



DUKE ENERGY F7581/F7582/F5689—138kV GARVER SUBSTATION TLOOP

APPENDIX



SITE PHOTOGRAPHS



Photo 1. Data Point 1, View Facing North, 11/17/2018.



Photo 3. Data Point 2, View Facing East, 11/17/2018.



Photo 2. Data Point 1, View Facing South, 11/17/2018.



Photo 4. Data Point 2, View Facing South, 11/17/2018.





Photo 5. Data Point 3, View Facing North, 11/17/2018.



Photo 7. Data Point 4, View Facing North, 11/17/2018.



Photo 6. Data Point 3, View Facing South, 11/17/2018.



Photo 8. Data Point 4, View Facing South, 11/17/2018.



DUKE ENERGY F7581/F7582/F5689—138kV GARVER SUBSTATION

APPENDIX

B

OHIO RAPID ASSESSMENT METHOD 5.0 FORM AND USACE WETLAND DELINEATION DATA SHEETS

Site:	Duke En	nergy Garver Substation	Rater(s):	November 7, 2018	
2 max 6 pts.	2 subtotal	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pt) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) X 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 <0.1 acres (0.04 to <0.12ha) (1 <0.1 acres (0.04ha) (0 pts)	s)	Garver Substation Weltand 1	
5 max 14 pts	7 subtotal	Metric 2. Upland buffers and so that the second so the second so that the second so the sec	one and assign sor more around volum (82 to <164f 25m (32ft to <82 m (<32ft) around e or double chest, prairie, savand, young second ced pasture, par	core. Do not double check. vetland perimeter (7) t) around wetland perimeter (4) ft) around wetland perimeter (1) d wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) k, conservation tillage, new fallow field. (3)	
20 max 30 pts	27 subtotal	Metric 3. Hydrology 3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface water Perennial surface water (lake or streated or str	im) (5) d assign score.	observed point source (nonstormwate filling/grading road bed/RR track dredging	orest), complex (1) idor (1) one or dbl check. ed/saturated (4) id (3) 30cm (12in) (1)
18 max 20 pts	45 subtotal 45 subtotal this page	Recovered (6) Recovering (3) Recent or no recovery (1)	e check and avera	es observed shrub/sapling removal herbaceous/aquatic bed ren sedimentation dredging removal farming	noval

Site:	Duke En	ergy Garver Substation	Rater(s):	K. Hillier and D. Thom Date:	November 7, 2018
			_		
	15		Site:	Garver Substation Weltand 1	
	subtotal th	is nage	Site.	Garver Substation Westand 1	
_		is page			
5	5	Metric 5. Special Wetlands			
nax 10 pt	subtotal	Check all that apply and score as indicated.			
		Bog (10)			
		Fen (10) Old growth forest (10)			
		x Mature forested wetland (5)			
		Lake Erie coastal/tributary wetland		=::::::::::::::::::::::::::::::::::::::	
		Lake Erie coastal/tributary wetland		gy (5)	
		Lake Plain Sand Prairies (Oak Openi Relict Wet Prairies (10)	ngs) (10)		
		Known occurrence state/federal the	reatened or endan	gered species (10)	
		Significant migratory songbird/water			
		Category 1 Wetland. See Question	1 Qualitative Ratir	ng (-10)	
		Not Applicable (0)			
10	15				
		Metric 6. Plant communities, in	•		
nax 20 pt	subtotal	6a. Wetland Vegetation Communities.	Vegetation Co	ommunity Cover Scale	71 agras) contiguous area
		Score all present using 0 to 3 scale. O Aquatic bed		Absent or comprises <0.1ha (0.247) Present and either comprises small	
		1 Emergent	1	vegetation and is of moderate	
		0 Shrub		significant part but is of low q	
		3 Forest		Present and either comprises signi	
		0 Mudflats	2	vegetation and is of moderate	e quality or comprises a small
		0 Open water 0 Other		part and is of high quality Present and comprises significant	nart or more of wetland's
		6b. Horizontal (plan view) Interspersion.	3	vegetation and is of high qual	
		Select only one.		1 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
		High (5)	Narrative Des	cription of Vegetation Quality	
		Moderately high (4)	low	Low spp diversity and/or predomin	
		X Moderate (3) Moderately low (2)		disturbance tolerant native sp Native spp are dominant compone	
		Low (1)		although nonnative and/or di	
		None (0)	mod	. •	
		6c. Coverage of invasive plants. Refer		moderately high, but general	ly w/o presence of rare
		to Table 1 ORAM long form for list. Add		threatened or endangered sp	
		or deduct points for coverage Extensive >75% cover (-5)		A predominance of native species, and/or disturbance tolerant n	
		Moderate 25-75% cover (-3)	high	absent, and high spp diversity	
		Sparse 5-25% cover (-1)		the presence of rare, threater	
		Nearly absent <5% cover (0)			
		X Absent (1)		Open Water Class Quality	
		6d. Microtopography. Score all present using 0 to 3 scale.	0	Absent <0.1ha (0.247 acres) Present very small amounts or if m	aoro common
		0 Vegetated hummocks/tussocks	1	of marginal quality	nore common
		1 Coarse woody debris >15cm (6in)		Present in moderate amounts, but	not of highest
		1 Standing dead >25cm (10in) dbh	2	quality or in small amounts of	
				quantity or more and a second	
		O Amphibian breading pools	3	Present in moderate or greater am and of highest quality	

