6	30	С	PL/M	silty clay loam	
*Location:	oncentration, D= PL=Pore Lining, Indicators:			d Matrix	k, CS=Co	overed o	Coated Sand Grains	blematic Hydric Solls:
Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy (LRR N Sandy (Sandy (Sandy (Sandy (pipedon (A2) listic (A3) en Sulfide (A4) d Layers (A5) uck (A10) (LRR d Below Dark Su ark Surface (A12 Mucky Mineral (S , MLRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	urface (2) 31) 3) 4)	(MLRA Thin Da (MLRA Loamy (X Deplete A11) Redox I Deplete Redox I Iron-Ma Umbric Piedmoi Red Par	147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Depress inganes Surface nt Flooc rent Ma	ace (S9) 8) Matrix (F (F3) Inface (FC Surface Surface (F13) (I dplain Sc terial (F2)	2) 5) (F7)) s (F12) (MLRA 13 vils (F19) 21) (MLR	Coast Prairie F Piedmont Floor (MLRA 136, 14 Very Shallow D Other (Explain	Dark Surface (TF12) in Remarks)
Restrictive Type: Depth (inch	Layer (if observe es):	d):					Hydric soil present?	<u> </u>
Remarks:								

DUKE- WALTON TO BIG BONE

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Walton-Big	Bone Natural Gas P	ipeline City/Coun	ity: Boone	Sampling Date:	3/30/16				
Applicant/Owner: Duke E	Inergy	S	tate: Kentucky	Sampling Point	U008				
Investigator(s): Sarah Milo				ange: No PLSS in Are	a				
Landform (hillslope, terrace		and the second design of the s	ef (concave, convex,		Slope (%): 20				
Subregion (LRR or MLRA):		Lat.: 38.879312		-84.698793	Datum: WGS 84				
Soil Map Unit Name FcD-Fa	aywood silty clay loan	n, 12 to 20 percent slo	pes N	WI Classification: N/A					
Are climatic/hydrologic cond			And		explain in remarks)				
Are vegetation, so, so, so, so	oil, or hydr oil, or hydr		cantly disturbed? ally problematic?	Are "normal circumstances" pre (If needed, explain	Yes sent? any answers in remark				
SUMMARY OF FINDIN	IGS								
Hydrophytic vegetation pres	sent? No								
Hydric soil present?	No	is the	sampled area with	in a wetland?	lo				
Wetland hydrology present?	? No		Upland for W008						
Upland pit for wetland	I W008								
HYDROLOGY									
Wetland Hydrology Indic	ators:		Secon	dary Indicators (mini	num of two required)				
Primary Indicators (minimur	n of one is required; o	check all that apply)	Su	urface Soil Cracks (B6)					
Surface Water (A1)		True Aquatic Plants (B		parsely Vegetated Con					
High Water Table (A2)	and the second se	Hydrogen Sulfide Odor	· _ ·	rainage Patterns (B10)					
Saturation (A3)		Oxidized Rhizospheres		oss Trim Lines (B16)					
Water Marks (B1)		Roots (C3)		y-Season Water Table	(C2)				
Sediment Deposits (B2)	Cited Installer	Presence of Reduced I		ayfish Burrows (C8)	()				
Drift Deposits (B3)		Recent Iron Reduction	in Tilled Sa	aturation Visible on Aer	ial Imagery (C9)				
Algal Mat or Crust (B4)		Soils (C6)	St	unted or Stressed Plan	nts (D1)				
Iron Deposits (B5)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Thin Muck Surface (C7) <u> </u>	eomorphic Position (D2	2)				
Inundation Visible on Ae	rial	Other (Explain in Rema	irks) St	nallow Aquitard (D3)					
Imagery (B7)	AND STORES		Mi	icrotopographic Relief	(D4)				
Water-Stained Leaves (I	B9)		F#	AC-Neutral Test (D5)					
Aquatic Fauna (B13)									
Field Observations:			11 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
Surface water present?	Yes N	o X Depth (inc	ches): NA	Wetland					
Water table present?	Yes N	o X Depth (inc	ches): NA	hydrology					
Saturation present?	Yes N	o X Depth (inc	ches): NA	present?	<u>N</u>				
(includes capillary fringe)									
Describe recorded data (str	eam gauge, monitorir	ng well, aerial photos,	previous inspections	s), if available:					
			and the second						
Remarks:									
Remarks:									
Remarks:	in the second								

