

Photographic Documentation

Client: Hecate Energy Highland LLC Project Number: N1177433

Location: Highland County, Ohio **Photographer**: M. Perkins, S. West

Photograph No. 53

Date: December 2017

Direction: West

Description: Stream 23



Photograph No. 54

Date: January 2018

Direction: Southwest

Description:Stream 24





Photographic Documentation

Client: Hecate Energy Highland LLC Project Number: N1177433

Location:Highland County, OhioPhotographer:M. Perkins, S. West

Photograph No. 55

Date: January 2018

Direction: East

Description: Wetland U



Photograph No. 56

Date: December 2017

Direction: East

Description:Wetland V





Photographic Documentation

Client: Hecate Energy Highland LLC Project Number: N1177433

Location: Highland County, Ohio **Photographer**: M. Perkins, S. West

Photograph No. 57

Date: January 2018

Direction: North

Description: Stream 25



Photograph No. 58

Date: January 2018

Direction: North

Description:

Typical agricultural field on site.



APPENDIX C – DATA SHEETS

Project/Site: Highland Solar		City/Cou	Sampling Date:	12/14/2017		
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WAWet1
Investigator(s): M. Perkins, C. Brendel		Section, 7	Township, Ra	ange:		
Landform (hillside, terrace, etc.):			Local relief (concave, convex, none):		
Slope (%): Lat: 39.066751		Long: -	-83.789253		Datum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	it slopes			NWI classif	ication: NAD83	
Are climatic / hydrologic conditions on the site typical f	or this time o	of year?	Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation , Soil , or Hydrology	significantly ()
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS – Attach site ma						tures, etc.
Hydrophytic Vegetation Present? Yes X No	О	Is the	Sampled A	rea		
	0		n a Wetland		No	
Wetland Hydrology Present? Yes X No	0					
Remarks:						
This data is typical to point WAWet2: 39.066669, -83.	.788256					
NECETATION III asiantifa nama afula						
VEGETATION – Use scientific names of pla		Dominant	Indicator	T		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:	
1. Quercus palustris	20	Yes	FACW	Number of Dominant		
2. Acer rubrum	30	Yes	FAC	Are OBL, FACW, or F		4 (A)
3.				Total Number of Domi		
4.				Across All Strata:	•	5 (B)
5.				Percent of Dominant S	Species That	
	50 =	=Total Cover		Are OBL, FACW, or F	AC: 80	.0% (A/B)
Sapling/Shrub Stratum (Plot size:)					
Fagus grandifolia	20	Yes	FACU	Prevalence Index wo		
2. Lindera benzoin	40	Yes	FACW	Total % Cover of		
3.				OBL species 50		50
4.				FACW species 60		20
5	60 =	=Total Cover		FAC species 40 FACU species 20		20 80
Herb Stratum (Plot size:)		-Tutal Cuvei		FACU species 20 UPL species 0		0
1. Carex lurida	50	Yes	OBL	Column Totals: 17		370 (B)
Smilax rotundifolia	10	No	FAC	Prevalence Index =	``	``
3.	10	110	170	I IGVAIGNOO MAGA	- 0/A	
4.				Hydrophytic Vegetat	ion Indicators:	
5.					Hydrophytic Vegeta	ation
6.				X 2 - Dominance Te		
7.				X 3 - Prevalence Inc		
8.				4 - Morphological	Adaptations ¹ (Provi	de supporting
9.				data in Remark	s or on a separate	sheet)
10.				Problematic Hydro	ophytic Vegetation ¹	(Explain)
	60 =	=Total Cover		¹ Indicators of hydric so	oil and wetland hydi	rology must
Woody Vine Stratum (Plot size:)			be present, unless dis	turbed or problemate	tic.
1				Hydrophytic		
2				Vegetation		
	=	=Total Cover		Present? Yes_	X No	<u> </u>
Remarks: (Include photo numbers here or on a separate	rate sheet.)					

SOIL Sampling Point: WAWet1

Profile Desc	cription: (Describe	to the depti	needed to doc	ument tl	he indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 4/3	100					Loamy/Clayey	
5-13	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
l								
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, N	√S=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle					st Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)
	stic (A3)		Stripped N	•	3)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)
	ıck (A10)		Loamy Gle					
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2	
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted [and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:			_					
Depth (in	nches):		_				Hydric Soil Present	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	93.doc	()	
HYDROLC	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ives (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drair	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-9	Season Water Table (C2)
Water M	larks (B1)		Hydrogen					fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F			-	` ' —	ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)
	oosits (B5)		Thin Muck		. ,		X FAC-	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	Vegetated Concave	e Surface (B8	B)Other (Exp	olain in R	Remarks)		_	
Field Obser	vations:							
Surface Wat		es			nches): _			
Water Table		es			nches): _			
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolog	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strean	ı gauge, mor	iitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:	
Remarks:								
i tomants.								

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/14					
Applicant/Owner: Hecate Energy Highland LLC			·	State: OH	Sampling Po	oint: W	BWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	ange:			
Landform (hillside, terrace, etc.):			Local relief (concave, convex, none):			
Slope (%): Lat: 39.065174				_	Datum: NAD83	3	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percer	nt slopes			NWI classifi	cation: NA		
Are climatic / hydrologic conditions on the site typical		f year?	Yes X	No (If no, exp	ain in Remark	s.)	
Are Vegetation , Soil , or Hydrology							
Are Vegetation, Soil, or Hydrology	•						_
SUMMARY OF FINDINGS – Attach site m	-					features	s, etc.
Hydric Soil Present? Wetland Hydrology Present? Yes X N	lo lo		Sampled A		No		
Remarks:							
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:) 1. Quercus palustris	% Cover 20	Species? Yes	FACW	Dominance Test work			
2. Quercus bicolor	60	Yes	FACW	Number of Dominant S Are OBL, FACW, or FA	•	3	(A)
3. Platanus occidentalis	10	No	FACW	Total Number of Domi	_		_('')
4.				Across All Strata:	iant opecies	4	(B)
5.				Percent of Dominant S	pecies That		
		=Total Cover		Are OBL, FACW, or FA	4C:	75.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:	_)						
1 2.				Prevalence Index wo Total % Cover of:		Itiply by	
2				OBL species 20		Itiply by: 20	-
4.				FACW species 90			-
5.				FAC species 0		0	-
	·	Total Cover		FACU species 20	x 4 =	80	
Herb Stratum (Plot size:)				UPL species 0	x 5 =	0	_
Schoenoplectus tabernaemontani	20	Yes	OBL	Column Totals: 130	` ′ -	280	_(B)
2. Rubus allegheniensis	20	Yes	FACU	Prevalence Index =	B/A =	2.15	-
3. 4.				Hydrophytic Vegetati	on Indicators		
				1 - Rapid Test for			
6.				X 2 - Dominance Te		ogotation	
7.				X 3 - Prevalence Ind			
8.				4 - Morphological	Adaptations ¹ (F	Provide su	pporting
9.				data in Remark	s or on a sepa	rate sheet))
10				Problematic Hydro	phytic Vegeta	tion ¹ (Expl	ain)
		=Total Cover		¹ Indicators of hydric so			must
Woody Vine Stratum (Plot size:	.)			be present, unless dist	urbed or probl	ematic.	
2.				Hydrophytic			
		Total Cover		Vegetation Present? Yes_	X No_		
Remarks: (Include photo numbers here or on a sepa				_			
	,						

SOIL Sampling Point: WBWet1

Profile Desc	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 4/3	100					Loamy/Clayey	
5-13	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
l								
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle				Coas	t Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re	dox (S5)			Iron-l	Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)
	ıck (A10)		Loamy Gle	eyed Mat	trix (F2)			
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2	
	ark Surface (A12)		Redox Da		, ,			rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:			_					
Depth (in	nches):		_				Hydric Soil Present	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	S/nrcs142	2p2_0512	93.doc	()	
HYDROLC	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			Secondar	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drain	nage Patterns (B10)
Saturation	on (A3)		True Aqua	atic Plant	s (B14)		Dry-S	Season Water Table (C2)
Water M	larks (B1)		Hydrogen					fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F			-	` ' —	ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil		norphic Position (D2)
	oosits (B5)		Thin Muck		, ,		X FAC-	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	Vegetated Concave	e Surface (B8	B)Other (Exp	plain in R	Remarks)		_	
Field Obser	vations:							
Surface Wat		es	No X		nches): _			
Water Table		es	No X		nches): _			
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolog	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strean	ı gauge, mor	iitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:	
Remarks:								
i tomants.								

Project/Site: Highland Solar	City/County: Buford/Hi	12/14/2017		
Applicant/Owner: Hecate Energy Highland LLC		State: OH	Sampling Point:	WAUp1
Investigator(s): M. Perkins, C. Brendel	_Section, Township, Rang	ge:		
Landform (hillside, terrace, etc.):	Local relief (co	oncave, convex, none):		
Slope (%): Lat: 39.067018	Long: <u>-83.789746</u>		oatum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent slopes		NWI classific	cation: NA	
Are climatic / hydrologic conditions on the site typical for this time of y	/ear? Yes X	No (If no, expla	ain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Ci	rcumstances" present?	Yes X No	
Are Vegetation, Soil, or Hydrologynaturally proble	ematic? (If needed, exp	lain any answers in Rem	arks.)	
SUMMARY OF FINDINGS – Attach site map showing	sampling point loc	ations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No X	Is the Sampled Are within a Wetland?	ea Yes	No_X	
Remarks: Observations also typical to WBUp1: 39.065108, -83.785384				
VEGETATION – Use scientific names of plants.	- La Gartan I			
	Dominant Indicator Species? Status	Dominance Test work	sheet:	
1. 2.		Number of Dominant S Are OBL, FACW, or FA	•)(A)
3. 4.		Total Number of Domin Across All Strata:	nant Species 1	(B)
5.	Fotal Cover	Percent of Dominant Sp Are OBL, FACW, or FA	•)% (A/B)
Sapling/Shrub Stratum (Plot size:)	L			
1		Prevalence Index wor		
2. 3.	—— — I	Total % Cover of: OBL species 0	Multiply b	
3		FACW species 0	x1 = 0 x2 = 0	
5.		FAC species 0	x3 = 0	
	Total Cover	FACU species 0	x 4 = 0	
Herb Stratum (Plot size:)		UPL species 100	x 5 = 50	10
1. Glycine max 100 2.	Yes UPL	Column Totals: 100 Prevalence Index =		00 (B)
3	—— —	Hydrophytic Vegetation	on Indicators:	
			Hydrophytic Vegetat	lion
6.		2 - Dominance Tes		.1011
7.		3 - Prevalence Inde		
8.			Adaptations ¹ (Provid	
9.			or on a separate sl	
10		Problematic Hydro	phytic Vegetation ¹ (Explain)
	Total Cover	¹ Indicators of hydric soi be present, unless distu	•	
1		Hydrophytic		
2=T	Total Cover	Vegetation Present? Yes	No X	
Remarks: (Include photo numbers here or on a separate sheet.)				
,				

SOIL Sampling Point: WAUp1

Profile Desc	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
1-5	10YR 4/3	100					Loamy/Clayey		
5-13	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentration	าร
l									
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, N	/IS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :	
Histosol	(A1)		Sandy Gle		rix (S4)		Coa	st Prairie Redox (A16)	
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)	
	stic (A3)		Stripped N	•	6)			Parent Material (F21)	
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)	
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)	
	ıck (A10)		Loamy Gle						
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2		
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and	
	lucky Mineral (S1)		Depleted [and hydrology must be present,	
5 cm Mu	icky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.	
Restrictive	Layer (if observed)	:							
Type:			_						
Depth (in	nches):		_				Hydric Soil Presen	t? Yes X No_	
Remarks:									
		-						rs of Hydric Soils, Version 7.0, 2015	j
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	(93.doc)	()		
HYDROLC	OGY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two requ	ired)
Surface	Water (A1)		Water-Sta	ined Lea	ves (B9)		Surf	ace Soil Cracks (B6)	
	ater Table (A2)		Aquatic Fa	auna (B1	3)			nage Patterns (B10)	
Saturation	on (A3)		True Aqua					Season Water Table (C2)	
	larks (B1)		Hydrogen					fish Burrows (C8)	
	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (CS	∌)
	posits (B3)		Presence		,	,		ited or Stressed Plants (D1)	
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)	
· —	oosits (B5)	(5.5)	Thin Muck		, ,		FAC	-Neutral Test (D5)	
	on Visible on Aerial I	0 , ,							
	/ Vegetated Concave	Surrace (Bo	3)Other (Exp	Diain in R	emarks)				
Field Obser									
Surface Wat		es			nches): _				
Water Table		es			nches):_			5 40 V	
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes No _	<u> </u>
	pillary fringe) corded Data (strean	aguag man	sitoring well corio	l photos	provious	inonos	tions) if available:		
Describe Re	corded Data (Stream	i gauge, moi	intoring well, aeria	ii priotos	, previous	sinspec	alons), ii avaliable.		
Remarks:									

Project/Site: Highland Solar	City/County: Buford/Highland Sampling Date: 12/1					
Applicant/Owner: Hecate Energy Highland LLC		State: OH	Sampling Point:	WCWet1		
Investigator(s): M. Perkins, C. Brendel	Section, Township, R	ange:				
Landform (hillside, terrace, etc.):	Local relief	(concave, convex, none):				
Slope (%): Lat: 39.062583	Long: -83.768422	[Datum: NAD83			
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to 2 percent	slopes	NWI classifi	cation: PEM1A			
Are climatic / hydrologic conditions on the site typical for this time of		No (If no, expl	ain in Remarks.)			
Are Vegetation , Soil , or Hydrology significantly		Circumstances" present?	Yes X No			
Are Vegetation, Soil, or Hydrology naturally pro		xplain any answers in Ren				
SUMMARY OF FINDINGS – Attach site map showing				ures, etc.		
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled A		No			
Remarks:						
VEGETATION – Use scientific names of plants.						
Absolute	Dominant Indicator					
Tree Stratum (Plot size:) % Cover	Species? Status	Dominance Test worl	(sheet:			
1. Acer rubrum 60 2	Yes FAC	Number of Dominant S Are OBL, FACW, or FA	•	2 (A)		
3. 4.		Total Number of Domin	•	2 (B)		
5.		Percent of Dominant S	pecies That			
Sapling/Shrub Stratum (Plot size:)	=Total Cover	Are OBL, FACW, or FA	AC: 100	.0% (A/B)		
1.		Prevalence Index wo	rksheet:			
2.		Total % Cover of:	Multiply I	by:		
3		OBL species 70	x 1 =7	0		
4		FACW species 0		0		
5		FAC species 60		80		
Herb Stratum (Plot size:)	=Total Cover	FACU species 0 UPL species 0		0		
Herb Stratum (Plot size:) 1. Scirpus cyperinus 70	Yes OBL	Column Totals: 130		50 (B)		
2		Prevalence Index =	` ′	` ´		
		Hydrophytic Vegetation	on Indicators:			
5.			Hydrophytic Vegeta	ition		
6.		X 2 - Dominance Tes				
7.		X 3 - Prevalence Ind	ex is ≤3.0 ¹			
8.			Adaptations ¹ (Provid			
9			s or on a separate s	· · · · · · · · · · · · · · · · · · ·		
10		Problematic Hydro	phytic Vegetation ¹	(Explain)		
	=Total Cover	¹ Indicators of hydric so be present, unless dist	•			
1		Hydrophytic				
2	=Total Cover	Vegetation Present? Yes	X No			
Remarks: (Include photo numbers here or on a separate sheet.)				-		

SOIL Sampling Point: WCWet1

Profile Desc	cription: (Describ	e to the depti	needed to doc	ument tl	he indica	tor or c	onfirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
1-12	10YR 6/2	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentration	ns
l -									
l 									
	-								
¹ Type: C=C	oncentration, D=De	epletion, RM=F	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains	. ² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicator	s for Problematic Hydric Soils ³	:
Histosol	(A1)		Sandy Gle				Coas	t Prairie Redox (A16)	
Histic Ep	pipedon (A2)		Sandy Red	dox (S5)			Iron-l	Manganese Masses (F12)	
Black Hi	stic (A3)		Stripped M	latrix (S6	3)		Red	Parent Material (F21)	
X Hydroge	n Sulfide (A4)		Dark Surfa	ice (S7)				Shallow Dark Surface (F22)	
	l Layers (A5)		Loamy Mu	cky Mine	eral (F1)		Othe	r (Explain in Remarks)	
2 cm Mu	ick (A10)		Loamy Gle	eyed Mat	trix (F2)				
Depleted	d Below Dark Surfa	ice (A11)	X Depleted N	,	,		•		
Thick Da	ark Surface (A12)		Redox Dar		` '			s of hydrophytic vegetation and	
ı —	lucky Mineral (S1)		Depleted [nd hydrology must be present,	
5 cm Mu	icky Peat or Peat (S3)	Redox Dep	oression	s (F8)		unles	s disturbed or problematic.	
Restrictive	Layer (if observed	d):							
Type:									
Depth (ir	nches):		_				Hydric Soil Present	? Yes <u>X</u> No	
Remarks:						•			
		•						s of Hydric Soils, Version 7.0, 201	5
Errata. (http:	//www.nrcs.usda.g	ov/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	293.docx	x)		
HYDROLC	GY								
Wetland Hy	drology Indicator	s:							
Primary Indi	cators (minimum o	f one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two requ	uired)
X Surface	Water (A1)		Water-Sta	ined Lea	ives (B9)		Surfa	ice Soil Cracks (B6)	
X High Wa	iter Table (A2)		Aquatic Fa	una (B1	3)		Drain	age Patterns (B10)	
Saturation	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)	
Water M	arks (B1)		X Hydrogen	Sulfide (Odor (C1)	X Cray	fish Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	iving R	oots (C3) Satu	ration Visible on Aerial Imagery (C	(9)
Drift Dep	oosits (B3)		Presence	of Reduc	ced Iron (C4)	Stunf	ed or Stressed Plants (D1)	
Algal Ma	t or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Geor	norphic Position (D2)	
	osits (B5)		Thin Muck	Surface	(C7)		X FAC-	Neutral Test (D5)	
	on Visible on Aeria			Well Dat	a (D9)				
Sparsely	Vegetated Conca	ve Surface (B8	B)Other (Exp	olain in R	Remarks)				
Field Obser	vations:								
Surface Wat	er Present?	Yes X	No	Depth (i	nches):	12			
Water Table	Present?	Yes X		Depth (i	_	0			
Saturation P		Yes X	No	Depth (i	nches): _	0	Wetland Hydrolog	gy Present? Yes X No	
(includes cap									
Describe Re	corded Data (strea	ım gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	tions), if available:		
Domorko									
Remarks:									

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12								
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WDWet1				
Investigator(s): M. Perkins, C. Brendel		Section, T	rownship, Ra	ange:						
Landform (hillside, terrace, etc.):		!	Local relief (d	concave, convex, none):						
Slope (%): Lat: 39.063557		Long:	83.767008		Datum: NAD83					
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	t slopes			NWI classi	fication:					
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	plain in Remarks.)					
Are Vegetation, Soil, or Hydrology	significantly o	disturbed? A	Are "Normal (Circumstances" present?	Yes X No	·				
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (If needed, ex	cplain any answers in Re	marks.)					
SUMMARY OF FINDINGS – Attach site ma	ap showir	ıg samplin	ig point lo	ocations, transects	, important fea	tures, etc.				
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea						
	0		within a Wetland? Yes X No							
Wetland Hydrology Present? Yes X No										
Remarks:										
Observations typical for WDWet2: 39.064096, -83.76	6995									
NECETATION III										
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator	1						
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test wo	rksheet:					
1. Acer rubrum	30	Yes	FAC	Number of Dominant	Species That					
2. Liquidambar styraciflua	20	Yes	FACW	Are OBL, FACW, or F	•	5 (A)				
3. Ulmus americana	30	Yes	FACW	Total Number of Dom	inant Species	_				
4. Fagus grandifolia	20	Yes	FACU	Across All Strata:		6 (B)				
5	100	Tatal Cover		Percent of Dominant	•	2 00/ (A/D)				
Sapling/Shrub Stratum (Plot size:	100 =	=Total Cover		Are OBL, FACW, or F	·AC: 03	3.3% (A/B)				
1. Lindera benzoin	<i>)</i> 50	Yes	FACW	Prevalence Index wo	orksheet:					
2.		100	171011	Total % Cover of		bv:				
3.				-		30				
4.					00 x 2 = 2	200				
5.					0 x 3 =	90				
	50 =	=Total Cover		FACU species 2	0 x 4 =	80				
Herb Stratum (Plot size:)					x 5 =	0				
1. Carex lurida	30	Yes	OBL		()	100 (B)				
2				Prevalence Index	= B/A = 2.22	<u>'</u>				
3.				Lindranhydia Vagatai	ti- n Indicatore					
4 5.				Hydrophytic Vegetat	t ion indicators: r Hydrophytic Veget	ation				
				X 2 - Dominance Te		ation				
7				X 3 - Prevalence In						
8.					Adaptations ¹ (Provi	ide supporting				
9.					ks or on a separate					
10				Problematic Hydr	ophytic Vegetation ¹	(Explain)				
	30 =	=Total Cover		¹ Indicators of hydric s	oil and wetland hyd	rology must				
Woody Vine Stratum (Plot size:)			be present, unless dis	sturbed or problema	tic.				
1.				Hydrophytic						
2		T : 10		Vegetation	. N.					
		=Total Cover		Present? Yes	No	_				
Remarks: (Include photo numbers here or on a separ	rate sheet.)									
Buttressing on the Am. Beech in the wetland										

SOIL Sampling Point: WDWet1

Depth (inches) Matrix (inches) Redox Features Type¹ Loc² Texture Remarks 1-3 10YR 4/3 100 Loamy/Clayey Loamy/Clayey 3-12 10YR 6/2 70 7.5YR 5/8 30 C M Loamy/Clayey Prominent redox concentration	
1-3 10YR 4/3 100 Loamy/Clayey	
3-12 10YR 6/2 70 7.5YR 5/8 30 C M Loamy/Clayey Prominent redox concentre	
	tions
Trungs Co-Congentration Deposition DM-Dadwood Matrix MC-Macked Sand Crains 21 coations DI -Dave Lining M-Matrix	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soil	3.
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)	٠.
Histic Epipedon (A2) Sandy Gleyed Matrix (34) Sandy Redox (S5) Iron-Manganese Masses (F12)	
Black Histic (A3) Stripped Matrix (S6) Red Parent Material (F21)	
Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22)	
Stratified Layers (A5) Loamy Mucky Mineral (F1) Other (Explain in Remarks)	
2 cm Muck (A10) Loamy Gleyed Matrix (F2)	
Depleted Below Dark Surface (A11) X Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6) Redox Dark Surface (F6) Redox Dark Surface (F6)	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present,	
5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) unless disturbed or problematic.	
Restrictive Layer (if observed):	
Type:	
	0
Remarks:	
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2	015
Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two re	
	quired)
Surface Water (A1) X Water-Stained Leaves (B9) Surface Soil Cracks (B6)	equired)
Surface Water (A1) High Water Table (A2) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Surface Soil Cracks (B6) Drainage Patterns (B10)	equired)
Surface Water (A1) High Water Table (A2) Saturation (A3) X Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)	equired)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) X Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Flants (B14) Hydrogen Sulfide Odor (C1) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Surface Soil Cracks (B6) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3) Seturation Visible on Aerial Imagery Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Stunted or Stressed Plants (D1)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Aquatic Fauna (B13) X Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Flants (B14) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) X Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Flants (B14) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)	
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) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Aquatic Fauna (B13) True Aquatic Plants (B14) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) X FAC-Neutral Test (D5)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Surface Soil Cracks (B6) Aquatic Fauna (B13) True Aquatic Plants (B14) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Surface Soil Cracks (B6) Drainage Patterns (B10) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Surface Soil Cracks (B6) Drainage Patterns (B10) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Surface Soil Cracks (B6) Drainage Patterns (B10) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Surface Soil Cracks (B6) Drainage Patterns (B10) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Saturation Visible on Aerial Imagery Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Iron Deposits (B5) Geomorphic Position (D2) X FAC-Neutral Test (D5)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Aquatic Fauna (B13) Aquatic Fauna (B13) True Aquatic Plants (B14) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Stunted or Stressed Plants (D1) Geomorphic Position (D2) Thin Muck Surface (C7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) Aquatic Fauna (B13) Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (B7) Geomorphic Position (D2) X FAC-Neutral Test (D5) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Stunted or Stressed Plants (D1) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No X Water-Stained Leaves (B9) Drainage Patterns (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Field Observations: Surface Water Present? Yes No X Depth (inches):	
Surface Water (A1)	(C9)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (A1) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation Present (B10) Sparsely Vegeason Water Table (C2) A Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (D1) Geomorphic Position (D2) Thin Muck Surface (C7) X FAC-Neutral Test (D5) Gauge or Well Data (D9) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No	
Surface Water (A1)	(C9)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (A1) X Water-Stained Leaves (B9) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation Present (B10) Sparsely Vegeason Water Table (C2) A Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (D1) Geomorphic Position (D2) Thin Muck Surface (C7) X FAC-Neutral Test (D5) Gauge or Well Data (D9) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No	(C9)
Surface Water (A1)	(C9)
Surface Water (A1)	(C9)

Project/Site: Highland Solar		City/Coun	12/14/2017			
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WDUp1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	inge:		
Landform (hillside, terrace, etc.):				concave, convex, none):		
Slope (%): Lat: 39.063463		Long:{	83.7669		Datum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	nt slopes			NWI classif	ication:	
Are climatic / hydrologic conditions on the site typical	for this time of y	/ear?	Yes X	No (If no, exp	olain in Remarks.)	_
Are Vegetation, Soil, or Hydrology	significantly dis	sturbed? A	re "Normal C	Circumstances" present?	Yes X N	lo
Are Vegetation, Soil, or Hydrology	_ naturally proble	ematic? (I	If needed, ex	plain any answers in Rer	marks.)	<u> </u>
SUMMARY OF FINDINGS – Attach site m	- nap showing	, samplin	g point lo	cations, transects,	, important fe	atures, etc.
Hydric Soil Present? Yes X	No X		Sampled Ar		No X	
Wetland Hydrology Present? Yes N	No <u>X</u>					
Remarks:						
VEGETATION – Use scientific names of pl	lante					
VEGETATION - 056 Scientific flames of pr		Dominant	Indicator	Г		
Tree Stratum (Plot size:)		Species?	Status	Dominance Test wor	ksheet:	
Fagus grandifolia	40	Yes	FACU	Number of Dominant S	•	
2. Carya ovata		Yes	FACU	Are OBL, FACW, or F		0 (A)
3.				Total Number of Domi	inant Species	2 (D)
4 5.				Across All Strata:		3 (B)
J	60 =T	Total Cover		Percent of Dominant S Are OBL, FACW, or F	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size:				, ,		()
1.	- 			Prevalence Index wo	rksheet:	
2.	·			Total % Cover of:	: Multipl	y by:
3				OBL species 0		-
4				FACW species 0		0
5	- ——	Total Cover		FAC species 0 FACU species 90		360
Herb Stratum (Plot size:)		Oldi Covei		UPL species 0		0
1. Rosa multiflora	30	Yes	FACU	Column Totals: 90		360 (B)
2.				Prevalence Index =	`	()
3.						
4.				Hydrophytic Vegetati		
5				1 - Rapid Test for		etation
6.				2 - Dominance Te		
7.				3 - Prevalence Inc 4 - Morphological		vide cupporting
8. 9.					Adaptations (Pro	
10.		-		Problematic Hydro	•	
10	30 =T	Total Cover		¹ Indicators of hydric so		, , ,
Woody Vine Stratum (Plot size:				be present, unless dis	•	
1.	•′ •			Hydrophytic		
2.				Vegetation		
	=T	Total Cover		Present? Yes_	No X	
Remarks: (Include photo numbers here or on a sepa Buttressing on the Am. Beech in the upland is reduc	,	area				
3						

SOIL Sampling Point: WDUp1

Profile Des	cription: (Describe	to the depti	h needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es	_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
1-3	10YR 4/3	100					Loamy/Clayey		
3-12	10YR 6/2	70	7.5YR 5/8	30	С	M	Loamy/Clayey	Prominent redox concentra	ations
	-								
	-								
	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.	- 2
Hydric Soil					. (0.1)			rs for Problematic Hydric Soil	is":
— Histosol	` '		Sandy Gle					st Prairie Redox (A16)	
	oipedon (A2)		Sandy Re					Manganese Masses (F12)	
	stic (A3)		Stripped N	•	P)			Parent Material (F21)	
	n Sulfide (A4) d Layers (A5)		Dark Surfa Loamy Mu		oral (E1)			r Shallow Dark Surface (F22) er (Explain in Remarks)	
	ick (A10)		Loamy Gl					er (Explain in Remarks)	
	d Below Dark Surfac	ο (Δ11)	X Depleted						
ı — ·	ark Surface (A12)	C (ATT)	Redox Da	`	,		³ Indicato	rs of hydrophytic vegetation and	4
	fucky Mineral (S1)		Depleted I		` '			and hydrology must be present,	
	icky Peat or Peat (S	3)	Redox De					ss disturbed or problematic.	
	Layer (if observed)	•			- ()				
Type:	Layer (II Observed)	•							
Depth (ii	nches).						Hydric Soil Presen	t? Yes X M	No
· ` `			_			ļ	Tryano Com Frederic	100 <u>X</u>	
Remarks:	m is revised from M	idwest Regio	anal Sunnlement	Version 3	0 to incl	uda tha	NPCS Field Indicator	rs of Hydric Soils, Version 7.0, 2	2015
	://www.nrcs.usda.go	-						3 of Flydric Colla, Version 7.0, 2	.010
	ŭ		_				,		
HYDROLO	OGY								
	drology Indicators								
_	cators (minimum of		ed: check all that	annly)			Seconda	ary Indicators (minimum of two r	equired)
	Water (A1)	one is require	Water-Sta		ves (R9)			ace Soil Cracks (B6)	<u>cquirca)</u>
I —	ater Table (A2)		Aquatic Fa		` ′			nage Patterns (B10)	
Saturation			True Aqua					Season Water Table (C2)	
	larks (B1)		Hydrogen)		fish Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on L	iving R	oots (C3) Satu	ration Visible on Aerial Imagery	(C9)
Drift Dep	posits (B3)		Presence	of Reduc	ced Iron (C4)	Stur	ited or Stressed Plants (D1)	
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Geo	morphic Position (D2)	
Iron Dep	oosits (B5)		Thin Muck	Surface	(C7)		FAC	-Neutral Test (D5)	
Inundati	on Visible on Aerial	magery (B7)							
Sparsely	Vegetated Concav	e Surface (B	3)Other (Exp	olain in R	Remarks)				
Field Obser	vations:								
Surface Wat	ter Present? Ye	es	No X	Depth (i	nches): _				
Water Table	Present? Y	es	No X	Depth (i	nches):				
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes N	No X
	pillary fringe)						1		
Describe Re	corded Data (strean	n gauge, mor	nitoring well, aeria	al photos	, previous	sinspec	tions), if available:		
Domorto									
Remarks:									

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/1					
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Po	oint: WE	EWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	inge:			
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):			
Slope (%): Lat: 39.07472		Long: -	83.767009		Datum: NAD83	3	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percer	nt slopes			NWI classif	cation:		
Are climatic / hydrologic conditions on the site typical		f year?	Yes X	No (If no, exp			
Are Vegetation , Soil , or Hydrology							
Are Vegetation, Soil, or Hydrology	•					-	_
SUMMARY OF FINDINGS – Attach site m	-					features	s, etc.
Hydric Soil Present? Wetland Hydrology Present? Yes X N	lo lo		Sampled A		No		
Remarks:							
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:)	% Cover 30	Species? Yes	Status FACW	Dominance Test wor			
Liquidambar styraciflua Acer rubrum	50	Yes	FAC	Number of Dominant S Are OBL, FACW, or F	•	5	(A)
3. Ulmus americana	20	Yes	FACW	Total Number of Domi	-		-('')
4.	·			Across All Strata:	nant Species	5	(B)
5.				Percent of Dominant S	Species That		
		Total Cover		Are OBL, FACW, or F	4C: _	100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:	_)			Prevalence Index wo	rkohooti		
2.				Total % Cover of:		Itiply by:	
3.				OBL species 50		50	-
4.				FACW species 80			-
5.				FAC species 50) x 3 =	150	_
	<u> </u>	Total Cover		FACU species 0	x 4 =	0	
Herb Stratum (Plot size:)				UPL species 0	x 5 =	0	_
1. Carex lurida	50	Yes	OBL	Column Totals: 18	` ′ -	360	_(B)
2. Elymus virginicus	30	Yes	FACW	Prevalence Index =	· B/A =	2.00	-
3. 4.	· ——			Hydrophytic Vegetati	on Indicators		
				1 - Rapid Test for			
6.				X 2 - Dominance Te		ogotatio	
7.				X 3 - Prevalence Inc			
8.				4 - Morphological	Adaptations ¹ (Provide su	pporting
9.				data in Remark	s or on a sepa	rate sheet))
10				Problematic Hydro	phytic Vegeta	ition ¹ (Expl	ain)
Was da Visa Obadasa (District		Total Cover		¹ Indicators of hydric so			must
Woody Vine Stratum (Plot size:	.)			be present, unless dis	urbed or probl	iematic.	
2.				Hydrophytic Vegetation			
		Total Cover		Present? Yes_	X No		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)						
' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	,						

SOIL Sampling Point: WEWet1

Profile Desc	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
1-4	10YR 4/3	100					Loamy/Clayey	
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
l								
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle				Coas	st Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)
	ıck (A10)		Loamy Gle					
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2	
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and
I —	lucky Mineral (S1)		Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:			_					
Depth (in	nches):		_				Hydric Soil Presen	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	S/nrcs142	2p2_0512	93.doc	()	
HYDROLC	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drair	nage Patterns (B10)
Saturation	on (A3)		True Aqua	atic Plant	s (B14)		Dry-9	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cray	fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F			-		ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil	` '	morphic Position (D2)
	oosits (B5)		Thin Muck		, ,		FAC	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	Vegetated Concave	e Surface (B8	B)Other (Exp	plain in R	Remarks)		_	
Field Obser	vations:							
Surface Wat		es	No X		nches): _			
Water Table		es	No X		nches): _			
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strean	n gauge, mor	nitoring well, aeria	al photos	, previous	sinspec	ctions), if available:	
Remarks:								
i tomants.								