60 Grand Total (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

010 011 1 3		Quartitutive riating			
Site:	Duke En	ergy Garver Substation	Rater(s):	K. Hillier and D. Thom Date:	November 7, 2018
O max 6 pts.	Osubtotal	Metric 1. Wetland Area (size). Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pt) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2 pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 X <0.1 acres (0.04ha) (0 pts)	5)	Garver Substation Wetland 2	
7 max 14 pts.	7 subtotal	Metric 2. Upland buffers and some second sec	one and assign some more around work for more around work for (82 to <82	core. Do not double check. cetland perimeter (7) c) around wetland perimeter (4) t) around wetland perimeter (1) wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) c, conservation tillage, new fallow field. (3)	
10 max 30 pts.	17 subtotal	Metric 3. Hydrology 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface water Perennial surface water (lake or streated or strea	am) (5) d assign score.	point source (nonstormwate filling/grading X road bed/RR track dredging	orest), complex (1) idor (1) one or dbl check. ed/saturated (4) d (3) 30cm (12in) (1)
11 max 20 pts.	28 subtotal	X Recovered (6) Recovering (3) Recent or no recovery (1)	e check and avera	s observed shrub/sapling removal herbaceous/aquatic bed ren sedimentation dredging removal farming	noval

JKAIVI V 5.	.0 Field Form	Quantitati	ive Rating					
Site:	Duke En	ergy Gar	rver Substation	Rater(s):	K. Hillie	er and D. Thom	Date:	November 7, 2018
		· · · · · · · · · · · · · · · · · · ·						
	11							
	-11			Site:	Garver	Substation We	tland 2	
	subtotal this	s nage		L				
	Sabtotal till	o hage						
-10	-10	Metric	5. Special Wetlands					
max 10 pt	subtotal	Check all	that apply and score as indicated.					
			Bog (10)					
			Fen (10)					
			Old growth forest (10)					
			Mature forested wetland (5)	ractriated budge	ology (10)			
			Lake Erie coastal/tributary wetland-ung Lake Erie coastal/tributary wetland-res	•				
			Lake Plain Sand Prairies (Oak Openings		gy (3)			
		—	Relict Wet Prairies (10)	, (10)				
			Known occurrence state/federal threat	tened or endang	gered speci	es (10)		
			Significant migratory songbird/water for			•		
		Х	Category 1 Wetland. See Question 1 Q	ualitative Ratin	ıg (-10)			
			Not Applicable (0)					
1	11							
-1	-11	Metric	6. Plant communities, inter	spersion, n	nicrotop	ograhy.		
max 20 pts	subtotal		and Vegetation Communities.	Vegetation Co	-			
110X 20 Pt.	Jubiotai		present using 0 to 3 scale.	0		bsent or comprises <	:0.1ha (0.2471 ac	res) contiguous area
			Aquatic bed			resent and either cor		, •
			Emergent	1		vegetation and is	of moderate qua	ality, or comprises a
		0	Shrub			significant part b		
			Forest		P	resent and either cor		
			Mudflats	2		-	= = = = = = = = = = = = = = = = = = = =	ality or comprises a small
			Open water			part and is of high		
			Other	3	P			or more, of wetland's
		Select onl	ontal (plan view) Interspersion.			vegetation and is	or night quality	
		Jelect offi	High (5)	Narrative Desc	crintion of \	Vegetation Quality		
			Moderately high (4)			ow spp diversity and	or predominanc	e of nonnative or
			Moderate (3)	low		disturbance toler	•	
			Moderately low (2)		N	lative spp are domina		
		Χ	Low (1)			_		bance tolerant native spp
		Ļ	None (0)	mod		•	•	liversity moderate to
			rage of invasive plants. Refer					o presence of rare
			L ORAM long form for list. Add			threatened or en		nonnativo con
			points for coverage Extensive >75% cover (-5)			predominance of na		n nonnative spp e spp absent or virtually
			Moderate 25-75% cover (-3)	high				l often, but no always,
			Sparse 5-25% cover (-1)					or endangered spp
			Nearly absent <5% cover (0)		1		,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	UFF
			Absent (1)	Mudflat and C	Open Water	Class Quality		
			otopography.	0	Д	bsent <0.1ha (0.247		
			present using 0 to 3 scale.	1	Р	resent very small am		common
			Vegetated hummocks/tussocks			of marginal quali		
			Coarse woody debris >15cm (6in)	2	P	resent in moderate a		
			Standing dead >25cm (10in) dbh			quality or in smal		
		0	Amphibian breading pools	3	I ^P	resent in moderate o	-	TS
					<u> </u>	and of highest qu	idiity	
	_							