HEAL BULLE

	names of	plants	-			Sampling Point: UC	800
						50/20 Thresholds	
Plot Size (30 ft	1				20%	50%
FIOI SIZE (50 n.	,	% Cover	Species	Status	Tree Stratum 0	0
						Sapling/Shrub Stratum 0	0
							50
102						and the second	
						Woody Vine Stratum 0	0
and the second second		0.250	112 112				
	-00	1		Contraction of the second	12010	Dominance Test Worksheet	
						Number of Dominant	
							(4)
			and the second second	A CONTRACTOR OF A			(A)
10.00 C	11-11-	1.5	The second second		28 11 24 14	Total Number of Dominant	
and the second		10.70		2.12022 201	CALCER THE	Species Across all Strata: 3	(B)
1. C. 1. 1. 1. 1. 1.			0 ;	= Total Cover		Demonst of Demissrat	
		-		1. HEAL 1999			
						the second se	
Diat Cine /	45.4		Absolute	Dominant	Indicator	FACW, or FAC: 33.3	3% (A/
Plot Size (15 π.)	% Cover	Species	Status		
						Prevalence Index Worksheet	
						Total % Cover of:	
. It is the star	3110 110						0
						and the second s	40
		_	Carl Carl				30
						FACU species 70 x 4 =	280
NO DESC			GI 12-27/00		Mr. Mithings	UPL species 0 x 5 =	0
							350 (B)
							550 (B)
Description 201						Prevalence index = B/A = 3.5	0
				State of the second second	1000		
	10-11-1		0 =	= Total Cover	THE R. P. LEWIS CO., NAME		
		_				Hydrophytic Vegetation Indicate	108'
			Absolute	Dominant	Indicator		
Plot Size (5 ft.)					etation
			% Cover	Species	Status	Dominance test is >50%	
inale			30	Y	FACU	Prevalence index is ≤3.0*	
	the second second		25	Y	FACU	Morphological adaptations* (p	rovide
				V	the second		
							Ulla
					And in case of the local division of the loc	The second	
Part of the	N. 19 K.	420	10	<u>N</u>	FAC	Problematic hydrophytic vege	tation*
	State State				Thomas and	(explain)	
	ALC: NO		CALIFICATION .	Contraction of the	2.0400000	*Indicators of hydric soil and wettand bydr	
					The second second		Jogy musi
						present, amess disturbed of problematic	
		and the			the state of the		Q)(Q)
						Definitions of Vegetation Strata	
	dial di secto	tiller (d. s.	121		A SPACE		
	and the second		ALTER AND A			Tree - Woody plants 3 in. (7.6 cm) or more	e in diamet
A STATE OF STATE						breast height (DBH), regardless of height.	
	N. DANGER		alter of the	14 14 THE C			
			Di-Distriction	ALC: STREET, STREET, ST	Trees and the second	Sapling/shrub - Woody plants less than 3	in. DBH a
AND STORES	10 Mar 1	3 81			in the start is	greater than 3.28 ft (1 m) tall.	
			100 =	= Total Cover			
		-	100			Herb - All herbaceous (non-woody) plants,	regardles
The state						size, and woody plants less than 3.28 ft tal	
he				Dominant	Indicator		
Plot Size (30 ff	1	Absolute		01-1		
Plot Size (30 ft.)	% Cover	Species	Status	Woody vines - All woody vines greater that	an 3.28 ft II
Plot Size (30 ft.)		Species	Status	height.	an 3.28 ft ir
Plot Size (30 ft.)		Species	Status		an 3.28 ft ii
Plot Size (30 ft.)		Species			an 3.28 ft ir
Plot Size (30 ft.)		Species		height.	an 3.28 ft ir
Plot Size (30 ft.)		Species			an 3.28 ft ir
Plot Size (30 ft.)		Species		height.	an 3.28 ft ir
Plot Size (30 ft.)	% Cover			height. Hydrophytic vegetation	an 3.28 ft ir
Plot Size (30 ft.)	% Cover	Species		height. Hydrophytic	an 3.28 ft ir
		, 	% Cover			height. Hydrophytic vegetation	an 3.28 ft ir
Plot Size (, 	% Cover			height. Hydrophytic vegetation	an 3.28 ft ir
		, 	% Cover			height. Hydrophytic vegetation	an 3.28 ft II
		, 	% Cover			height. Hydrophytic vegetation	an 3.28 ft II
		, 	% Cover			height. Hydrophytic vegetation	an 3.28 ft II
	Plot Size (Plot Size (15 ft.	Plot Size (30 ft.)	% Cover % Cover % Cover 0 Absolute % Cover % Co	Plot Size (30 ft.) % Cover Species	Plot Size (30 ft.) % Cover Species Status	Plot Size (30 ft.) Absolute % Cover Dominant Species Indicator Status Tree Stratum 0