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/1					
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Poin	t: <u>W</u>	EUp1
Investigator(s): M. Perkins, C. Brendel		Section, 7	Township, Ra	ange:			
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):			
Slope (%): Lat: <u>39.074688</u>		Long:	-83.766655		Datum: NAD83		
Soil Map Unit Name: Clermont silt loam, 0 to 1 percer	nt slopes			NWI classif	ication:		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes X	No (If no, exp	olain in Remarks.	.)	_
Are Vegetation, Soil, or Hydrology	significantly of	disturbed? /	Are "Normal (Circumstances" present?	Yes X	No	_
Are Vegetation, Soil, or Hydrology	•						_
SUMMARY OF FINDINGS – Attach site m	-					eatures	s, etc.
Hydric Soil Present? Yes X N	lo X lo X		e Sampled A n a Wetland		No_X		
Remarks:		!					
VEGETATION – Use scientific names of pla	ants.						
To the state of th	Absolute	Dominant	Indicator	D. Committee Track word			
Tree Stratum (Plot size:) 1. Carya ovata	% Cover 20	Species? Yes	Status FACU	Dominance Test wor			
2. Acer rubrum	20	Yes	FAC	Number of Dominant S Are OBL, FACW, or F.	•	2	(A)
3. Quercus rubra	10	Yes	FACU	Total Number of Domi			- ()
4.				Across All Strata:	Пан орсою	5	(B)
5.				Percent of Dominant S	Species That		_
		=Total Cover		Are OBL, FACW, or F.	AC:	40.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:)			2	1 -14.		
1 2.				Prevalence Index wo Total % Cover of:		ply by:	
3				OBL species 0			-
4.				FACW species 0		0	-
5.				FAC species 40		120	_
	:	=Total Cover		FACU species 80	0 x 4 =	320	_
Herb Stratum (Plot size:)	_			UPL species 0	x 5 =	0	_
1. Rosa multiflora	50	Yes	FACU	Column Totals: 12	`	440	_(B)
2. Toxicodendron radicans	20	Yes	<u>FAC</u>	Prevalence Index =	= B/A =3.	.67	_
3.				Undraphytic Vocatati	ian Indicators		
4 5.				Hydrophytic Vegetati 1 - Rapid Test for		ratation	
6				2 - Dominance Te	, , ,	Jetation	
7.				3 - Prevalence Inc			
8.				4 - Morphological		ovide su	pporting
9.				data in Remark	s or on a separa	te sheet)	1
10				Problematic Hydro	ophytic Vegetatio	on¹ (Expla	ain)
Woody Vino Stratum (Dlot size:		=Total Cover		¹ Indicators of hydric so be present, unless dis			must
Woody Vine Stratum (Plot size:1.)			·	turnea or bronier	nauc.	
2.				Hydrophytic Vegetation			
	;	=Total Cover		Present? Yes_	No_	X	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)						
•							

SOIL Sampling Point: WEUp1

Profile Des	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-4	10YR 4/3	100					Loamy/Clayey	
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
								-
<u> </u>								
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
Hydric Soil								ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle					st Prairie Redox (A16)
	oipedon (A2)		Sandy Re					-Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					/ Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		3	
	ark Surface (A12)		Redox Da		, ,			ors of hydrophytic vegetation and
	flucky Mineral (S1)	_,	Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
	Layer (if observed)	:						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Presen	it? Yes X No
Remarks:								
		-						rs of Hydric Soils, Version 7.0, 2015
Errata. (nttp:	://www.nrcs.usda.go	//internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	(93.doc)	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	cators (minimum of	one is require					Seconda	ary Indicators (minimum of two required)
I —	Water (A1)		Water-Sta		` ′			ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)
Saturation			True Aqua					Season Water Table (C2)
	larks (B1)		Hydrogen					rfish Burrows (C8)
	nt Deposits (B2)		Oxidized F			-		uration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		nted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lied Soli		morphic Position (D2) c-Neutral Test (D5)
I — ·	oosits (B5) on Visible on Aerial I	magan/(P7)	Thin Muck		, ,		FAC	-Neutral Test (D5)
	Vegetated Concav	0 , ,						
		ouriace (De	Other (EX	Jiaiii iii i	terriarks)		-	
Field Obser			No. V	Danth (
Surface Wat		es	No X No X		nches): _			
Water Table Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	ogy Present? Yes No X
	pillary fringe)	es	NO X	Deptii (i			VVetiana riyaroro	ogy Present? Yes No X
	corded Data (strean	n dalide mor	nitoring well aeria	al photos	previous	sinsnec	tions) if available:	
	2000 (000000)	J		F5100	, 1000		,,,	
Remarks:								

Project/Site: Highland Solar		City/Cou	Sampling Date: 12/14/2017		
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point: WFWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	ange:	
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):	
Slope (%): Lat: 39.075526		Long:	83.763171		Datum: NAD83
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	slopes			NWI classit	fication:
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	plain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly o	listurbed? A	Are "Normal (Circumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (If needed, ex	xplain any answers in Re	marks.)
SUMMARY OF FINDINGS – Attach site ma	ap showir	ıg samplin	g point lo	ocations, transects	, important features, etc.
			Sampled A		No
Wetland Hydrology Present? Yes X No					
Remarks:	<u> </u>				
VEGETATION – Use scientific names of pla	nts.				
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test wo	rkshoot:
Tree Stratum (Plot size:) 1. Quercus palustris	40	Species? Yes	Status FACW	Number of Dominant	
2. Acer rubrum	20	Yes	FAC	Are OBL, FACW, or F	•
3. Ulmus rubra	20	Yes	FAC	Total Number of Dom	inant Species
4				Across All Strata:	6 (B)
5				Percent of Dominant	•
Capling/Shrub Stratum (Dlat size:	80 =	Total Cover		Are OBL, FACW, or F	AC: <u>83.3%</u> (A/B)
Sapling/Shrub Stratum (Plot size:	40	Yes	FACW	Prevalence Index wo	orkshoot:
2. Fagus grandifolia	10	Yes	FACU	Total % Cover of	
3.				OBL species 4	
4.				FACW species 8	0 x 2 = 160
5				FAC species 4	0 x 3 = 120
	50 =	Total Cover		FACU species 1	
Herb Stratum (Plot size:)	40		0.01	UPL species 0	
1. Carex lurida 2.	40	Yes	OBL	Column Totals: 17 Prevalence Index	(//
				Prevalence index	- D/A - <u>2.12</u>
4.				Hydrophytic Vegetat	ion Indicators:
5.					Hydrophytic Vegetation
6.		·		X 2 - Dominance Te	est is >50%
7				X 3 - Prevalence Inc	
8					Adaptations ¹ (Provide supporting
9					s or on a separate sheet)
10	40	Total Cover		I —	ophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:	40	- Total Cover			oil and wetland hydrology must sturbed or problematic.
1.	,				tariboa or probromation
2.				Hydrophytic Vegetation	
		Total Cover			X No
Remarks: (Include photo numbers here or on a separ	ate sheet.)			•	

SOIL Sampling Point: WFWet1

Profile Desc	cription: (Describ	e to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)		
Depth	Matrix			x Featur		. 3				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
1-4	10YR 4/3	100					Loamy/Clayey			
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent r	edox concen	trations
										-
¹ Type: C=C	oncentration, D=D	nletion RM=F	Reduced Matrix N	 2eM=2N	ked Sand		² l ocatio	n: PL=Pore Linin	a M=Matrix	
Hydric Soil		spietion, Min-i	veduced Matrix, I	/IO-IVIAS	Red Sand	Oranis		ors for Problema		
Histosol			Sandy Gle	ved Mat	rix (S4)			ast Prairie Redox	-	0110 .
	pipedon (A2)		Sandy Red					-Manganese Mas		
Black Hi			Stripped M					l Parent Material (. ,	
	n Sulfide (A4)		Dark Surfa	,	,			y Shallow Dark Si	. ,	
	d Layers (A5)		Loamy Mu		eral (F1)			er (Explain in Rer		
	ick (A10)		Loamy Gle	•	, ,				•	
	d Below Dark Surfa	ce (A11)	X Depleted N							
Thick Da	ark Surface (A12)		Redox Dar	k Surfac	e (F6)		³ Indicate	ors of hydrophytic	vegetation a	ınd
	lucky Mineral (S1)		Depleted [Dark Sur	face (F7)		wet	land hydrology mi	ust be preser	nt,
5 cm Mu	icky Peat or Peat (S3)	Redox Dep	oression	s (F8)		unle	ess disturbed or p	roblematic.	
Restrictive	Layer (if observed	l):								
Type:			_							
Depth (ir	nches):		_				Hydric Soil Presei	nt?	Yes X	No
	m is revised from //www.nrcs.usda.g						NRCS Field Indicato	ors of Hydric Soils	, Version 7.0	, 2015
HYDROLC)GY									
	drology Indicator	2.								
_	cators (minimum o		ed: check all that	apply)			Seconda	ary Indicators (mi	nimum of two	required)
	Water (A1)		X Water-Sta		ves (B9)			face Soil Cracks (
	iter Table (A2)		Aquatic Fa	una (B1	3)			inage Patterns (B	. ,	
Saturation	on (A3)		True Aqua	tic Plant	s (B14)		Dry-	-Season Water Ta	able (C2)	
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cra	yfish Burrows (C8	3)	
Sedimer	nt Deposits (B2)		Oxidized F			_	oots (C3) Sate	uration Visible on	Aerial Image	ery (C9)
	oosits (B3)		Presence					nted or Stressed I	` '	
	at or Crust (B4)		Recent Iro			lled Soil	` ' —	omorphic Position		
	oosits (B5)	(0.7)	Thin Muck				FAC	C-Neutral Test (D	5)	
	on Visible on Aeria									
	Vegetated Conca	ve Surrace (Bo	B)Other (Exp	nain in R	(emarks		1			
Field Obser		/os	No. V	Donth /:	nohoo\.		1			
Surface Wat Water Table		/es /es			nches): _		1			
Saturation P		res res		Depth (i Depth (i	_		Wetland Hydrolo	nav Present?	Yes X	No
(includes cap			110 <u>X</u>	Dopui (i			Troughand Tryal Old		. 33 /	
		m gauge, mor	nitoring well, aeria	l photos	, previous	s inspec	tions), if available:			
	(23,00	J J.,o.	J 2, 2.3.1.C	,	, ,	- F- 3-0	-,,			
Remarks:										

Project/Site: Highland Solar		City/Cou	12/14/2017			
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WFUp1
Investigator(s): M. Perkins, C. Brendel		Section, 7	 Γownship, Ra	ange:		
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):	:	
Slope (%): Lat: 39.075493		Long: -	83.762763		Datum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percer	nt slopes			NWI classi	ification:	
Are climatic / hydrologic conditions on the site typical	for this time o	of year?	Yes X	No (If no, ex	plain in Remarks.)	_
Are Vegetation, Soil, or Hydrology	significantly o	disturbed? F	Are "Normal (Circumstances" present	? Yes X No	·
Are Vegetation, Soil, or Hydrology	naturally prol	olematic? (If needed, ex	xplain any answers in Re	emarks.)	<u>-</u>
SUMMARY OF FINDINGS – Attach site m	nap showir	ng samplin	ng point lo	ocations, transects	s, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes N	No X	Is the	Sampled A	rea		
	No		n a Wetland		No X	
Wetland Hydrology Present? Yes N	No X			_	· —	
Remarks:						
VEGETATION – Use scientific names of pla		Distinguit	lo diseason	.		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1. Carya ovata	60	Yes	FACU	Number of Dominant		
2. Acer rubrum	20	Yes	FAC	Are OBL, FACW, or I	•	2 (A)
3.				Total Number of Dom	ninant Species	
4				Across All Strata:	·	5 (B)
5				Percent of Dominant	•	
C " (C) I C) to the (D) to the control of the contr	80=	=Total Cover		Are OBL, FACW, or I	FAC: 40	0.0% (A/B)
Sapling/Shrub Stratum (Plot size:	_) 30	Vos	EACH	Prevalence Index w		
Fagus grandifolia 2.		Yes	FACU	Total % Cover o		, hu:
3.				-	0 x 1 =	0
4.					0 x 2 =	0
5.						120
	30	=Total Cover	•			560
Herb Stratum (Plot size:)					0 x 5 =	0
1. Rosa multiflora	50	Yes	FACU	Column Totals: 18	80 (A) 6	680 (B)
2. Toxicodendron radicans	20	Yes	FAC	Prevalence Index	= B/A = 3.78	}
3						
4.				Hydrophytic Vegeta		
5.	-				r Hydrophytic Veget	ation
6.	-			2 - Dominance To 3 - Prevalence In		
7. 8.					idex is ≤3.0 Il Adaptations¹ (Prov	ride sunnorting
	-			l — · · · ·	ks or on a separate	
10.	. ——				rophytic Vegetation ¹	
	70	=Total Cover		¹ Indicators of hydric s		` ' '
Woody Vine Stratum (Plot size:				be present, unless dis	•	
1.	<u> </u>			Hydrophytic		
2.				Vegetation		
	:	=Total Cover			No X	_
Remarks: (Include photo numbers here or on a sepa	arate sheet.)					

SOIL Sampling Point: WFUp1

Profile Des	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-4	10YR 4/3	100					Loamy/Clayey	
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
								-
<u> </u>								
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
Hydric Soil								ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle					st Prairie Redox (A16)
	oipedon (A2)		Sandy Re					-Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					/ Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		3	
	ark Surface (A12)		Redox Da		, ,			ors of hydrophytic vegetation and
	flucky Mineral (S1)	_,	Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
	Layer (if observed)	:						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Presen	it? Yes X No
Remarks:								
		-						rs of Hydric Soils, Version 7.0, 2015
Errata. (nttp:	://www.nrcs.usda.go	//internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	93.000	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	cators (minimum of	one is require					Seconda	ary Indicators (minimum of two required)
I —	Water (A1)		Water-Sta		` ′			ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)
Saturation			True Aqua					Season Water Table (C2)
	larks (B1)		Hydrogen					rfish Burrows (C8)
	nt Deposits (B2)		Oxidized F			-		uration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		nted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lied Soli		morphic Position (D2) c-Neutral Test (D5)
I — ·	oosits (B5) on Visible on Aerial I	magan/(P7)	Thin Muck		, ,		FAC	-Neutral Test (D5)
	Vegetated Concav	0 , ,						
		ouriace (De	Other (EX	Jiaiii iii i	terriarks)		-	
Field Obser			No. V	Danth (
Surface Wat		es	No X No X		nches): _			
Water Table Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	ogy Present? Yes No X
	pillary fringe)	es	NO X	Deptii (i			VVetiana riyaroro	ogy Present? Yes No X
	corded Data (strean	n dalide mor	nitoring well aeria	al photos	previous	sinsnec	tions) if available:	
	2000 (000000)	J		F5100	, 1000		,,,	
Remarks:								

Project/Site: Highland Solar		City/Cour	12/14/2017			
Applicant/Owner: Hecate Energy Highland LLC			· 	State: OH	Sampling Point:	WGWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	_ Γownship, Ra	ange:		
Landform (hillside, terrace, etc.):		i	Local relief (d	concave, convex, none):		
Slope (%): Lat: 39.079645		Long: -	83.780417		Datum: NAD83	
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to	o 2 percent s	slopes		NWI classi	fication: PSS1A	
Are climatic / hydrologic conditions on the site typical fo			Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation , Soil , or Hydrology s	significantly c					ı
Are Vegetation, Soil, or Hydrologyn						
SUMMARY OF FINDINGS – Attach site ma						ures, etc.
Hydrophytic Vegetation Present? Yes X No)	Is the	Sampled A	rea		
			n a Wetland		No	
Wetland Hydrology Present? Yes X No						
Remarks:						
Observations consistent with WGWet2: 39.082588, -8	3.778048					
NECETATION III asiastica asaas stala						
VEGETATION – Use scientific names of plan		Dominant	Indicator	T		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Status	Dominance Test wo	rksheet:	
1. Quercus palustris	30	Yes	FACW	Number of Dominant	Snecies That	
2. Acer rubrum	30	Yes	FAC	Are OBL, FACW, or F		5 (A)
3. Liquidambar styraciflua	30	Yes	FACW	Total Number of Dom	inant Species	
4.				Across All Strata:	•	6 (B)
5				Percent of Dominant	Species That	
	90 =	=Total Cover		Are OBL, FACW, or F	AC: 83	.3% (A/B)
Sapling/Shrub Stratum (Plot size:)			-: 2144			
1. Lindera benzoin	40	Yes	FACW	Prevalence Index wo		
2. Fagus grandifolia	30	Yes	FACU	Total % Cover of		_
3				OBL species 7		70
5.				FACW species 10 FAC species 3		00 90
5	70 =	=Total Cover		FACU species 3		20
Herb Stratum (Plot size:)	7.0	-10101 0010.		UPL species (0
1. Carex lurida	70	Yes	OBL	Column Totals: 23		80 (B)
2.				Prevalence Index	` ′	
3.						
4.				Hydrophytic Vegetat	ion Indicators:	
5.				1 - Rapid Test for	Hydrophytic Vegeta	ation
6.				X 2 - Dominance Te	est is >50%	
7.				X 3 - Prevalence Inc		
8					Adaptations ¹ (Provide	
9					ks or on a separate s	· · · · · · · · · · · · · · · · · · ·
10				Problematic Hydr	ophytic Vegetation ¹	(Explain)
		=Total Cover		¹ Indicators of hydric s	•	
Woody Vine Stratum (Plot size:)				be present, unless dis	turbed or problemat	ic.
1.				Hydrophytic		
2		=Total Cover		Vegetation	V No	
		=10tai Covei		Present? Yes	No	-
Remarks: (Include photo numbers here or on a separa	ate sheet.)					

SOIL Sampling Point: WGWet1

Profile Des	cription: (Describ	e to the dept	h needed to doc	ument tl	he indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-4	10YR 4/3	100					Loamy/Clayey	
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
								_
l								
¹ Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, N	√S=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle				Coas	t Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)
	stic (A3)		Stripped N	•	3)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfa	ce (A11)	X Depleted I	`	,		2	
	ark Surface (A12)		Redox Da		` '			s of hydrophytic vegetation and
1 <u> </u>	lucky Mineral (S1)		Depleted [and hydrology must be present,
5 cm Mu	icky Peat or Peat (S3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed):						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Present	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.g	ov/Internet/FS	SE_DOCUMENTS	/nrcs142	2p2_0512	93.doc	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators	s:						
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ives (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		X Drair	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-9	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cray	fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence			,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil		norphic Position (D2)
	oosits (B5)		Thin Muck		. ,		FAC-	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	/ Vegetated Conca	e Surface (B	8)Other (Exp	olain in R	Remarks)		1	
Field Obser								
Surface Wat		'es			nches): _			
Water Table		'es			nches):			
Saturation P		'es	No X	Depth (i	nches): _		Wetland Hydrolog	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strea	ті gauge, moi	nitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:	
Remarks:								
i tomains.								

Project/Site: Highland Solar		City/Cour	12/14/2017			
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WGUp1
Investigator(s): M. Perkins, C. Brendel		Section, T	 Гownship, Ra	ange:		<u>-</u>
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):		
Slope (%): Lat: 39.081516		Long: -	83.780169		Datum: NAD83	
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 t	to 2 percent s	slopes		NWI classi	fication:	
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes_X	No (If no, ex	plain in Remarks.)	
Are Vegetation , Soil , or Hydrology)
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS – Attach site ma						tures, etc.
Hydrophytic Vegetation Present? Yes No	o X	Is the	Sampled A	rea		
	0		n a Wetland		No X	
Wetland Hydrology Present? Yes No	o X				·	
Remarks:						
Observations typical for WGUp2: 39.084051, -83.778	613					
VEGETATION – Use scientific names of pla		Deminant	1 li - otor			
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
1. Carya ovata	30	Yes	FACU	Number of Dominant		
2. Acer rubrum	20	Yes	FAC	Are OBL, FACW, or F	•	2 (A)
3. Fagus grandifolia	20	Yes	FACU	Total Number of Dom	ninant Species	
4				Across All Strata:	<u> </u>	6 (B)
5				Percent of Dominant	•	
	=	=Total Cover		Are OBL, FACW, or F	FAC: 33	3.3% (A/B)
Sapling/Shrub Stratum (Plot size:)	V-2	540H	December 201	114-	
Fagus grandifolia 2.	30	Yes	<u>FACU</u>	Prevalence Index wo		. h
3.				-		20
1						0
5.						60
	30 =	=Total Cover		· —		520
Herb Stratum (Plot size:)					0 x 5 =	0
1. Rosa multiflora	50	Yes	FACU		70 (A) 6	600 (B)
2. Carex lurida	20	Yes	OBL	Prevalence Index	= B/A = 3.53	
3.						
4				Hydrophytic Vegetat		
5.					r Hydrophytic Veget	ation
6.				2 - Dominance Te		
7.				3 - Prevalence In	ldex is ≤3.0 ' I Adaptations¹ (Provi	:-la aupparting
9.					ks or on a separate	
10.					rophytic Vegetation ¹	· · · · · · · · · · · · · · · · · · ·
10	70 =	=Total Cover		¹ Indicators of hydric s		` ' '
Woody Vine Stratum (Plot size:		-10101 0010.		be present, unless dis	•	
1.	,			·	744.000	tic.
2.				Hydrophytic Vegetation		
		=Total Cover			No X	_
Remarks: (Include photo numbers here or on a separ	rate sheet.)					
·	•					

SOIL Sampling Point: WGUp1

Profile Des	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-4	10YR 4/3	100					Loamy/Clayey	
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
								-
<u> </u>								
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
Hydric Soil								ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle					st Prairie Redox (A16)
	oipedon (A2)		Sandy Re					-Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					/ Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		3	
	ark Surface (A12)		Redox Da		, ,			ors of hydrophytic vegetation and
	flucky Mineral (S1)	_,	Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
	Layer (if observed)	:						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Presen	it? Yes X No
Remarks:								
		-						rs of Hydric Soils, Version 7.0, 2015
Errata. (nttp:	://www.nrcs.usda.go	//internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	93.000	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
	cators (minimum of	one is require					Seconda	ary Indicators (minimum of two required)
I —	Water (A1)		Water-Sta		` ′			ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)
Saturation			True Aqua					Season Water Table (C2)
	larks (B1)		Hydrogen					rfish Burrows (C8)
	nt Deposits (B2)		Oxidized F			-		uration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		nted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			ilea Soil		morphic Position (D2) c-Neutral Test (D5)
I — ·	oosits (B5) on Visible on Aerial I	magany (P7)	Thin Muck		, ,		FAC	-Neutral Test (D5)
	Vegetated Concav	0 , ,						
		ouriace (De	Other (EX	Jiaiii iii i	terriarks)		-	
Field Obser			No. V	Danth (
Surface Wat		es	No X No X		nches): _			
Water Table Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	ogy Present? Yes No X
	pillary fringe)	es	NO X	Deptii (i			VVetiana riyaroro	ogy Present? Yes No X
	corded Data (strean	n dalide mor	nitoring well aeria	al photos	previous	sinsnec	tions) if available:	
	2000 (000000)	J		F5100	, 1000		,,,	
Remarks:								

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/14					
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WHWet1	
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	ange:			
Landform (hillside, terrace, etc.):			Local relief (c	concave, convex, none):			
Slope (%): Lat: 39.087931		Long: -	83.761723		Datum: NAD83		
Soil Map Unit Name: Clermont silt loam, 0 to 1 percer	nt slopes			NWI classifi	ication:		
Are climatic / hydrologic conditions on the site typical	for this time of	year?	Yes X	No (If no, exp	lain in Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly dis	sturbed? A	Are "Normal C	Circumstances" present?	Yes X No	o	
Are Vegetation, Soil, or Hydrology	_			cplain any answers in Ren	<u> </u>		
SUMMARY OF FINDINGS – Attach site m			g point lo	cations, transects,	important fea	tures, etc.	
Hydric Soil Present? Yes X	No No		Sampled Ain a Wetland?		No		
Remarks:						_	
<u> </u>							
VEGETATION – Use scientific names of plants		Developet	le disease	,			
<u>Tree Stratum</u> (Plot size:)		Dominant Species?	Indicator Status	Dominance Test work	ksheet:		
1. Quercus palustris	10	No	FACW	Number of Dominant S			
2. Acer rubrum	70	Yes	FAC	Are OBL, FACW, or F	•	2 (A)	
3.				Total Number of Domi	nant Species		
4.				Across All Strata:		3 (B)	
5	80 =T	Total Cover		Percent of Dominant S	•	2 70/ /A/R\	
Sapling/Shrub Stratum (Plot size:		Olai Covei		Are OBL, FACW, or F	AC	6.7% (A/B)	
1. Fagus grandifolia	_/ 20	Yes	FACU	Prevalence Index wo	rksheet:		
2.				Total % Cover of:	Multiply	by:	
3.				OBL species 0		0	
4				FACW species 50		100	
5	;			FAC species 70		210	
(Diet eine	20 =T	Total Cover		FACU species 20		80	
Herb Stratum (Plot size:) 1. Elymus virginicus	40	Yes	FACW	UPL species 0 Column Totals: 14		0 390 (B)	
2.	. 40	165	TACVV	Prevalence Index =	`` /	`` ′	
3				Hydrophytic Vegetati	Indicatore:		
4 5.					ion indicators: Hydrophytic Veget	ation	
6				X 2 - Dominance Te		allon	
7.				X 3 - Prevalence Ind			
8.	·				Adaptations ¹ (Prov	ide supporting	
9.				data in Remark	s or on a separate	sheet)	
10				Problematic Hydro	ophytic Vegetation ¹	(Explain)	
Woody Vine Stratum (Plot size:		Total Cover		¹ Indicators of hydric so be present, unless dist	•		
1.	·′ ,			Hydrophytic			
2.				Vegetation			
	=T	Total Cover		Present? Yes_	X No	_	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)						

SOIL Sampling Point: WHWet1

Profile Des	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)			
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks			
1-4	10YR 4/3	100					Loamy/Clayey				
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations			
l											
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :			
Histosol	(A1)		Sandy Gle				Coas	st Prairie Redox (A16)			
— Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)			
	stic (A3)		Stripped N	•	6)			Parent Material (F21)			
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)			
	ıck (A10)		Loamy Gle								
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2				
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and			
1 <u> </u>	lucky Mineral (S1)		Depleted I				wetland hydrology must be present,				
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.			
Restrictive	Layer (if observed)	:									
Type:			_								
Depth (ii	nches):		_				Hydric Soil Present	t? Yes <u>X</u> No			
Remarks:											
		-						s of Hydric Soils, Version 7.0, 2015			
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	S/nrcs142	2p2_0512	93.doc	()				
HYDROLO	OGY										
Wetland Hy	drology Indicators										
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)			
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)			
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drainage Patterns (B10)				
Saturation	on (A3)		True Aqua	atic Plant	s (B14)		Dry-Season Water Table (C2)				
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))		fish Burrows (C8)			
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)			
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)			
	oosits (B5)		Thin Muck		, ,		FAC	-Neutral Test (D5)			
	on Visible on Aerial										
Sparsely	/ Vegetated Concav	e Surface (B8	B)Other (Exp	plain in R	Remarks)		_				
Field Obser	vations:										
Surface Wat		es	No X		nches): _						
Water Table		es	No X		nches): _						
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolog	gy Present? Yes X No			
	pillary fringe)										
Describe Re	corded Data (strean	n gauge, mor	nitoring well, aeria	al photos	, previous	sinspec	ctions), if available:				
Remarks:											
i tomains.											

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/14					
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WHUp1	
Investigator(s): M. Perkins, C. Brendel		Section, T	rownship, Ra	ange:			
Landform (hillside, terrace, etc.):		!	Local relief (d	concave, convex, none):			
Slope (%): Lat: 39.08807		Long:	83.761665		Datum: NAD83		
Soil Map Unit Name: Atlas silt loam, 2 to 6 percent slo	pes, moderat	tely eroded		NWI classif	ication:		
Are climatic / hydrologic conditions on the site typical	for this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly of	disturbed? F	Are "Normal (Circumstances" present?	Yes X N	lo	
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (If needed, ex	κplain any answers in Rer	marks.)		
SUMMARY OF FINDINGS – Attach site m	ap showir	ıg samplin	g point lo	ocations, transects,	, important fe	atures, etc	
Hydric Soil Present? Yes X N	lo X lo X		Sampled A		No X		
Remarks:		•					
VEGETATION – Use scientific names of pla	ants.						
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator	Dominance Test wor	rkahaat:		
Tree Stratum (Plot size:) 1. Fagus grandifolia	% Cover 30	Species? Yes	Status FACU				
Acer rubrum	10	No	FAC	Number of Dominant S Are OBL, FACW, or F	•	1 (A)	
3. Carya ovata	20	Yes	FACU	Total Number of Domi			
4.				Across All Strata:		4 (B)	
5				Percent of Dominant S	•		
7 10 10 10 10 10 10 10 10 10 10 10 10 10	60=	=Total Cover		Are OBL, FACW, or F	AC: 2	25.0% (A/B)	
Sapling/Shrub Stratum (Plot size:	_) 	Yes	FACU	Prevalence Index wo			
2. 1. Fagus grandifolia 2.		162	FACU	Total % Cover of:		v hv	
3.				OBL species 0		0	
4				FACW species 0		0	
5.				FAC species 50		150	
	20 =	=Total Cover		FACU species 70		280	
Herb Stratum (Plot size:)				UPL species 0	x 5 =	0	
1. Smilax rotundifolia	40	Yes	FAC	Column Totals: 12	`	430 (B)	
2				Prevalence Index =	= B/A = <u>3.5</u>	8	
3	. ——						
4				Hydrophytic Vegetati			
5					Hydrophytic Vege	tation	
6.				2 - Dominance Te 3 - Prevalence Inc			
7				3 - Prevalence Inc		vido supportir	
8. 9.	· 			<u> </u>	s or on a separate		
10.				Problematic Hydro	•		
10	40 =	=Total Cover		¹ Indicators of hydric so		, , ,	
Woody Vine Stratum (Plot size:		1000.		be present, unless dis	•		
1.				Hydrophytic	·		
2.				Vegetation			
	:	=Total Cover		Present? Yes	No_X	_	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			J			

SOIL Sampling Point: WHUp1

Profile Des	cription: (Describe	to the depti	needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)			
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
1-4	10YR 4/3	100					Loamy/Clayey				
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations			
								-			
l 											
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.			
Hydric Soil								ors for Problematic Hydric Soils ³ :			
Histosol	(A1)		Sandy Gle					st Prairie Redox (A16)			
	oipedon (A2)		Sandy Re					-Manganese Masses (F12)			
	stic (A3)		Stripped N	•	6)			Parent Material (F21)			
	n Sulfide (A4)		Dark Surfa					/ Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)			
	ıck (A10)		Loamy Gle								
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		3				
	ark Surface (A12)		Redox Da		, ,			ors of hydrophytic vegetation and			
	flucky Mineral (S1)	_,	Depleted I				wetland hydrology must be present,				
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.			
	Layer (if observed)	:									
Type:			_								
Depth (ii	nches):		_				Hydric Soil Presen	it? Yes X No			
Remarks:											
		-						rs of Hydric Soils, Version 7.0, 2015			
Errata. (nttp:	://www.nrcs.usda.go	//internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	(93.doc)	()				
HYDROLO	OGY										
Wetland Hy	drology Indicators:										
	cators (minimum of	one is require					Seconda	ary Indicators (minimum of two required)			
I —	Water (A1)		Water-Sta		` ′		Surface Soil Cracks (B6)				
	ater Table (A2)		Aquatic Fa				Drainage Patterns (B10)				
Saturation			True Aqua				Dry-Season Water Table (C2)				
	larks (B1)		Hydrogen					rfish Burrows (C8)			
	nt Deposits (B2)		Oxidized F			-		uration Visible on Aerial Imagery (C9)			
	posits (B3)		Presence		,	,		nted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Iro			ilea Soil		morphic Position (D2) c-Neutral Test (D5)			
I — ·	oosits (B5) on Visible on Aerial I	magan/(P7)	Thin Muck		, ,		FAC	-Neutral Test (D5)			
	Vegetated Concav	0 , ,									
		ouriace (De	Other (EX	Jiaiii iii i	terriarks)		-				
Field Obser			NI- V	Danth (
Surface Wat		es	No X No X		nches): _						
Water Table Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	ogy Present? Yes No X			
	pillary fringe)	es	NO X	Deptii (i			VVetiana riyaroro	ogy Present? Yes No X			
	corded Data (strean	n dalide mor	nitoring well aeria	al photos	previous	sinsnec	tions) if available:				
	2000 (000000)	J		F5100	, 1000		,,,				
Remarks:											

Project/Site: Highland Solar		City/Cour	12/14/2017					
Applicant/Owner: Hecate Energy Highland LLC			State: OH Sampling Point: WIWet					
Investigator(s): M. Perkins, C. Brendel		Section, T	Township, Ra	ange:				
Landform (hillside, terrace, etc.):		!	Local relief (d	concave, convex, none):				
Slope (%): Lat: <u>39.090607</u>		Long:	83.768946		Datum: NAD83			
Soil Map Unit Name: Westboro-Schaffer silt loams, 0 to	o 2 percent s	slopes		NWI classi	fication:			
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)			
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? A	re "Normal (Circumstances" present?	Yes X No	· <u> </u>		
Are Vegetation, Soil, or Hydrologyn	naturally prob	olematic? (If needed, ex	cplain any answers in Re	marks.)			
SUMMARY OF FINDINGS – Attach site ma	ıp showir	ıg samplin	ıg point lo	ocations, transects	, important fea	tures, etc.		
Hydrophytic Vegetation Present? Yes X No)	Is the	Sampled A	rea				
Hydric Soil Present? Yes X No			n a Wetlandî		No			
Wetland Hydrology Present? Yes X No	,							
Remarks:	700470							
Observations consistent with WIWet2: 39.089072, -83	.7681/3							
VEGETATION – Use scientific names of pla	nto							
VEGETATION - Use scientine names of plan	Absolute	Dominant	Indicator	T				
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test wo	rksheet:			
Liquidambar styraciflua	50	Yes	FACW	Number of Dominant				
2. Quercus palustris	20	Yes	FACW	Are OBL, FACW, or F	:AC:	5 (A)		
3. Nyssa sylvatica	20	Yes	<u>FAC</u>	Total Number of Dom		~ (D)		
5.				Across All Strata:		6 (B)		
5	90 =	=Total Cover		Percent of Dominant : Are OBL, FACW, or F	•	3.3% (A/B)		
Sapling/Shrub Stratum (Plot size:)	1	-10tal 00.1.	ļ	AIC OBE, 17.5,	AC	,		
1. Fagus grandifolia	20	Yes	FACU	Prevalence Index wo	orksheet:			
2. Lindera benzoin	60	Yes	FACW	Total % Cover of	f: Multiply	by:		
3.				OBL species 2	0 x 1 =	20		
4.				FACW species 13	30 x 2 = 2	260		
5						60		
	80 =	=Total Cover	ļ			80		
Herb Stratum (Plot size:)	20	Vaa	ODI	UPL species (0 (B)		
1. Carex lurida	20	Yes	OBL	Column Totals: 19	`	120 (B)		
2. 3.				Prevalence Index	= B/A = Z.Z1			
				Hydrophytic Vegetat	ion Indicators:			
5.					· Hydrophytic Vegeta	ation		
6.				X 2 - Dominance Te				
7.			-	X 3 - Prevalence Inc				
8.					Adaptations ¹ (Provi			
9.					ks or on a separate			
10				Problematic Hydr	ophytic Vegetation ¹	(Explain)		
		=Total Cover	ļ	¹ Indicators of hydric s	•			
Woody Vine Stratum (Plot size:)	r.		ļ	be present, unless dis	turbed or problema	tic.		
1.				Hydrophytic				
2		=Total Cover		Vegetation	V No			
		=Total Cover		Present? Yes	X No	_		
Remarks: (Include photo numbers here or on a separa	ate sheet.)							