17 Grand Total (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html

Project/Site:	Garver Substation							City/County	: Middletown	/Butler	S	Sampling Date	: 11/7/20)18
Applicant/Owner:	Duke Energy							State	: OH	Sampling Point:		DP01	1	
Investigator(s):	Kaitlin Hillier and Da	nielle Thom	oson						Section, Tow	nship, Range: S7 T2E R4	N			
Landform (hillslope	, terrace, etc.):		Toeslope						L	ocal relief (concave, conv	/ex, none): co	ncave		
Slope (%):		Lat:			39.4666	5		Long:		-84.35136		Datum: NAD	D83 UTM	116N
Soil Map Unit Name	e: Patton silty clay loar	m (Pa)									NWI classific	ation: non	ie	
Are climatic / hydro	logic conditions on the	e site typical	for this time of	year?				Yes	X X	No (If no, explain in	n Remarks.)			
Are Vegetation	N	, Soil	N	, or Hyd	drology	N	significantly dis	turbed?	Are "N	ormal Circumstances" pre	esent?	Yes X	No	
Are Vegetation	N	, Soil	N	, or Hyd	drology	N	_ naturally proble	ematic?	(If nee	ded, explain any answers	in Remarks.)			
SUMMARY OF	FINDINGS Att	ach site n	nap showin	g samplir	g point l	ocations,	transects, im	portant featu	res, etc.					
Hydrophytic Ve	getation Present?			Yes	Х	1	No	Is the	Sampled	Area		•		
Hydric Soil Pres				Yes	Х		No	withi	n a Wetlan	ıd?	Yes x	No		
Wetland Hydrol	ogy Present?			Yes	Χ	1	No	- -			·			
Remarks:	Use scientific	names of	nlante											
VEGETATION	Ose scientific	iailles Ui	piarits.				Absolute	Dominant	Indicator					
Tree Stratum (Plot	size: 30' radius)						% Cover	Species?	Status	Dominance Test v	vorksheet:			
Carya laciniosa							60%	Yes	FACW	_				
2. Celtis occidenta	alis						20%	Yes	FAC	Number of Dominar	nt Species			
3.		-			-		_			That Are OBL, FAC	W, or FAC:	4		(A)
4							_	_						
5								_		Total Number of Do	minant			
							80%	= Total Cover		Species Across All	Strata:	4		(B)
	tum (Plot size: 15' rac	dius)								Percent of Dominar				
Carya laciniosa							5%	Yes	FACW	That Are OBL, FAC	W, or FAC:	1009	%	(A/B)
2. Lonicera maaci	KII						1%	No	UPL	_				
3. 4.							-			Prevalence Index v	vorkehoot:			
5.											voiksileet.			
0.							6%	= Total Cover	-	Total % Co	ver of:	Mu	Itiply by:	
							0,0			That Are OBL, FAC				A/B
Herb Stratum (Plot	size: 5' radius)									OBL species	3%	x1 =	0.03	
Leersia virginic	a						70%	Yes	FACW	FACW species	141%	x2 =	2.82	
2. Fraxinus penns	sylvanica						5%	No	FACW	FAC species	20%	x3 =	0.6	
3. Carex musking	umensis						3%	No	OBL	FACU species		x4 =		
4. Carex granular	is						1%	No	FACW	UPL species	1%	x5 =	0.05	
5								_		Column Totals:	1.65	(A)	3.5	(B)
6									. ———	_				
7										Prevalen	ice Index = B/A	A =	2.12	
8.										_				
9. 10.							-		-	— Hydrophytic Vege	tation Indicat	ore:		
11.										Injurophytic vege	tation mulcat	013.		
12.								_		1-Rapid Te	est for Hydroph	nytic Vegetatio	on	
13.								-	· 	X 2-Dominar				
14.									-	X 3-Prevaler				
15.										4-Morphole	ogical Adaptati	ons ¹ (Provide	supporti	ng
16.										data in Re	marks or on a	separate she	et)	
17.										Problemat	ic Hydrophytic	: Vegetation1 ((Explain)	
18.														
19										Indicators of hydric	soil and wetla	and hydrology	must	
20							_	_		be present, unless	disturbed or pr	oblematic.		
							79%	= Total Cover						
_										_				
1	m (Plot size: 30' radi	us)								Hydrophytic				
1										Vegetation				
2								T-4-LO		Present?	Yes	X No	_	
							-	= Total Cover						
Pamarke: (Include	photo numbers here	or on a core	rate shoot \							<u> </u>				
Tromains. (Include	prioto numbers nele	oi oii a sepa	ale sneet.)											

SOIL							Sar	mpling Point:	DP01
Profile Desc	cription: (Describe to the	e depth neede	d to document the ir	ndicator or co	nfirm the a	bsence of	indicators.)		
Depth	Matrix	-		dox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-16"	10YR 4/2	85	10YR 4/4	15	С	М	Clay Loam		
¹Type: C=C	Concentration, D=Depletio	n RM=Reduce	d Matrix CS=Covered	or Coated Sa	nd Grains	² Location	n: PL=Pore Lining,	M=Matrix	
	Indicators ³ :	ii, itivi—itoddoo	a main, 00-00voroc	or ocaloa ca	na Graine.		ndicators of Hydr		
Histoso			Sandy Gleve	ed Matrix (S4)			-	anese Masses (F1	2)
	Epipedon (A2)		Sandy Redo					ow Dark Surface (•
	Histic (A3)		Stripped Mar					olain in Remarks)	
	gen Sulfide (A4)		Dark Surface	, ,				,	
Stratifi	ed Layers (A5)			xy Mineral (F1)					
2 cm N	Muck (A10)		Loamy Gleye	ed Matrix (F2)					
Deplet	ed Below Dark Surface (A	.11)	X Depleted Ma	atrix (F3)					
Thick [Dark Surface (A12)		Redox Dark	Surface (F6)			³ The hydric soil	indicators have bee	en updated to
Sandy	Mucky Mineral (S1)		Depleted Da	irk Surface (F7)		comply with t	he <i>Field Indicator</i> s	of Hydric Soils
5 cm N	Mucky Peat or Peat (S3)		X Redox Depre	essions (F8)			in the United	States, Version 8.	0, 2016.
Type:	Layer (if observed):					Hydric S	Soil Present?	Yes <u>></u>	<u> No</u>
HYDROL	OGV								
	drology Indicators:								
•	arology indicators: cators (minimum of one is	roquirod: aboa	k all that apply)				Socondary India	ators (minimum of	two required)
	e Water (A1)	required. Chec		ed Leaves (B9))			oil Cracks (B6)	two required)
	Vater Table (A2)		Aquatic Fau	` '	,			Patterns (B10)	
	tion (A3)		 ·	Plants (B14)				on Water Table (C2	2)
	Marks (B1)			ulfide Odor (C1)			Burrows (C8)	-)
	ent Deposits (B2)			izospheres on	-	s (C3)		Visible on Aerial I	magery (C9)
Drift D	eposits (B3)		Presence of	Reduced Iron	(C4)		Stunted or	Stressed Plants (D1)
Algal N	Mat or Crust (B4)		Recent Iron	Reduction in T	illed Soils (C6)	X Geomorph	nic Position (D2)	
Iron De	eposits (B5)		Thin Muck S	Surface (C7)			X FAC-Neut	ral Test (D5)	
Inunda	tion Visible on Aerial Imag	gery (B7)	Gauge or W	ell Data (D9)					
Sparse	ely Vegetated Concave Su	rface (B8)	Other (Expla	in in Remarks)				
Field Obser	vations:								
		es No	C Depth (inches	s): NA					
Water Table		es X No	Depth (inches						
Saturation P		es No		<i>'</i> — —	Wetland	d Hydrolog	gy Present?	Yes >	(No
	pillary fringe)		_ · ·			•			