Depth	Matrix	72.19	Redo	ox Fea	tures		r or confirm the absence Texture	Remarks
(Inches) 0-18	Color (moist) 10YR 5/3	% 100	Color (moist)	%	Type*	Loc**	silt loam	
		100						
	concentration, D= PL=Pore Lining,			d Matri	x, CS=Co	overed o	r Coated Sand Grains	
Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy (LRR N Sandy Sandy Strippe	pipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) uck (A10) (LRR ed Below Dark Su park Surface (A12 Mucky Mineral (S Mucky Mineral (S I, MLRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	erface (<i>A</i> 2) 51) 3) 4)	(MLRA 1 Thin Dar (MLRA 2 Loamy 0 Depleted Redox D Iron-Mar Umbric 3 Piedmor Red Pan	e Belo 147, 14 147, 14 Sleyed d Matriz Dark Su d Dark Depress Surface of Flood ent Ma	w Surface (88) ace (S9) (8) Matrix (F x (F3) urface (F6) Surface (Surface (2) F7) s (F12) (/LRA 1: ils (F19) 1) (ML R	Coast Prairie Piedmont Flo (MLRA 136, Very Shallow Other (Expla	v Dark Surface (TF12) in in Remarks)
Restrictive Type: Depth (inch	Layer (if observe	d):					Hydric soll present	17 <u>N</u>
Remarks:								

DUKE- WALTON TO BIG BONE

Applicant/Owner: Duke Ene Investigator(s): Sarah Miloski	VDT		and the second se			4/1/16
Investigator(s): Sarah Miloski			and the second se	Kentucky	Sampling Point:	
					ange: No PLSS in Are	
Landform (hillslope, terrace, et	and the second se		the second se		none): concave	Slope (%): 0
Subregion (LRR or MLRA): LI			t.: 38.889871		-84.639984	Datum: WGS 84
Soil Map Unit Name No-Nolin	silt loam	, 0 to 2 percent s	slopes, occasionally	flooded N	WI Classification: N/A	
Are climatic/hydrologic condition	ons of th	e site typical for	this time of the year	? Yes X	No (If no, ex	xplain in remarks)
Are vegetation , soil		_, or hydrology	significant	ly disturbed?	Are "normal	Yes
Are vegetation , soil	1.0	, or hydrology	naturally p	roblematic?	circumstances" pres	sent?
	Sec. 1				(If needed, explain a	any answers in remar
SUMMARY OF FINDING	S					
Hydrophytic vegetation presen	the state	Yes				
Hydric soil present?		Yes	le the ean	pled area with	in a wetland? Ye	e e
			13 110 301		Wo	
Wetland hydrology present?		Yes			VVU	109
Remarks:	1.50 100	A CONTRACTOR		10-17 - 18-		A CONTRACTOR OF
PSS wetland located be	tween r	astures and s	stream			
FSS welland located be	tweent	Jasimes and s	sucam.			
HYDROLOGY		A second second				
Wetland Hydrology Indicat	OFS:	- <u>A.</u> 1998 - 19		Secor	dary Indicators (minim	num of two required)
Primary Indicators (minimum o	of one is	required; check	all that apply)	Su	urface Soil Cracks (B6)	
X Surface Water (A1)		True A	quatic Plants (B14)		barsely Vegetated Conc	ave Surface (B8)
X High Water Table (A2)		the second se	gen Sulfide Odor (C1)		ainage Patterns (B10)	
X Saturation (A3)		and the second sec	Inc. C. Catter and State		oss Trim Lines (B16)	
Water Marks (B1)		X Roots	ed Rhizospheres on L		y-Season Water Table	((2))
Sediment Deposits (B2)		and the second se	ice of Reduced Iron (ayfish Burrows (C8)	(02)
Drift Deposits (B3)		11	t Iron Reduction in Ti		aturation Visible on Aeri	al Imagery (C9)
Algal Mat or Crust (B4)		Soils (unted or Stressed Plant	
Iron Deposits (B5)			luck Surface (C7)		eomorphic Position (D2)	
			A DESCRIPTION OF THE OWNER OF THE	100 C		
Inundation Visible on Aerial		Other	(Explain in Remarks)		nallow Aquitard (D3)	
Imagery (B7)					crotopographic Relief (I	D4)
Water-Stained Leaves (B9)				F#	AC-Neutral Test (D5)	
Aquatic Fauna (B13)						Merel Market Sta
Field Observations:		has seen is				
Constant of March 199 and 197 and 199 and 199 and 199 and 199 and 199	Yes	X No	Depth (inches)		Wetland	
	Yes	X No	Depth (inches)		hydrology	
	Yes	X No	Depth (inches)): 0	present?	<u>Y</u>
(includes capillary fringe)						
	WILL SALE					
Describe recorded data (stream	n gauge	, monitoring well	, aerial photos, prev	ious inspections	s), if available:	
	See all	- Har				
Remarks:						