SOIL Sampling Point: WIWet1

Profile Desc	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)			
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks			
1-4	10YR 4/3	100					Loamy/Clayey				
4-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations			
l											
¹ Type: C=C	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :			
Histosol	(A1)		Sandy Gle				Coas	st Prairie Redox (A16)			
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)			
	stic (A3)		Stripped N	•	6)			Parent Material (F21)			
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)			
	ıck (A10)		Loamy Gle								
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	,	,		2				
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and			
I —	lucky Mineral (S1)		Depleted I				wetland hydrology must be present,				
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.			
Restrictive	Layer (if observed)	:									
Type:			_								
Depth (in	nches):		_				Hydric Soil Presen	t? Yes X No			
Remarks:											
		-						s of Hydric Soils, Version 7.0, 2015			
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	S/nrcs142	2p2_0512	93.doc	()				
HYDROLC	OGY										
Wetland Hy	drology Indicators:										
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)			
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)			
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drainage Patterns (B10)				
Saturation	on (A3)		True Aqua	atic Plant	s (B14)		Dry-Season Water Table (C2)				
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Crayfish Burrows (C8)				
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)			
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)			
	at or Crust (B4)		Recent Iro			lled Soil	` '	morphic Position (D2)			
	oosits (B5)		Thin Muck		, ,		FAC	-Neutral Test (D5)			
	on Visible on Aerial										
Sparsely	/ Vegetated Concave	e Surface (B8	B)Other (Exp	plain in R	Remarks)		_				
Field Obser	vations:										
Surface Wat		es	No X		nches): _						
Water Table		es	No X		nches): _						
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No			
	pillary fringe)										
Describe Re	corded Data (strean	ı gauge, mor	iitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:				
Remarks:											
i tomants.											

Project/Site: Highland Solar		City/Cour	Sampling Date:	12/15/2017				
Applicant/Owner: Hecate Energy Highland LLC		State: OH Sampling Point: WJWet						
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	ange:				
Landform (hillside, terrace, etc.):		l	Local relief (concave, convex, none):					
Slope (%): Lat: 39.084985		Long:{	83.800264		Datum: NAD83			
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	t slopes			NWI classi	fication:			
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)			
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? A	re "Normal (Circumstances" present?	Yes X No)		
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (I	If needed, ex	kplain any answers in Re	marks.)			
SUMMARY OF FINDINGS – Attach site ma	ap showir	ıg samplin	g point lo	ocations, transects	, important fea	tures, etc.		
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea				
	<u> </u>		n a Wetland		No			
Wetland Hydrology Present? Yes X No								
Remarks:								
VEGETATION – Use scientific names of pla								
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet:			
1.	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Оросили	0.00.00	Number of Dominant				
2.				Are OBL, FACW, or F	•	2 (A)		
3.				Total Number of Dom	inant Species			
4				Across All Strata:	· ———	3 (B)		
5				Percent of Dominant	•	: (A/D)		
Complete Charter (Plot gize)	·=	=Total Cover		Are OBL, FACW, or F	AC: <u>66</u>	6.7% (A/B)		
Sapling/Shrub Stratum (Plot size:) 1.	20	Yes		Prevalence Index wo	arkshoot:			
	20	163		Total % Cover of		hv:		
3.				-		30		
4.						20		
5.					0 x 3 = 2	240		
	20 =	=Total Cover		FACU species 0) x 4 =	0		
Herb Stratum (Plot size:)				UPL species 0) x 5 =	0		
1. Panicum virgatum	80	Yes	FAC	Column Totals: 12	. ,	290 (B)		
2. Juncus effusus	30	Yes	OBL	Prevalence Index	= B/A = <u>2.42</u>			
3. Carex grayi	10	No	FACW					
4				Hydrophytic Vegetat		e		
5.				X 2 - Dominance Te	Hydrophytic Vegeta	ation		
6 7.				X 3 - Prevalence Inc				
Q					dex is ≤3.0 Adaptations¹ (Provi	ide supportina		
9.					ks or on a separate			
10.				Problematic Hydr	ophytic Vegetation ¹	(Explain)		
	120 =	=Total Cover		¹ Indicators of hydric s		, , ,		
Woody Vine Stratum (Plot size:)			be present, unless dis	•			
1.				Hydrophytic				
2				Vegetation				
		=Total Cover		Present? Yes	No	<u> </u>		
Remarks: (Include photo numbers here or on a separ	rate sheet.)							

SOIL Sampling Point: WJWet1

Profile Des	cription: (Describe t	o the depth	needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)			
Depth	Matrix			x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
1-6	10YR 5/2	60	7.5YR 5/6	40			Loamy/Clayey				
6-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations			
l 											
¹ Type: C=C	Concentration, D=Depl	etion, RM=R	educed Matrix, N	/IS=Mas	ked Sand	Grains		n: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators:							rs for Problematic Hydric Soils ³ :			
Histosol	` '		Sandy Gle	-	rix (S4)			st Prairie Redox (A16)			
Histic E	pipedon (A2)		Sandy Red					-Manganese Masses (F12)			
	istic (A3)		Stripped M	`	6)			Parent Material (F21)			
_	en Sulfide (A4)		Dark Surfa	` '				Shallow Dark Surface (F22)			
	d Layers (A5)		Loamy Mu	-	. ,		Othe	er (Explain in Remarks)			
	uck (A10)		Loamy Gle								
I — ·	d Below Dark Surface	(A11)	X Depleted N	`	,		3				
	ark Surface (A12)		Redox Dai		` '		³ Indicators of hydrophytic vegetation and				
	Mucky Mineral (S1)		Depleted [` ′		wetland hydrology must be present,				
	ucky Peat or Peat (S3)	Redox De	oression	s (F8)		unie	ss disturbed or problematic.			
	Layer (if observed):										
Type:			_				Health Oall Donas	Var. V. Na			
Depth (i	ncnes):		_				Hydric Soil Presen	t? Yes X No			
Remarks:											
	rm is revised from Mic ://www.nrcs.usda.gov/							rs of Hydric Soils, Version 7.0, 2015			
Litata. (IIII)	.//www.mcs.usua.gov/	internet/i of	DOCOMENTO	/11103142	.ρ2_0512	.33.d0c/	()				
HYDROLO	OGY										
Wetland Hy	drology Indicators:										
1 -	icators (minimum of o	ne is require	d: check all that	apply)			Seconda	ary Indicators (minimum of two required)			
	Water (A1)	10 10 TOQUITO	Water-Sta		ves (B9)			ace Soil Cracks (B6)			
	ater Table (A2)		Aquatic Fa					nage Patterns (B10)			
X Saturation			True Aqua				Dry-Season Water Table (C2)				
	Marks (B1)		Hydrogen		. ,)		rfish Burrows (C8)			
	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)			
Drift De	posits (B3)		Presence	of Reduc	ed Iron (C4)	Stur	nted or Stressed Plants (D1)			
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Geo	morphic Position (D2)			
Iron Der	posits (B5)		Thin Muck	Surface	(C7)		FAC	-Neutral Test (D5)			
Inundati	on Visible on Aerial In	nagery (B7)	Gauge or '	Well Dat	a (D9)						
Sparsely	y Vegetated Concave	Surface (B8) Other (Exp	olain in R	lemarks)						
Field Obser	rvations:										
Surface Wa	ter Present? Yes	s	No X	Depth (i	nches): _						
Water Table	Present? Yes	3	No X	Depth (i	nches):						
Saturation F	Present? Yes	s <u>X</u>	No	Depth (i	nches):	0	Wetland Hydrolo	gy Present? Yes X No No			
(includes ca	pillary fringe)										
Describe Re	ecorded Data (stream	gauge, moni	toring well, aeria	l photos	, previou	s inspec	tions), if available:				
Remarks:											

Project/Site: Highland Solar		_ City/Cour	nty: Buford/l	Highland	Sampling Date	: 12/15	5/2017
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point	:: <u>W</u> K	KWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	inge:			
Landform (hillside, terrace, etc.):		l	_ocal relief (c	concave, convex, none):			
Slope (%): Lat: 39.077531		Long: -{	83.800468		Datum: NAD83		
Soil Map Unit Name: Westboro-Schaffer silt loams, 0	to 2 percent slo	pes		NWI classif	ication: PFO1A (partial)	
Are climatic / hydrologic conditions on the site typical			Yes X	No (If no, exp	lain in Remarks.)	
Are Vegetation, Soil, or Hydrology							
Are Vegetation, Soil, or Hydrology				plain any answers in Rer			-
SUMMARY OF FINDINGS – Attach site m				•	,	atures	s, etc.
Hydric Soil Present? Yes X	No No		Sampled Ar		No		
Remarks: Observations consistent with WKWet2: 39.07928, -8	3.799796						
VEGETATION – Use scientific names of pl	ants.						
Tron Stratum (Diat size:		Dominant	Indicator	Dominance Test wor	kahaati		
Tree Stratum (Plot size:) 1. Liquidambar styraciflua	% Cover 30	Species? Yes	Status FACW				
2. Acer rubrum	30	Yes	FAC	Number of Dominant S Are OBL, FACW, or FA	•	4	(A)
3. Fagus grandifolia	20	Yes	FACU	Total Number of Domi			- (* -)
4. Quercus palustris	10	No	FACW	Across All Strata:	Harit Opcolog	6	(B)
5.				Percent of Dominant S	Species That		_ ` `
	90 =T	Total Cover		Are OBL, FACW, or F	•	66.7%	_(A/B)
Sapling/Shrub Stratum (Plot size:	_)						
1. Lindera benzoin	40	Yes	FACW	Prevalence Index wo			
2. Fagus grandifolia	20	Yes	FACU	Total % Cover of:		oly by:	-
3.				OBL species 0		0	-
4				FACW species 15 FAC species 30		300 90	_
5	60 =T	Total Cover		FACU species 40		160	-
Herb Stratum (Plot size:)		Otal Oovo.		UPL species 0		0	-
1. Leersia virginica	70	Yes	FACW	Column Totals: 22		550	– (B)
2.				Prevalence Index =	``	50	- \
3.				Market a Variation	· · · · · · · · · · · · · · · · · · ·		
4				Hydrophytic Vegetati		station	
5. 6.	- —— -			1 - Rapid Test for X 2 - Dominance Te		etation	
7				X 3 - Prevalence Ind			
8.	. —— -			4 - Morphological		ovide sur	oporting
9.					s or on a separat		
10.				Problematic Hydro	ophytic Vegetatic	n ¹ (Expla	ain)
	70 =T	Total Cover		¹ Indicators of hydric so		, ,	•
Woody Vine Stratum (Plot size:	_)			be present, unless dis	turbed or probler	natic.	
1.				Hydrophytic			
2	· —— ;			Vegetation	Y N.		
		Total Cover		Present? Yes_	No		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)						

SOIL Sampling Point: WKWet1

Profile Des	cription: (Describe	to the dept	h needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 5/2	100					Loamy/Clayey	
5-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
								_
l								
¹ Type: C=C	oncentration, D=De	pletion, RM=I	Reduced Matrix, N	√S=Mas	ked Sand	l Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicator	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle		rix (S4)		Coas	t Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	r (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfac	ce (A11)	X Depleted I	`	,		2	
	ark Surface (A12)		Redox Da		` '			s of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted [and hydrology must be present,
5 cm Mu	icky Peat or Peat (S	33)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed):						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Present	? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	ov/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	93.doc	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		X Drair	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-9	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cray	fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence			,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)
	oosits (B5)		Thin Muck		, ,		FAC-	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	/ Vegetated Concav	e Surface (B	B)Other (Exp	olain in R	lemarks)		_	
Field Obser								
Surface Wat		es			nches): _			
Water Table		es			nches): _			
Saturation P		es	No X	Depth (i	nches):_		Wetland Hydrolog	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strear	π gauge, mor	nitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:	
Remarks:								
i tomains.								

Project/Site: Hecate Energy Highland LLC		City/Cou	nty: Buford/l	Highland	Sampling Dat	e: <u>12/1</u>	5/2017
Applicant/Owner: Hecate Energy LLC				State: OH	Sampling Poi	nt: WI	LWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	inge:			
Landform (hillside, terrace, etc.):		!	Local relief (c	concave, convex, none):			
Slope (%): Lat: 39.087022		Long: -	83.796596		Datum: NAD83		
Soil Map Unit Name: Westboro-Schaffer silt loams, 0	to 2 percent sl	lopes		NWI classif	ication: PFO1A		
Are climatic / hydrologic conditions on the site typical	for this time of	year?	Yes X	No (If no, exp	lain in Remarks	·.)	
Are Vegetation, Soil, or Hydrology	significantly d	isturbed? A	\re "Normal C	Circumstances" present?	Yes X	No	_
Are Vegetation, Soil, or Hydrology	naturally prob	lematic? (If needed, ex	xplain any answers in Rer	narks.)	-	_
SUMMARY OF FINDINGS – Attach site m	ap showin	g samplin	g point lo	cations, transects,	important f	eatures	, etc.
Hydric Soil Present? Yes X N	lo lo	I	Sampled Ar		No		
Remarks:							
VEGETATION – Use scientific names of pla	ants.						
·	Absolute	Dominant	Indicator	_			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wor			
Quercus palustris Acer rubrum	90	Yes No	FACW FAC	Number of Dominant S Are OBL, FACW, or F	•	2	(A)
3.	10	INU	-FAC		_		- ^(A)
4.				Total Number of Domi Across All Strata:	nant Species	3	(B)
5.				Percent of Dominant S	— Species That	-	<u>-</u> ` '
	110 =	Total Cover		Are OBL, FACW, or F	•	66.7%	_(A/B)
Sapling/Shrub Stratum (Plot size:	_)						
1. Fagus grandifolia	40	Yes	FACU	Prevalence Index wo		·	
2.	,			Total % Cover of:		tiply by:	-
3				OBL species 10 FACW species 90		10 180	-
5.				FAC species 10		30	-
	40 =	Total Cover		FACU species 40		160	-
Herb Stratum (Plot size:)		Total GC.G.		UPL species 0		0	-
1. Carex lurida	10	Yes	OBL	Column Totals: 15		380	(B)
2.				Prevalence Index =	` _	2.53	=` ´ -
3. 4.				Hydrophytic Vegetati	ion Indicators:		
				1 - Rapid Test for			
				X 2 - Dominance Te		getation	
7				X 3 - Prevalence Ind			
8.				4 - Morphological		rovide su	pporting
9.				data in Remark			
10.				Problematic Hydro	ophytic Vegetati	ion¹ (Expl	ain)
	10 =	Total Cover		¹ Indicators of hydric so	oil and wetland	hydrology	must
Woody Vine Stratum (Plot size:				be present, unless dis			
1				Hydrophytic			
2				Vegetation			
	=	Total Cover		Present? Yes_	X No_		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)						

SOIL Sampling Point: WLWet1

Profile Desc	cription: (Describe	to the depth	needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 5/2	100					Loamy/Clayey	
5-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
l								
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	MS=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle				Coas	st Prairie Redox (A16)
Histic Ep	pipedon (A2)		Sandy Re	dox (S5)			Iron-	Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)
	ıck (A10)		Loamy Gle	eyed Mat	trix (F2)			
I — ·	d Below Dark Surfac	e (A11)	X Depleted I	Matrix (F	3)		•	
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted I					and hydrology must be present,
5 cm Mu	icky Peat or Peat (S	3)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:			_					
Depth (in	nches):		_				Hydric Soil Presen	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	3/nrcs142	2p2_0512	93.doc	()	
HYDROLC	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drain	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cray	fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil		morphic Position (D2)
	oosits (B5)		Thin Muck		, ,		FAC	-Neutral Test (D5)
	on Visible on Aerial I							
X Sparsely	/ Vegetated Concave	e Surface (B8	3)Other (Exp	olain in R	Remarks)		_	
Field Obser	vations:							
Surface Wat		es	No X		nches): _			
Water Table		es	No X		nches): _			
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (stream	ı gauge, mor	iitoring well, aeria	ıı pnotos	, previous	sinspec	ctions), it available:	
Remarks:								
i tomants.								

Project/Site: Highland Solar		City/Cour	nty: Buford/l	Highland	Sampling Date:	12/15/2017
Applicant/Owner: Hecate Energy Highland LLC				State: OH	Sampling Point:	WMWet1
Investigator(s): M. Perkins, C. Brendel		Section, T	Γownship, Ra	inge:		
Landform (hillside, terrace, etc.):		!	Local relief (d	concave, convex, none):		
Slope (%): Lat: 39.081623		Long:{	83.809621		Datum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	slopes			NWI classif	fication: PFO1A	
Are climatic / hydrologic conditions on the site typical for	or this time o	of year?	Yes X	No (If no, exp	olain in Remarks.)	
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? A	Are "Normal (_
Are Vegetation, Soil, or Hydrologyr						
SUMMARY OF FINDINGS – Attach site ma						ures, etc.
Hydrophytic Vegetation Present? Yes X No)	Is the	Sampled A	rea	_	_
		withir	n a Wetland	? Yes X	No	
Wetland Hydrology Present? Yes X No	,					
Remarks:						
Observations consistent with WMWet3: 39.077606, -8	3.811528 an	nd WMWet4: 3	39.079646, -	83.818294		
VEGETATION – Use scientific names of pla	nts.					
· ·	Absolute	Dominant	Indicator	_		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wor	rksheet:	
1. Quercus palustris	30	Yes	FACW	Number of Dominant	•	. (4)
2. Acer rubrum	30	Yes	FAC	Are OBL, FACW, or F		6 (A)
3. Nyssa sylvatica	20	Yes	FACU	Total Number of Domi	•	· (D)
4. Fagus grandifolia	20	Yes	FACU	Across All Strata:	8	B(B)
5	100 =	=Total Cover		Percent of Dominant S Are OBL, FACW, or F	•	0% (A/B)
Sapling/Shrub Stratum (Plot size:)		- Tutal Cuvel		AIC ODE, I AGVV, GI I	AC	(7/15)
1. Fagus grandifolia	20	Yes	FACU	Prevalence Index wo	orksheet:	
Lindera benzoin	20	Yes	FACW	Total % Cover of		ov.
3.			17.01.	OBL species 10		
4.				FACW species 50		
5.				FAC species 60		
	40	=Total Cover		FACU species 40		
Herb Stratum (Plot size:)				UPL species 0		
1. Carex lurida	10	Yes	OBL	Column Totals: 16	60 (A) 45	50 (B)
2. Smilax rotundifolia	10	Yes	FAC	Prevalence Index =	= B/A = 2.81	
3.						<u> </u>
4.				Hydrophytic Vegetat	ion Indicators:	
5.					Hydrophytic Vegeta	tion
6.				X 2 - Dominance Te		
7.				X 3 - Prevalence Inc	dex is ≤3.0 ¹	
8.				4 - Morphological	Adaptations ¹ (Provid	le supporting
9.				data in Remark	ks or on a separate s	heet)
10.				Problematic Hydro	ophytic Vegetation ¹ ((Explain)
	20 =	=Total Cover		¹ Indicators of hydric so	oil and wetland hydro	ology must
Woody Vine Stratum (Plot size:)	,			be present, unless dis		
1				Hydrophytic		
2				Vegetation		
	=	=Total Cover		Present? Yes	No	
Remarks: (Include photo numbers here or on a separ	ate sheet.)					

SOIL Sampling Point: WMWet1

Profile Des	cription: (Describe	o the dept	h needed to doc	ument tl	ne indica	ator or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 5/2	100					Loamy/Clayey	
5-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
17	concentration, D=Depl		Dadwaad Matrix N	10-14			21 +	: PL=Pore Lining, M=Matrix.
Hydric Soil		elion, Kivi-i	Reduced Matrix, N	/IS-IVIAS	keu Sand	Giailis		rs for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	ved Mat	riv (S4)			st Prairie Redox (A16)
	pipedon (A2)		Sandy Red	-	, ,			Manganese Masses (F12)
	istic (A3)		Stripped M					Parent Material (F21)
	en Sulfide (A4)		Dark Surfa	,	- /			Shallow Dark Surface (F22)
_	d Layers (A5)		Loamy Mu	, ,	eral (F1)			r (Explain in Remarks)
	uck (A10)		Loamy Gle	-	. ,			,
	d Below Dark Surface	(A11)	X Depleted N					
Thick Da	ark Surface (A12)	, ,	Redox Dar	k Surfac	e (F6)		³ Indicator	s of hydrophytic vegetation and
Sandy N	Mucky Mineral (S1)		Depleted [Dark Sur	face (F7))	wetla	and hydrology must be present,
5 cm Mu	ucky Peat or Peat (S3)	Redox Dep	oression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed):							
Туре:								
Depth (i	nches):		_				Hydric Soil Present	? Yes X No
Remarks:						•		
								s of Hydric Soils, Version 7.0, 2015
Errata. (http	://www.nrcs.usda.gov	Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	293.doc	()	
LIVERGLA	201							
HYDROLO								
	drology Indicators:							
	cators (minimum of o	ne is require			(50)			ry Indicators (minimum of two required)
	Water (A1)		X Water-Stai					ace Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					nage Patterns (B10) Season Water Table (C2)
Saturation			True Aqua			١		` '
_	Marks (B1) nt Deposits (B2)		Hydrogen Oxidized R					fish Burrows (C8) ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence			•	` ′ —	ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			,		norphic Position (D2)
	posits (B5)		Thin Muck				` '	Neutral Test (D5)
	on Visible on Aerial Ir	nagery (B7)			, ,			
	y Vegetated Concave	. ,			` '			
Field Obser		•	<u> </u>				T	
	ter Present? Ye	3	No X	Depth (i	nches):			
Water Table					nches):			
Saturation F	Present? Ye	3			nches):		Wetland Hydrolog	gy Present? Yes X No
(includes ca	pillary fringe)				_			
Describe Re	ecorded Data (stream	gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	ctions), if available:	
Remarks:								

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/						
Applicant/Owner: Hecate Energy Highland LLC				Buford/Highland Sampling Date: 12/15 State: OH Sampling Point: WM				
Investigator(s): M. Perkins, C. Brendel Section, Township, Range:								
Landform (hillside, terrace, etc.):		!	Local relief (d	concave, convex, none):				
Slope (%): Lat: 39.08054		Long:	83.814217	_	Datum: NAD83			
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	t slopes			NWI classi	fication: PFO1A			
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)	_		
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed? F	ارد Are "Normal (Circumstances" present?	Yes X No	·		
Are Vegetation, Soil, or Hydrology								
SUMMARY OF FINDINGS – Attach site ma						tures, etc.		
Hydrophytic Vegetation Present? Yes X No	0	Is the	Sampled A	rea				
	0		n a Wetland		No			
Wetland Hydrology Present? Yes X No								
Remarks:								
VEGETATION – Use scientific names of pla	ints.							
	Absolute	Dominant	Indicator	I _ ,				
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wo				
1. Quercus palustris	30	Yes	FACW	Number of Dominant	•	2 (4)		
Acer rubrum Nyssa sylvatica	20	Yes Yes	FAC	Are OBL, FACW, or F		6 (A)		
Nyssa sylvatica 4.		165	<u>FAC</u>	Total Number of Dom Across All Strata:		6 (B)		
5.						(5)		
J	80 =	=Total Cover		Percent of Dominant Are OBL, FACW, or F	•	0.0% (A/B)		
Sapling/Shrub Stratum (Plot size:		-10101 00.0.		7110 052, 17.0,	AC	7.0 /0 (* ,		
1	,			Prevalence Index wo	orksheet:			
2.				Total % Cover of		by:		
3.				OBL species 1		10		
4.					0 x 2 = 1	20		
5.				FAC species 5	0 x 3 = 1	50		
		=Total Cover		FACU species (x 4 =	0		
Herb Stratum (Plot size:)				UPL species(x 5 =	0		
Carex vulpinoidea	20	Yes	FACW	Column Totals: 12		80 (B)		
2. Scirpus atrovirens	10	Yes	OBL	Prevalence Index	= B/A = <u>2.33</u>			
3. Leersia virginica	10	Yes	FACW					
4				Hydrophytic Vegetat				
5.					Hydrophytic Vegeta	ation		
6.				X 2 - Dominance Te				
7. 8.					gex is ≤3.0 Adaptations¹ (Provi	da sunnortina		
					s or on a separate			
10.					ophytic Vegetation ¹	,		
10	40	=Total Cover		¹ Indicators of hydric s		` '		
Woody Vine Stratum (Plot size:		10.0.		be present, unless dis	•			
1.	,			·				
2.				Hydrophytic Vegetation				
	:	=Total Cover		_	X No			
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			-		_		
,	,							

SOIL Sampling Point: WMWet2

Depth Marix Redox Features Cinches Solid Findis % Color (moisi) % Typal Loc Taxture Remarks	I Ligitie Des	cription: (Describe	to the dep	th needed to doc	ument t	ne indica	tor or c	onfirm the absence of	of indicators.)
1-5 10YR 5/2 100 7.5YR 5/8 40 C M Loamy/Clayey Prominent redox concentrations 1-7 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-7 Location: PL=Pore Lining, M=Matrix, MS=Masked Sand Grains. 1-8 Location: PL=Pore Lining, MS=Matrix, MS=Masked Sand Grains. 1-8 Location: PL=Pore Lining, MS=Matrix, MS=Masked Sand Grains. 1-8 Location: PL=Pore Lining, MS=Matrix, MS=Masked Sand Grains. 1-8 Location: PL=Pore Lining, MS=Matrix. 1-9 Location: PL=Pore Lining, MS=Matrix	Depth	Matrix		Redo	x Featur	es			
S-12 7.5YR 5/1 60 7.5YR 5/8 40 C M Loamy/Clayey Prominent redox concentrations	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. "Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Histosci (A1)	1-5	10YR 5/2	100					Loamy/Clayey	
Hydric Soil Indicators:	5-12	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations
Hydric Soil Indicators:									
Hydric Soil Indicators:									
Hydric Soil Indicators:									
Hydric Soil Indicators:									
Hydric Soil Indicators:									
Hydric Soil Indicators:	1		·					2	
Histosol (A1)			letion, RM=	Reduced Matrix, I	/IS=Mas	ked Sand	Grains.		
Histic Epipedon (A2)	1 -			Sandy Cla	und Mat	riv (C4)			•
Black Histic (A3)	l —	` '							
Hydrogen Sulfide (A4)	I —								
Stratified Layers (A5)	I —				,)			` '
2 cm Muck (A10) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Send Wucky Mineral (S1) Send Wucky Peat or Peat (S3) Redox Depressions (F8) Redox Depressions (F8) Restrictive Layer (if observed): Type: Depth (inches): Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X Surface Water (A1) Aquatic Fauna (B13) Drainage Patterns (B10) Aquatic Fauna (B13) Drainage Patterns (B10) Drainage Patterns (B10						eral (F1)			
Depleted Below Dark Surface (A11)	l —	• ' '			•	, ,			(Explain in Romano)
Thick Dark Surface (A12) Redox Dark Surface (F6) wetland hydrology must be present, 2 for Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, 2 for Mucky Peat or Peat (S3) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if observed):		, ,	e (A11)						
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:	<u> </u>		,		`	,		³ Indicators	s of hydrophytic vegetation and
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X. Surface Water (A1) X. Water-Stained Leaves (B9) X. High Water Table (A2) X. Surface Water (A1) X. Surface Water (A1) X. Surface Soil Cracks (B6) Drainage Patterns (B10) X. Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Sediment Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inon Deposits (B5) Tim Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Sufface Water Present? Yes X No Depth (inches): Obeyth (inches): Obescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sandy N	Mucky Mineral (S1)		Depleted [Dark Sur	face (F7)			
Type: Depth (inches):	5 cm Mu	ucky Peat or Peat (S	3)					unles	s disturbed or problematic.
Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) ### Wetland Hydrology Indicators: ### Primary Indicators (minimum of one is required; check all that apply) ### Secondary Indicators (minimum of two required) ### Secondary Indicators (minimum of tw	Restrictive	Layer (if observed):	!						
Remarks: This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) ### Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Type:	,							
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) HYDROLOGY	Depth (i	nches):						Hydric Soil Present	? Yes X No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X High Water Table (A2) Water Table (A2) Water Marks (B1) Aquatic Fauna (B13) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks:								
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X Water-Stained Leaves (B9) X High Water Table (A2) X Saturation (A3) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) X Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Agal Mat or Crust (B4) Agent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): 0 Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Surface Soi	This data for	rm is revised from Mi	idwest Regi	onal Supplement \	ersion 2	2.0 to incl	ude the	NRCS Field Indicators	of Hydric Soils, Version 7.0, 2015
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) X Water-Stained Leaves (B9) Surface Soil Cracks (B6) X High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) X Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) X Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B6) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B10) Overland Hydrology Present? Yes X No Saturation (P1)	Errata. (http	://www.nrcs.usda.gov	v/Internet/F	SE_DOCUMENTS	/nrcs142	2p2_0512	93.docx)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) X Water-Stained Leaves (B9) Surface Soil Cracks (B6) X High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) X Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) X Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B6) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B10) Overland Hydrology Present? Yes X No Saturation (P1)									
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) X Water-Stained Leaves (B9) Surface Soil Cracks (B6) X High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) X Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) X Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B6) Other (Explain in Remarks) Field Observations: Surface Soil Cracks (B10) Overland Hydrology Present? Yes X No Saturation (P1)									
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X Surface Water (A1)	Wetland Hy	drology Indicators:							
X High Water Table (A2) X Saturation (A3) True Aquatic Fauna (B13) Drainage Patterns (B10) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): Other (includes capillary fringe) Drainage Patterns (B10) Dry-Season Water Table (C2) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes X No Depth (inches): Other (Explain in Remarks) Wetland Hydrology Present? Yes X No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Primary Indi	icators (minimum of o	one is requi	ed; check all that	apply)			<u>Secondar</u>	y Indicators (minimum of two required)
X Saturation (A3) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Tield Observations: Surface Water Present? Yes X No Depth (inches): Saturation (C1) X Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): O Wetland Hydrology Present? Yes X No Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	l —	, ,				, ,			, ,
Water Marks (B1)									• '
Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Surface Water Present? Yes X No Depth (inches): Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Wetland Hydrology Present? Yes X No Depth (inches): Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) FAC-Neutral Test (D5) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes X No No Depth (inches): Saturation Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		` ,							
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Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Water Table Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches): Other (inches): Other (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		. , ,							
Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): 5 Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): 5 Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	<u> </u>	, ,					ileu Soils		
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes X No Depth (inches): 5 Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	I — ·	` '	magery (B7			. ,		1 AO-	Nedital Test (D3)
Field Observations: Surface Water Present? Yes X No Depth (inches): 5 Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			0 , (
Surface Water Present? Yes X No Depth (inches): 5 Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sparsely	v Vegetated Concave	Sullace (L	-,		,			
Water Table Present? Yes X No Depth (inches): 0 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		-	e Surface (L						
Saturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser	rvations:	· · ·	No	Denth /i	nches).	5		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser Surface War	rvations: ter Present? Ye	es X			′ -			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser Surface Wat Water Table	rvations: ter Present? Present? Ye	es X es X	No	Depth (i	nches):	0	Wetland Hydrolog	y Present? Yes X No
Remarks:	Field Obser Surface War Water Table Saturation P	rvations: ter Present? Present? Ye Present? Ye	es X es X	No	Depth (i	nches):	0	Wetland Hydrolog	y Present? Yes X No
Remarks:	Field Obser Surface Wat Water Table Saturation P (includes ca	rvations: ter Present? Present? Ye Present? Ye Present? Ye pillary fringe)	es X es X	No No	Depth (i	nches): _ nches): _	0		y Present? Yes X No
	Field Obser Surface Wat Water Table Saturation P (includes ca	rvations: ter Present? Present? Ye Present? Ye Present? Ye pillary fringe)	es X es X	No No	Depth (i	nches): _ nches): _	0		y Present? Yes X No
	Field Obser Surface War Water Table Saturation P (includes ca Describe Re	rvations: ter Present? Present? Ye Present? Ye Present? Ye pillary fringe)	es X es X	No No	Depth (i	nches): _ nches): _	0		y Present? Yes X No
	Field Obser Surface War Water Table Saturation P (includes ca Describe Re	rvations: ter Present? Present? Ye Present? Ye Present? Ye pillary fringe)	es X es X	No No	Depth (i	nches): _ nches): _	0		y Present? Yes X No

Project/Site: Highland Solar		City/County: Buford/Highland Sampling Date: 12/15/20						
Applicant/Owner: Hecate Energy Highland LLC		State: OH Sampling Point: WNWet1						
Investigator(s): M. Perkins, C. Brendel		Section, T	ownship, Ra	ange:				
Landform (hillside, terrace, etc.):			Local relief (d	concave, convex, none):				
Slope (%): Lat: 39.077769		Long:	83.820054		Datum: NAD83			
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent	t slopes			NWI classit	fication:			
Are climatic / hydrologic conditions on the site typical for	or this time o	f year?	Yes X	No (If no, exp	olain in Remarks.)			
Are Vegetation, Soil, or Hydrology	significantly o	listurbed? A	Are "Normal (Circumstances" present?	Yes X No			
Are Vegetation, Soil, or Hydrology	naturally prob	olematic? (If needed, ex	plain any answers in Re	marks.)			
SUMMARY OF FINDINGS – Attach site ma	ap showin	ıg samplin	g point lo	ocations, transects	, important features, etc.			
			Sampled A		No			
Remarks:								
VEGETATION – Use scientific names of pla	ınts.							
	Absolute	Dominant	Indicator					
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wor				
Quercus palustris Acer rubrum	30	No Yes	FACW FAC	Number of Dominant Are OBL, FACW, or F	•			
3. Fagus grandifolia	30	Yes	FACU	Total Number of Dom	····			
4.				Across All Strata:	5 (B)			
5.				Percent of Dominant	Species That			
	70 =	Total Cover		Are OBL, FACW, or F	FAC: 60.0% (A/B)			
Sapling/Shrub Stratum (Plot size:)	V.	FAOU	Bland	alaha at			
1. Fagus grandifolia	30	Yes	FACU	Prevalence Index wo Total % Cover of				
3.				OBL species 2				
4.				FACW species 3				
5.				FAC species 3	0 x 3 = 90			
	30 =	Total Cover		FACU species 6	0 x 4 = 240			
Herb Stratum (Plot size:)				UPL species				
1. Elymus virginicus	20	Yes	FACW	Column Totals: 14				
2. Carex lurida 3.	20	Yes	OBL	Prevalence Index	= B/A = <u>2.93</u>			
4.				Hydrophytic Vegetat	ion Indicators:			
5.					Hydrophytic Vegetation			
6.	·			X 2 - Dominance Te				
7.				X 3 - Prevalence Inc	dex is ≤3.0 ¹			
8				· · ·	Adaptations ¹ (Provide supporting			
9					ks or on a separate sheet)			
10	40	T-1-1-0		I —	ophytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size:	40 =	=Total Cover			oil and wetland hydrology must sturbed or problematic.			
1				Hydrophytic				
2				Vegetation				
		Total Cover		Present? Yes	No			
Remarks: (Include photo numbers here or on a separate	rate sheet.)							