US Army Corps of Engineers prepared by Cardno Midwest Region version 2.0

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site:	Garver Substation					City/County	: Middletown/Bu	tler	Sa	mpling Date:	11/7/2018	
Applicant/Owner:	Duke Energy					State	: OH	Sampling Point:	,	DP02		
Investigator(s):	Kaitlin Hillier and Da	anielle Thompson						p, Range: S7 T2E R4N	1			
Landform (hillslope,		Summit						I relief (concave, conve		vex		
Slope (%):	,,	Lat:	39.46651			Long:		84.35133		Datum: NAD8	181 UTM161	V
	e: Patton silty clay loa	-	00.10001						NWI classificat			•
		e site typical for this time o	f.voor?			Voc	X No	(If no, explain in		1011.		
				N	significantly dis	-				Von V	No	
Are Vegetation	N	, Soil N	, or Hydrology	N N	significantly dis			al Circumstances" pres		Yes X		_
Are Vegetation	N	, Soil N	, or Hydrology	N	naturally proble			explain any answers in	i Remarks.)			
		ach site map showir										
	getation Present?		Yes	N		-	Sampled Ar					
Hydric Soil Pres			Yes	N		withir	n a Wetland?		Yes	No x		
Wetland Hydrol	ogy Present?		Yes	N	0 X	<u>-</u>						
Remarks:	Uso scientific	names of plants.										
VEGETATION	Ose scientific	names of plants.			Absolute	Dominant	Indicator					
Tree Stratum (Plot	size: 30' radius)				% Cover	Species?	Status	Dominance Test we	orksheet:			
Populus tremule					20%	Yes	FAC					
Tilia americana					15%	Yes	FACU	Number of Dominant	Species			
3.								That Are OBL, FACV		1	(A))
4.								,	, -		`	
5.					-	·		Total Number of Don	ninant			
					35%	= Total Cover		Species Across All S		3	(B))
							-				`´	
Sapling/Shrub Strat	tum (Plot size: 15' rad	dius)						Percent of Dominant	Species			
Lonicera maaci	•				75%	Yes	UPL	That Are OBL, FACV		33%	(A/	'B)
2.									.,			-,
3.					-	· 						
4.						· -		Prevalence Index w	orksheet:			
5.						· ———		Trevalence macx w	or Roncet.			
o.					75%	= Total Cover		Total % Cov	er of:	Multi	iply by:	
					7070	- Total Cover		That Are OBL, FACW		Ividiti	A/E	3
Herb Stratum (Plot	size: 5' radius)							OBL species	,	x1 =		_
Lonicera maaci					3%	No	UPL	FACW species		x2 =		_
Glechoma hede					1%	No	FACU	FAC species	20%	x3 =	0.6	_
3.								FACU species	16%	x4 =	0.64	_
4.								UPL species	78%	x5 =	3.9	_
5.					-	·		Column Totals:	1.14	(A)	5.14	(B)
6.					-	·		-		` '		- ` ′
7.					-	·		Prevalenc	e Index = B/A	= 4	.51	
8.					-	·				-		_
9.												
10.					-	·		Hydrophytic Vegeta	ation Indicato	rs:		
11.					-	·						
12.					-	·		1-Rapid Tes	t for Hydrophy	tic Vegetation	1	
13.									e Test is >50%			
14.					-	·		3-Prevalence	e Index is ≤3.0) ¹		
15.								4-Morpholog	gical Adaptatio	ns ¹ (Provide s	supporting	
16.								data in Ren	narks or on a s	eparate shee	t)	
17.								Problemation	Hydrophytic \	/egetation1 (E	:xplain)	
18.												
19.								¹ Indicators of hydric s	soil and wetlan	d hydrology n	nust	
20.								be present, unless d	sturbed or pro	blematic.		
					4%	= Total Cover			•			
Woody Vine Stratur	m (Plot size: 30' radi	us)						Hydrophytic				
1.	_ (Vegetation				
2.					-			Present?	Yes	No X		
					-	= Total Cover						
						-						
Remarks: (Include	photo numbers here	or on a separate sheet.)						+				
		. ,										