VECETATION Lies acientific nomes of plante

	se scientific i	names o	plan	(5			Sampling Pol	int: wo	09
				Absolute	Dominant	Indicator	50/20 Thresholds	200/	500/
Free Stratum	Plot Size (30 ft.)	% Cover	Species		Tree Streeture	20%	50%
				76 COVEI	Species	Status	Tree Stratum	0	0
	an des a success	Service and	-				Sapling/Shrub Stratum	14	35
							Herb Stratum	13	33
							Woody Vine Stratum	0	0
							Dominance Test Worksh	eet	
	1.4						Number of Dominant		
	·				dia se	No. THERE	Species that are OBL,		
				1000	1. 19 1. 19 1.	and the second se	FACW, or FAC:	5	(A)
				College Lange		the second second	Total Number of Dominant	1	
A CARLES IN MARK	Contented of			THE REAL	Carl State States	DOM NUMBER OF	Species Across all Strata:	5	(B)
	A Start Ing Start		100	0 :	= Total Cover	1000 C	Percent of Dominant		<u> </u>
							Species that are OBL,		
anline/Chash				Absoluto	Dominant	Indicator		100.00	
apling/Shrub	Plot Size (15 ft.)	Absolute	Dominant	Indicator	FACW, or FAC:	100.00	% (A)
Stratum				% Cover	Species	Status		1.10	
Acer negundo				60	Y	FAC	Prevalence Index Works	neet	
Salix nigra		10		10	Y	OBL	Total % Cover of:		
Guink Ingru			-				OBL species 25 x 1	= 2	5
Trailer and							FACW species 45 x 2		
									-
								-	_
							FACU species 5 x 4		_
			1.1				UPL species 0 x 5		
		100 11	1.11				Column totals 135 (A)	31	5 (B)
		11000			357		Prevalence Index = B/A =	2.33	-
				1.2.2.10.2	1.1.2.2.2.1.1.1	and the second		15.15	
		12.0	1	70 :	= Total Cover		and the state of the second		
				TO DECEMBER			Hydrophytic Vegetation I	ndicator	8'
				Absolute	Dominant	Indicator	Rapid test for hydrophy		
lerb Stratum	Plot Size (5 ft.)	% Cover	Species	Status	X Dominance test is >50		lation
m					and an and a second				
Epilobium colo	ratum			30	Y	FACW	X Prevalence index is ≤3		-
Typha latifolia				15	<u>Y</u>	OBL	Morphological adaptati		
Phalaris arund				15	Y	FACW	supporting data in Ren	narks or o	ona
Lamium purpu	reum			5	<u>N</u> .	FACU	separate sheet)		
							Problematic hydrophyti	ic vegeta	tion*
CHIEF CONSTRUCT	ST. State	P. C. D. S.				I FOILTRA	(explain)		
1. T. M. M. M. M.			1.12		1 SE 54	1.189.50	*Indicators of hydric soil and wetla	and hydroid	av must
	10000	1.1				1000	present, unless disturbed or prob		
		de Charles							
							Definitions of Vegetation	Strata:	
		1000	1.45				Dennicens er regemaen	otrata.	
							Tree - Woody plants 3 in. (7.6 cm) or more i	n diamet
			_				breast height (DBH), regardless of	f height.	
			10001	2 0 0 000					
			_		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	<u>1997 - 19</u> 16	Sapling/shrub - Woody plants le	ss than 3 in	. DBH a
	No. of the second second			CHIEF SUPP	THE STATE OF		greater than 3.28 ft (1 m) tall.		
N. 1. 1997 19 1				65 =	= Total Cover			A alasta	
				100			Herb - All herbaceous (non-wood size, and woody plants less than)		egardles
Woody Vine	Dist Olar (00.4		Absolute	Dominant	Indicator	size, and woody plants less than	3.28 ft tell.	
Stratum	Plot Size (30 ft.)	% Cover	Species	Status	Woody vines - All woody vines g	reater then	3 28 8 1
olialum				1. 31 10 200	A MARINE A		height.		5.65 K II
Stratom	at a set		1	(10) IS					
Stratum			-	1.11			and the second s	1111	-
							Hydrophytic		
							vegetation		
					No. of Concession, Name of				
				0 =	Total Cover		present? Y		
		1.		0	Total Cover		present? Y		
		ere or on	a sena		Total Cover		present? Y	-	1
		ere or on a	a sepa		Total Cover		present? Y		
		ere or on a	a sepa		Total Cover		present? Y		
		ere or on a	a sepa		Total Cover		present? <u>Y</u>		