SOIL Sampling Point: WNWet1

Profile Des	cription: (Describe	to the depti	n needed to doc	ument tl	ne indica	tor or o	confirm the absence	of indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
1-5	10YR 4/3	100					Loamy/Clayey	
5-12	7.5YR 5/1	60	7.5YR 5/8	40	С	М	Loamy/Clayey	Prominent redox concentrations
l								
¹ Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, I	√S=Mas	ked Sand	l Grains		n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Gle				Coas	st Prairie Redox (A16)
Histic Ep	oipedon (A2)		Sandy Re					Manganese Masses (F12)
	stic (A3)		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	d Layers (A5)		Loamy Mu				Othe	er (Explain in Remarks)
	ıck (A10)		Loamy Gle					
ı — ·	d Below Dark Surfac	e (A11)	X Depleted I	`	,		2	
	ark Surface (A12)		Redox Da		` '			rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted I					and hydrology must be present,
5 cm Mu	ıcky Peat or Peat (S	3)	Redox De	pression	s (F8)		unles	ss disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:			_					
Depth (ii	nches):		_				Hydric Soil Presen	t? Yes X No
Remarks:								
		-						s of Hydric Soils, Version 7.0, 2015
Errata. (http:	://www.nrcs.usda.go	v/Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	93.doc	()	
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of	one is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum of two required)
Surface	Water (A1)		X Water-Sta	ined Lea	ves (B9)		Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B1	3)		Drair	nage Patterns (B10)
Saturation	on (A3)		True Aqua	itic Plant	s (B14)		Dry-9	Season Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1))	X Cray	fish Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F					ration Visible on Aerial Imagery (C9)
	posits (B3)		Presence		,	,		ted or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			lled Soil	` '	morphic Position (D2)
	oosits (B5)		Thin Muck		, ,		FAC	-Neutral Test (D5)
	on Visible on Aerial							
Sparsely	/ Vegetated Concave	e Surface (B8	B)Other (Exp	olain in R	Remarks)		_	
Field Obser	vations:							
Surface Wat		es	No X		nches): _			
Water Table		es	No X		nches): _			
Saturation P		es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No
	pillary fringe)							
Describe Re	corded Data (strean	n gauge, mor	nitoring well, aeria	II photos	, previous	sinspec	ctions), if available:	
Remarks:								
i tomains.								

Project/Site: Highland Solar	City/County: Buford/	Highland	Sampling Date: 12	2/15/2017
Applicant/Owner: Hecate Energy Highland LLC		State: OH	Sampling Point:	WJ/LUp1
Investigator(s): M. Perkins, C. Brendel	Section, Township, Ra	inge:		
Landform (hillside, terrace, etc.):	Local relief (c	concave, convex, none):_		
Slope (%): Lat: 39.085324	Long: -83.799378		Datum: NAD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 percent slopes		NWI classifi	ication: NA	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X	No (If no, exp	lain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly of	disturbed? Are "Normal (Circumstances" present?	Yes X No	
Are Vegetation, Soil, or Hydrologynaturally prol	blematic? (If needed, ex	κρlain any answers in Ren	narks.)	
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point lo	ocations, transects,	important featur	res, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No X	Is the Sampled Ai within a Wetland?		No_X_	
Remarks: Observations typical to WMUp1: 39.082823, -83.809729; WM/NU	p1: 39.078608, -83.819274	1		
VEGETATION – Use scientific names of plants.	Danie aut. Indiada.			
Tree Stratum (Plot size:) % Cover	Dominant Indicator Species? Status	Dominance Test worl	ksheet:	
1		Number of Dominant S Are OBL, FACW, or FA	•	(A)
3. 4.		Total Number of Domii Across All Strata:		(B)
5.	=Total Cover	Percent of Dominant S Are OBL, FACW, or FA	•	``
Sapling/Shrub Stratum (Plot size:)				`
1		Prevalence Index wo		
2		Total % Cover of:		<u>: </u>
3	!	OBL species 0		
4		FACW species 0 FAC species 0		
	=Total Cover	FACU species 0		_
Herb Stratum (Plot size:)	. • • • • • • • • • • • • • • • • • • •	UPL species 100		_
1. Glycine max 100	Yes UPL	Column Totals: 100	0 (A) 500	(B)
2		Prevalence Index =	B/A = 5.00	
3		United in heading Managed	to disafans.	
4	!	Hydrophytic Vegetati	i on Indicators: Hydrophytic Vegetatio	NO.
		2 - Dominance Tes		л П
7.		3 - Prevalence Ind		
8.			Adaptations ¹ (Provide	supporting
9.		data in Remarks	s or on a separate she	et)
10		Problematic Hydro	ophytic Vegetation ¹ (E	xplain)
Woody Vine Stratum (Plot size:)	=Total Cover	¹ Indicators of hydric so be present, unless dist	•	ogy must
1		Hydrophytic		
2	=Total Cover	Vegetation Present? Yes_	No X	
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL Sampling Point: _ WJ/LUp1

Profile Des	cription: (Describe	o the depti	n needed to doc	ument tl	ne indica	ator or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
1-5	10YR 4/3	100					Loamy/Clayey		
5-13	7.5YR 5/1	60	7.5YR 5/8	40	С	M	Loamy/Clayey	Prominent redox concentrations	i
								-	
									—
17	Name and the state of the state		Daduard Matrix N	10-14			21 + :	. Di -Dara Linia a M-Matria	—
Hydric Soil	Concentration, D=Depl	elion, Kivi-r	Reduced Matrix, I	vio-ivias	keu Sand	Giailis		: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :	
Histosol			Sandy Gle	wad Mat	riv (S4)			t Prairie Redox (A16)	
	pipedon (A2)		Sandy Red	•	. ,			Manganese Masses (F12)	
	istic (A3)		Stripped M					Parent Material (F21)	
	en Sulfide (A4)		Dark Surfa	,	- /			Shallow Dark Surface (F22)	
_	d Layers (A5)		Loamy Mu	` '	eral (F1)			r (Explain in Remarks)	
	uck (A10)		Loamy Gle	-	. ,			,	
	d Below Dark Surface	(A11)	X Depleted N						
Thick Da	ark Surface (A12)	, ,	Redox Dar	rk Surfac	e (F6)		³ Indicator	s of hydrophytic vegetation and	
Sandy N	Mucky Mineral (S1)		Depleted [Dark Sur	face (F7))	wetla	nd hydrology must be present,	
5 cm Mu	ucky Peat or Peat (S3)	Redox Dep	pression	s (F8)		unles	s disturbed or problematic.	
Restrictive	Layer (if observed):								
Туре:	, ,								
Depth (i	nches):		_				Hydric Soil Present	? Yes X No	
Remarks:						ļ			
								s of Hydric Soils, Version 7.0, 2015	
Errata. (http	://www.nrcs.usda.gov	Internet/FS	E_DOCUMENTS	/nrcs142	2p2_0512	293.doc	x)		
LIVERGLA	201								
HYDROLO									
	drology Indicators:								
	icators (minimum of o	ne is require	•		(50)			ry Indicators (minimum of two require	<u>ed)</u>
	Water (A1)		Water-Sta					ice Soil Cracks (B6)	
	ater Table (A2)		Aquatic Fa					age Patterns (B10) Season Water Table (C2)	
Saturation			True Aqua			١		, ,	
_	Marks (B1) nt Deposits (B2)		Hydrogen Oxidized F					fish Burrows (C8) ration Visible on Aerial Imagery (C9)	
	posits (B3)		Presence			•	` ′ —	ed or Stressed Plants (D1)	
	at or Crust (B4)		Recent Iro			,		norphic Position (D2)	
	posits (B5)		Thin Muck				` '	Neutral Test (D5)	
	on Visible on Aerial Ir	nagery (B7)			, ,				
	y Vegetated Concave	0, ,			` '				
Field Obser	-		<u> </u>						
	ter Present? Ye	3	No X	Depth (i	nches):				
Water Table					nches):				
Saturation F				Depth (i	_		Wetland Hydrolog	gy Present? Yes No	X
(includes ca	pillary fringe)				_				_
Describe Re	ecorded Data (stream	gauge, mor	nitoring well, aeria	l photos	, previou	s inspec	ctions), if available:		
Remarks:									

Project/Site: Highland Solar		City/County _F	Highland	1	Sam	pling D	ate: 12/2	0/2017
Applicant/Owner Hecate Energy Highland LLC		State: Ohio Sampling Point: V					07200W	
nvestigator(s): M. Perkins, C. Brendel		Section, Town	ship Rar	ige:				
andform (hillsippe terrace etc.):				concave, convex,	none):			
Slope (%) Lat 39.091196		Long: -83.81		,		ım NA	D83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 pe		Lui III		NIM/I	dassification	0.00		
		V X	*In	(If no, expla	01000000			
Are climatic / hydrologic conditions on the site typical for				Normal Circumsta			×	900
Are Vegetation, Soil, or Hydrology								No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eded, explain any	answers in	Remark	5.)	
SUMMARY OF FINDINGS - Attach site m	nap showing	sampling	point le	ocations, tran	sects, im	portar	nt featur	res, etc
Hydrophytic Vegetation Present? Yes X	No	leve.		200				
Hydric Soil Present? Yes X	_ No	1	Sampled		s X			
Wetland Hydrology Present? Yes X	_ No	within	a Wetlan	d? Ye	s	No		
Remarks:								
VEGETATION – Use scientific names of pla	ante							
TEGETATION - Use scientific harries of pie	Absolute	Dominant In	dicator	Dominance Tes	st workshee	t		_
Tree Stratum (Plot size)	% Cover	Species?	Status	Number of Dom		5		
1. Acer rubrum	40		AC	That Are OBL, F	ACW, or FA	c: 5		(A)
2 Liquidambar styraciflua	20		ACW	Total Number of	Dominant			
3. Quercus palustris	20	Yes F	ACW	Species Across	All Strata:	5		(B)
4		-	_	Percent of Domi	nant Specie	s	CO.	
5	00		_	That Are OBL, F			00	(A/B)
Sapling/Shrub Stratum (Plot size:	80	= Total Cover		Prevalence Ind	ex workshe	et:		_
Fraxinus pennsylvanica	20	Yes F.	ACW	Total % Co			ultiply by:	
2				OBL species		x 1 =		
3				FACW species	90	x2=	180	
4.				FAC species	40	х 3 =	120	
5.				FACU species		x 4 =		
	20	= Total Cover		UPL species		x 5 =		
Herb Stratum (Plot size:)	20	Ven E	ACIAL	Column Totals:	130	(A)	300	(B)
Leersia virginica	30	Yes F	ACW	Proviolego	e Index = B	A - 2	.3	
2			-	Hydrophytic Ve				
3				X 1 - Rapid To				
4			_	The second of th	nce Test is >	0.406.00		
5				X 3 - Prevaler				
6				The state of the s	ogical Adapt		(Provide s	upporting
8.				dala in F	Remarks or o	n a sep	arate shee	et)
8				Problematic	Hydrophytic	: Vegeta	ation' (Exp	fain)
10.								
	30	= Total Cover		Indicators of hy be present unle				y must
Woody Vine Stratum (Plot size:)				be present title	- Sa Maren Med	ar prot	remotile:	-
1				Hydrophytic				
				Vegetation		/		
2.		= Total Cover		Present?	Yes 2	1	No	

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Sampling Point _WO

rofile Description: (Description: Mate	DK .		x Feature			4.97	A
inches) Color (moist		Color (moist)	%	Type	Loc*	Texture	Remarks
-12 7.5YR 6/1	70	7.5YR 5/8	30	C	М	C/L	
Type: C=Concentration D=	Depletion RN	I=Reduced Matrix, M	S=Maske	d Sand G	rains.		PL=Pore Lining, M=Matrix.
lydric Soil Indicators:							r Problematic Hydric Soils ³ :
Histosol (A1)				latrix (S4)		75.75.40	airie Redox (A16)
Histic Epipedon (A2)			Redox (S			Dark Sun	
Black Histic (A3)			d Matrix				ganese Masses (F12) llow Dark Surface (TF12)
Hydrogen Sulfide (A4)				lineral (F1			plain in Remarks)
Stratified Layers (A5)		X Deplete		Aatrix (F2) (F3)		Office (C)	description (1997)
2 cm Muck (A10) Depleted Below Dark St	riere (A11)			face (F6)			
Thick Dark Surface (A1)	The state of the s			urlace (F)	7)	3 Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S			Depressi			welland h	ydrology must be present.
5 cm Mucky Peal or Pea						unless di	sturbed or problematic
Restrictive Layer (if obser	red):						
Type:						Hydric Soil Pr	resent? Yes X No
Depth (inches):Remarks:							
Depth (inches):Remarks:							
Depth (inches):Remarks:	tors:						
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica		uired, check all that a	pplv)				
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur		uired, check all that a		ayes (B9)		Secondary	
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1)			ained Lea			Secondary Surface	Indicators (minimum of two required
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2)		X Water-Str	ained Lea auna (B1	(3)		Secondary Surface Draina Dry-Sir	Indicators (minimum of two required to Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3)		X Water-Sti Aquatic F True Aqu	ained Lea auna (B1 atic Plan	(3)		Secondary Surface Draine Dry-Si X Crayfi	Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	of one is req	X Water-Str Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plan Sulfide	13) Is (B14) Odor (C1)	iving Roots	Secondary Surface Draina Dry-Si X Crayfi	Indicators (minimum of two required to Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
Pignary Indicators (Minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized	ained Lea auna (B1 atic Plan Sulfide Rhizospl	13) Is (B14) Odor (C1)		Secondary Surface Draina Dry-Si X Crayfi	Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plan Sulfide Rhizospl of Redu	(3) Is (B14) Odor (C1) neres on L ced fron (I		Secondary Surface Draina Dry-Si X Crayfi S (C3) Stunte	Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plan a Sulfide Rhizospl of Redu on Redu	ts (B14) Odor (C1) heres on L ced fron (I ction in Til	C4)	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte	Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aenal Imagery (C9) ed or Stressed Plants (D1)
Print Deposits (B2) New Metand Hydrology Indicates Primary Indicators (minimum Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	n of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Lea auna (B1 atic Plan a Sulfide Rhizospl of Redu on Redu k Surface	ts (B14) Odor (C1) heres on L ced fron (C ction in Title e (C7)	C4)	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte	Indicators (minimum of two required the Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) shion Visible on Aenal Imagery (C9) and or Stressed Plants (D1) orphic Position (D2)
Print Deposits (B2) New Mater Marks (B1) Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	n of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Lea auna (B1 atic Plan a Sulfide Rhizospl of Redu on Redu k Surface Well Da	ts (B14) Odor (C1) heres on L ced fron (C ction in Title e (C7)	C4)	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte	Indicators (minimum of two required the Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) shion Visible on Aenal Imagery (C9) and or Stressed Plants (D1) orphic Position (D2)
Print Deposits (B4) Iron Deposits (B5) Inundation Visible on A	n of one is req	X Water-Str Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Lea auna (B1 atic Plan a Sulfide Rhizospl of Redu on Redu k Surface Well Da	ts (B14) Odor (C1) heres on L ced fron (I ction in Till e (C7) ta (D9)	C4)	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte	Indicators (minimum of two required the Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) shion Visible on Aenal Imagery (C9) and or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co	n of one is req	X Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc (87) Gauge or (88) Other (E)	ained Lea auna (B1 atic Plan a Sulfide Rhizospi of Redu on Redu on Redu k Surfaca Well Da splain in I	ts (B14) Odor (C1) heres on L ced fron (I ction in Till e (C7) ta (D9)	C4)	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte	Indicators (minimum of two required the Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) shion Visible on Aenal Imagery (C9) and or Stressed Plants (D1) orphic Position (D2)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co Field Observations:	erial Imagery ncave Surface Yes Yes	X Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc (B7) Gauge or (B8) Offer (E) No X Depth (i	ained Lea auna (81 atic Plan a Sulfide Rhizospl e of Redu on Redu k Surface Well Da splain in I	ts (B14) Odor (C1) neres on L ced fron (I ction in Till a (C7) ta (D9) Remarks)	C4) led Soils (C	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte C6) Geom	Indicators (minimum of two required to Soil Cracks (B6)) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) atlon Visible on Aerial Imagery (C9) and or Stressed Plants (D1) criphic Position (D2) Neutral Test (D5)
Property (inches): YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present?	erial Imagery ncave Surface Yes Yes Yes X	X Water-State	ained Lea fauna (B1 atic Plan a Sulfide Rhizospi of Redu on Redur Well Da whiches): niches): niches):	ts (B14) Odor (C1) heres on L ced fron (C ction in Till e (C7) ta (D9) Remarks)	C4) ied Soits (0	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte C6) Geom FAC-F	Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) season Water Table (C2) shion Visible on Aenal Imagery (C9) and or Stressed Plants (D1) arphic Position (D2)
Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	erial Imagery ncave Surface Yes Yes Yes X	X Water-State	ained Lea fauna (B1 atic Plan a Sulfide Rhizospi of Redu on Redur Well Da whiches): niches): niches):	ts (B14) Odor (C1) heres on L ced fron (C ction in Till e (C7) ta (D9) Remarks)	C4) ied Soits (0	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte C6) Geom FAC-F	Indicators (minimum of two required to Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) atlon Visible on Aerial Imagery (C9) and or Stressed Plants (D1) criphic Position (D2) Neutral Test (D5)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indica Primary Indicators (minimur Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present?	erial Imagery ncave Surface Yes Yes Yes X	X Water-State	ained Lea fauna (B1 atic Plan a Sulfide Rhizospi of Redu on Redur Well Da whiches): niches): niches):	ts (B14) Odor (C1) heres on L ced fron (C ction in Till e (C7) ta (D9) Remarks)	C4) ied Soits (0	Secondary Surface Draina Dry-Si X Crayfi S (C3) Satura Stunte C6) Geom FAC-F	Indicators (minimum of two required to Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) atlon Visible on Aerial Imagery (C9) and or Stressed Plants (D1) criphic Position (D2) Neutral Test (D5)

Project/Site Highland Solar	A A	City/County: Highlan	d	Sampling Date 12/20/2018
ppicant/Owner: Hecate Energy Highland LLC			State Ohio	Sampling Point: WO-UP
nvestigator(s): M. Perkins, C. Brendel		Section, Township Ra	inge:	
andform (hillstope terrace etc.)		and the second second	(concave, convex, none).	
		Long -83.819922	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
soil Map Unit Name: Clermont silt loam, 0 to 1 perce		Long.		cation: NA
are climatic / hydrologic conditions on the site typical for th			2,14, 5,14,14	
re Vegetation Soil or Hydrology				present? Yes X No
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (If no	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point	locations, transects	, important features, etc
Hydrophytic Vegetation Present? Yes !	No X	La Policio	Section 1	
Hydric Soil Present? Yes		Is the Sample		
Wetland Hydrology Present? Yes	No_X_	within a Wetla	nd? Yes	No X
Remarks:				
/EGETATION – Use scientific names of plants				
ESETATION - OSC SCIENTING HARRIST OF PIONE	_	Deminant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:) 1,)	100 100 100 100 100 100 100 100 100 100	Species? Status	Number of Dominant S Thai Are OBL, FACW,	0
2			Total Number of Domin	land
3			Species Across All Shr	0
4			Percent of Dominant S	Contra
5			That Are OBL, FACW,	
		= Total Cover	Decidence Independen	the bank.
Sapling/Shrub Stratum (Plot size)			Prevalence Index wor Total % Cover of:	
1				x1=
2			FACW species	
4			FAC species	
5.			FACU species	
U		= Total Cover	UPL species 100	war.
Herb Stratum (Plot size:)	- 300		Column Totals: 100	(A) 500 (B)
Glycine max	100	Yes UPL	P. C.	
2				c = B/A = _5
3			Hydrophytic Vegetati	
4				Hydrophytic Vegetation
5.			2 - Dominance Te	
6			3 - Prevalence Ind	
7			data in Remark	Adaptations' (Provide supporting as or on a separate sheet)
8				ophytic Vegetation (Explain)
9				A CONTRACTOR OF THE PARTY OF TH
10	100	= Total Cover	Indicators of hydric so be present, unless dist	and wetland hydrology must lurbed or problematic
			37 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
Woody Vine Stratum (Plot size)			Hydrophytic	
1				
		= Total Cover	Vegetation	esNo_X_

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Soil Sampling Point WO-UP

Profile Description: (Descripe Depth Matri	TY.	Redox Features			
(inches) Color (moist		Color (moist) % Type	Loc	Texture	Remarks
0-12 10YR 6/4					
			_		
			-		
			_		
		The second second second second	_		
	Depletion, RM=R	leduced Matrix, MS=Masked Sand Gr	ains,		=Pore Lining, M=Matrix.
lydric Soil Indicators:		Water Wilder College College College			Problematic Hydric Soils ³ :
_ Histosol (A1)		Sandy Gleyed Matrix (S4)			rie Redox (A16)
Histic Epipedon (A2)		Sandy Redox (S5)		Dark Surfa	
Black Histic (A3) Hydrogen Sulfide (A4)		Stripped Matrix (S6)		Commence of the commence of th	anese Masses (F12)
Stratified Layers (A5)		 Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) 			ow Dark Surface (TF12) Nain in Remarks)
2 cm Muck (A10)		Depleted Matrix (F3)		_ Oniei (Exp	near III INGINO/NO/
Depleted Balow Dark Su	rface (A11)	Redox Dark Surface (F6)			
Thick Dark Surface (A12		Depleted Dark Surface (F7)	Indicators of h	hydrophytic vegetation and
Sandy Mucky Mineral (S	1)	Redox Depressions (F8)			drology must be present.
_ 5 cm Mucky Peat or Pea	t (S3)			unless dist	urbed or problematic
Restrictive Layer (if observ	ed):				
Type:		-		Y	- ×
				Hydric Soil Pre	sent? Yes No X
Depth (inches):Remarks:					
Remarks:					
YDROLOGY					
Remarks: YDROLOGY Wetland Hydrology Indicate					
Remarks: YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum					ndicators (minimum of two requires
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1)		Water-Stained Leaves (B9)		Surface	Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Stained Leaves (B9) Aquatic Fauna (B13)		_ Surface _ Drainage	Soil Cracks (B6) e Patterns (B10)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)		Surface Drainage Dry-Sea	Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)		Surface Drainage Dry-Sea Crayfish	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv		Surface Drainage Dry-Sea Crayfish Salurate	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C-	1)	Surface Drainage Dry-Sea Crayfish Saturate Stunted	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C-	1)	Surface Drainage Dry-Sea Crayfish Salurate Stunted Geomor	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum 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)	of one is require	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7)	1)	Surface Drainage Dry-Sea Crayfish Salurate Stunted Geomor	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
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YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum 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 Sparsely Vegetated Confield Observations:	of one is required rial Imagery (B7) cave Surface (B8	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	1)	Surface Drainage Dry-Sea Crayfish Salurate Stunted Geomor	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum 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 Sparsely Vegetated Con Field Observations: Surface Water Present?	of one is required in the second of the seco	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced fron (C- Recent fron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks)	1)	Surface Drainage Dry-Sea Crayfish Salurate Stunted Geomor	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Primary Indicators (minimum 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 Sparsely Vegetated Confield Observations: Surface Water Present? Water Table Present?	of one is required in the second of the seco	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced fron (C- Recent fron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) X Depth (inches) Depth (inches)	d) d Solls (C6)	Surface Drainage Dry-Sea Crayfish Saturate Geomon FAC-Ne	Soil Cracks (B6) a Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
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roject/Site: Highland Solar		City/Coun	ty Highland	d	_ Samp	ling Da	te: 12/2	20/2017
Applicant/Owner Hecate Energy Highland LLC				State Ohio			mt. WF	
		Section, 1	ownship, Ra	nge:				
andform (hillstope, terrace, etc.):			Local relief	(concave, convex, none	±)'			
Slope (%) Lat. 39.095081			3.815249			n NAI	D83	
Soil Map Unit Name Clermont silt loam, 0 to 1 perc				NWI class		cation: NA		
are climatic / hydrologic conditions on the site typical for		ard Vac	X No					
are Vegetation X, Soll X, or Hydrology X	_ significantly	disturbed	? Are	Normal Circumstances	* present	? Yes		No
kre Vegetation, Soil, or Hydrology	_ naturally pro	blematic?	(If ne	eeded, explain any ansi	vers in R	emarks	5.)	
SUMMARY OF FINDINGS - Attach site ma	p showing	sampli	ng point l	ocations, transec	ts, imp	ortan	t featu	ires, etc
Hydrophytic Vegetation Present? Yes X	No	-16						
Hydric Soil Present? Yes X	No	17 1.70	the Sampled		,			
Wetland Hydrology Present? Yes X	No	wi	thin a Wetlar	nd? Yes_/	×_	No	_	
Remarks								
WP Wet 2: 39.096747, -83.814122 WP is located in an old agricultural field.								
/EGETATION - Use scientific names of plan	ts.							
	Absolute		nt Indicator	Dominance Test wo	rksheet	7.5		
Tree Stratum (Plot size:)	1000		? Status	Number of Dominant				0.0
1. Platanus occidentialis		Yes	FACW	That Are OBL, FACV	V, or FAC	6		(A)
2. Quercus palustris	10	Yes	FACW	Total Number of Don		0		200
3		_	-	Species Across All S	trata:	8		(B)
4.				Percent of Dominant				
5	20	Table		That Are OBL, FACV	V or FAC	10	,	(A/B)
Sapring/Shrub Stratum (Plot size:)	20	= Total C	over	Pravalence Index w	orkshee	l;		
1 Cornus sericea	30	Yes	FACW	Total % Cover o	f:		ultiply by	12
2				OBL species 30		× 1 =		_
3				FACW species 50	_	45-	100	
4		_		FAC species 30		x 3 =	90	_
6 ,				FACU species	_	x 4 =	400	
	30	= Total C	over	UPL species 80	ν	x5=	370	
Herb Stratum (Plot size:) 1. Schoenoplectus tabernaemontani	10	Yes	OBL	Column Totals 190		(A)	3/0	(B)
2. Juncus effusus	20	Yes	OBL	Prevalence Ind	ex = B/A	= 3	.3	
3 Setaria pumila	30	Yes	FAC	Hydrophytic Vegeta				
4 Rosa multiflora	30	Yes	UPL	1 - Rapid Test fo	r Hydrop	hytic V	egetatio	n
5. Glycine max	50	Yes	UPL	X 2 - Dominance T	est is >5	0%		
6				3 - Prevalence II	ndex is s	3.0		
7-				4 - Morphologica				
8				data in Rema				
9				- Problematic Hyd	rophylic	Vegeta	tion' (Ex	(nielda
10				Indicators of hydric	and made	January A	hardest-	accounted
Woody Vine Stratum (Plot size:)	140	= Total C	over	be present, unless d				gy musi
1				Hydrophytic				
2				Vegetation Present?	Yes X	- N	10	
		= Total C						

US Army Corps of Engineers

melion Point	WP

Depth Mat			lox Feature		1.07	Texture	Remarks
inches) Color (mois		Color (maist)	96	Type	Loc'	L/C	Remarks
-12 7.5YR 6/2	60	7.5YR 5/8	40	C	JVI	Lite	
			_	_			
				-			
				-		-	
			-		-		
Type: C=Concentration, D	Depletion, R	M=Reduced Matrix, I	MS=Maske	ed Sand G	rains.		PL=Pore Lining, M=Matrix.
lydric Soil Indicators:							or Problematic Hydric Solis ³ :
Histosol (A1)			Gleyed N				raine Redox (A16)
Histic Epipedon (A2)			Redox (S	550			rface (S7)
Black Histic (A3)			ed Matrix				nganese Masses (F12) allow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)			y Mucky N				xplain in Remarks)
_ Stratified Layers (A5)			y Gleyed fi ted Matrix			Oiner (E	Appelli il Norlacito,
2 cm Muck (A10) Depleted Below Dark S	urfare (A 11)		k Dark Sur				
Depleted Below Dark S Thick Dark Surface (A1			ted Dark		7)	3Indicators o	of nydrophytic vegetation and
Sandy Mucky Mineral (x Depress				hydrology must be present.
5 cm Mucky Peal or Pe		- 01501		41.0		unless d	listurbed or problematic
Restrictive Layer (if obser							
Туре						Undete Call C	resent? Yes X No
E						Hydric Soil F	resentr res NO
Depth (inches)::Remarks							
Remarks							
YDROLOGY	thors:						
Remarks YDROLOGY Wetland Hydrology Indica		guired: check all that	acply)			Secondar	y Indicators (minimum of two required
Remarks YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus				aves (89)			y Indicators (minimum of two required ice Soil Cracks (B6)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum Surface Waler (A1)		Water-S	Stained Le			Surfa	
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimul Surface Water (A1) High Water Table (A2)		Water-S Aquatic	Stained Lea Fauna (B	13)		Surfa Drain	ice Soil Cracks (B6)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimul Surface Water (A1) High Water Table (A2) X Saturation (A3)		Water-S Aquetic True Ac	stained Le Fauna (B juatic Plan	13) ts (B14)		Surfa Drain Dry-S	ice Soil Cracks (B6) lage Patterns (B10)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)	n of one is re	Water-S Aquatic True Ac Hydrog	Stained Le Fauna (B Juatic Plan en Sulfide	13) ts (B14) Odor (C1)		Surfa Drain Dry-S X Crayl	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	n of one is re	Water-S Aquetic True Ac Hydrogi Oxidize	Stained Le Fauna (B Juatic Plan en Sulfide	13) ts (B14) Odor (C1) heres on l	iving Root	Surfa Drain Dry-S Crayl s (C3) Satur	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
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YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	n of one is re	Water-S Aquetic True Ac Hydrog Oxidize Present	stained Lei Fauna (B juatic Plan en Sulfide d Rhizosp ce of Redu	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti	iving Root C4)	Surfa Drain Dry-S Crayl s (C3) Satur Stunt C6) Geor	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1)
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YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparse y Vegetated Co Field Observations: Surface Water Present? Water Table Present?	n of one is re	Water-S	Stained Lei Fauna (B Juatic Plan en Sulfide d Rhizosp de of Redu Iron Redu ick Surfac or Well Da Explain in	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti e (C7) ita (D9) Remarks)	C4) (C4) (C4) (C4)	Surfa Drain Dry-S X Crayl Saturi Stunt C6) FAC-	ice Soil Cracks (86) lage Patterns (810) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparse y Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present?	verial Imagery oncave Surface Yes Yes Yes X	Water-S	stained Lei Fauna (B Juatic Plan en Sulfide d Rhizosp de of Redu Iron Redu uck Surfac or Well Da Explain in (inches): (inches);	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti e (C7) ita (D9) Remarks)	C4) C4) We	Surfa Drain Dry-S Crayl Saturi Stunt C6) FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparse y Vegetated Co Field Observations: Surface Water Present? Water Table Present?	verial Imagery oncave Surface Yes Yes Yes X	Water-S	stained Lei Fauna (B Juatic Plan en Sulfide d Rhizosp de of Redu Iron Redu uck Surfac or Well Da Explain in (inches): (inches);	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti e (C7) ita (D9) Remarks)	C4) C4) We	Surfa Drain Dry-S Crayl Saturi Stunt C6) FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
YDROLOGY Wetland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on A Sparse y Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present?	verial Imagery oncave Surface Yes Yes Yes X	Water-S	stained Lei Fauna (B Juatic Plan en Sulfide d Rhizosp de of Redu Iron Redu uck Surfac or Well Da Explain in (inches): (inches);	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti e (C7) ita (D9) Remarks)	C4) C4) We	Surfa Drain Dry-S Crayl Saturi Stunt C6) FAC-	lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)
YDROLOGY Netland Hydrology Indica Primary Indicators (minimus Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Inundation Visible on A Sparse y Vegetated Co Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	verial Imagery oncave Surface Yes Yes Yes X	Water-S	stained Lei Fauna (B Juatic Plan en Sulfide d Rhizosp de of Redu Iron Redu uck Surfac or Well Da Explain in (inches): (inches);	ts (B14) Odor (C1) heres on L ced Iron (ction in Ti e (C7) ita (D9) Remarks)	C4) C4) We	Surfa Drain Dry-S Crayl Saturi Stunt C6) FAC-	ice Soil Cracks (B6) lage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) Neutral Test (D5)