Profile Description	ion: (Describe to the	e depth needs	ed to document the in	ndicator or co	onfirm the a	bsence of	indicators.)			
Depth	Matrix	o dopin nood		dox Features			maioatoroi,			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Re	emarks	
0-14"	10YR 4/2	85			- 71		Clay Loam			
<u> </u>	101111/1/2						Oldy Loan			
				- ——						
				- ——						
							·			
				- ——						
						-				
Type: C-Conce	entration D-Depletic	n PM-Peduce	ed Matrix, CS=Covered	d or Coated Sc	and Grains	² Location	n: PL=Pore Lining	M-Matrix		
ydric Soil Indic		II, KIVI=Keuuce	id Matrix, CS=Covered	J OI COALEG Sa	and Grains.		ndicators of Hydr			
Histosol (A1			Sandy Gleve	ed Matrix (S4)		10011	-	ganese Masses (F1	2)	
Histic Epipe	•		Sandy Redo					low Dark Surface (•	
Black Histic	, ,		Stripped Ma					plain in Remarks)	•	
Hydrogen S	Sulfide (A4)		Dark Surface	e (S7)						
Stratified La	ayers (A5)		Loamy Muck	ky Mineral (F1))					
2 cm Muck	(A10)		Loamy Gley	ed Matrix (F2)						
	elow Dark Surface (A	.11)	Depleted Ma				3			
Thick Dark	Surface (A12)			Surface (F6)				indicators have bee		
_			Depleted De		/ \	comply with the Field Indicators of Hydric Soils				
	ky Mineral (S1)			ark Surface (F7	')	to the Liberties		0.0040		
5 cm Mucky	y Peat or Peat (S3)	<u>, </u>		essions (F8)	· ,		in the United	States, Version 8.	0, 2016.	
5 cm Mucky	y Peat or Peat (S3)						in the United		0, 2016.	
5 cm Mucky Restrictive Layer Type:	y Peat or Peat (S3) er (if observed):					Unabela G		States, Version 8.		
5 cm Mucky estrictive Layer Type: Depth (inche	y Peat or Peat (S3) er (if observed):					Hydric S	in the United		0, 2016. No>	
5 cm Mucky estrictive Layer Type: Depth (inche	y Peat or Peat (S3) or (if observed): es):					Hydric S		States, Version 8.		
5 cm Mucky Restrictive Layer Type: Depth (inche	y Peat or Peat (S3) or (if observed): es):					Hydric S		States, Version 8.		
5 cm Mucky Restrictive Layer Type: Depth (inche) Remarks: RYDROLOG Wetland Hydrolog	y Peat or Peat (S3) or (if observed): es): ay ogy Indicators:	required; chec	Redox Depr			Hydric S	Soil Present?	Yes	No	
5 cm Mucky Restrictive Layer Type: Depth (inche) Bemarks: Primary Indicator	y Peat or Peat (S3) or (if observed): es): ogy Indicators: rs (minimum of one is	required: chec	Redox Deprior Redox Redox Deprior Redox Redox Deprior Redox	ressions (F8)		Hydric S	Soil Present?	Yes	No	
5 cm Mucky Restrictive Layer Type: Depth (inche) Bemarks: PyDROLOG Vetland Hydrolo Primary Indicator Surface Wa	y Peat or Peat (S3) er (if observed): es): gy ogy Indicators: es (minimum of one is later (A1)	required: chec	Redox Deprior Re	essions (F8)		Hydric S	Soil Present? Secondary Indic	Yes	No	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG Vetland Hydrolog Surface Wa High Water	y Peat or Peat (S3) or (if observed): es): esy: orgy Indicators: rs (minimum of one is ater (A1) Table (A2)	required: chec	Redox Deprior Redox Redox Deprior Redox Redox Deprior Redox Redo	eed Leaves (B9	9)	Hydric S	Secondary Indic	Yes	No	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG /etland Hydrolo /orimary Indicator Surface Wa	y Peat or Peat (S3) or (if observed): es): esy: orgy Indicators: rs (minimum of one is later (A1) Table (A2) (A3)	required: chec	ck all that apply) Water-Stain Aquatic Faul	essions (F8)	9)	Hydric S	Secondary Indic	Yes	No	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG rimary Indicator Surface Wa High Water Saturation (Water Mark	y Peat or Peat (S3) or (if observed): es): esy: orgy Indicators: rs (minimum of one is later (A1) Table (A2) (A3)	: required: chec	ck all that apply) Water-Stain Aquatic Faul True Aquatic Hydrogen St	eed Leaves (B9 na (B13) c Plants (B14)	9)		Secondary Indic Surface S Drainage Dry-Sease Crayfish E	Yes	No No two required)	
5 cm Mucky Restrictive Layer Type: Depth (inche emarks: IYDROLOG Vetland Hydrolo Primary Indicator Surface Wa High Water Saturation (Water Mark	y Peat or Peat (S3) or (if observed): es): esy: ogy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (xs (B1) Deposits (B2)	required: chec	ck all that apply) Water-Stain Aquatic Faul True Aquatic Hydrogen St	ned Leaves (B9) ina (B13) c Plants (B14) ulfide Odor (C	9) 1) Living Root		Secondary Indic Surface S Drainage Dry-Sease Crayfish E Saturation	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	No No two required) 2) magery (C9)	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG /etland Hydrolo Primary Indicator Surface Wa High Water Saturation (Water Mark Sediment D	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (A3) (A5) (A6) (A6) (A6) (A6) (A6) (A6) (A6) (A6	required: chec	Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Redox Deprisor Redox Depr	need Leaves (B9) na (B13) c Plants (B14) ulfide Odor (Cinizospheres on	a) 1) a Living Roof a (C4)	es (C3)	Secondary Indic Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial II	No No two required) 2) magery (C9)	
5 cm Mucky lestrictive Layer Type: Depth (inche emarks: PyDROLOG Vetland Hydrolo Primary Indicator Surface Wa High Water Saturation (, Water Mark Sediment D Drift Deposi	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	required: chec	Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Deprior Redox Redox Deprisor Redox Depr	need Leaves (B9) Ina (B13) Ic Plants (B14) Iulfide Odor (Conizospheres on Freduced Iron Reduction in T	a) 1) a Living Roof a (C4)	es (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial II r Stressed Plants (I	No No two required) 2) magery (C9)	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG /etland Hydrolo /erimary Indicator Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposit	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3		Redox Depri	need Leaves (B9) Ina (B13) Ic Plants (B14) Iulfide Odor (Conizospheres on Freduced Iron Reduction in T	a) 1) a Living Roof a (C4)	es (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	No No two required) 2) magery (C9)	
5 cm Mucky estrictive Layer Type: Depth (inche emarks: YDROLOG /etland Hydrolo /erimary Indicator Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposit Inundation \	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is later (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A4) (A5) (A5) (A5) (A6) (A6) (A7) (A7) (A8) (A8) (A9) (A9)	gery (B7)	Redox Depri	need Leaves (B9) Ina (B13) Ina (B14)	1) a Living Root a (C4) Filled Soils (es (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	No No two required) 2) magery (C9)	
5 cm Mucky Type: Depth (inche emarks: TYDROLOG Vetland Hydrolo Primary Indicator: Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposit Algal Mat or Iron Deposit Inundation \	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is later (A1) Table (A2) (A3) (xs (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Image egetated Concave Su	gery (B7)	Redox Depri	red Leaves (B9) na (B13) c Plants (B14) ulfide Odor (Cinizospheres on Freduced Iron Reduction in T Surface (C7) 'ell Data (D9)	1) a Living Root a (C4) Filled Soils (es (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	No No two required) 2) magery (C9)	
5 cm Mucky Type: Depth (inche emarks: TYDROLOG Vetland Hydrolo Primary Indicator Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposit Inundation \ Sparsely Ve	y Peat or Peat (S3) or (if observed): es): es): ogy Indicators: rs (minimum of one is later (A1) Table (A2) (A3) (xs (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Image egetated Concave Sulpons:	gery (B7) urface (B8)	Redox Depri	ressions (F8) red Leaves (B9) red (B13) red Plants (B14)	1) a Living Root a (C4) Filled Soils (es (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	No No two required) 2) magery (C9)	
5 cm Mucky Type: Type: Depth (inche emarks: TYDROLOG Vetland Hydrolo Primary Indicator: Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposit Inundation \ Sparsely Ve Veteld Observatio Surface Water Preservation of the preser	y Peat or Peat (S3) or (if observed): es): es): orgy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	gery (B7) Irface (B8) /es No /es No	Redox Depri	ressions (F8) red Leaves (B9) red (B13) red Plants (B14)	1) a Living Root a (C4) Filled Soils (rs (C3)	Secondary Indic Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpi FAC-Neur	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	two required) 2) magery (C9) D1)	
5 cm Mucky Restrictive Layer Type: Depth (inche emarks: PYDROLOG Vetland Hydrolo Primary Indicator Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposit Inundation (Sparsely Ve Vield Observatio Surface Water Primary Indicator (Water Mark Sediment D Drift Deposit Algal Mat or Iron Deposit Inundation (Sparsely Ve Vield Observatio	y Peat or Peat (S3) or (if observed): es): es): gy Indicators: rs (minimum of one is ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A5) (A5) (A6) (A6) (A6) (A7) (A8) (A8) (A8) (A9) (A9) (A9) (A9) (A9) (A9) (A9) (A9	gery (B7) urface (B8) /es No	Redox Depri	ressions (F8) red Leaves (B9) red (B13) red Plants (B14)	1) a Living Root a (C4) Filled Soils (rs (C3)	Secondary Indices Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o Geomorpl	rators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial II or Stressed Plants (Inic Position (D2)	No No two required) 2) magery (C9)	