Profile Desi		be to th	e depth needed t	o docu	ment the	indicato	r or confirm the absence o	f indicators.)
Depth	Matrix	~		ox Feat			Texture	Remarks
(Inches)	Color (moist)	%	Color (moist) 10YR 5/8	%	Type*	Loc**		
0-18	10YR 4/2	90		10	С	PL/M	silt loam	
**Location:	concentration, D= PL=Pore Lining, I Indicators:			d Matrix	x, CS=C	overed o	r Coated Sand Grains	oblematic Hydric Soils:
Black H Hydrog Stratifie 2 cm M Deplete Thick D Sandy I (LRR N Sandy 0 Sandy I Stripped	pipedon (A2) listic (A3) en Sulfide (A4) ed Layers (A5) uck (A10) (LRR ed Below Dark Su park Surface (A12 Mucky Mineral (S Mucky Mineral (S MuRA 147, 144 Gleyed Matrix (S Redox (S5) d Matrix (S6)	(1176) (2) (1) (1) (3) (4)	(MLRA Thin Da (MLRA Loamy (X Depleter A11) Redox D Depleter Redox D Iron-Ma Umbric Piedmon Red Par	ue Belov 147, 14 rk Surfa 147, 14 Gleyed d Matrix Dark Su d Dark Depress nganes Surface nt Flooc rent Ma	w Surfac 18) ace (S9) 18) Matrix (F x (F3) Inface (Ff Surface e Masse e (F13) (I dplain So terial (F2)	52) 6) (F7))) ss (F12) (MLRA 13 bills (F19) 21) (MLR	Coast Prairie I Piedmont Floc (MLRA 136, 1 Very Shallow I Other (Explain	Dark Surface (TF12) in Remarks)
Restrictive ype: Depth (inch	Layer (if observe es):	d):					Hydric soil present?	Y
Remarks:								