Project/Site: Highland Solar		City/County	Highlan	d	Sampling Date: 12/20/2017			
opplicant/Owner Hecate Energy Highland LLC		100,000		State: Ohio			int WP	
nvestigator(s): M. Perkins, C. Brendel		Section To	wnship Ra	nge:				
andform (hillslope, terrace, etc.)			Local relief	(consave, convex, none)			
Slope (%) Lat 39 097132		Long83.814061				Dalum NAD83		
Soil Map Unit Name: Clermont silt loam, 0 to 1 perce				NWI classif				
are climatic / hydrologic conditions on the site typical for th		ar2 Ves	X No					
we Vegetation Soil or Hydrology				Normal Circumstances			X	Ne
								NO
re Vegetation, Soil, or Hydrology				eded, explain any answ				
SUMMARY OF FINDINGS – Attach site map	-	samplin	g point I	ocations, transect	s, imp	oortar	nt teatu	res, etc.
	No X	le th	ne Sampled	Area				
	No X	100	in a Wetla			No :	X	
Wetland Hydrology Present? Yes 1 Remarks	ND	mo	mit & weeks	100				
/EGETATION – Use scientific names of plants	S.							
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo				
1. Profisize.	70 COVE	opecies:	Status	Number of Dominant That Are OBL FACW				(A)
2								
3.				Total Number of Dom Species Across All St		3		(B)
4								
5.				Percent of Dominant: That Are OBL, FACW			3	(A/B)
Company A. S. A. Marrier		= Total Co	ver	Prevalence Index wo	selvelses	N. Br		
Sapling/Shrub Stratum (Plot size:)				Total % Cover of			ultiply by	
1		-		OBL species			O.D.P.II	
3				FACW species		x2=		
4				FAC species 20		x3=	60	
5.				FACU species		x 4 =		
	1	= Total Co	ver	UPL species 30		x 5 =	150	
Herb Stratum (Plot size:)	20	3700	Uni	Column Totals: 50		(A)	210	(B)
Rosa multiflora Setaria numila	20	Yes	FAC	Prevalence Inde	w = D/	0 - 4	.1	
2. Setaria pumila 3. Glycine max	50	Yes	UPL	Hydrophytic Vegeta	_	_		
		100		1 - Rapid Test fo				
5				2 - Dominance To	300			
5				3 - Prevalence In	der is s	3 D		
				4 - Morphologica				
7				data in Rema		A A SHOW		
8							ation (Ex	olain)
				Problematic Hyd	ophytic	Veget		
8								ny must
8 g 10 Woody Vine Stratum (Plot size)		= Total Co	ver	*Indicators of hydric s be present unless dis	oil and	wetland	t hydrolog	y must
8 9. 10 Woody Vine Stratum (Plot size)		= Total Co	ver	Indicators of hydric s be present unless di	oil and	wetland	t hydrolog	gy must
8 9 10 Woody Vine Stratum (Plot size)		= Total Co		Indicators of hydric s be present unless dis Hydrophytic Vegetation	oil and sturbed	wetland or prob	t hydrolog	y must

US Army Corps of Engineers

Midwest Region - Version 2.0

Profile Description		to the dep				or commi	in the epachice i	or marcators.)
Depth (inches) Co	Matrix for (moist)	%	Color (moist)	dox Feature		Last	Tarabasa	Describe
	R 6/2	60	7.5YR 5/8	40	C	Loc*	L/C	Remarks
1.31	11 0/2	- 00	7.51K 5/6	40	-	IVI	LIC	
Trans De Consider	- D D	THE PARTY	D-10-10-10-10-10-10-10-10-10-10-10-10-10-		16:128		2,	Sec. 2. Character and General
Type: C=Concentr		letion, RM	=Reduced Matrix,	M5≈Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix
	UIS		400		1020			or Problematic Hydric Soils ³ :
Histosol (A1)	120			ly Gleyed M				rairie Redox (A16)
Histic Epipedon				y Redox (S				irface (S7)
Black Histic (A3 Hydrogen Sulfic				ped Matrix (- T. P. L.			nganese Masses (F12)
Stratified Layer				y Mucky M				allow Dark Surface (TF12)
2 cm Muck (A1)	70.0			ny Gleyed N eted Matrix			Other (E	explain in Remarks)
Depleted Below		0 (011)		x Dark Surf				
Thick Dark Surf		e (Att)		eted Dark S	11		³ Indicators	of hydrophytic vegetation and
Sandy Mucky N			The second secon	x Depression				hydrology must be present.
5 cm Mucky Pe	Control of the second	3)		n Deplessi	110 (1 0)			isturbed or problematic
Restrictive Layer (Silve story	note that the second second
Туре							1000	
1,0,7							1 64 W W W W W	X
Depth (inches)							Hydric Soil F	resent? Yes X No
							Hydric Soil F	resent? Yes No
Remarks							Hydric Soil F	resent? Yes No
YDROLOGY	/ Indicators						Hydric Soil F	resent? Yes _ No
Remarks YDROLOGY Netland Hydrolog)			end chank all that	operital)				
YDROLOGY Wetland Hydrology Primary Indicators (r	min mum of c			-			Secondar	y Indicators (minimum of two required
YDROLOGY Netland Hydrology Primary Indicators (r	minimum of c		Water-S	Stained Leav			Secondar Surfa	y Indicators (minimum of two required ce Soil Cracks (86)
YDROLOGY Netland Hydrology Surface Water (High Water Tab	minimum of c		Water-S Aquatic	Stained Leav Fauna (B13)		Secondar Surfa Drain	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (High Water Tab Saturation (A3)	minimum of c A1) le (A2)		Water-S Aquatic True Aq	Stained Leav Fauna (B13 uatic Plants	(B14)		Secondar Surfa Drain	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B	minimum of c A1) Ile (A2) 1)		Water-S Aquatic True Aq Hydroge	Stained Leav Fauna (B13 uatic Plants en Sulfide O) (B14) dor (C1)		Secondar Surfa Drain Dry-S Crayf	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) ish Burrows (C8)
YDROLOGY Netland Hydrology Crimary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo	minimum of c A1) le (A2) 1) sits (B2)		Water-S Aquatic True Aq Hydroge Oxidizer	Stained Leav Fauna (B13 Juatic Plants en Sulfide O d Rhizosphe	(B14) dor (C1) eres an Liv		Secondar Surfa Drain Dry-S Crayf (C3) Satur	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (r High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (F	minimum of c A1) le (A2) 1) sits (B2)		Water-S Aquatic True Aq Hydroge Oxidized	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduci	(B14) (B14) dor (C1) eres an Liv ed Iron (C4	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) ish Burrows (C8)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cre	minimum of c A1) le (A2) 1) sits (B2) 33) ust (B4)		Water-S Aquatic True Aq Hydroge Oxidized Presenc	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ce of Reduct fron Reduct	(B14) dor (C1) eres an Lived Iron (C4) on in Tille	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cre Iron Deposits (E	minimum of c A1) le (A2) 1) ssits (B2) 33) sst (B4)	ne is requir	Water-S Aquatic True Aq Hydroge Oxidizer Present Recent	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ee of Reduct Iron Reduct ck Surface	(B14) (B14) dor (C1) eres an Liv ed Iron (C4 con in Tiller (C7)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Aigal Mat or Cre Iron Deposits (E	minimum of c A1) le (A2) 1) sits (B2) 33) list (B4) 35) ele on Aenal I	me is requir	Water-S Aquatic True Aq Hydroge Oxidized Presence Recent Thin Mu	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ce of Reduct fron Reduct	(B14) (B14) dor (C1) eres an Liv ed Iron (C4 con in Tiller (C7)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Netland Hydrology Metland Hydrology Metland Hydrology Metland Hydrology Mater Mater (A3) Water Marks (B Sediment Depo Drift Deposits (E Algai Mat or Cru Iron Deposits (E Inuncation Visib Sparsely Vegets	minimum of c A1) le (A2) 1) sits (B2) 33) ust (B4) st) ble on Aenal I	me is requir	Water-S Aquatic True Aq Hydroge Oxidized Presend Recent Thin Mu	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ee of Reduct Iron Reduct ck Surface	(B14) dor (C1) eres an Lived Iron (C4 on in Tille (C7) (D9)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Wetland Hydrology Primary Indicators (r. Surface Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Iron Deposits (E Inuncation Visib Sparsely Vegets	minimum of c A1) le (A2) 1) sits (B2) 33) ust (B4) st) ble on Aenal I	magery (87 Surface (8	Water-S Aquatic True Aq Hydroge Oxidizer Presenc Recent Thin Mu Gauge c 38) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ce of Reduct iron Reduct ick Surface or Well Data	(B14) dor (C1) eres an Lived Iron (C4 on in Tille (C7) (D9)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Wetland Hydrology Primary Indicators (i Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cru Iron Deposits (E Inuncation Visib Sparsely Vegets	minimum of c A1) le (A2) 1) sits (B2) 33) Jist (B4) 55) ble on Aenal I aled Concave	magery (87 Surface (8	Water-S Aquatic True Aq Hydroge Oxidizer Presend Recent Thin Mu Gauge of	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe ce of Reduct iron Reduct ick Surface or Well Data	(B14) dor (C1) eres an Lived Iron (C4 on in Tille (C7) (D9)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Wetland Hydrology Primary Indicators (r Surface Water (r High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cru Iron Deposits (B Inuncation Visib Sparsely Vegets Field Observations	minimum of c A1) le (A2) 1) sits (B2) 33) list (B4) 35) le on Aenal I lated Concave	magery (B7 Surface (B	Water-S Aquatic True Aq Hydroge Oxidizer Presenc Recent Thin Mu Gauge C 38) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re	(B14) dor (C1) eres an Lived Iron (C4 on in Tille (C7) (D9)	1)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Wetland Hydrology Primary Indicators (r Surface Water (a) High Water Table Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (B) Algal Mat or Cre Iron Deposits (B) Inuncation Visib Sparsely Vegets Field Observations Surface Water Presen	minimum of c A1) le (A2) 1) sits (B2) 33) list (B4) 35) le on Aenal I alled Concave	magery (B7 Surface (B es	Water-S Aquatic True Aq Hydroge Oxidizer Presenc Recent Thin Mu Gauge o B8) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re	(B14) dor (C1) eres an Lived Iron (C4 on in Tille (C7) (D9)	d Soils (Co	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
YDROLOGY Wetland Hydrology Primary Indicators (r Surface Water (r) High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Inuncation Visib Sparsely Vegets Field Observations Surface Water Present Saturation Present? Includes capillary fri	minimum of c A1) le (A2) 1) sits (B2) 33) sit (B4) ble on Aenal I aled Concave ent? Y y nge)	magery (87 es	Water-S Aquatic True Aq Hydroge Oxidizer Presend Recent Thin Mu (1) Gauge of B8) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re (inches)	(B14) (B14) dor (C1) eres on Lived Iron (C4) con in Tiller (C7) (D9) emarks)	d Soils (Co	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk Geom FAC-	y Indicators (minimum of two required ce Soil Cracks (86) age Patterns (810) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) loophic Position (D2)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (r High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Inuncation Visib Sparsely Vegets Field Observations Surface Water Present Saturation Present? Includes capillary fri	minimum of c A1) le (A2) 1) sits (B2) 33) sit (B4) ble on Aenal I aled Concave ent? Y y nge)	magery (87 es	Water-S Aquatic True Aq Hydroge Oxidizer Presend Recent Thin Mu (1) Gauge of B8) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re (inches)	(B14) (B14) dor (C1) eres on Lived Iron (C4) con in Tiller (C7) (D9) emarks)	d Soils (Co	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk Geom FAC-	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
YDROLOGY Wetland Hydrology Primary Indicators (r Surface Water (r High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru Iron Deposits (E Inuncation Visib	minimum of c A1) le (A2) 1) sits (B2) 33) sit (B4) ble on Aenal I aled Concave ent? Y y nge)	magery (87 es	Water-S Aquatic True Aq Hydroge Oxidizer Presend Recent Thin Mu (1) Gauge of B8) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re (inches)	(B14) (B14) dor (C1) eres on Lived Iron (C4) con in Tiller (C7) (D9) emarks)	d Soils (Co	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk Geom FAC-	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
YDROLOGY Netland Hydrology Primary Indicators (r Surface Water (A) Water Marks (B) Sediment Deposits (E) Algal Mat or Cru Iron Deposits (E) Inuncation Visib Sparsely Vegets Field Observations Surface Water Present Saturation Present? Includes capillary fri Describe Recorded	minimum of c A1) le (A2) 1) sits (B2) 33) sit (B4) ble on Aenal I aled Concave ent? Y y nge)	magery (87 es	Water-S Aquatic True Aq Hydroge Oxidizer Presend Recent Thin Mu (1) Gauge of B8) Other (E	Stained Leav Fauna (B13 uatic Plants en Sulfide O d Rhizosphe e of Reduct fron Reduct ick Surface or Well Data explain in Re (inches)	(B14) (B14) dor (C1) eres on Lived Iron (C4) con in Tiller (C7) (D9) emarks)	d Soils (Co	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunk Geom FAC-	y Indicators (minimum of two required be Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

Henata Energy Highland II C		ardia aming	Highlan	Sampling Date: 12/20/2017		
pplicant/Ownel Hecate Energy Highland LLC		V 0.13.	5082	State Ohio	Sampling Point WQ-DP1	
vestigator(s): M. Perkins, C. Brendel		Section, To	wnship Ra	nge		
andlorm (hillslope, terrace, etc.):				(concave, convex, none):	The second secon	
		Long. <u>-83.</u>	826585		Datum NAD83	
oil Map Unit Name: Clermont silt loam, 0 to 1 perce	ent slopes			MWI classific	ation; NA	
re climatic / hydrologic conditions on the site typical for ti	nis time of year	ar? Yes)	X No_	(If no, explain in R	emarks.)	
re Vegetation, Soil, or Hydrology	significantly	disturbed?	Are	Normal Circumstances	present? Yes X No	
re Vegetation, Soil, or Hydrology				seded, explain any answe	rs in Remarks.)	
UMMARY OF FINDINGS - Attach site map				ocations, transects	, important features, etc	
Hydrophytic Vegetation Present? Yes	No					
7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	No	Is th	e Sampled			
	No	with	in a Wetla	nd? Yes X	No	
Remarks:						
WQ Wet3: 39.087118, -83.829296						
/EGETATION - Use scientific names of plant	S					
	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size:)	% Cover		Status	Number of Dominant S		
1 Acer rubrum	40	Yes	FAC	That Are OBL, FACW.	or FAC, 5 (A)	
2. Liquidambar styraciflua	20	Yes	FACW	Total Number of Domin	-	
3 Quercus palustris		165	TAGIV	Species Across All Stra	1ta. 5 (B)	
4				Percent of Dominant S		
5	80	- Total Car	100	That Are OBL, FACW,	or FAC: 100 (A/B)	
Sapling/Shrub Stratum (Plot size:)		= Total Co	ver	Prevalence Index wor	ksheet:	
Fraxinus pennsylvanica	20	Yes	FACW	Total % Cover of	Multiply by:	
2				OBL species	x 1 =	
3.				FACW species 90	x 2 = 180	
4				FAC species 40	x3=_120	
5				FACU species	x 4 =	
Hart Status (Distains	20	= Total Co	ver	UPL species	x 5 =	
Herb Stratum (Plot size:) 1 Leersia virginica	30	Yes	FACW	Column Totals: 130	(A) 300 (B)	
2.				Prevalence Index	= B/A = 2.3	
3.				Hydrophytic Vegetati		
4.	300			X 1 - Rapid Test for	Hydrophytic Vegetation	
5.				2 - Dominance Tes		
6.				X 3 - Prevalence Ind	ex (s ≤3.0°	
7					Adaptations' (Provide supporting	
8.					s or on a separate sheet)	
9				Problematic Hydro	phytic Vegetation (Explain)	
10				(Indicators of Eudens	ii and wetland hydrology must	
Woody Vine Stratum (Plot size:)	30	= Total Co	ver	be present unless dist		
t				Hydrophytic		
				Vegetation	V	
2				Present? Ye	s X No	

US Army Corps of Engineers

Midwest Region - Version 2 0

Sampling Point WQ-DP1

-	44		
0	$^{\circ}$	н	
0	u	н	_

rofile Descr Depth	Matrix		Red	ox Featur				20074
nches)	Color (moist)	%	Color (moist)	9/6	Type	Loc	Texture	Remarks
-12	7.5YR 6/1	70	7.5YR 5/8	30	C	М	C/L	
				-	-	_		
				-	-	_		
				-	-	_		o Borrison - Nacional
	ncentration, D=De	pletion, RM=	Reduced Matrix, N	IS=Maske	ed Sand G	rains.		L=Pore Lining, M=Matrix Problematic Hydric Soils ³ :
ydric Soil I			200					ina Redox (A16)
_ Histosol	The second secon			Redox (S	Aalrix (S4)		Dark Surf	
Black His	ipedon (A2)			ed Matrix				ganese Masses (F12)
	n Sulfide (A4)				lineral (F1			low Dark Surface (TF12)
	Layers (A5)		The second secon		Matrix (F2)			plain in Remarks)
2 cm Mu			X Deplet	ed Matrix	(F3)			
	Below Dark Surfa	ce (A11)	Redox	Dark Sur	face (F6)		*	and the second second
	irk Surface (A12)				Surface (F7	()		hydrophytic vegetation and
	lucky Mineral (S1)		Redox	Depress	ions (FB)			ydrology must be present, sturbed or problematic
	cky Peat or Peat (S						Uniess dis	nained or brooletisatic
	ayer (if observed	1:					10000	
Type:			_				Hydric Soil Pr	esent? Yes X No
Depth (inc Remarks:	ches);							
Remarks:								
Remarks:	GY	\$7						
Remarks: YDROLO Netland Hyd	GY drology Indicators		ed: check all that	apply)				
YDROLO Netland Hyd	GY drology Indicators calors (minimum of				aves (B9)		Secondary	Indicators (minimum of two required
YDROLO Netland Hyd Surface	GY drology Indicators calors (minimum of Water (A1)		X Water-S				Secondary Surface	Indicators (minimum of two required
YDROLO Netland Hyr Surface High Wa	GY drology Indicators calors (minimum of Water (A1) ater Table (A2)		X Water-S Aquatic	lained Lea	(3)		Secondary Surface Draina	Indicators (minimum of two required e Soil Cracks (B6)
YDROLO Netland Hyd Surface High Wa X Saturatio	GY drology Indicators calors (minimum of Water (A1) ater Table (A2)		X Water-S Aquatic True Ag	lained Lea Fauna (61 uatic Plan	(3)		Secondary Surface Draina Dry-Se X Crayfis	Indicators (minimum of two required e Soil Cracks (B6) ge Patlerns (B10) eason Water Table (C2) th Burrows (C8)
YDROLO Netland Hyd Surface High Wa X Saturatic Water M	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		X Water-S Aquatic True Aqu Hydroge	lained Lea Fauna (61 uatic Plan n Sulfide	(3) ts (B14) Odor (C1)	iving Roots	Secondary Surface Draina Dry-Se X Crayfis	Indicators (minimum of two required e Soil Cracks (B6) ge Patlerns (B10) eason Water Table (C2)
YDROLO Netland Hyd Surface High Wa X Saturatic Water M Sedimer	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)		X Water-Si Aquatic True Age Hydroge Oxidized	lained Lea Fauna (Br uatic Plan n Sulfide I Rhizospl	(3) ts (B14) Odor (C1)		Secondary Surface Draina Dry-Se X Crayfis (C3) Satura Stunte	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
YDROLO Netland Hyd Surface High Wa X Saturatic Water M Sedimer Drift Dep	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		X Water-S Aquatic True Aqu Hydroge Oxidized Present I	(ained Lea Fauna (Br uatic Plan In Sulfide I Rhizosph e of Redu ron Redu	(3) ts (B14) Odor (C1) heres on L ced Iron (C		Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Netland Hyd Surface High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		X Water-S Aquatic True Aqu Hydroge Oxidized Present I	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizosph e of Redu	(3) ts (B14) Odor (C1) heres on L ced Iron (C	541	Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
YDROLO Netland Hyd Surface High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Grust (B4) posits (B5) on Visible on Aeria	one is requir	X Water-S Aquatic True Agi Hydroge Oxidized Presenc Recent I Thin Mu Gauge of	lained Lea Fauna (Br uatic Plan In Sulfide I Rhizosph e of Redu ron Redu ck Surface or Well Da	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9)	541	Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (86) ge Patterns (810) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Vetland Hyde Surface High Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Grust (B4) oosits (B5) on Visible on Aeria y Vegetated Conca	one is requir	X Water-S Aquatic True Agi Hydroge Oxidized Presenc Recent I Thin Mu Gauge of	lained Lea Fauna (Br Juatic Plan In Sulfide I Rhizosph e of Redu ron Reduck Surface	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9)	541	Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Netland Hydenson Incompany India Surface High Wa X Saturation Water M Sedimer Drift Dep Incompany India Iron Dep Inundati Sparsely	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Grust (B4) posits (B5) on Visible on Aeria y Vegetated Conca- vations:	one is required in the second of the second	X Water-S Aquatic True Age Hydroge Oxidized Presenc Recent I Thin Mu Gauge of Other (E	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospi e of Redu ron Redu ck Surface in Well Da ixplain in I	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9)	541	Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Netland Hydenson Incompany India Surface High Wa X Saturation Water M Sedimer Drift Dep Incompany India Iron Dep Inundati Sparsely	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Grust (B4) oosits (B5) on Visible on Aeria y Vegetated Conca	Imagery (E) ve Surface (I	X Water-S Aquatic True Agu Hydroge Oxidized Presenc Recent I Thin Mu Gauge of 88) Other (E	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizosph e of Redu ron Redui ck Surface or Well Da inches).	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9)	541	Secondary Surface Draina Dry-Se X Craylis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Netland Hyd Surface High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundali Sparsely Field Obser	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Grust (B4) posits (B5) on Visible on Aeria y Vegetated Conca vations: er Present?	I Imagery (B) ve Surface (I) Yes	X Water-S Aquatic True Agi Hydroge Oxidized Presenc Recent Thin Mu Gauge B8 Other (E	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospl e of Redu ron Redu ck Surface in Well Da inches): inches):	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9) Remarks)	ed Soils (C	Secondary Surface Draina Dry-Se Crayfis (C3) Satura Stunte 6) Geome	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) reutral Test (D5)
YDROLO Vetland Hyde Surface High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Table Saturation P	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca vations: er Present? Present?	Imagery (E: ve Surface (I) Yes Yes Yes X	X Water-S	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospi e of Redu ron Redui ck Surface or Well Da inches): inches): inches):	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9) Remarks)	(4) ed Soils (C	Secondary Surface Draina Dry-Se X Crayfis Crayfis Stunte G FAC-N	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Vetland Hyde Surface High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Table Saturation P	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Grust (B4) posits (B5) on Visible on Aeria y Vegetated Conca vations: er Present? Present?	Imagery (E: ve Surface (I) Yes Yes Yes X	X Water-S	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospi e of Redu ron Redui ck Surface or Well Da inches): inches): inches):	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9) Remarks)	(4) ed Soils (C	Secondary Surface Draina Dry-Se X Crayfis Crayfis Stunte G FAC-N	Indicators (minimum of two requires a Soil Cracks (B6) go Patterns (B10) go Patterns (B10) go Water Table (C2) go Water Table (C3) go Stressed Plants (D1) go Position (D2) go Water Table (D5)
YDROLO Vetland Hyde Surface High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Water Table Saturation P	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca vations: er Present? Present?	Imagery (E: ve Surface (I) Yes Yes Yes X	X Water-S	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospi e of Redu ron Redui ck Surface or Well Da inches): inches): inches):	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9) Remarks)	(4) ed Soils (C	Secondary Surface Draina Dry-Se X Crayfis Crayfis Stunte G FAC-N	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) priphic Position (D2) (eutral Test (D5)
YDROLO Netland Hyd Primary Indic Surface High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wate Water Table Saturation P (includes ca) Describe Re	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca vations: er Present? Present?	Imagery (E: ve Surface (I) Yes Yes Yes X	X Water-S	lained Lea Fauna (Br uatic Plan in Sulfide I Rhizospi e of Redu ron Redui ck Surface or Well Da inches): inches): inches):	ts (B14) Odor (C1) heres on L ced Iron (C ction in Till e (C7) ta (D9) Remarks)	(4) ed Soils (C	Secondary Surface Draina Dry-Se X Crayfis Crayfis Stunte G FAC-N	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) priphic Position (D2) (eutral Test (D5)

							/20/2017
pplicant/Owner Hecate Energy Highland LLC				State Ohio	Sampling	Point: W	Q-DP2
westigator(s): M. Perkins, C. Brendel		Section, To	wnship, Ra	nge			
andform (hillslope, terrace, etc.):			ocal relief	(concave, convex, none			
lope (%): Lat. 39.088053		Long: -83.	82884		Datum	NAD83	
cil Map Unit Name Clermont silt loam, 0 to 1 perce	nt slopes	NWI classific				4	
re climatic / hydrologic conditions on the site typical for the		ar2 Ves >	< No	(If no, explain in			
re Vegetation, Soil, or Hydrology			Are	'Normal Circumstances'		Yes X	No
				eeded, explain any answ			- 100
re Vegetation, Soil, or Hydrology							
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transect	s, impor	tant feat	tures, etc
Hydrophytic Vegetation Present? Yes X	No	(-)	.6 8 4	200			
	No	1172.6	e Sampleo		No		
Wetland Hydrology Present? Yes X	No	with	in a Wetlar	nd? Yes_/	No.		
Remarks:							
Wetland Q Data Point 2 is located in an old agric	ultural field						
/EGETATION - Use scientific names of plant	S.						
	11/14/2007	Dominant	114 (40) 400 (10)	Dominance Test wor	ksheet:		
Tree Stratum (Plot size)	% Cover	Species?	Status	Number of Dominant		2	144
1		-	-	That Are OBL, FACW	or FAC.	2	(A)
2	-	_	_	Total Number of Dom		3	
3			-	Species Across All St	ata	3	(B)
4			-	Percent of Dominant		P.C	
5	9	- 112		That Are OBL, FACW	or FAC:	66	(A/B)
Sapling/Shrub Stratum (Plot size:)		= Total Co	ver	Prevalence Index wo	rksheet:		
1				Total % Cover of		Multiply i	DVV
2				OBL species 80	x	1 = 80	
3.				FACW species 20	×	2 = 40	
4.				FAC species	×	3 =	
5				FACU species		4 =	_
		= Total Co	ver	UPL species 40	×	5 = 200	
Herb Stratum (Plot size)	an	Von	OBL	Column Totals: 140	(A	320	(B)
1 Ludwigia alternifolia	80	Yes	UPL	Prevalence Inde	v = H/A =	2.3	
Glycine max Cyperus esculentus	20	Yes Yes	FACW	Hydrophytic Vegetat			
3. Cyperus escurentus		100	171011	1 - Rapid Test for			ion
4				X 2 - Dominance To			
5.		-		X 3 - Prevalence In			
6			_	4 - Marphological			e supporting
7		-		data in Remar	ks or on a	separate s	heel)
9				Problematic Hydr	opnytic Ve	getation' (Explain)
10							
(4)	120	= Total Co	vei	Indicators of hydric s be present, unless dis	oil and wet	land hydro	logy must
West Very Other Charles (District)				be present, unless on	minen or t	лошения	1
Woody Vine Stratum (Plot size:)				Hydrophytic			
1							
				Vegetation Present? Y	es X	No	

US Army Corps of Engineers

Midwest Region - Version 2 0

Sampling Point WQ-DP2

(inches)		olor (maist) YR 5/8	_%				
			30	Type	M Lac	C/L	Remarks
Type: C=Concentration, D=Dep	letion, RM=Redi	iced Matrix, M	S=Maske	d Sand Gr	ains.		n: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:							s for Problematic Hydric Soils ³ :
Histosol (A1)			Gleyed Ma			-	t Prairie Redox (A16)
Histic Epipedon (A2)			Redox (S				Surface (S7)
Black Histic (A3) Hydrogen Sulfide (A4)			d Matrix (neral (F1)			Manganese Masses (F12) Shallow Dark Surface (TF12)
Stratified Layers (A5)		The second secon	Gleyed M				r (Explain in Remarks)
2 cm Muck (A10)		1 2	ed Matrix (571176	(Laplati ii Nemata)
Depleted Below Dark Surface	e (A11)		Dark Surf				
Thick Dark Surface (A12)	~			urlace (F7).	Indicato	rs of hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Depression		1		nd hydrology must be present.
5 cm Mucky Peat or Peat (S:	3)						s disturbed or problematic
Restrictive Layer (if observed):							
Туре						Voltage Sto	
Depth (inches):						Hydric So	il Present? Yes X No
Remarks:							
YDROLOGY							
AATON AND THE STATE OF THE STATE OF							
YDROLOGY Wetland Hydrology Indicators:		hack all this sa	nokil			Spenne	Nany Indicators Imprimum of hun required
Wetland Hydrology Indicators: Primary Indicators (minimum of o				(as (BG)			dary Indicators (minimum of two required
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1)		Water-Sta	ined Leav			Su	rface Soil Cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2)		Water-Sta Aquatic F	ined Leav auna (813	3)		Su Dr	rface Soil Cracks (B6) ainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta Aquatic F True Aqua	auna (813 auna (813 atic Plants	3) (B14)		Su Dr	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1)		Water-Sta Aquatic Factor Fact	ained Leav auna (B13 atic Plants Sulfide O	(B14) dor (C1)	District	Su Dr. Dr. X Cr.	rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Sta Aquatic Face True Aqua Hydrogen Oxidized	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv	ing Roots	Su Dr Dr X Cr (C3) Sa	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Sta Aquatic F. True Aqua Hydrogen Oxidized I	auna (813 auna (813 atic Plants Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Liv ed Iron (C	4)	Su Su Dr Dr Z Cr. (C3) Sa St.	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Sta Aquatic Fi True Aqua Hydrogen Oxidized Presence Recent Iro	auna (813 auna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct	(B14) (B14) dor (C1) eres on Liv ed fron (C- tion in Tille		Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	one is required. c	Water-Sta Aquatic F. True Aqua Hydrogen Oxidized Presence Recent Iro Thiri Muck	auna (813 auna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface	(B14) (B14) (dor (C1) eres on Lived fron (C- tion in Title (C7)	4)	Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I	one is required co	Water-Sta Aquatic F. True Aqua Hydrogen Oxidized I Presence Recent Inc Thiri Muck Gauge or	ained Leava auna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct & Surface Well Data	(B14) Idor (C1)	4)	Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave	one is required co	Water-Sta Aquatic F. True Aqua Hydrogen Oxidized Presence Recent Iro Thiri Muck	ained Leava auna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct & Surface Well Data	(B14) Idor (C1)	4)	Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations:	Imagery (B7) e Surface (B8)	Water-Sta Aquatic F. True Aqua Hydrogen Oxidized Presence Recent Inc Thir Muck Gauge or Other (Ex	ained Leava auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	(B14) rdor (C1) eres on Liv ed fron (C- tion in Title (C7) t (D9) emarks)	4)	Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations: Surface Water Present?	Imagery (B7) e Surface (B8)	Water-Sta Aquatic F- True Aqua Hydrogen Oxidized I Presence Recent Inc Thiri Much Gauge or Other (Ex	ained Leavauna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Reducts	(B14) rdor (C1) eres on Liv ed fron (C- tion in Title (C7) t (D9) emarks)	4)	Su Su Dr. X Cn (C3) Sa St. Ge	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present?	Imagery (B7) e Surface (B8) es X No 2	Water-Sta Aquatic F- True Aqua Hydrogen Oxidized Presence Recent Inc Thiri Much Gauge or Other (Ex Depth (in	ained Leavauna (813 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Reduct sches): 3-	(B14) rdor (C1) eres on Liv ed fron (C- tion in Title (C7) t (D9) emarks)	4) d Soils (CE	Su Su Dr Z Cr. (C3) Sa Sti Ge FA	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2) C-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Y Saturation Present? Y Saturation Present? Y Saturation Present? Y Saturation Present?	Imagery (B7) e Surface (B8) es X No X es X No X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Inc Thiri Much Gauge or Other (Ex Depth (in	ained Leavauna (813 atic Plants Sulfide O Rhizosphe of Reduct Reduct Surface Well Data plain in Re aches) aches) 0	(B14) Indor (C1) Indor (C1) Indor (C1) Indor (C-1) Ind	4) d Soils (C6	Su Dr. Dr. X Cr. (C3) Sa Sti Ge FA	rface Soil Cracks (86) alnage Patterns (810) y-Season Water Table (C2) ayfish Burrows (C8) furation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of o X Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Y Water Table Present? Y Saturation Present? (includes capillary fringe) Describe Recorded Data (stream	Imagery (B7) e Surface (B8) es X No X es X No X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Inc Thiri Much Gauge or Other (Ex Depth (in	ained Leavauna (813 atic Plants Sulfide O Rhizosphe of Reduct Reduct Surface Well Data plain in Re aches) aches) 0	(B14) Indor (C1) Indor (C1) Indor (C1) Indor (C-1) Ind	4) d Soils (C6	Su Dr. Dr. X Cr. (C3) Sa Sti Ge FA	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2) C-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of o Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial I Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Y Saturation Present? Y Saturation Present? Y Saturation Present? Y Saturation Present?	Imagery (B7) e Surface (B8) es X No X es X No X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence Recent Inc Thiri Much Gauge or Other (Ex Depth (in	ained Leavauna (813 atic Plants Sulfide O Rhizosphe of Reduct Reduct Surface Well Data plain in Re aches) aches) 0	(B14) Indor (C1) Indor (C1) Indor (C1) Indor (C-1) Ind	4) d Soils (C6	Su Dr. Dr. X Cr. (C3) Sa Sti Ge FA	rface Soil Cracks (B6) alnage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visible on Aerial Imagery (C9) unted or Stressed Plants (D1) comorphic Position (D2) C-Neutral Test (D5)