Midwest Region version 2.0

Project/Site:	Garver Substation							City/Co	ounty	: Middle	town/Bu	tler	8	Sampling Da	ate: 11/7	/2018	
Applicant/Owner:	Duke Energy								State	: OH		Sampling Point	:	DI	P03		
Investigator(s):	Kaitlin Hillier and Da	nielle Thomps	on						;	Section,	Townshi	ip, Range: S7 T2E R	4N				
Landform (hillslope	, terrace, etc.):	S	ummit								Loca	al relief (concave, cor	vex, none): co	ncave			
Slope (%):		Lat:			39.4661	3		Long:			-	84.35096		Datum: N	1AD83 U	TM16N	
Soil Map Unit Name	e: Patton silty clay loar	n (Pa)											NWI classific	ation: r	none		
Are climatic / hydro	logic conditions on the	site typical fo	r this time of y	ear?					Yes	Χ	No_	(If no, explain	in Remarks.)				
Are Vegetation	N	, Soil	N	, or Hyd	rology	N	significantly d	isturbed?		Ar	re "Norm	al Circumstances" pr	esent?	Yes _	X No		
Are Vegetation	N	, Soil	N	, or Hyd	rology	N	naturally prob	lematic?		(If	needed	, explain any answers	in Remarks.)				
SUMMARY OF	FINDINGS Atta	ach site ma	p showing	samplin	g point l	ocations	, transects, in	nportant fe	atur	es, etc	С.						
Hydrophytic Ve	getation Present?			Yes	Х		No	Is	the	Samp	led Ar	ea					
Hydric Soil Pres				Yes	Х	_	No	w	ithir	ı a We	tland?		Yes x	No			
Wetland Hydrol	ogy Present?			Yes	Х	_	No										
Remarks:	Use scientific ı	names of n	lants														
VEGETATION	Ose scientific i	iailles oi p	iaiits.				Absolute	Domina	ant	Indi	cator						
Tree Stratum (Plot	size: 30' radius)						% Cover				atus	Dominance Test	worksheet:				
1.																	
2.												Number of Domina	nt Species				
3.												That Are OBL, FA	CW, or FAC:		1	(A)	
4																	
5												Total Number of D	ominant				
								= Total Cov	/er			Species Across Al	l Strata:		2	(B)	
	tum (Plot size: 15' rac	lius)										Percent of Domina					
1. Robinia pseudo	pacacia						10%	Yes			CU	That Are OBL, FA	CW, or FAC:	5	50%	(A/B)	
2. Morus alba							3%	No No		_	AC						
3. Fraxinus penns	sylvanica						3% 1%	No No			CW AC	Prevalence Index	warkahaati				
4. Acer negundo 5.							170				AC.	Prevalence index	worksneet:				
J.							17%	= Total Cov	/er			Total % C	over of	,	Multiply by	v.	
							1770		, 01			That Are OBL, FAC			nulliply b	A/B	
Herb Stratum (Plot	size: 5' radius)											OBL species		x1 =			
Phalaris arundi				_			90%	Yes		FA	CW	FACW species	93%	x2 =	1.8	6	
2. Apocynum can	nabinum						15%	No		F	AC	FAC species	21%	x3 =	0.6	3	
3. Symphyotrichu	m ericoides						5%	No		FA	CU	FACU species	16%	x4 =	0.6	4	
4. Rumex crispus							1%	No		F	AC	UPL species		x5 =			
5. Dipsacus fullon							1%	No		_	CU	Column Totals:	1.30	(A)	3.1	3 ((B)
6. Quercus macro	ocarpa						1%	No		F/	AC						
7												Prevale	nce Index = B/	A =	2.41		
8.																	
9.												I hadaa ahadia Maa					
10. 11.												Hydrophytic Veg	etation indica	.ors:			
12												1-Papid T	est for Hydrop	hytic Veget	ation		
13.													nce Test is >50		20011		
14.							_						nce Index is ≤3				
15.													logical Adaptat		ide suppr	orting	
16.								_				data in R	emarks or on a	separate s	sheet)		
17.												Problema	atic Hydrophytic	c Vegetation	n¹ (Explai	in)	
18.																	
19.												¹ Indicators of hydri	c soil and wetla	and hydrolo	gy must		
20.												be present, unless	disturbed or p	roblematic.			
							113%	= Total Cov	/er								
1	m (Plot size: 30' radio	us)										Hydrophytic					
1												Vegetation					
2.												Present?	Yes	X No_			
								= Total Cov	/er								
Demande (1) 1	abata assat so to		th! \									1					
nemarks: (include	photo numbers here	on a separa	ie Sileet.)														