DUKE- WALTON TO BIG BONE

Project/Site: Walton-Big	Bone Natural G	as Pipeline	City/County:	Boone	Sampling Date	4/1/16
Applicant/Owner: Duke I				Kentucky	Sampling Poin	
nvestigator(s): Sarah Milo		Set allowed		A state of the second second state of the second se	ange: No PLSS in Ar	the second s
Landform (hillslope, terrace					, none): none	Slope (%): 5
Subregion (LRR or MLRA): Soil Map Unit Name No-No		Lat.:	38.88972		: -84.639974 IWI Classification: N//	Datum: WGS 84
			Call Market and			Anne and the second
Are climatic/hydrologic con	ditions of the site	e typical for thi	s time of the year	? Yes X	No (If no,	explain in remarks)
Are vegetation, s		hydrology _		ly disturbed?	Are "normal	Yes
Are vegetation, s	oil, or	hydrology	naturally p	roblematic?	circumstances" pre	
					(If needed, explain	any answers in remark
SUMMARY OF FINDIN	IGS					
Hydrophytic vegetation pres	sent? No		ALC: STREET	1 57 6	a distant and the	
Hydric soil present?	No	0.00	Is the san	npled area with	hin a wetland?	No
Wetland hydrology present				Upland fo		
	No. 1990 - Robert and					
Remarks:						
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Upland pit for wetland	I W009					
				31. 22		
					1	
HYDROLOGY		Sec. Con				
Wetland Hydrology India	ators:		a service and	Seco	ndary Indicators (mini	mum of two required)
Primary Indicators (minimu	m of one is requi	red; check all	that apply)	S	urface Soil Cracks (B6)
Surface Water (A1)		True Aqu	atic Plants (B14)	s	parsely Vegetated Cor	ncave Surface (B8)
High Water Table (A2)			Sulfide Odor (C1)		rainage Patterns (B10)	
Saturation (A3)			Rhizospheres on L		loss Trim Lines (B16)	
Water Marks (B1)		Roots (C:			ry-Season Water Table	e (C2)
Sediment Deposits (B2)		- Contraction of the Contraction	of Reduced Iron (rayfish Burrows (C8)	- ()
Drift Deposits (B3)		Recent In	on Reduction in Ti	lled S	aturation Visible on Ae	rial Imagery (C9)
Algal Mat or Crust (B4)		Soils (C6))	s	tunted or Stressed Pla	nts (D1)
Iron Deposits (B5)		Thin Muc	k Surface (C7)	G	eomorphic Position (D	2)
Inundation Visible on Ae	rial	Other (Ex	plain in Remarks)	s	hallow Aquitard (D3)	
Imagery (B7)				N	licrotopographic Relief	(D4)
Water-Stained Leaves (B9)				AC-Neutral Test (D5)	Stephen and the - at the
Aquatic Fauna (B13)						
Field Observations:	and the second		STATISTICS OF REAL	1		14 70-00
Surface water present?	Yes	No X	Depth (inches): NA	Wetland	
Water table present?	Yes	No X	Depth (inches		hydrology	
Saturation present?	Yes	No X	Depth (inches		present?	N
(includes capillary fringe)	San Take	1.04			and the second	120-14
Describe recorded data (str	eam gauge, mor	nitoring well, a	erial photos, prev	ious inspection	s), if available:	
Remarks:						
6. Tati (n. 1446). Tak			a - 14 al		14	