Project/Site Highland Solar	c	ity/County Highland	d	Sampling Date: 12/20/2017
pplicant/Owner: Hecate Energy Highland LLC		2-14 Tr	State: Ohio	Sampling Point. WQ-UP
vestigator(s). M. Perkins, C. Brendel	S	ection, Township, Ra	nge:	
andform (hilfslope, terrace, etc.):		Local relief	(concave, convex, none)	
			(00) 30 (0) 00 (0)	
cil Map Unit Name: Clermont silt loam, 0 to 1 p		ong	NWI classific	
		- V		7.3
re climatic ℓ hydrologic conditions on the site typical			(If no, explain in R	
re Vegetation, Soil, or Hydrology			'Normal Circumstances'	present? Yes X No
re Vegetation, Soil, or Hydrology	naturally prob	lematic? (If ne	eded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS - Attach site	map showing s	sampling point l	ocations, transects	, important features, et
Hydrophytic Vegetation Present? Yes	No X	1.00.00	A.D. 1	
Hydric Soil Present? Yes	No X	Is the Sampled		V
Wetland Hydrology Present? Yes	No X	within a Wetlan	nd? Yes	No_X_
Remarks				
EGETATION - Use scientific names of p	lants.			
		Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:) 1	% Cover	Species? Status	Number of Dominant S That Are OBL, FACW,	0
2.				
3			Total Number of Domini Species Across All Stra	0
4.				
5.			Percent of Dominant Sp That Are OBL, FACW,	
	-	Total Cover	17.55 A. S. S. J.	WAAA A TOO TOO TOO
Sapling/Shrub Stratum (Plot size:			Prevalence Index wor	
1				Multiply by:
2			12.3 A 12.4 A 24.0 M 3	x 1 =
3			CARLES AND	x 2 =
4				x 3 =
5		-	FACU species 100	× 5 = 500
Herb Stratum (Plot size:)		Total Cover	Column Totals: 100	
1. Glycine max	100	Yes UPL	Goldmin Totals	
2.			Prevalence Index	= B/A =5
3.			Hydrophytic Vegetation	on Indicators:
4.			1 - Rapid Test for I	Hydrophytic Vegetation
5			2 - Dominance Tes	at is >50%
6.			3 - Prevalence Inde	
7				Adaptations¹ (Provide supportin s or on a separate sheet)
8				phytic Vegetation (Explain)
9			Problematic Hydro	priyac vegeration (Explain)
10			Indicators of hudge en	and wetland hydrology must
Woody Vine Stratum (Plot size:	100 =	Total Cover	be present, unless distr	
		-	Hydrophytic	
1			Vegetation	
2			Present? Ye	sNo_X

US Army Corps of Engineers

Midwest Region - Version 2 0

Sampling Point: WQ-UP

Depth (inches) Matrix (color (moist)) 0-12 10YR 6/4				8			
MANAGEMENT DESCRIPTION OF THE PARTY OF THE P	%	Color (moist)	x Feature %	Type	Loc2	Texture	Remarks
			_	_	_		
			_	_	_		
			-	-			Todaya a Voltava
Type: C=Concentration, D=De	epielion, RM=Re	duced Matrix, M.	S=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix.
lydric Soil Indicators:				0.00			Problematic Hydric Soils ¹ :
_ Histosol (A1)			Gleyed Ma				ris Redox (A16)
Histic Epipedon (A2)			Redox (S5			Dark Surfa	
_ Black Histic (A3)			d Matrix (\$				anese Masses (F12)
Hydrogen Sulfide (A4)				neral (F1)			ow Dark Surface (TF12) plain in Remarks)
Stratified Layers (A5)			Gleyed M			_ Other (EX	Sam in Kemarks)
 2 cm Muck (A10) Depleted Below Dark Surfa 	200 /0111		d Matrix (Dark Surfa				
Thick Dark Surface (A12)	100 (011)			irface (F7		Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S1)			Depressio				drology must be present.
5 cm Mucky Peat or Peat (D Opi O Octio	100			turbed or problematic
Restrictive Layer (if observed							
Type:	.6					AND AND A	· ·
Depth (inches):						Hydric Soil Pre	esent? Yes No X
YDROLOGY							
	s:						
Wetland Hydrology Indicator		check all that ap	opły)			Secondary	ndicators (minimum of two require
Wetland Hydrology Indicator		check all that ap	EVENTO.	res (89)			indicators (minimum of two required Soil Cracks (B6)
Netland Hydrology Indicators Primary Indicators (minimum of		The second section of the second section of the second section of the second section s	ined Leav			Surface	Section 2. The Control of the Contro
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		Water-Sta	iined Leav auna (B13	3)		Surface Drainag	Soil Cracks (B6)
Netland Hydrology Indicators rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta	ined Leav auna (B13 atic Plants	(B14)		Surface Drainag Dry-Se	Soil Cracks (B6) ne Patterns (B10)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2)		Water-Sta Aquatic Fa True Aqua Hydrogen	uned Leav auna (B13 atic Plants Sulfide O	(B14) dor (C1)	ing Roots	Surface Drainag Dry-Sea Cray(is)	Soil Cracks (B6) ne Patterns (B10) ason Water Table (C2)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen	uned Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Liv		Surface Drainag Dry-Sea Crayfisl (C3) Saturat	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) th Burrows (C8)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence	auna (B13 auna (B13 atic Plants Sulfide C Rhizosphe of Reduc	(B14) dor (C1) eres on Lived Iron (C		Surface Drainag Dry-Ser Cray(isl (C3) Saturat Stunted	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8) ton Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized I Presence	uned Leavauna (B13 etic Plants Sulfide O Rhizosphe of Reduct on Reduct	(B14) dor (C1) eres on Lived Iron (Co	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Son Water Table (C2) the Burrows (C8) ton Visible on Aerial Imagery (C9) tor Stressed Plants (D1)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	fone is required	Water-Sta Aquatic For True Aquatic For Aqu	uned Leavauna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct & Surlace	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7)	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Surrows (C8) the Surrows (C8) the Visible on Aerial Imagery (C9) the Stressed Plants (D1) the Position (D2)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5)	of one is required	Water-Sta Aquatic For True Aquatic For Hydrogen Oxidized In Presence Recent Inc. Thin Much	nined Leava auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct & Surlace Well Data	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) i (D9)	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Surrows (C8) the Surrows (C8) the Visible on Aerial Imagery (C9) the Stressed Plants (D1) the Position (D2)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Depos ts (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is required	Water-Sta Aquatic For True Aquatic For Hydrogen Oxidized In Presence Recent Inc. Thin Much	nined Leava auna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct & Surlace Well Data	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) i (D9)	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Surrows (C8) the Surrows (C8) the Visible on Aerial Imagery (C9) the Stressed Plants (D1) the Position (D2)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca	of one is required	Water-Sta Aquatic For True Aquatic For True Aquatic For True Aquatic For True Aquatic For Forest For Forest For Third Much Gauge or Other (Expense)	auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Ri	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) i (D9)	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Surrows (C8) the Surrows (C8) the Visible on Aerial Imagery (C9) the Stressed Plants (D1) the Position (D2)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present?	of one is required at Imagery (B7) ave Surface (B8)	Water-Sta Aquatic For True Aquatic For True Aquatic For True Aquatic For True Aquatic For Forest For Forest For True Aquatic For Forest For True Aquatic For Forest	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Re	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) i (D9)	4)	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) ton Visible on Aerial Imagery (C9) tor Stressed Plants (D1) riphic Position (D2) eutral Test (D5)
Wetland Hydrology Indicators Primary Indicators (minimum of 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 Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present?	al Imagery (B7) ave Surface (B8) Yes No	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized f Presence Recent fro Thin Much Gauge or Other (Ex	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Ri aches):	(B14) dor (C1) eres on Lived Iron (C- ion in Tille (C7) i (D9)	4) d Soils (CE	Surface Drainag Dry-Sea Creyfisi (C3) Saturat Stunted	Soil Cracks (B6) the Patterns (B10) the Patterns (B10) the Patterns (B10) the Burrows (C8) the Stressed Plants (D1) the Stressed Plants (D1) the Position (D2) the Stressed (D5)
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Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta Aquatic For True Aquatic For True Aquatic For True Aquatic For True Aquatic For Forester Forest	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Ri aches):	(B14) dor (C1) eres on Lived Iron (Cion in Tille (C7) in (D9) emarks)	4) d Soils (Cr	Surface Drainag Dry-See Crayfisi Saturat Stunted FAC-No	Soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) ton Visible on Aerial Imagery (C9) tor Stressed Plants (D1) riphic Position (D2) eutral Test (D5)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary tringe) Describe Recorded Data (streat	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta Aquatic For True Aquatic For True Aquatic For True Aquatic For True Aquatic For Forester Forest	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Ri aches):	(B14) dor (C1) eres on Lived Iron (Cion in Tille (C7) in (D9) emarks)	4) d Soils (Cr	Surface Drainag Dry-See Crayfisi Saturat Stunted FAC-No	Soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) ton Visible on Aerial Imagery (C9) tor Stressed Plants (D1) riphic Position (D2) eutral Test (D5)
Wetland Hydrology Indicators Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algai Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present?	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta Aquatic For True Aquatic For True Aquatic For True Aquatic For True Aquatic For Forester Forest	auna (B13 auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Ri aches):	(B14) dor (C1) eres on Lived Iron (Cion in Tille (C7) in (D9) emarks)	4) d Soils (Cr	Surface Drainag Dry-See Crayfisi Saturat Stunted FAC-No	Soil Cracks (B6) the Patterns (B10) ason Water Table (C2) the Burrows (C8) ton Visible on Aerial Imagery (C9) tor Stressed Plants (D1) riphic Position (D2) eutral Test (D5)

Project/Site Highland Solar	(City/County	Highland	d	Sampling Date	12/20/2017
Applicant/Owner: Hecate Energy Highland LLC		TO SECULIAR IN			Sampling Point	
nvestigator(s): M. Perkins, C. Brendel		Section, To	wnship Ra	nge:	23.20.00	
andform (hilfstope, terrace, etc.):				(concave, convex, none).		
Slope (%). Lat 39.095734		Long83.			Datum NAD83	
Soil Map Unit Name: Eel silt loam				NWI crassifica		
Are climatic / hydrologic conditions on the site typical for the	on time of tree	v >	C No		1000	
				'Normal Circumstances' p		(N-
Are Vegetation, Soil, or Hydrology						V 190
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eded, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transects,	important fe	atures, etc
Hydrophytic Vegetation Present? Yes X	No		140 T.W.	6 10		
	No		e Sampled	V	No	
Welland Hydrology Present? Yes X	Na	with	in a Wetlar	nd7 Yes _^	No	
Remarks:						
WR Wet2: 39.096243, -83.829483						
VEGETATION - Use scientific names of plants			-			
/EGETATION - Use scientific flames of plants	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Sp		
1, Acer negundo	50	Yes	FAC	That Are OBL, FACW, o	or FAC: 4	(A)
2				Total Number of Domin	ant	
3				Species Across All Stra	ta: 4	(B)
4.				Percent of Dominant Sp	pecies	
5	= ==	-		That Are OBL, FACW, o	FAC: 100	(A/B)
Sapling/Shrub Stratum (Plot size:	50	= Total Co	/er	Prevalence Index work	ksheet:	
1				Total % Cover of	Multip	ly by:
2.				OBL species 40	x 1 = 40	
3.				FACW species 30	×2≈ 60	
4.				FAC species 80	x 3 = 15	0
5.				FACU species	x4=	
		= Total Cov	/er	UPL species	x 5 =	
Herb Stratum (Plot size)	20		E4.0141	Column Totals: 150	(A) 25	0 (B)
Symphyotrichum lateriflorum	30	Yes	FACW	Prevalence Index	-9/4 - 1.7	
2 Leersia oryzoldes	40	Yes	FAC			
3. Ambrosia trifida	30	Tes	FAC	Hydrophytic Vegetation 1 - Rapid Test for H		tation
4.				X 2 - Dominance Tes		I AUDIT
5	_	-		X 3 - Prevalence Inde		
6			_	4 - Morphological A		ide supporting
7	-			data in Remarks	s or on a separate	sheet)
8				Problematic Hydrol	phytic Vegetation	(Explain)
9		-				
10	100	= Total Co	ver	Indicators of hydric soi		
Woody Vine Stratum (Plot size)	235	Total Gu		be present unless disk	libea of broblems	nuc.
1				Hydrophytic		
				Vegetation	s X Na	
2.				Present? Ye		

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Midwest Region - Version 2.0

TOTAL DESI	cription: (Describe	e to the dep	oth needed to docu	ment the	indicator	or contin	m the absence of	A muicators.)
Depth	Matrix	410		ox Featur	4		Lance of the second	National Control
(inches)	Color (maist)	%	Color (moist)	%	Type	Loc'	Texture	Remarks
0-12	10YR 5/2	80	7.5YR 6/8	20		М	L/C	
					Ξ			
Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, N	MS=Maske	ed Sand Gr	ains.	² Location:	PL≃Pore Lining, M≃Matrix.
Hydric Soil	Indicators:						Indicators f	or Problematic Hydric Soils ³ :
Black H Hydroge Stratifier	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10)		Sandy Strippe Loamy Loamy	Redox (S ed Matrix of Mucky M	(S6) lineral (F1) Matrix (F2)		Dark Su Iron-Ma Very Sh	rairie Redox (A16) vface (S7) nganese Masses (F12) allow Dark Surface (TF12) explain in Remarks)
Deplete Thick Da	d Below Dark Surfa ark Surface (A12) Mucky Mineral (S1)	ce (A11)	Redox Deplet	Dark Sur	face (F6) iurface (F7)		of hydrophytic vegetation and hydrology must be present,
	ucky Peat or Peat (53)	Kedox	Боргозог	2012-1012-1			disturbed or problematic
5 cm M	Part of the Part o		Redox	Боргозог	2012-0-24			
5 cm Ma	icky Peat or Peat (Redox	Боргозоп	2-12-17-21	Ħ	unless	disturbed or problematic
5 cm Me Restrictive Type: Depth (in	ucky Peat or Peat (Layer (if observed		Kedox	Боргосол			unless	
5 cm Mi Restrictive Type: Depth (in Remarks:	ucky Peat or Peat (Layer (if observed ches): GY drology Indicators	E E	ired_check_all_that_a				Hydric Soil F	disturbed or problematic
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface	ucky Peat or Peat (Layer (if observed ches): GY drology Indicators	E E	ired check all that a				Hydric Soil F	Present? Yes X No
5 cm Mi Restrictive Type: Depth (in Remarks: IYDROLO Wetland Hy Primary India Surface X High Wa	ucky Peat or Peat (Layer (if observed ches):	E E	ired_check all that a Water-St Aquatic F	opply) ained Lea fauna (B1)	ves (B9)		Hydric Soil F Secondar Surfa Drain	Present? Yes X No
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati	ucky Peat or Peat (i Layer (if observed ches):	E E	ired_check all that a Water-St Aquatic F	pply) ained Lea	ves (B9)		Secondar Surfa Drain Dry-S	Present? Yes X No
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indi Surface High Wat Saturati Water M	ucky Peat or Peat (i Layer (if observed ches):	E E	ired_check all that a Water-St Aquatic F True Aqu Hydroger	opply) ained Lea fauna (B1 atic Plant o Sulfide (ves (B9) 3) s (B14) Odor (C1)		Secondar Surfa Dran Dry-S Crayl	y Indicators (minimum of two requirements (B10) Geason Water Table (C2) ish Burrows (C8)
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary Indii Surface X High Wat X Saturati Water M Sedimei	ucky Peat or Peat (i Layer (if observed ches):	E E	ired_check all that a Water-St Aquatic F True Aqu Hydroger Oxidized	ipply) ained Lea fauna (B1 atic Plant n Sulfide (Rhizosph	ves (B9) 3) s (B14) Odor (C1) eres on Liv		Secondar Surfa Drain Crayf (C3) Satur	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Geason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X Saturati Water M Sedimei Drift De	ucky Peat or Peat (i Layer (if observed ches):	E E	ired_check all that a Water-St Aquatic F True Aqu Hydroger Oxidized Presence	opp(v) ained Lea fauna (B1 atic Plant o Sulfide (Rhizosph of Reduc	ves (B9) 3) s (B14) Odor (C1) eres on Liv sed Iron (C	4)	Secondar Surfa Dran Crayf (C3) Saturt Stunt	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimei Drift De Algal Mi	ucky Peat or Peat (it Layer (if observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) at or Crust (B4)	E E	ired_check_all_that_a Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent_fr	ained Lea fauna (B1 atic Piant n Sulfide (Rhizosph e of Reduc on Reduc	ves (B9) 3) s (B14) Odor (C1) eres on Liv ced Iron (C	4)	Secondar Surfa Drain Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Sem Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimel Drift Det Algal Mi Iron Det	ucky Peat or Peat (it observed ches):	i: one is requ	ired check all that a Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	ained Lea fauna (B1 atic Piant n Sulfide (Rhizosph of Reduc on Reduc k Surface	ves (B9) 3) s (B14) Odor (C1) eres on Liv eed Iron (C- tion in Tille	4)	Secondar Surfa Drain Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements of t
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimel Drift Dep Algel Ma Iron Dep Inundati	ucky Peat or Peat (it observed ches):	t: one is requ	ired_check all that a Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	apply) ained Lea fauna (B1- atic Plant of Sulfide C Rhizosph of Reduc on Reduc k Surface Well Dat	ves (B9) 3) s (B14) Odor (C1) eres on Lic ced Iron (C- tion in Tille (C7) a (D9)	4)	Secondar Surfa Drain Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
S cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimei Drift De Iron Dep Inundati Sparsel	ucky Peat or Peat (it Layer (it observed ches):	t: one is requ	ired_check all that a Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Lea fauna (B1 atic Piant n Sulfide (Rhizosph of Reduc on Reduc k Surface	ves (B9) 3) s (B14) Odor (C1) eres on Lic ced Iron (C- tion in Tille (C7) a (D9)	4)	Secondar Surfa Drain Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
5 cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimei Drift Dei Algal Mi Iron Dei Inundati Sparsele Field Obser	ches):	t: one is requ Imagery (B ve Surface	ired_check_all_that_a — Water-St — Aquatic P — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc 37) — Gauge or (88) — Other (Ex	ained Lea fauna (B1 alic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface Well Dat oplain in R	ves (B9) 3) s (B14) Odor (C1) eres on Lic ced Iron (C- tion in Tille (C7) a (D9)	4)	Secondar Surfa Drain Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
S cm Mi Restrictive Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimel Drift Dep Algel Me Iron Dep Inundati	dicky Peat or Peat (it Layer (it observed ches): GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial y Vegetated Concal vations: eer Present?	t: one is requ	ired_check_all_that_a Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc 37) Gauge or (B8) Other (E)	ained Lea fauna (B1 alic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface Well Dat oplain in R	ves (B9) 3) s (B14) Odor (C1) eres on Liv ded Iron (C tlorr in Tille (C7) a (D9) demarks)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two requirements) y Indicators (minimum of two requirements) ce Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) ish Burrows (C8) ration Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)

Project/Site: Highland Solar		City/County: Highland	d Sampling Date 12/20/2017
Applicant/Owner: Hecate Energy Highland LLC			State Ohio Sampling Point WR-UP
nvestigator(s): M. Perkins, C. Brendel		Section, Township, Ra	nge:
andform (hillslope, terrace, etc.):		Local relief	(concave, convex, none):
Slope (%). Lat 39.09573			Datum NAD83
Soil Map Unit Name: Eel silt loam			NWI classification: NA
are climatic / hydrologic conditions on the sile typical for	this have bring	yes X Na	
			A 14
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
		sampling point I	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X		4.50
Hydric Soil Present? Yes		is the Samples	· · · · · · · · · · · · · · · · · · ·
Wetland Hydrology Present? Yes	No_X	within a Wetla	nar resNo
Remarks:			
VEGETATION - Use scientific names of plan	nts.		
A A A A A A A A A A A A A A A A A A A	1 3 6 6 6 7 7 7 7 7 7	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Yes FACU	Number of Dominant Species That Are ORL FACW or FAC 0 (A)
1. Juglans nigra	20	163 1700	That Are OBL, FACW, or FAC. 0 (A)
2			Total Number of Dominant
3,			Species Across All Strata: U (B)
4	60		Percent of Dominant Species
5		7.10.5	That Are OBL_FACW, or FAC: U(A/B
Sapling/Shrub Stratum (Plot size:	, —	= Total Cover	Prevalence Index worksheet
Lonicera maackii	60	Yes UPL	Total % Cover of: Multiply by:
2			OBL species x 1 =
3.			FACW species x 2 =
4			FAC species x 3 =
5			FACU species 60 x 4 = 240
	60	= Total Cover	UPL species 60 x 5 = 300
Herb Stratum (Plot size)	40	Ves EAGU	Column Totals 120 (A) 540 (B)
Rosa multiflora	40	Yes FACU	Prevalence Index = B/A = 4.5
2.			Hydrophytic Vegetation Indicators:
3		-	1 - Rapid Test for Hydrophytic Vegelation
4			2 - Dominance Test is >50%
5.			3 - Prevalence Index is ≤3.0
6			4 - Morphological Adaptations' (Provide supporting
7		-	data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation (Explain)
9			
10	60	- Total Cause	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)		= Total Cover	be present unless disturbed or problematic.
1.			Hydrophytic
			Vegetation
2.			Present? YesNo_X
2		= Total Cover	17636111

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SOIL Sampling Point WR-UP

Profile Description: (Des Depth M	atrix	Redox Features			
(inches) Color (mo		Color (moist) % Type	Loc*	Texture	Remarks
)-12 10YR 5/4	100				
			_		
	-				
	D=Depletion, RM:	Reduced Matrix: MS=Masked Sand C	Brains.		Pore Lining, M=Matrix.
lydric Soil Indicators:		Book Stranger			roblematic Hydric Soils':
_ Histosol (A1)		Sandy Gleyed Matrix (S4)	Dark Surfac	e Redox (A16)
Histic Epipedon (A2) Black Histic (A3)		Sandy Redox (S5) Stripped Matrix (S6)			nese Masses (F12)
black filstic (A3) Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1	19		w Dark Surface (TF12)
Stratified Layers (A5)		Loamy Gleyed Malrix (F2			ain in Remarks)
2 cm Muck (A1D)		Depleted Matrix (F3)	*		
Depleted Balow Dark	Surface (A11)	Redox Dark Surface (F6)			
Thick Dark Surface (A	.12)	 Depleted Dark Surface (F 	7)		ydrophytic vegetation and
Sandy Mucky Mineral	(S1)	Redox Depressions (F8)		- 10 to 10 t	rology must be present.
5 cm Mucky Peat or F				unless distu	rbed or problematic.
Restrictive Layer (if obs	erved):				
Type				Hydric Soil Pres	ent? Yes No X
Depth (inches):Remarks;					
Remarks;					
YDROLOGY					
Remarks; YDROLOGY Wetland Hydrology India		rad chack all that apply)		Secondary in	dicalars (minimum of two requires
Primary Indicators (minim					
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1)	um of one is requi	Water-Stained Leaves (B9)		Surface :	Soil Cracks (B6)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2)	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13)		Surface : Drainage	Soil Cracks (B6) Patterns (B10)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3)	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)		Surface : Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)		Surface S Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres on L	iving Roots (C	Surface S Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Pfants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (iving Roots (0 C4)	Surface 3 Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mal or Crust (B	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti	iving Roots (0 C4)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B) Iron Deposits (B5)	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Til Thin Muck Surface (C7)	iving Roots (0 C4)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B) Iron Deposits (B5) Inundation Visible on	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Til Thin Muck Surface (C7) Gauge or Well Data (D9)	iving Roots (C C4) lled Soils (C6)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C	um of one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Til Thin Muck Surface (C7) Gauge or Well Data (D9)	iving Roots (C C4) lled Soils (C6)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
YDROLOGY Netland Hydrology Indice Primary Indicators (minimal Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mail or Crust (B) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations:	um of one is required. 2) Aerial Imagery (Bloncave Surface (Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Til Thin Muck Surface (C7) Gauge or Well Data (D9)	iving Roots (C C4) lled Soils (C6)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations: Surface Water Present?	um of one is required. 2) Aerial Imagery (Bloncave Surface (Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks)	iving Roots (C C4) lled Soils (C6)	Surface : Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mail or Crust (B3) Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present?	um of one is required. 2) Aerial Imagery (Boncave Surface (Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks)	Iving Roots (CC4)	Surface : Drainage Dry-Seas Crayfish Saturatio	Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) utral Test (D5)
YDROLOGY Wetland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B- Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations: Surface Water Present? Water Table Present? Saturation Present?	um of one is required. (2) Aerial Imagery (B. concave Surface (Yes Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Iving Roots (CC4) Illed Soils (C6) Wetlai	Surface 3 Drainage Dry-Seas Crayfish Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) stral Test (D5)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mal or Crust (B- Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations: Surface Water Present? Water Table Present? Saturation Present?	um of one is required. (2) Aerial Imagery (B. concave Surface (Yes Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Pfants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (Inches):	Iving Roots (CC4) Illed Soils (C6) Wetlai	Surface 3 Drainage Dry-Seas Crayfish Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) stral Test (D5)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mal or Crust (B- Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations: Surface Water Present? Water Table Present? Saturation Present?	um of one is required. (2) Aerial Imagery (B. concave Surface (Yes Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Iving Roots (CC4) Illed Soils (C6) Wetlai	Surface 3 Drainage Dry-Seas Crayfish Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) stral Test (D5)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B) Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	um of one is required. (2) Aerial Imagery (B. concave Surface (Yes Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on L Presence of Reduced Iron (Recent Iron Reduction in Ti Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Iving Roots (CC4) Illed Soils (C6) Wetlai	Surface 3 Drainage Dry-Seas Crayfish Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) in Visible on Aerial Imagery (C9) or Stressed Plants (D1) ohic Position (D2) stral Test (D5)

Project/Site: Highland Solar		City/County	Highland	d Sampling Date 12/20/2018
applicant/Owner: Hecate Energy Highland LLC				State: Ohio Sampling Point: WS
ovestigator(s) M. Perkins, C. Brendel		Section, To	wnship, Ra	inge:
andform (hillslope, terrace, etc.);			Local relief	(concave, convex, none):
Slope (%). Lat. 39.095359		tong83	824922	Datum NAD83
Soil Map Unit Name. Rossmoyne silt loams, 6 to 12 p		-		
are climatic / hydrologic conditions on the site typical for this				
re Vegetation, Soil, or Hydrologys				
re Vegetation, Soil, or Hydrology r	naturally pro	blematic?	(If ne	eeded, explain any enswers in Romarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	ig point l	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes X N	0		33.77	A:L->2
Hydric Soil Present? Yes X N	00		ne Sampled	V
Wetland Hydrology Present? Yes X N	00	with	nin a Wetlan	nd? Yes X No
Remarks				
VEGETATION - Use scientific names of plants.				
East flamen or ped anomics and as a second		Dominant	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2		_	_	Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50 (A/B)
Sapling/Shrub Stratum (Plot size:	-	= Total Co	ver	Prevalence Index worksheet:
1				Total % Cover of Multiply by
3				OBL species 80 x 1 = 80
3				FACW species 10 x 2 = 20
4				FAC species x 3.=
5.			/	FACU species x 4 =
		= Total Co	ver	UPL species x 5 =
Herb Stratum (Plot size:)				Column Totals: 90 (A) 100 (B)
Symphyotrichum lateriflorum	10	- 14	FACW	Prevalence Index = B/A =9
2 Typha angustifolia	80	Yes	OBL	Hydrophytic Vegetation Indicators:
3				X 1 - Rapid Test for Hydrophytic Vegetation
4.	_	_	-	X 2 – Dominance Test is >50%
5.				X 3 - Prevalence Index is ≤3.0
6				4 - Morphological Adaptations' (Provide supporting
7		_		data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation* (Explain)
9	-			
10,	90	= Total Co	Wet	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:		- I Diai GO	77.61	be present, unless disturbed or problematic.
TYOUGH WITE STREET				Hydrophytic
1				
				Vegetation Present? Yes X No