SOIL							San	npling Point: DP03
Profile Desc	cription: (Describe to th	ne depth need	ed to document the	indicator or co	onfirm the a	bsence of	indicators.)	
Depth	Matrix		R	edox Features			_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16"	10YR 4/2	90	10YR 4/4	10	С	М	Clay Loam	
1								
	Concentration, D=Depletion	on, RM=Reduc	ed Matrix, CS=Covere	ed or Coated Sa	and Grains.		n: PL=Pore Lining,	
-	Indicators ³ :		Sandy Clay	red Matrix (S4)		i est i	ndicators of Hydri	
Histos	Epipedon (A2)		Sandy Gley	` ,				anese Masses (F12) ow Dark Surface (F22)
	Histic (A3)		Stripped M					lain in Remarks)
	gen Sulfide (A4)		Dark Surfa	` '			Other (Exp	iair ii Nemarks)
	ed Layers (A5)			cky Mineral (F1)			
	/luck (A10)			yed Matrix (F2)				
Deplet	ed Below Dark Surface (A	\11)	X Depleted M					
Thick I	Dark Surface (A12)		Redox Darl	Surface (F6)			³ The hydric soil i	ndicators have been updated to
Sandy	Mucky Mineral (S1)		Depleted D	ark Surface (F	7)		comply with the	ne Field Indicators of Hydric Soils
5 cm N	flucky Peat or Peat (S3)		X Redox Dep	ressions (F8)			in the United	States, Version 8.0, 2016.
Restrictive	Layer (if observed):							
Restrictive Type:	Layer (if observed):							
Type: Depth (inches):					Hydric \$	Soil Present?	Yes <u>X</u> No
Type: _ Depth (emarks:	inches):					Hydric \$	Soil Present?	Yes X No
Type: Depth (inches):					Hydric \$	Soil Present?	Yes X No
Type:	OGY drology Indicators:					Hydric S		
Type: _ Depth (demarks: HYDROL Wetland Hy Primary Indi	OGY drology Indicators: cators (minimum of one is	s required: che	11.07	ned Leaves (RG	2)	Hydric \$	Secondary Indica	ators (minimum of two required)
Type: _ Depth (emarks: HYDROL Wetland Hy Primary Indi Surfac	OGY drology Indicators: cators (minimum of one is	s required: che	Water-Stair	ned Leaves (BS	3)	Hydric \$	Secondary Indica	ators (minimum of two required) bil Cracks (B6)
Type: _ Depth (emarks: HYDROL Wetland Hy Primary Indi Surfac High W	OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2)	s required: che	Water-Stair Aquatic Far	una (B13)		Hydric \$	Secondary Indica Surface So Drainage F	ators (minimum of two required) bil Cracks (B6) Patterns (B10)
Type:	OGY drology Indicators: cators (minimum of one is e Water (A1) /ater Table (A2) tion (A3)	s required: che	Water-Stair Aquatic Far	una (B13) ic Plants (B14)		Hydric S	Secondary Indica Surface So Drainage F Dry-Seaso	ators (minimum of two required) bil Cracks (B6) Patterns (B10) n Water Table (C2)
Type:	OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1)	s required: che	Water-Stain Aquatic Fan True Aquat Hydrogen S	una (B13) ic Plants (B14) Sulfide Odor (C	1)		Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B	ators (minimum of two required) oil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)
Type: Depth (emarks: IYDROL Vetland Hy Primary Indi Surfac High W Satura Water Sedim	OGY drology Indicators: cators (minimum of one is e Water (A1) /ater Table (A2) tion (A3)	s required: che	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R	una (B13) ic Plants (B14)	1) Living Root		Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation	ators (minimum of two required) bil Cracks (B6) Patterns (B10) n Water Table (C2)
Type: Depth (emarks: IYDROL Vetland Hy Primary Indi Surfac High W Satura Water Sedim Drift D	OGY drology Indicators: cators (minimum of one is e Water (A1) //ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	s required: che	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on	1) Living Root (C4)	is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or	ators (minimum of two required) oil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Type: Depth (De	OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	s required: che	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence co	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron	1) Living Root (C4)	is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Type: Depth (oGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	·	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron n Reduction in T	1) Living Root (C4)	is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type:	oGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vater Crust (B4) eposits (B5)	gery (B7)	Water-Stail Aquatic Fai True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron n Reduction in Surface (C7)	1) Living Roof (C4) Filled Soils (is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Aerial Ima	gery (B7)	Water-Stail Aquatic Fai True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron n Reduction in Surface (C7) Vell Data (D9)	1) Living Roof (C4) Filled Soils (is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (Pemarks: HYDROL Wetland Hy Primary Indi Surfac High W Satura Water Sedim Drift D Algal M Iron Del Inunda Sparse	inches): OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vator Crust (B4) eposits (B5) tion Visible on Aerial Imalely Vegetated Concave Sulvations:	gery (B7)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron n Reduction in Surface (C7) Vell Data (D9) ain in Remarks	1) Living Roof (C4) Filled Soils (is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (Remarks: HYDROL Wetland Hy Primary Indi Surfac High W Satura Water Sedim Drift D Algal M Iron Del Inunda Sparse	OGY drology Indicators: cators (minimum of one is e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial Ima ely Vegetated Concave Su vations: ter Present?	gery (B7) urface (B8)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron n Reduction in Surface (C7) Vell Data (D9) ain in Remarks s): NA	1) Living Roof (C4) Filled Soils (is (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)
Type: Depth (Remarks: HYDROL Wetland Hy Primary Indi Surfac High W Satura Water Sedim Drift D Algal M Iron De Inunda Sparse Field Obser Surface Wa	inches): OGY drology Indicators: cators (minimum of one is e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vator Crust (B4) eposits (B5) tion Visible on Aerial Imaely Vegetated Concave Suvations: ter Present?	gery (B7) urface (B8) Yes No _	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Expl	una (B13) ic Plants (B14) Sulfide Odor (C hizospheres on f Reduced Iron Reduction in Surface (C7) Vell Data (D9) fain in Remarks s): NA NA	1) Living Root (C4) Filled Soils (ts (C3)	Secondary Indica Surface So Drainage F Dry-Seaso Crayfish B Saturation Stunted or X Geomorph	ators (minimum of two required) poil Cracks (B6) Patterns (B10) n Water Table (C2) purrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) ic Position (D2)