Plot Size (30 ft.)	Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds Tree Stratum	20% 0	50% 0
			% Cover	Species	Status	Tree Stratum	0	0
1-1-20						Contine /Ohm the Oleastern	•	
						Sapling/Shrub Stratum	0	0
						Herb Stratum	20	50
						Woody Vine Stratum	0	0
						Deminance Test Wester		
						Dominance Test Worksh	eet	
						the second s		
3.94 5		_				the second se	6.2	1000
		_	00-89-8-01-0		1. 16 1.		-	(A)
14 - 14 - 14 - 14 - 14 - 14 - 14 - 14 -	-				E all			
NO DE MORE				THE MELLING	10 M 10 M 10	Species Across all Strata:	3	(B)
			0 =	Total Cover		Percent of Dominant		
						Species that are OBL.		
		14.21	Absolute	Dominant	Indicator	and the second se	0.00%	(Al
Plot Size (15 ft.)						
100.000			1. A.			Denvelopes Index Montral	hant	
						 School Percent Control Control Control 	neer	
		1.1.1		STERNE 201				
10.2012		_				and the second se		
THE WAY AND ALL	8 1 18		TIM PARTY	ALC: NOT THE OWNER OF	1.210010	FACW species 0 x 2	= 0	
		11-11	163111		민준희(화동)	FAC species 0 x 3	= 0	
		1111	Pilerents "	and the second second	TISTIC LET	FACU species 100 x 4	= 40	0
1 1 1 1 1 A	1.1.2.3	100	1202	Service Se		UPL species 0 x 5	= 0	
AVE STREET				and the second second	100	Column totals 100 (A)	40	0 (B)
S 10 - 30						Prevalence Index = B/A =	4.00	
A DEPARTMENT	The Ware	25		A STREET				
			0 =	Total Cover	0.00 P	I share the second second		
						Hydrophytic Vegetation I	ndicator	g.
			Absolute	Dominant	Indicator			
Plot Size (5 ft.)	Carl Carl Carl Carl Carl Carl					auon
to a to				A second s				
				-	The second	the second se		
		1.11.						
St. 57.2097							harks or c	on a
		1		and the second se				
	5.54 10	-			Concession of the local division of the loca	Problematic hydrophyt	ic vegetat	tion*
60	2.01 2.01 1	1911	5	<u>N</u>	FACU	(explain)		
		14.	Children and			*Indicators of hydric soil and wetl	and hydrolo	gy must
1. 30 1.5 1.0		101	C.S. Busic	102-11-2011	M. 11 (2010)	present, unless disturbed or prob	lematic	
			Part Inter	A THING S	100	and the second second	100	1
			Tean Stilling of a	<u></u>	Service of the	Definitions of Vegetation	Strata:	
	1 presides		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1. 19. 19.		Tree Woody plants 3 in (7.6 cm		diametr
State Cartan	10.000			2200 044				i ulameti
Contract Spaces and	110 131		Tree Might Specia	A DEAL THE SEC.	1967 (1977)			
				Section Section	A PARTING A		ss than 3 in	. DBH ar
	212	121			Sharks Mr.	greater than 3.28 ft (1 m) tall.		
			100 =	fotal Cover		Herb - All herbaceous (non-wood	v) plants re	oardies
					1			- gen ano de
Plot Size (30 ft.)						
and the second			% Cover	Species	Status		reater than	3.28 ft in
C			AND GARA			neight.		
A Lange	-					State State - 1		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		100 C	<u></u>		Hydrophytic		
	Will Com			LINE AND	1.1.1.1.2	vegetation		
	16.34		0 =	Total Cover		present? N		
				nil Stanfe a				
to numbers h	ere or on a	a sepa	rate sheet)					
to numbers h	ere or on a	a sepa	rate sheet)					
to numbers h	ere or on a	a sepa	rate sheet)					
to numbers h	ere or on a	a sepa	rate sheet)					
	Plot Size (inale plot Size (inale plot Size (inale	Plot Size (5 ft.	Plot Size (5 ft.) inale	Plot Size (15 ft.) Absolute % Cover	Plot Size (15 ft. Absolute % Cover Dominant Species	Plot Size (15 ft. Absolute % Cover Dominant Species Indicator Status	0 = Total Cover Species Across all Strata: Plot Size (15 ft.)) Absolute % Cover Dominant Species Indicator Status	Plot Size (15 ft.) Absolute % Cover Dominant Species Status Indicator Plot Size (15 ft.) Absolute % Cover Dominant Species Status Indicator Plot Size (15 ft.) Absolute % Cover Dominant Species Status Prevalence Index Worksheet Total % Cover of: OBL species 0 x 2 = 0 FACW species 0 x 3 = 0 FACW species 0 x 4 = 40 UPL species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # B/A = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 x 5 = 0 Column totals 100 (A) 40 Prevalence Index # SIA = 4.00 Work species 0 hythes a 100 (A) 40 Prevalence Index # SIA = 4.00 Species 0 hythe sol and wetland hytholo present, unless databations* (or separate sheet) Image: 100 Total Cover FACU FACU Problematic hythorytic vegeta (explain) Image: 100 Total Cover Tree - Woody plants 10 (.76 cm) or more in the species 0 hythe sol and wetland hytholo