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		VAIO
Campling	Point:	WS

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v	٠.	æι		

Depth	Matrix	-		ox Feature			T. 18 (1)	Remarks
inches)	Color (moist)	80	7.5YR 5/8	20	Type	Loc*	L/C	Remarks
-12	10YR 4/1	- 00	7.311.3/0	20		101		
-	oncentration D=De	pletion, RM=				rains.	Indicators f	PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ¹ :
_ Histoso				Gleyed M				raine Redox (A16)
	pipedon (A2)			Redox (S				irface (S7) nganese Masses (F12)
and the same of th	istic (A3)			ed Matrix (ineral (F1)			allow Dark Surface (TF12)
	en Sulfide (A4) d Layers (A5)			The second second	latrix (F2)			Explain in Remarks)
	uck (A10)		X Deplet					and the second of the
	d Below Dark Surfa	ce (A11)		Dark Sur				
Thick D	ark Surface (A12)				urface (F7	7)		of hydrophytic vegetation and
	Mucky Mineral (S1)		Redox	Depressi	ons (F8)			hydrology must be present.
	ucky Peat or Peat (S						unless	disturbed or problematic
Restrictive	Layer (if observed):						
Type			_				Hydric Soil I	Present? Yes X No
	iches)							
Remarks.								
Remarks:		8						
Remarks: YDROLO Wetland Hy	DGY ydrology Indicators		red: check all that a	apply)			Secondar	ry Indicators (minimum of two required
YDROLO Wetland Hy	OGY ydrology Indicators icators (minimum of			apply)	ves (B9)		The second second	ny Indicators (minimum of two required ace Soil Cracks (B6)
YDROLO Wetland Hy Primary Ind Surface	OGY ydrology Indicators cators (minimum of water (A1)		Water-St		Labor Yalk V.		Surfa	
YDROLO Wetland Hy Primary Ind Surface X High W	OGY ydrology Indicators icators (minimum of		Water-St Aquatic I	ained Lea auna (B1	3)		Surfa Drain	ace Soil Cracks (B6)
YDROLO Wetland Hy Primary Ind Surface X High W X Salurat	OGY ordrology Indicators cators (minimum of Water (A1) later Table (A2)		Water-St Aquatic F True Aqu	ained Lea auna (B1 uatic Plant	3)		Surfa Drain Dry-8	ace Soil Cracks (B6) nage Patterns (B10)
YDROLO Wetland Hy Surface X High W X Salurat Water I	OGY rdrology Indicators cators (minimum of Water (A1) later Table (A2) ion (A3)		Water-St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1 Jatic Plant n Sulfide (3) s (B14) Odor (C1)	iving Roots	Surfa Drair Dry-8 Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
YDROLO Vetland Hy Primary Ind Surface X High W X Salurat Water I Sedime	OGY Address (minimum of the Water (A1) Sater Table (A2) Sion (A3) Marks (B1)		Water-St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1 Jatic Plant In Sulfide (Rhizosph	3) s (B14) Odor (C1)		Surfa Drair Dry-8 Cray (C3) Salu	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
YDROLO Vetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De	OGY ydrology Indicators cators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Water-Si Aquatic F True Aqu Hydroge Oxidized Presence	ained Lea Fauna (B1 Jatic Plant In Sulfide (Rhizosph In Reduction	3) s (B14) Odor (C1) neres on Li ced Iron (C		Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLO Vetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal W	OGY ydrology Indicators (cators (minimum of 2 Water (A1) ater Table (A2) ion (A3) Marks (B1) ant Deposits (B2) eposits (B3)		Water-St Aqualic F True Aqu Hydroge Qxidized Presence Recent Is	ained Lea Fauna (B1 Jatic Plant In Sulfide (Rhizosph In Reduction	3) s (B14) Odor (C1) leres on L ced Iron (C	(4)	Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
YDROLO Netland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inungar	OGY Identify Indicators I	one is requi	Water-St Aqualic I True Aqu Hydroge Qxidized Presence Recent II Thin Muc Gauge o	ained Lea Fauna (B1 ratic Plant n Sulfide (Rhizosph a of Reduc ron Reduc ck Surface r Well Dat	3) s (B14) Ddor (C1) heres on L ced Iron (C tion in Till s (G7) a (D9)	(4)	Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLO Netland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inungal	ordrology Indicators (cators (minimum of Water (A1) (ater Table (A2) (fon (A3) Warks (B1) (ent Deposits (B2) (eposits (B3) (at or Crust (B4) (eposits (B5) (tion Visible on Aeria (b) Vegetated Conca	one is requi	Water-St Aqualic I True Aqu Hydroge Qxidized Presence Recent II Thin Muc Gauge o	ained Lea Fauna (B1 Jatic Plant In Sulfide (Rhizosph a of Reduc ck Surface	3) s (B14) Ddor (C1) heres on L ced Iron (C tion in Till s (G7) a (D9)	(4)	Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLO Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundar Sparse	ordrology Indicators (cators (minimum of Water (A1) (ater Table (A2) (fion (A3) Warks (B1) (ent Deposits (B2) (eposits (B3) (lat or Crust (B4) (eposits (B5) (tion Visible on Aeria (ly Vegetated Conca	one is requi	Water-St Aquatic F True Aqu Hydroge Qxidized Presence Recent le Thin Muc T) Gauge o B8) Other (E	pined Lea Fauna (B1 ratic Plant n Sulfide (Rhizosph e of Reduc ron Reduc ck Surface r Well Dat xplain in F	3) s (B14) Ddor (C1) heres on L ced Iron (C tion in Till s (G7) a (D9)	(4)	Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLO Vetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inunda: Sparse Field Obse Surface We	ordrology Indicators (cators (minimum of Water (A1) (ater Table (A2) (fon (A3) Warks (B1) (ent Deposits (B2) (eposits (B3) (at or Crust (B4) (eposits (B5) (fon Visible on Aeria (for Vegetated Conca	Imagery (B ve Surface (Water-St Aquatic F True Aqu Hydroger Qxidized Presencer Recent In Thin Muc To Gauge o S8) Other (E	pined Lea Fauna (B1 ratic Plant n Sulfide (Rhizosph e of Reduc ron Reduc ck Surface r Well Dat xplain in F	3) s (B14) Odor (C1) heres on Liced Iron (C blion in Till s (G7) a (D9) Remarks)	(4)	Surfa Drair Dry-8 Cray (C3) Salu Stun Geof	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLC Vetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal W Iron De Inunual Sparse Field Obse Surface Water Table	order of the control	Imagery (B ve Surface (Yes X	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent In Thin Muc Thin Muc Other (E	ained Lea Fauna (B1 Jatic Plant on Sulfide (Rhizosph of Reduction Reduction ck Surface of Well Dat explain in Faunches):	3) s (B14) Ddor (C1) neres on L ced fron (C tition in Till s (G7) a (D9) Remarks)	C4) ed Sails (C	Surfa Drain Dry-8 Cray s (C3) Satu Stun FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundal Sparse Field Obse Surface Water Table Saturation I	pdrology Indicators (cators (minimum of Water (A1) later Table (A2) fron (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeria ly Vegetated Conca ervations: liter Present? e Present? Present?	Imagery (B ve Surface (Yes X Yes X	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc Thin Muc Other (E No Depth (I No Depth (I	prined Lease auna (B1 partic Plant of Sulfide (B1 partic Plant of Reduction	3) s (B14) Odor (C1) neres on L ced Iron (C ction in Till c(G7) a (D9) Remarks)	C4) ed Sails (C	Surfa Drain Dry-8 Cray (C3) Salu Stun G6) Geor FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLO Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse Field Obse Surface Wet Water Table Saturation I (includes ca	order of the control	Imagery (B ve Surface (Yes X Yes X	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc Thin Muc Other (E No Depth (I No Depth (I	prined Lease auna (B1 partic Plant of Sulfide (B1 partic Plant of Reduction	3) s (B14) Odor (C1) neres on L ced Iron (C ction in Till c(G7) a (D9) Remarks)	C4) ed Sails (C	Surfa Drain Dry-8 Cray (C3) Salu Stun G6) Geor FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLO Wetland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal M Iron De Inundal Sparse Field Obse Surface Water Table Saturation I	pdrology Indicators (cators (minimum of Water (A1) later Table (A2) fron (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeria ly Vegetated Conca ervations: liter Present? e Present? Present?	Imagery (B ve Surface (Yes X Yes X	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc Thin Muc Other (E No Depth (I No Depth (I	prined Lease auna (B1 partic Plant of Sulfide (B1 partic Plant of Reduction	3) s (B14) Odor (C1) neres on L ced Iron (C ction in Till c(G7) a (D9) Remarks)	C4) ed Sails (C	Surfa Drain Dry-8 Cray (C3) Salu Stun G6) Geor FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLO Netland Hy Primary Ind Surface X High W X Saturat Water I Sedime Drift De Algal W Iron De Inundat Sparse Field Obse Surface We Water Table Saturation I Includes ca Describe Re	pdrology Indicators (cators (minimum of Water (A1) later Table (A2) fron (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeria ly Vegetated Conca ervations: liter Present? e Present? Present?	Imagery (B ve Surface (Yes X Yes X	Water-St Aquatic F True Aqu Hydroge Oxidized Presence Recent II Thin Muc Thin Muc Other (E No Depth (I No Depth (I	prined Lease auna (B1 partic Plant of Sulfide (B1 partic Plant of Reduction	3) s (B14) Odor (C1) neres on L ced Iron (C ction in Till c(G7) a (D9) Remarks)	C4) ed Sails (C	Surfa Drain Dry-8 Cray (C3) Salu Stun G6) Geor FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

Project/Site: Highland Solar		City/County: Highland	d Sampling Date _12/20/2018
Applicant/Owner, Hecate Energy Highland LLC			State: Ohio Sampling Point: WS-UP
		Section, Township, Ra	
andform (hillslope, terrace etc.):			(concave convex none)
Slope (%). Lat. 39.095276		Leng -83.824965	Datum, NAD83
Soil Map Unit Name Westboro-Schaffer silt lo			NWI classification NA
		3.4	(If no, explain in Remarks.)
are climatic / hydrologic conditions on the site typic			"Normal Circumstances" present? Yes X No
re Vegetation, Soil, or Hydrology			
re Vegetation, Soil, or Hydrology _			eeded, explain any answers in Remarks.)
		sampling point I	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X	In the Complete	1400
	No X	is the Sampled within a Wetlan	~
The state of the s	No_X	witimi a wetiai	168 10 73
Remarks			
PARTITION (No. of Young)	at the same		
/EGETATION – Use scientific names of	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species
1 Juniperus virginiana	10	Yes FACU	That Are OBL, FACW, or FAC: 0 (A)
2			Total Number of Dominant
3			Species Across All Strata: 0 (B)
4			Percent of Dominant Species
5	76		That Are OBL, FACW, or FAC. 0 (A/B)
Sapling/Shrub Stratum (Plot size:	10	= Total Cover	Prevalence Index worksheet:
1	_/		Total % Cover of: Multiply by:
2			OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5.			FACU species
		= Total Cover	UPL species x 5 =
Herb Stratum (Plot size:)	60	Yes FACU	Column Totals: 70 (A) 280 (B)
Dipsacus fullonum	- 00	Tes TAGG	Prevalence Index = B/A = 4
2			Hydrophytic Vegetation Indicators:
3			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.0
7			4 - Marphological Adaptations' (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			Problematic Hydrophytic Vegetation (Explain)
10.			To an an all the second second second second
	60	= Total Cover	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:			
			Hydrophytic
1,			
1,		= Total Cover	Vegetation Present? YesNoX

US Army Corps of Engineers

Sampling Point WS-UP

Depth M	atrix		Redox	Feature				1 a transmission
inches) Color (me			(moist)	%	Type	Loc	Texture	Remarks
10YR 6/4	100							
			_					
		_		_	-			
Type: C=Concentration	D=Depletion.	RM=Reduced	Matrix, MS	=Masker	d Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix.
ydric Soil Indicators:							Indicators	for Problematic Hydric Soils ³ :
Histosol (A1)			_ Sandy G	leyed Ma	alrix (S4)		Coast F	Prairie Redox (A16)
Histic Epipedon (A2)			Sandy R	edox (S	5)		Dark St	urtace (S7)
Black Histic (A3)			_ Stripped					inganese Masses (F12)
_ Hydrogen Sulfide (A4)	-		the second second	neral (F1)			nallow Dark Surface (TF12)
_ Stratified Layers (A5)		-		7 - 7	alrix (F2)		Other (Explain in Remarks)
2 cm Muck (A10)	0.4		_ Depleted Redox D					
Depleted Below Dark) -			urface (F7)		³ Indicators	of hydrophytic vegetation and
Thick Dark Surface (A Sandy Mucky Mineral	1100	-	Redox D					hydrology must be present.
5 cm Mucky Peat or F				- Production	N 2/			disturbed or problematic.
Restrictive Layer (if obs	The second second							
Туре	77.55						C. T S S	
1100							Hydric Soil	Present? Yes No X
Depth (inches).								
Depth (inches) Remarks:								
Remarks:								
YDROLOGY								
Remarks: YDROLOGY Netland Hydrology Indi	cators:							
Remarks: YDROLOGY Netland Hydrology Indi	cators:	equired chec						ry Indicators (minimum of two required
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1)	cators: um of one is I	equired chec	Water-Stair	ned Leav	2000		Surfa	ace Soil Cracks (B6)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim	cators: um of one is I	required chec	Water-Stair Aquatic Fac	ned Leav una (B13	3)		Surfa Drain	ace Soil Cracks (B6) nage Patterns (B10)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3)	cators: um of one is I	equired chec	Water-Stair Aquatic Fac True Aquat	ned Leav una (B1: ic Plants	3) s (B14)		Surfa Drain Dry-1	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	cators: um of one is !	equired chec	Water-Stair Aquatic Fac True Aquat Hydrogen S	ned Leav una (B13 lic Plants Sulfide C	3) s (B14) odor (C1)		Surfa Drain Dry-l Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (F	cators: um of one is !	equired chec	Water-Stair Aquatic Fac True Aquat Hydrogen S Oxidized R	ned Leav una (B13 lic Plants Sulfide C hizosphe	3) (B14) odor (C1) eres on Liv		Surfa Drain Dry-l Cray Satu	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	cators: um of one is i	required: chec	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence o	ned Leav una (B1) Sulfide C hizospho F Reduc	3) (B14) dor (C1) eres on Liv ed Iron (C4	4)	Surfa Drain Dry-l Cray CC3) Satu Stun	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B	cators: um of one is i	required chec	Water-Stair Aquatic Fac True Aquat Hydrogen S Oxidized R Presence of Recent Iron	ned Leav una (813 ic Plants Sulfide C hizosphol Reduc n Reduct	3) (B14) Odor (C1) eres on Liv ed Iron (C4) tion in Tille	4)	Surfa Drain Cray Cray Satu Stun) Geor	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (G2) fish Burrows (G8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	cators: um of one is ()		Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	ned Leav una (813 Sulfide C hizospho of Reduct n Reduct Surface	3) is (B14) is (B14) is (C1) is eres on Liv ed Iron (C- tion in Tille (C7)	4)	Surfa Drain Cray Cray Satu Stun) Geor	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on	cators: um of one is i) (2) (3) Aerial Imago	y (B7)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V	ned Leav una (813 iic Plants Sulfide C hizospho of Reduct n Reduct Surface Vell Data	B) s (B14) dor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	Surfa Drain Cray Cray Satu Stun) Geor	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (G2) fish Burrows (G8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
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YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations:	cators: um of one is !) (2) (3) Aerial Image: Concave Surfa	y (87)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Lear una (B1) ic Plants Sulfide C hizospho if Reduc n Reduct Surface Vell Data lain in R	B) s (B14) dor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	Surfa Drain Cray Cray Satu Stun) Geor	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (G2) fish Burrows (G8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B tron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations; Surface Water Present?	cators: um of one is t) 12) Aerial Image: Concave Surfa	ry (B7)	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Lean una (B1) lic Plants Sulfide C hizosphol Reduct Reduct Surface Vell Data lain in R	B) s (B14) dor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4)	Surfa Drain Cray Cray Satu Stun) Geor	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (G2) fish Burrows (G8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3 Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations: Surface Water Present? Nater Table Present?	cators: um of one is i 2) Aerial Image Concave Surfa Yes Yes	ry (87) ace (88) No X	Water-Stair Aquatic Fai True Aquat Hydrogen S Oxidized R Presence of Recent Iror Thin Muck Gauge or V Other (Exp	ned Lean una (B1) lic Plants Sulfide C hizosphe of Reduc n Reduct Surface Well Data thes)	B) s (B14) dor (C1) eres on Liv ed Iron (C- tion in Tille (C7) a (D9)	4) d Soils (C6	Surfa Drain Dry-l Cray C3) Satu Stun FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (Field Observations: Surface Water Present? Water Table Present? Saturation Present?	cators: um of one is i i i i i i i i i i i i i	No X No X	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Leanuna (B13) lic Plants Sulfide C hizosphol Reduct n Reduct Surface Vell Data lain in R thes) thes)	(B14) s (B14) eres on Lived Iron (C-1) sion in Tille (C7) a (D9) emarks)	4) d Soils (C6	Surfa Drain Dry-l Cray C3) Satu Stun FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (G2) fish Burrows (G8) ration Visible on Aenal Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3 Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	cators: um of one is i i i i i i i i i i i i i	No X No X	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Leanuna (B13) lic Plants Sulfide C hizosphol Reduct n Reduct Surface Vell Data lain in R thes) thes)	(B14) s (B14) eres on Lived Iron (C-1) sion in Tille (C7) a (D9) emarks)	4) d Soils (C6	Surfa Drain Dry-l Cray C3) Satu Stun FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLOGY Netland Hydrology Indi- Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible on	cators: um of one is i i i i i i i i i i i i i	No X No X	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Leanuna (B13) lic Plants Sulfide C hizosphol Reduct n Reduct Surface Vell Data lain in R thes) thes)	(B14) s (B14) eres on Lived Iron (C-1) sion in Tille (C7) a (D9) emarks)	4) d Soils (C6	Surfa Drain Dry-l Cray C3) Satu Stun FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
YDROLOGY Netland Hydrology India Primary Indicators (minim Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3 Iron Deposits (B5) Inundation Visible on Sparsely Vegetated (C) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	cators: um of one is i i i i i i i i i i i i i	No X No X	Water-Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Gauge or V Other (Exp	ned Leanuna (B13) lic Plants Sulfide C hizosphol Reduct n Reduct Surface Vell Data lain in R thes) thes)	(B14) s (B14) eres on Lived Iron (C-1) sion in Tille (C7) a (D9) emarks)	4) d Soils (C6	Surfa Drain Dry-l Cray C3) Satu Stun FAC	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aenal Imagery (C9) led or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

pplicant/Owner Hecate Energy Highland LLC		_		State: Ohio	Sampling Point	I VV
nvestigator(s) M. Perkins, C. Brendel		Section, T	ownship, Ra	nge:		
andform (hillslope terrace etc.):			Local relief	(concave, convex, none):		
lope (%). Lat. 39.070159		Long -83	797856		Datum NADE	33
cil Map Unit Name: Westboro-Schaffer silt loam, 0 t	o 2 percer	t slopes		NWI classific	ation: NA	
re climatic / hydrologic conditions on the sile typical for th				(if no, explain in R	emarks)	
re Vegetation, Soil, or Hydrology				Normal Circumstances" p		X No
				eded, explain any answe		
re Vegetation, Soil or Hydrology SUMMARY OF FINDINGS – Attach site map						
	No.		a promote		E 11/10 12 13 13 13 13 13 13 13	10.0000.000.000
1.13.ch.(1.2.13.ch.)	No	ls t	he Sampled			
	No	wit	hin a Wetlar	nd? Yes X	No	_
Remarks						
/EGETATION - Use scientific names of plants						
2021111011	Absolute	Dominar	t Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size:)	% Cover			Number of Dominant S		
1. Acer rubrum	40	Yes	FAC	That Are OBL, FACW,	or FAC. 5	(A)
2 Liquidambar styraciflua	20	Yes	FACW	Total Number of Domin	ent	
3. Quercus palustris	20	Yes	FACV	Species Across All Stra	ita: 5	(B)
4		_		Percent of Dominant Sp	pecies .ng	
5	90	C2 17.00		That Are OBL, FACW,	or FAC: 100	(A/B
Sapling/Shrub Stratum (Plot size:)	90	= Total Co	over	Prevalence Index wor	ksheet:	
1 Lindera benzoin	40	Yes	FACW	Total % Cover of.	Mult	liply by:
2				OBL species	x 1 =	
3.				FACW species 120	x 2 = 2	
4.				FAC species 40	x 3 = 1	20
5.				FACU species	× 4 =	
	40	= Total C	over	UPL species	x 5 =	100
Herb Stratum (Plot size)	30	Vac	EACIN	Column Totals: 160	(A)	360 (B)
1. Leersia virginica	30	Yes	FACW	Prevalence Index	= BIA = 2.3	
2				Hydrophytic Vegetati		
3		-		1 - Rapid Test for		relation
4		_	_	X 2 - Dominance Tes		4-1-1-1
56			-	X 3 - Prevalence Ind		
				4 - Morphological	Adaptations (Pr	rovide supportin
7				data in Remark	s or on a separa	ale sheet)
9				Problematic Hydro	phytic Vegetation	on (Explain)
10				Section 15		
191	30	= Total C	over	Indicators of nydric so be present unless dist		
			16.31	be present unless dist	arbed or proble	matte.
Woody Vine Stratum (Plot size)				Hydrophytic		
Woody Vine Stratum (Plot size:) 1						
				Vegetation Present? Ye	s X No	

US Army Corps of Engineers

Midwest Region - Version 2.0

	WT
Sampling Point	47.1

Depth	Matrix	0/		x Feature		1.002	-	nast also
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc	Texture	Remarks
-12	10YR 5/2	70	7.5YR 4/8	30	C	M	L/C	
	-					_		
	-			_		_		
						-	2/	N. B. C. W. C. W. M. C.
	Indicators:	epietion, RM	=Reduced Matrix, M	s=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix r Problematic Hydric Soils ³ :
Histoso			Sanda	Slaved M	alrıx (S4)			airie Redox (A16)
	pipedon (A2)			Redox (S				face (S7)
	listic (A3)			Matrix (ganese Masses (F12)
	en Sulfide (A4)				ineral (F1)			llow Dark Surface (TF12)
	d Layers (A5)				lainx (F2)		Other (Ex	rplam in Remarks)
_ 2 cm M	uck (A10)		X Deplete	d Matrix	(F3)		12-10-100	
	d Below Dark Surfa	ice (A11)		Dark Surf				
	ark Surface (A12)				urface (F7)		hydrophytic vegetation and
	Mucky Mineral (S1)		Redox	Depressi	ons (F8)			ydrology must be present,
	ucky Peat or Peat (unless of	sturbed or problematic
	Layer (if observed	1):					0.000	
Type:	LALES V		-				Hydric Soil Pr	resent? Yes X No
	oches):							
Remarks.								
Remarks:	OGY	5:						
Remarks: YDROLO Wetland Hy	OGY /drology Indicator		ired check all that a	oply)			Secondary	Indicators (minimum of two regulred
YDROLO Vetland Hy	OGY odrology Indicator icators (minimum o		I I I I I I I I I I I I I I I I I I I		ves (89)			
YDROLO Vetland Hy Primary Indi Surface	OGY odrology Indicator icators (minimum of water (A1)		X Water-Sta	ined Lea	A 26.2 May 1		Surfac	Indicators (minimum of two required e Soil Cracks (B6) ge Patterns (B10)
YDROLO Vetland Hy Primary Indi Surface High W	OGY odrology Indicator icators (minimum o		I I I I I I I I I I I I I I I I I I I	ined Lea Juna (81)	3)		Surfac Draina	e Soil Cracks (B6)
YDROLO Vetland Hy Primary Indi Surface High W X Saturate	OGY drology Indicator cators (minimum of Water (A1) ater Table (A2)		★ Water-Sta Aquatic Fa	ined Lea iona (81: itic Plants	3) s (B14)		Surfac Draina Dry-Se	e Soil Cracks (B6) ge Patterns (B10)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water I	OGY Idrology Indicators icators (minimum of tweether (A1) ater Table (A2) ion (A3)		X Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea iona (81: itic Plants Sulfide C	3) s (B14) odor (C1)	ring Roots	Surfac Draina Dry-Se X Crayfis	e Soil Cracks (B6) ge Patterns (B10) aason Water Table (C2)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water It	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		X Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 dic Plants Sulfide C Rhizosph	3) s (B14) odor (C1) eres on Liv		Surface Draina Dry-Se X Crayfis (C3) Satura	e Soil Cracks (B6) ge Patterns (B10) aason Water Table (C2) sh Burrows (C8)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water It Sedime Drift De	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2)		X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (81: dic Plants Sulfide C Rhizosphi of Reduc	3) (B14) (dor (C1) ares on Liv ed Iron (C	4)	Surfac Draina Dry-Se X Crayfis (C3) Satura	e Soil Cracks (B6) ge Patterns (B10) gason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
YDROLC Vetland Hy Surface High W X Saturat Water II Sedime Drift De Algal M	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3)		X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1: dic Plants Sulfide C Rhizosphi of Reduc	3) 3 (B14) 3 dor (C1) 3 res on Lived Iron (C	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
YDROLC Vetland Hy Primary Ind Surface High W X Saturat Water It Sedime Drift De Algal M Iron De	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) eposits (B3) at or Crust (B4)	ane is requ	X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (81: dic Plants Sulfide C Rhizosphi of Reduct in Reduct Surlace	B) s (B14) odor (C1) eres on Liv ed Iron (C tion in Tille (C7)	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLC Vetland Hy Primary Ind Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundat	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) eposits (B3) at or Crust (B4) posits (B5)	ane is requ	X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (81: dic Plants Sulfide C Rhizosphi of Reduc in Reduc Surface Well Data	B) (B14) (dor (C1) eres on Lived Iron (C) (don in Tille (C7) (D9)	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLC Vetland Hy Primary Indi Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundat Sparse	oGY Idrology Indicator Idators (minimum of Water (A1) Ider Table (A2) Iden (A3) Marks (B1) Ident Deposits (B2) Ident Office (B3) Ident Crust (B4) Ident Visible on Aeria In Vegetated Conca	I Imagery (B ve Surface (X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1: dic Plants Sulfide C Rhizosphi of Reduct in Reduct Surface Well Data stain in R	B) (B14) (dor (C1) eres on Lived Iron (C) (don in Tille (C7) (D9)	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water Ii Sedime Drift De Algal M Iron De Inundat Sparsei	oGY Idrology Indicator Idators (minimum of Water (A1) Ider Table (A2) Iden (A3) Marks (B1) Ident Deposits (B2) Ident Office (B3) Ident Crust (B4) Ident Visible on Aeria In Vegetated Conca	I Imagery (B ve Surface (X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or	ined Lea auna (B1: dic Plants Sulfide C Rhizosphi of Reduct in Reduct Surface Well Data stain in R	B) (B14) (dor (C1) eres on Lived Iron (C) (don in Tille (C7) (D9)	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundat Sparse	or verticators (minimum of twater (A1) ater Table (A2) ion (A3) warks (B1) int Deposits (B2) posits (B3) iat or Crust (B4) posits (B5) ion Visible on Aeria by Vegetated Concarvations; ter Present?	I Imagery (B ve Surface (X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (81: aura (81: Sulfide C Rhizosphi of Reduc in Reduct Surface Well Data ches).	B) (B14) (dor (C1) eres on Lived Iron (C) (don in Tille (C7) (D9)	4)	Surface	e Soil Cracks (B6) ge Patterns (B10) gason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundar Sparse Surface Wa Vater Table Saturation Fincludes ca	or verticators (minimum of twater (A1) ater Table (A2) fon (A3) warks (B1) and Deposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aeria by Vegetated Concarvations; ter Present?	I Imagery (8 ve Surface (Yes Yes Yes	X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck T) Gauge or B8) Other (Exp	ined Lea auna (B1: auna (B1: sulfide C Rhizosphi of Reduc in Reduci surface Well Data ches): ches	3) s (B14) clor (C1) ares on Liv ed Iron (C clon in Title (C7) s (D9) emarks)	4) ad Soils (C	Surface Draina Dry-Se X Crayfis (C3) Satura Slunte 6) Geom FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
YDROLC Vetland Hy Primary Ind Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundat Sparse Field Obse Surface Wa Water Table Saturation Fincludes ca	or verticators (minimum of twater (A1) ater Table (A2) fon (A3) warks (B1) and Deposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aeria by Vegetated Concarvations; ter Present?	I Imagery (8 ve Surface (Yes Yes Yes	X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck T) Gauge or B8) Other (Exp No X Depth (in No Depth (in	ined Lea auna (B1: auna (B1: sulfide C Rhizosphi of Reduc in Reduci surface Well Data ches): ches	3) s (B14) clor (C1) ares on Liv ed Iron (C clon in Title (C7) s (D9) emarks)	4) ad Soils (C	Surface Draina Dry-Se X Crayfis (C3) Satura Slunte 6) Geom FAC-N	ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
YDROLO Vetland Hy Primary Indi Surface High W X Saturat Water It Sedime Drift De Algal M Iron De Inundat Sparse Gurface Wa Vater Table Saturation Fincludes ca	or verticators (minimum of twater (A1) ater Table (A2) fon (A3) warks (B1) and Deposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aeria by Vegetated Concarvations; ter Present?	I Imagery (8 ve Surface (Yes Yes Yes	X Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck T) Gauge or B8) Other (Exp No X Depth (in No Depth (in	ined Lea auna (B1: auna (B1: sulfide C Rhizosphi of Reduc in Reduci surface Well Data ches): ches	3) s (B14) clor (C1) ares on Liv ed Iron (C clon in Title (C7) s (D9) emarks)	4) ad Soils (C	Surface Draina Dry-Se X Crayfis (C3) Satura Slunte 6) Geom FAC-N	e Soil Cracks (B6) ge Patterns (B10) gason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

roject/Site: Highland Solar	G	ity/County: Highland				
pplicant/Owner Hecate Energy Highland LLC			State: Ohio	Sampling P	Point. WT-	UP
vestigator(s): M. Perkins, C. Brendel	s	ection, Township, Ra	nge:			
andform (hillslope, terrace, etc.):		Local relief	(concave, convex, none):			
lope (%) Lat 39.070091	L	ong -83.798011		Datum NA	AD83	
oil Map Unit Name Westboro-Schaffer silt loam,	0 to 2 percent	slopes	NWI classific	ation NA		
re climatic / hydrologic conditions on the site typical for		6.4	(If no explain in R	emarks)		
			Normal Circumstances" p		. X	Nic
re Vegetation Soil, or Hydrology						140
re Vegelation, Soil, or Hydrology	naturally prob	lematic? (If ne	eded, explain any answe	rs in Remari	KS.)	
UMMARY OF FINDINGS - Attach site m	ap showing s	sampling point k	ocations, transects	, importa	nt featur	es, et
Hydrophytic Vegetation Present? Yes	No X	III V A SERVE				
Hydric Soil Present? Yes	No X	Is the Sampled			V	
Wetland Hydrology Present? Yes	No X	within a Wetlar	nd? Yes	No_	^_	
Remarks.						
EGETATION - Use scientific names of pla	ints.					
) 12- 4100 10 10 10 10 10 10 10 10 10 10 10 10	100	Dominant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant S			
1			That Are OBL, FACW,	or FAC:)	_ (A)
2			Total Number of Domin			
3,			Species Across All Stra	ita:)	_ (B)
4:			Percent of Dominant S	pecies		
5			That Are OBL, FACW,	or FAC: 0		_ (A/8
Sapling/Shrub Stratum (Plot size:		Total Cover	Prevalence Index wor	ksheet:		
1			Total % Cover of:		Multiply by:	
2.			OBL species			
3.			FACW species			
A				х 3 =		
5.			FACU species	x 4 =		
		Total Cover	UPL species 100	×5=	500	_
Herb Stratum (Plot size:)		C& Tours	Column Totals 100	(A)	500	(8)
1. Glycine max	100	Yes UPL				
2			Prevalence Index			
3			Hydrophytic Vegetati			
4			1 - Rapid Test for		Vegetation	
5			2 - Dominance Tes			
6			3 - Prevalence Ind 4 - Morphological		(Decrete a	unned -
7			data in Remark			
8			Problematic Hydro	Barrier and Branch		
9	_	-				
10	_	*****	*Indicators of hydric so			y must
		- Total Cover	be present unless dist			
Woody Vine Stratum (Plot size:			Mudrophytic			
Woody Vine Stratum (Plot size:)			Hydrophytic			
1,			Venetation		147	
Woody Vine Stratum (Plot size:) 12:		= Total Cover	Venetation	s	No_X	

US Army Carps of Engineers

Sampling Point WT-UP

rofile Desci lepth nches)	nption: (Describe	e to the dept	th needed to document the indicator		SELLE OF HIGHGARDIS.)
	4.60			or committee are	***************************************
	Galor (moist)	9/0	Redox Features Color (moist) % Type	Loc ² Text	ure Remarks
-12	10YR 5/4	100	Contribution 10 1495		
ype: C≃Cc	ncentration, D=De	pletion, RM=	Reduced Matrix, MS=Masked Sand Gra	ains. ² Lt	ocation: PL=Pore Lining, M=Matrix.
dric Soil I	ndicators:			India	cators for Problematic Hydric Soils3:
Histosol	(A1)		Sandy Gleyed Matrix (S4)		Coast Prairie Redox (A16)
Histic Ep	ipedon (A2)		Sandy Redox (S5)		Dark Surface (S7)
Black His			Stripped Matrix (S6)		Iron-Manganese Masses (F12)
	n Sulfide (A4)		Loarny Mucky Mineral (F1)	7	Very Shallow Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
2 cm Mu			Depleted Metrix (F3)		
	Below Dark Surfa	ice (A11)	Redox Dark Surface (F6)	Steed	Ventors of hydrophytic yourslober and
	rk Surface (A12)		Depleted Dark Surface (F7)		licators of hydrophytic vegetation and wetland hydrology must be present.
Action to the second	ucky Mineral (S1) cky Peat or Peat (Redox Depressions (F8)		unless disturbed or problematic.
	ayer (if observed				uniess distributed of problettiane.
Туре					
OF SCHOOL SECTION	borl		_	Hydri	ic Soil Present? Yes No _X
Depth (inc					
Depth (inc					
emarks DROLO	GΥ				
DROLO	GY Irology Indicators				
DROLO	GY Irology Indicators ators (minimum of		red_check all that apply)	S	econdary Indicators (minimum of two requin
DROLO etland Hyd mary Indic	GY Irology Indicators ators (minimum of Water (A1)		Water-Stained Leaves (B9)	S	Surface Soil Cracks (B6)
DROLOGERIAN Hydrogery Indices	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2)		Water-Stained Leaves (B9) Aquatic Fauna (B13)	S	Surface Soil Cracks (B6) Drainage Patterns (B10)
DROLOG etland Hyd imary Indic Surface High Wa Saturatio	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3)		Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	S -	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLO etland Hyd imary Indic Surface High Wa Saturatic Water M	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1)		Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1)		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
DROLO etland Hyd imary Indic Surface High Wa Saturatic Water M	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3)		Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
DROLOI etland Hyd imary Indic Surface High Wa Saturatic Water M Sedimen	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1)		Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1)	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLO etland Hyd mary Indice High Wa Saturatio Water M Sedimen Drift Dep	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) If Deposits (B2)		Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C- Recent Iron Reduction in Tille	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLO etland Hyd mary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2)		Water-Stained Leaves (89) Aquatic Fauna (813) True Aquatic Plants (814) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C-	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLOG etland Hyd imary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) If Deposits (B2) vosits (B3) it or Crust (B4)	one is requi	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7)	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOG etland Hyd imary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundalio	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) if Deposits (B2) vosits (B3) it or Crust (B4) osits (B5)	one is requir	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9)	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOG etland Hyd imary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) If Deposits (B2) wosits (B3) if or Crust (B4) wosits (B5) on Visible on Aena Vegetated Conca	f one is requir il Imagery (Bi ive Surface (I	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (G- Recent Iron Reduction in Title Thin Muck Surface (C7) Gauge or Well Data (D9) B8) Other (Explain in Remarks)	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOG etland Hyd imary Indic Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) If Deposits (B2) sosits (B3) it or Crust (B4) sosits (B5) on Visible on Aena Vegetated Concavations:	f one is requir il Imagery (Bi ive Surface (I	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C- Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9)	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
DROLOI etland Hyd imary Indic Surface High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely eld Observ	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2) vosits (B3) of or Crust (B4) osits (B5) on Visible on Aena Vegetated Concavations: er Present?	Imagery (B ve Surface (I Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No X Depth (inches): Depth (inches):	ring Roots (C3)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
PROLOGENIAN SERVICE STATE SERVICE SERV	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2) wosits (B3) of or Crust (B4) wosits (B5) on Visible on Aena Vegetated Concavations: ar Present? Present?	I Imagery (B) Ive Surface (I Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	ring Roots (C3) 4) d Soils (C6) Wetland Hyd	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
PROLOGENIAN SERVICE STATE SERVICE SERV	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2) wosits (B3) of or Crust (B4) wosits (B5) on Visible on Aena Vegetated Concavations: ar Present? Present?	I Imagery (B) Ive Surface (I Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No X Depth (inches): Depth (inches):	ring Roots (C3) 4) d Soils (C6) Wetland Hyd	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
/DROLO /etland Hyd mary Indice Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely ield Observ urface Water /ater Table aturation Princludes cap lescribe Rec	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2) wosits (B3) of or Crust (B4) wosits (B5) on Visible on Aena Vegetated Concavations: ar Present? Present?	I Imagery (B) Ive Surface (I Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	ring Roots (C3) 4) d Soils (C6) Wetland Hyd	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
/DROLOGIVETIAND PROCESSION OF THE PROCESSION OF	GY Irology Indicators ators (minimum of Water (A1) Ier Table (A2) on (A3) arks (B1) of Deposits (B2) wosits (B3) of or Crust (B4) wosits (B5) on Visible on Aena Vegetated Concavations: ar Present? Present?	I Imagery (B) Ive Surface (I Yes Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	ring Roots (C3) 4) d Soils (C6) Wetland Hyd	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)