Remarks:

Project/Site:	Garver Substation							City/County	/: Middletown	n/Butler		Sampling Da	ite: 11/7/20)18
Applicant/Owner:	Duke Energy							State	e: OH	Sampling Poir	nt:	DF	P04	
Investigator(s):	Kaitlin Hillier and Da	nielle Thor	mpson						Section, Tow	nship, Range: S7 T2E I	R4N			
Landform (hillslope,	terrace, etc.):		Summit							Local relief (concave, co	nvex, none): co	onvex		
Slope (%):		Lat	: <u></u>	39.46	621			Long:		-84.35092		Datum: N	IAD83 UTM	116N
Soil Map Unit Name	:Patton silty clay loar	n (Pa)									NWI classific	cation: n	one	
Are climatic / hydrol	ogic conditions on the	site typica	al for this time of	year?				Yes	X	No (If no, explain	in Remarks.)			
Are Vegetation	N	, Soil	N	, or Hydrology	N	significa	ntly distu	urbed?	Are "N	lormal Circumstances" p	resent?	Yes _	X No	
Are Vegetation	N	, Soil	N	, or Hydrology	N	naturally	problen	natic?	(If nee	ded, explain any answe	rs in Remarks.)			
SUMMARY OF	FINDINGS Att	ach site	map showing	g sampling poir	t location	s, transect	s, imp	ortant featu	res, etc.					
Hydrophytic Ved	etation Present?			Yes		No :	<	Is the	Sampled	Area				
Hydric Soil Pres	•			Yes			Κ		n a Wetlan		Yes	No_	X	
Wetland Hydrold	ogy Present?			Yes		No	<							
Remarks: VEGETATION -	- Use scientific :	names o	f plants.											
							olute	Dominant	Indicator					
Tree Stratum (Plot							over	Species?	Status	Dominance Test	worksheet:			
Robinia pseudo Populus tremulo							5%	Yes	FACU	Number of Decide	ant Cassiss			
Populus tremula 3.	Jues					5	%	No	FAC	Number of Domin			1	(Δ)
4.									. ———	I IIIat Are OBL, FA	NOW, OF FAC:		1	(A)
5.										Total Number of I	Cominant			
J)% :	= Total Cover		Species Across A			4	(B)
							,,,,	_ 10tai 0010i		_ " " " " " " " " "	Ottata:	-		.(5)
Sapling/Shrub Strat	um (Plot size: 15' rad	lius)								Percent of Domin	ant Species			
Robinia pseudo						5	%	Yes	FACU	That Are OBL, FA		2	5%	(A/B)
2.										_				
3.														
4.										Prevalence Index	worksheet:			
5.														
						5	% :	= Total Cover		Total % (/lultiply by:	
										That Are OBL, FA	CW, or FAC:			A/B
Herb Stratum (Plot	_			_						OBL species		x1 =		
Solidago canad							5%	Yes	FACU	FACW species	23%	x2 =	0.46	
2. Phalaris arundir							0%	Yes	FACW	FAC species	7%	x3 = _	0.21	
3. Symphyotrichur)% %	No No	FACU	FACU species	95%	x4 = _	3.8	
Lonicera maack Lysimachia nun							%	No No	UPL FACW	UPL species Column Totals:	1.30	x5 = (A)	0.25 4.72	(P)
6. Morus alba	IIIIulaila						%	No	FAC	Column rotals.	1.30	(A) _	4.72	(B)
7. Toxicodendron	radicans						%	No	FAC	— Preval	ence Index = B/	'A =	3.63	
8.	radioario							- 110		_	onco macx – B	··-	0.00	
9.								-						
10.										Hydrophytic Veg	etation Indica	tors:		
11.										_				
12.										1-Rapid	Test for Hydrop	hytic Vegeta	ation	
13.										2-Domin	ance Test is >5	0%		
14										_	ence Index is ≤			
15.										_ ·	ological Adapta			ng
16.											Remarks or on a			
17										Problem	atic Hydrophyti	c Vegetatior	ı' (Explain)	
18.										_				
19.										Indicators of hyd			jy must	
20							-0/	T		be present, unles	s disturbed or p	roblematic.		
						9:	5% :	= Total Cover						
Woody Vine Stratun	n (Plot size: 30' radio	us)								Hydrophytic Vegetation				
2										Present?	Yes	No _	X	
								= Total Cover						
Remarks: (Include	photo numbers here	or on a sep	parate sheet.)											

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1/31/2019 2:55:49 PM

in

Case No(s). 19-0049-EL-BLN

Summary: Application F7581/F7582/F5689– 138kV Garver Substation TLoop- PART 10 electronically filed by Carys Cochern on behalf of Duke Energy