Project/Site Proposed Highland Solar Farm		City/County	Highlan	d County	Sampling I	Date 1/2	4/2018
Applicant/Owner: Hecate Energy Highland LLC				State: Ohlo	Sampling F		
nvestigator(s) S. West, C. Brendel		Section, To	wnship Ra	inge:			
andlorm (hillslope terrace etc.)				(concave, convex, none)			
				***************************************	Datum N.	AD83	
Soil Map Unit Name: Clermont silt loam, 0 to 1 per		Luiig		NWI classifi	17-17-17-17		
Are climatic / hydrologic conditions on the site typical for		was van 3	X No				
				"Normal Circumstances"		×	No.
Are Vegetation Soil or Hydrology							INO.
are Vegetation Soil or Hydrology	_ naturally pro	blematic?	(If no	eeded, explain any answe	ers in Remar	ks.)	
SUMMARY OF FINDINGS - Attach site ma	ap showing	samplin	g point l	ocations, transects	s, importa	nt featu	ıres, etc.
Hydrophytic Vegetation Present? Yes	No	UP A	S. O. Asi	2.3			
Hydric Soil Present? Yes X	No	100	e Sampleo	V	No.		
Wetland Hydrology Present? Yes X	No	with	in a Wetla	no? Yes_/\	NO_		
Remarks							
/EGETATION – Use scientific names of plan				T Residence & Section 1	about.		
Tree Stratum (Plot size)	Absolute % Cover	Dominant Species?	Status	Dominance Test work			
1 Acer rubrum	30	Yes	FAC	Number of Dominant S That Are OBL, FACW.		5	(A)
2. Liquidambar styraciflua	20	Yes	FACW	Total Manager of Parent			
3				Total Number of Domin Species Across All Str.		5	(B)
4				Present of Daminant S	manlan		
5				Percent of Dominant S That Are OBL, FACW.		00	(A/B)
	50	= Total Cov	ver				- 200
Sapling/Shrub Stratum (Plot size:	40	Yes	FACW	Prevalence Index wo		Multiply by	+
1 Lindera benzoin	40	165	IACW	OBL species	x 1 :	-	(-
2				FACW species 90	x 2:	100	
3				FAC species 30	x3	00	
6				FACU species	x 4		
	40	= Total Con	vei	UPL species	x 5	=	
Herb Stratum (Plot size)				Column Totals: 120	(A)	270	(B)
Carex vulpinodea	20	Yes	FACW		200	2.3	
2. Leersia virginica	10	Yes	FACW	Prevalence Index			
3				Hydrophytic Vegetati 1 - Rapid Test for			
4		_	_	X 2 - Dominance Te		vegetano	r)
5			_	X 3 - Prevalence Inc			
5			-	4 - Morphological		(Provide	supporting
7		_		data in Remark	s or on a se	parale she	eel)
8				Problematic Hydro	phytic Vege	tation' (E)	(plain)
9							
10	30	= Total Co	VBT	Indicators of hydric so			gy must
Woody Vine Stratum (Plot size:	-	a saidi GO		be present unless dist	urbed or pro	Diematic	
				Hydrophytic			
1				Manufactions			
2.		_		Vegetation Present? Ye	· X	No	

US Army Corps of Engineers

Sampling Point WU

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Depth (inches)	Color (moist)	0/	Color (moist)	x Feature	Type ¹	Loc*	Texture	Remarks
-12	10YR 5/2	80	7.5YR 5/8	20	C	M	L/C	1,000
	141114		114/1/2/2011	-	-	-		
						_		
_		-		-	-			
_								
-	oncentration, D=De	pletion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix or Problematic Hydric Soils ³ ;
	Indicators:		Cand	Clayed N	aline (CA)			rairie Redox (A16)
Histosol	(A1) oipedon (A2)			Gleyed M Redox (S	latrix (S4)			rane Redox (A.16)
	stic (A3)			d Matrix				nganese Masses (F12)
	n Sulfide (A4)			4-7-6-6	meral (F1)			allow Dark Surface (TF12)
	Layers (A5)				fatrix (F2)			xplain in Remarks)
	ick (A10)		X Deplete				-	e a character ex
	d Below Dark Surfa	ce (A11)			face (F6)		CRAME	
Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7)	Indicators of	of hydrophytic vegetation and
_ Sandy N	Mucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland	hydrology must be present.
	icky Peat or Peat (unless o	isturbed or problematic
Restrictive I	Layer (if observed):						
Type:			_				Hydric Spil P	resent? Yes X No
160.								
Depth (in	ches):						1777	
Depth (in Remarks:							1777	
Depth (in Remarks: YDROLO	GΥ						1777	
Depth (in Remarks: YDROLO Wetland Hy	GY drology Indicators		ed, check all that a	pply)				
Depth (in Remarks: YDROLO Wetland Hy Primary India	·GY drology Indicators cators (minimum of				ves (B9)		Secondan	
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface	GY drology Indicators cators (minimum of Water (A1)		X Water-Sta	ained Lea			SecondanSurfa	y Indicators (minimum of two required
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa	GY drology Indicators cators (minimum of Water (A1) ater Table (A2)			ained Lea auna (B1	3)		Secondari Surta Drain	y Indicators (minimum of two required ce Soil Cracks (B6)
Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		★ Water-Sta Aquatic F	ained Lea auna (B1 atic Plant	3) s (B14)		Secondar Surta Drain Dry-S	y Indicators (minimum of two required ce Soil Cracks (B6) age Pattems (B10)
Primary India Surface High Water Mater Mat	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		Water-Sta Aquatic F True Aqu Hydrogen	ained Lea auna (B1 atic Plant i Sulfide (3) s (B14) Odor (C1)	ving Roots	Secondari Surta Drain Dry-S X Crayfi	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sediment	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)		X Water-Sta Aquatic F True Aqu Hydroger Oxidized	ained Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1)		Secondan Surfar Drain Dry-S X Crayf (C3) Satur	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimes Drift De	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv sed Iron (C		Secondan Surfar Drain Dry-S X Crayf (C3) Satur Stunt	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9)
Primary India Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimei Drift De	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1 atic Plant I Sulfide (Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1) seres on Li sed Iron (C stion in Tille	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimen Drift Dei Algal Ma	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one is require	X Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc k Surface	3) s (B14) Odor (C1) eres on Li sed Iron (C tion in Tille (C7)	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Pepth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimer Drift Der Algal Ma Iron Der Inundati	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) mt Deposits (B2) posits (B3) at or Crust (B4)	one is require	Water-Sta — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent In — Thin Muc — Gauge or	ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Title (C7) a (D9)	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimer Drift De Algal Ma Iron Dep Inuncati Sparsel	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetaled Conca	one is require I Imagery (B7 ve Surface (B	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex	ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Title (C7) a (D9)	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (increase of the control of th	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetaled Conca	one is require I Imagery (B7 ve Surface (B	Water-Sta — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent In — Thin Muc — Gauge or	ained Lea auna (B1 atic Plant i Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Title (C7) a (D9)	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Primary India Surface High Water M Sedimer Drift De Algal Ma Iron Dep Inundati Sparsel	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetaled Conce rvations: er Present?	I Imagery (B7 ve Surface (B Yes N	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex	ained Lea auna (B1 atic Plant I Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Title (C7) a (D9)	4)	Secondan Surfa Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Primary India Surface High Water M Sedimer Drift Del Iron Del Inundati Sparsel Field Obser Surface Water Table Saturation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) at Deposits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetaled Concervations: eer Present?	I Imagery (B7 ve Surface (B7 Yes N	Water-Sta — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent In — Thin Muc — Gauge or — Other (Ex Io X Depth (in — Depth (in	ained Lea auna (B1 atic Plant I Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) odor (C1) eres on Li ced Iron (C tion in Tille (G7) e (D9) temarks)	4) ed Solls (CI	Secondan Surfar Drain Dry-S X Crayf (C3) Satur Stunt Geom	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimer Drift De Algal Ma Iron Dep Inuncati Sparsel Field Obser Surface Wat Water Table Saturation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetaled Conce rvations: er Present?	I Imagery (B7 ve Surface (B Yes N Yes N	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex Depth (in	ained Lea auna (B1 atic Plant i Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in F anches): nches); nches);	3) s (B14) Odor (C1) eres on Li sed Iron (C tion in Title (C7) a (D9) emarks)	4) ed Soils (Co	Secondary Surfary Drains Dry-S X Crayfi (C3) Saturn Stunt Geom FAC-I	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)
Depth (increments: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sediments Drift Den Algal Ma Iron Den Inundati Sparsel Field Obsert Surface Water Table Saturation Per Includes ca Describe Re	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria by Vegetaled Conce vations: ter Present? Present? pullary fringe)	I Imagery (B7 ve Surface (B Yes N Yes N	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex Depth (in	ained Lea auna (B1 atic Plant i Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in F anches): nches); nches);	3) s (B14) Odor (C1) eres on Li sed Iron (C tion in Title (C7) a (D9) emarks)	4) ed Soils (Co	Secondary Surfary Drains Dry-S X Crayfi (C3) Saturn Stunt Geom FAC-I	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)
Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa X Saturati Water M Sedimer Drift De Algal Ma Iron Dep Inuncati Sparsel Field Obser Surface Wat Water Table Saturation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria by Vegetaled Conce vations: ter Present? Present? pullary fringe)	I Imagery (B7 ve Surface (B Yes N Yes N	Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc Gauge or Other (Ex Depth (in	ained Lea auna (B1 atic Plant i Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat plain in F anches): nches); nches);	3) s (B14) Odor (C1) eres on Li sed Iron (C tion in Title (C7) a (D9) emarks)	4) ed Soils (Co	Secondary Surfary Drains Dry-S X Crayfi (C3) Saturn Stunt Geom FAC-I	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)

Project/Site Proposed Highland S	olar Farm		City/County Highland	d County	Sampling Date: 1/24/2018
Applicant/Owner Hecate Energy Hig					Sampling Point WU-UP
nvestigator(s) S. West, C. Brende			Section, Township, Ra		
andform (hillstope, terrace, etc.):				(concave, convex, none).
Slope (%): Lat: 39.078	3715		Long83.784503		Datum NAD83
Soil Map Unit Name Clermont silt k			The beautiful the same of the	NVVi classif	
Are climatic / hydrologic conditions on			4.72		
Are Vegetation, Soil, o					present? Yes X No
Are Vegetation Soil o	r Hydrology	naturally prof	blematic? (If ne	eeded, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS -	Attach site n	nap showing	sampling point l	ocations, transect	s, important features, etc
Hydrophytic Vegetation Present?	Yes	No X			
Hydric Soil Present?	Yes	No X	is the Sampled		
Wetland Hydrology Present?	Yes	No X	within a Wetlan	nd? Yes	No_X
Remarks					
VEGETATION - Use scientific	names of pla	ants			
Tona Charles (Dist since		Absolute % Cover	Dominant Indicator Species? Status	Dominance Test wor	
Tree Stratum (Plot size:		70 COVE	Species! Status	Number of Dominant That Are OBL, FACW	
2.		_			100
3				Total Number of Dom Species Across All St	0
4.				apades norosa nii di	(0)
5.				Percent of Dominant: That Are OBL, FACW	
			= Total Cover	THAT ATE OBE, THEW	.017.00
Sapling/Shrub Stralum (Plot size:)		Prevalence Index wo	orksheet:
1				Total % Cover of	
2				OBL species	
3				FACW species	
4				FAC species	
5					x 4 =
Herb Stratum (Plot size:	¥		= Total Cover	UPL species 100	
Glycine max		100	Yes UPL	Column Totals 100	(A) 500 (B)
2.				Prevalence Inde	ex = B/A = 5
3.				Hydrophytic Vegeta	
4.				1 - Rapid Test for	Hydrophylic Vegetation
5.				2 - Dominance To	est is >50%
6				3 - Prevalence In	dex is ≤3.0 ¹
7.					Adaptations1 (Provide supporting
B.					ks or on a separate sheet)
9				Problematic Hydr	ophytic Vegetation1 (Explain)
10.				Northwelson of building	all and walland builtain as all
		100	= Total Cover		oil and welland hydrology must sturbed or problematic
Woody Vine Stratum (Plot size:				Control of the State of the Sta	The state of the s
1				Hydrophytic	
				Vegelation	· · · · · · · · · · · · · · · · · · ·
2			= Total Cover	Present? Y	esNo_X_

US Army Corps of Engineers

Midwest Region - Version 2.0

SOIL Sampling Point: WU-UP

Profile Desc Depth	Matrix		Re	dox Feature	95			
inches)	Color (moist)	%	Color (moist)	%	Type	Loc	Texture	Remarks
-12	10YR 5/4	100						
					-	-		
						_		
					-	_	-	
	oncentration, D=De	pletion, RM=R	teduced Matrix	MS=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
ydric Soil	Indicators:							Problematic Hydric Soils':
_ Histosol				y Gleyed M				rie Redox (A16)
	pipedon (A2)			y Redox (S			Dark Surfa	
	istic (A3)			ed Matrix (The state of the state of			anese Masses (F12)
	en Sulfide (A4)			y Mucky M			THE PARTY OF THE P	ow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N			Other (Ext	plain in Remarks)
	uck (A10)	200,750		ted Matnx	The second second			
	d Below Dark Surfa	ce (A11)		x Dark Surf			Indicators of	and conhection and a second
	ark Surface (A12)			ted Dark S	the second second second	P.		nydrophytic vegetation and drology must be present.
and the second second	vlucky Mineral (S1) ucky Peat or Peat (S	231	Medo	x Depressi	mis (La)		71-17-17-10-2	turbed or problematic.
	Layer (if observed					-	unicas uts	caraca or proceedance
	Layer (ii observed							
Type:			_				Hydric Soil Pre	sent? Yes No X
	300.00							
Depth (in Remarks:	oches):							
emarks:								
YDROLO)GY							
YDROLO	OGY odrology Indicators							
Remarks: YDROLO Wetland Hy)GY		d check all that	app!y)				
YDROLO Vetland Hy	OGY odrology Indicators			ápp!γ) Stained Lea	ves (B9)		Surface	Soil Cracks (B6)
YDROLO Vetland Hy Primary Ind. Surface	OGY drology Indicators cators (minimum of		Water-S				Surface Drainag	Soil Cracks (B6) e Patterns (B10)
YDROLO Vetland Hy Surface High W	OGY orology Indicators cators (minimum of Water (A1)		Water-S Aquatic	Stamed Lea	3)		Surface Drainag	Soil Cracks (B6)
YDROLO Vetland Hy Primary Indi Surface High W Saturati	OGY drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-S Aquatic True Ac Hydroge	itained Lea Fauna (B1 Juatic Planti en Sulfide C	3) s (B14) Odor (C1)		Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water fi	OGY Idrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3)		Water-S Aquatic True Ac Hydroge	stained Lea Fauna (B1 uatic Plant	3) s (B14) Odor (C1)	ving Roots	Surface Drainag Dry-Sea Crayfish	Soil Cracks (B6) e Patterns (B10) ason Water Table (C2)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water M Sedime	OGY Indicators Icators (minimum of Water (A1) Inter Table (A2) Ion (A3) Marks (B1)		Water-S Aquatic True Aq Hydroge Oxidize	itained Lea Fauna (B1 Juatic Planti en Sulfide C	3) s (B14) Odor (C1) eres on Li		Surface Drainag Dry-Ser Crayfish (C3) Saturati	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water M Sedime Drift De	OGY Archogy Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Arrks (B1)		Water-S Aquatic True Aq Hydroge Oxidize Present	Stained Lea Fauna (B1 Juatic Planti en Sulfide C d Rhizosph	3) s (B14) Odor (C1) eres on Lic ced Iron (C	4)	Surface Drainage Dry-Ser Crayfist (C3) Saturate Stunted	Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2) ii Burrows (C8) on Visible on Aenal Imagery (C9)
YDROLO Vetland Hy Primary Ind. Surface High W Saturati Water M Sedime Drift De Algal M	ody drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Arks (B1) int Deposits (B2) iposits (B3)		Water-S Aquatic True Aq Hydroge Oxidize Present Recent	Stained Lea Fauna (B1 Juatic Plants en Sulfide C d Rhizosph de of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tills	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water fi Sedime Drift De Algal M Iron De	ody drology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) at or Crust (B4)	one is require	Water-S Aquatic True Aq Hydroge Oxidize Present Recent	Stained Lea Fauna (B1 uatic Planti en Sulfide C d Rhizosph de of Reduc iron Reduc	3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tills (C7)	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
YDROLO Vetland Hy Primary Ind Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundati	ordrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Arks (B1) int Deposits (B2) iposits (B3) at or Crust (B4) posits (B5)	one is require	Water-S Aquatic True Ac Hydroge Oxidize Present Recent Thin Mc	stained Lea Fauna (B1 uatic Planti en Sulfide C d Rhizosph de of Reduc iron Reduc ick Surface	3) s (B14) Odor (C1) eres on Lined Iron (C tion in Tills (C7) a (D9)	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundat Sparse	oGY Idrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) iposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concar	one is require	Water-S Aquatic True Ac Hydroge Oxidize Present Recent Thin Mc	Stained Lea Fauna (B1 uatic Planti en Sulfide C d Rhizosph de of Reduc iron Reduc ick Surface or Well Data	3) s (B14) Odor (C1) eres on Lined Iron (C tion in Tills (C7) a (D9)	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundati Spersel	order of the control	one is require (magery (B7) ve Surface (Bi	Water-S Aquatic True Ao Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	Stained Lea Fauna (B1 uatic Planti en Sulfide C d Rhizosph de of Reduc iron Reduc ick Surface or Well Data	3) s (B14) Odor (C1) eres on Lined Iron (C tion in Tills (C7) a (D9)	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	Soil Cracks (B6) te Patterns (B10) ason Water Table (C2) to Burrows (C8) on Visible on Aenal Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
YDROLO Vetland Hy Primary Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundat Sparse	order of the control	one is require (magery (B7) ve Surface (Bi	Water-S Aquatic True Aq Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	Stained Lea Fauna (B1 Juatic Plants on Sulfide C d Rhizosph de of Reduction Reduction lick Surface or Well Data Explain in R	3) s (B14) Odor (C1) eres on Lined Iron (C tion in Tills (C7) a (D9)	4)	Surface Drainag Dry-Ses Crayfisi (C3) Saturati Stunted Geomo	te Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2)
YDROLO Vetland Hy Primary Ind. Surface High W Saturati Water fi Sedime Drift De Algal M Iron De Inundat Sparsel Field Obset Surface Water Table	order of the control	(magery (B7) we Surface (B) Yes N	Water-S Aquatic True Ac Hydroge Oxidize Present Recent Thin Mc Gauge Other (B	Stained Lea Fauna (B1 Luatic Plants on Sulfide C d Rhizosph de of Reduction Reduction lock Surface or Well Data Explain in R (inches):	3) s (B14) Odor (C1) eres on Lined Iron (C tion in Tills (C7) a (D9)	4) a Sails (Cl	Surface Drainage Dry-Ser Crayfist Stunted GO FAC-Ne	Soil Cracks (B6) se Patterns (B10) ason Water Table (C2) substitution (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2) sutral Test (D5)
YDROLC Wetland Hy Primary Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundat Sparse! Field Obser Surface Wa Water Table Saturation F Includes ca	order of the control	(magery (B7) we Surface (Bi Yes N Yes N	Water-S Aquatic True Ao Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	stained Lea Fauna (B1 uatic Plants on Sulfide C d Rhizosph de of Reduction Reduction from Reduction Surface or Well Data Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tills (C7) a (D9) Lemarks)	4) d Sails (Ce	Surface Drainag Dry-Ser Crayfist Stunted Geomo FAC-Ne	Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2) autral Test (D5)
YDROLC Netland Hy Primery Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundat Sparse! Field Obser Surface Wa Nater Table Saturation F Includes ca	ordrology Indicators cators (minimum of Water (A1) ater Table (A2) ion (A3) Ariks (B1) int Deposits (B2) iposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concar rvations: ter Present? Present?	(magery (B7) we Surface (Bi Yes N Yes N	Water-S Aquatic True Ao Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	stained Lea Fauna (B1 uatic Plants on Sulfide C d Rhizosph de of Reduction Reduction from Reduction Surface or Well Data Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tills (C7) a (D9) Lemarks)	4) d Sails (Ce	Surface Drainag Dry-Ser Crayfist Stunted Geomo FAC-Ne	Soil Cracks (B6) ie Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2) autral Test (D5)
YDROLC Wetland Hy Primary Indi Surface High W Saturati Water It Sedime Drift De Algal M Iron De Inundat Sparse! Field Obser Surface Wa Water Table Saturation F Includes ca	order of the control	(magery (B7) we Surface (Bi Yes N Yes N	Water-S Aquatic True Ao Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	stained Lea Fauna (B1 uatic Plants on Sulfide C d Rhizosph de of Reduction Reduction from Reduction Surface or Well Data Explain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tills (C7) a (D9) Lemarks)	4) d Sails (Ce	Surface Drainag Dry-Ser Crayfist Stunted Geomo FAC-Ne	Soil Cracks (B6) se Patterns (B10) ason Water Table (C2) a Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2) autral Test (D5)
YDROLC Vetland Hy Primary Ind Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Spersel Field Obset Surface Wa Nater Table Saturation Fincludes ca	order of the control	(magery (B7) we Surface (Bi Yes N Yes N	Water-S Aquatic True Ao Hydroge Oxidize Present Recent Thin Mo Gauge Other (E	stained Lea Fauna (B1 uatic Plants on Sulfide C d Rhizosph de of Reduction Reduction from Reduction Surface or Well Data Explain in R (inches): (inches): (inches):	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tills (C7) a (D9) Lemarks)	4) d Sails (Ce	Surface Drainag Dry-Ser Crayfist Stunted Geomo FAC-Ne	Soil Cracks (B6) se Patterns (B10) ason Water Table (C2) substitution (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) riphic Position (D2) sutral Test (D5)

anticant/Outgat Heart E 18 11 111 5			Highland	State Ohio	Sampling P	oint W	1
pplicant/Owner: Hecate Energy Highland LLC			madala Pi-		Jumping 1	24.0	
vestigator(s): S. West, C. Brendel				nge:			
andform (hillslope, terrace, etc.);						Don	
		Long: -83.		1	200	1003	
oil Map Unit Name: Clermont silt loam, 0 to 1 percen		- 2		NWI classifica			
re climatic / hydrologic conditions on the site typical for thi	s time of year	r? Yes _				2.4	
re Vegetation, Soil, or Hydrology	significantly	disturbed?	Are "	Normal Circumstances" pri	esent? Ye	5 X	No
re Vegetation Soil, or Hydrology I	naturally pro	blematic?	(If ne	eded, explain any answers	in Remark	s.)	
UMMARY OF FINDINGS - Attach site map				ocations, transects,	importa	nt featu	ıres, etc
Hydrophytic Vegetation Present? Yes X	lo			9.0			
	la	100.00	e Sampled	V	20.		
Wetland Hydrology Present? Yes X	10	with	in a Wetlar	nd? Yes X	_ No		
Remarks:							
EGETATION - Use scientific names of plants	Absolute	Dominant	Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size:) 1. Acer rubrum	% Cover	F-12 (100) - 1-1		Number of Dominant Sp That Are OBL, FACW, o	ecies		(A)
2				Total Number of Domina	nt		
3.				Species Across All Strati	2		(B)
4				Percent of Dominant Spi	arine		
5.				That Are OBL, FACW, o		00	(A/B)
	50.	= Total Co	/er	Prevalence Index work	choot:		
Sapling/Shrub Stratum (Plot size)				Total % Cover of:		Aultiply by	,-
1,	_			OBL species			
2,				FACW species 40		80	-5.
3				FAC species 50	x 3 =	150	
4				FACU species			
51.		= Total Co	ver	UPL species	×5=		
Herb Stratum (Plot size:)	0			Column Totals: 90	(A)	230	(B)
Schoenoplectus tabernaemontani	10	Yes	FACW			6	
2. Leersia virginica	30	Yes	FACW	Prevalence Index			
3	-	_		Hydrophytic Vegetatio			6
4,	-			1 - Rapid Test for H 2 - Dominance Test	yaropnytic '	vegetalio	n
5.	_						
6	-	-		X 3 - Prevalence Inde 4 - Morphological A		Provide	elinandian
7			_	data in Remarks	or on a set	parale sh	set)
8	-	_	_	Problematic Hydrop	hytic Veget	ation (E.	xplain)
9		-	-				
10	40	= Total Co	ver	Indicators of hydric soil be present, unless distu			gy must
Woody Vine Stratum (Plot size:)				be present unless distu	red of high	alerridate.	
1.				Hydrophytic			
				Vegetation	11		
2.				Present? Yes	X	No	

US Army Corps of Engineers

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Campling Daint	WV

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o	v	м	ч

Depth (inches)	Calar (moist)	9/6	Color (moist)	ox Feature %	Type	Loc	Texture	Remarks
I-12	10YR 5/2	80	7.5YR 5/8	20	C	M	L/C	Remarks
	10111012	-	1.5117.675			-		
		-		-		-		
-		-		-	-			
		-						
		-		-				
				-		_	-	
		elion, RM	Reduced Matrix, M	S=Maske	ed Sand G	ains.		PL=Pore Lining, M=Matrix.
lydric Soil In								or Problematic Hydric Soils ³ :
_ Histosol (latrix (S4)			rairie Redox (A15)
	pedon (A2)			Redox (S				irface (S7)
Black His	tic (A3) Sulfide (A4)			d Matrix (ineral (F1)			nganese Masses (F12) allow Dark Surface (TF12)
	Layers (A5)				Aatrix (F2)		20.00	xplain in Remarks)
2 cm Muc			4.2	ed Matrix	American Art of the late of			April III Homoney
	Below Dark Surface	e (A11)		Dark Sur				
	k Surface (A12)	4			iurface (F7)	3indicators	of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Redox	Depressi	ons (F8)		wetland	hydrology must be present,
5 cm Muc	dky Peat or Peat (S	3)					unless o	disturbed or problematic.
Restrictive L	ayer (if observed)							
Type:							Hydric Soil F	Present? Yes X No
.36-								
Depth (incl	nes):						11,000	resent: res no
Depth (incl Remarks:							1,000000	resent: res No
Depth (incl Remarks:	3Y						1,000000	resent: res no
Depth (incl Remarks: YDROLOG Vetland Hydi	BY rology Indicators		red: check all that a	pply)				y Indicators (minimum of two required
Depth (incl Remarks: YDROLOG Wetland Hydi Primary Indica	3Y rology Indicators ators (minimum of		red_check all that a		ves (89)		Secondar	y Indicators (minimum of two required
Depth (incl Remarks: YDROLOG Wetland Hydi Simmary Indica X Surface V	GY rology Indicators ators (minimum of i Vater (A1)		X Water-Sta	ained Lea			Secondar Surfa	y Indicators (minimum of two required tice Soil Cracks (B6)
Depth (inches Personal Primary Indica Marks) YDROLOG Wetland Hydica Marks Surface V High Wat	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2)			ained Lea auna (B1	3)		Secondar Surfa Drain	y Indicators (minimum of two required ce Soil Cracks (B6) age Patterns (B10)
Popth (inches and inches and inch	ology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)		X Water-Sta Aquatic F	ained Lea auna (B1 atic Plant	3) s (B14)		Secondar Surfa Drain Dry-S	y Indicators (minimum of two required tice Soil Cracks (B6)
YDROLOG Wetland Hydi Surface V High Watt Saturation Water Ma	ology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)		X Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1 atic Plant Sulfide (3) s (614) Odor (C1)	ring Roots	Secondar Surfa Drain Dry-S Crayf	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) Beason Water Table (C2)
YDROLOG Wetland Hydica X Surface V High Wat X Saturation Water Ma	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) urks (B1) I Deposits (B2)		X Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (614) Odor (C1)	ring Roots	Secondar Surfa Drain Dry-S X Crayf (C3) Satur	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) lieason Water Table (C2) lish Burrows (C8)
YDROLOG YDROLOG Wetland Hyde Metland Hyde Metland Hyde Wetland Wate Water Ma Sediment Drift Depo	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) urks (B1) I Deposits (B2)		X Weter-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Planti Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Lin ced Iron (C		Secondar Surfa Drain Dry-S X Crayf (C3) Satur	y Indicators (minimum of two required ice Soil Cracks (B6) lage Pattems (B10) Beason Water Table (C2) Bish Burrows (C8) Bation Visible on Aerial Imagery (C9)
YDROLOG Wetland Hyde X Surface V High Wate X Saturation Water Ma Sediment Drift Depo	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) osits (B3) or Crust (B4)		X Weter-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1) eres on Lin ced Iron (C tion in Tille	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) Beason Water Table (C2) Bish Burrows (C8) Fation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
YDROLOG YDROLOG YDROLOG Wetland Hydr Surface V High Wate X Saturation Water Ma Sediment Drift Depo Algal Mat	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) osits (B3) or Crust (B4)	one is requi	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In	ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Lin ced Iron (C tion in Tills (C7)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) lation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) morphic Position (D2)
YDROLOG YDROLOG Wetland Hydr Surface V High Wate X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation	rology Indicators ators (minimum of a Vater (A1) er Table (A2) n (A3) arks (B1) b Deposits (B2) osits (B3) or Crust (B4)	one is requi	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Int Thin Mucl	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface Well Date	3) s (B14) Ddor (C1) eres on Lin red Iron (C tion in Tille (C7) a (D9)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) lation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) morphic Position (D2)
POROLOG Wetland Hydi Surface V High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations:	one is requi Imagery (B e Surface (X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Mucl Gauge or B8) Other (Ex	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Lin ced Iron (C dion in Tills (C7) a (D9) temarks)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) lation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) morphic Position (D2)
Popth (inch Remarks: YDROLOG Wetland Hydi Primary Indica X Surface V High Wat X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundetion Sparsely Field Observi	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations:	Imagery (B' e Surface (I	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Mucl Company Other (Ex	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Date	3) s (B14) Odor (C1) eres on Lin ced Iron (C dion in Tills (C7) a (D9) temarks)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) lation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) morphic Position (D2)
YDROLOG Wetland Hydi Primary Indica X Surface V High Wate X Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observi	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations:	Imagery (B' e Surface (I	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Mucl Gauge or B8) Other (Ex	ained Lea auna (B1 alic Plants Sulfide C Rhizosph of Reduc on Reduc & Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Lin ced Iron (C dion in Tills (C7) a (D9) temarks)	4)	Secondar Surfa Drain Dry-S Crayf (C3) Satur Stunt Geon	y Indicators (minimum of two required ice Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) lation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) morphic Position (D2)
POROLOG Wetland Hydica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundetion Sparsely Field Observ. Surface Wate Water Table F Saturation Pre Includes capi	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations: in Present?	Imagery (B'e Surface (I'es X'es X	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muci To Gauge or B8) Other (Ex No Depth (in	ained Lea auna (B1 alic Plantt sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface Well Dat plain in R anches): 3 nches): 0	3) s (B14) Odor (C1) eres on Lin ced Iron (C tion in Tills (C7) a (D9) cemarks)	4) d Soils (Cl	Secondar Surfa Drain Dry-S X Crayf (C3) Saturt Stunt Geon FAC-	y Indicators (minimum of two required the Soil Cracks (B6) lage Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)
YDROLOG Remarks: YDROLOG Wetland Hyde Primary Indica X Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ. Surface Water Water Table F Saturation Pre- includes capi Describe Reco	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations: in Present?	Imagery (B'e Surface (I'es X'es X	X Weter-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muci 7) Gauge or BB) Other (Ex	ained Lea auna (B1 alic Plantt sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface Well Dat plain in R anches): 3 nches): 0	3) s (B14) Odor (C1) eres on Lin ced Iron (C tion in Tills (C7) a (D9) cemarks)	4) d Soils (Cl	Secondar Surfa Drain Dry-S X Crayf (C3) Saturt Stunt Geon FAC-	y Indicators (minimum of two required the Soil Cracks (B6) lage Patterns (B10) leason Water Table (C2) lish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)
Popth (inclease of the color of	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) arks (B1) in Deposits (B2) posits (B3) or Crust (B4) posits (B5) in Visible on Aerial Vegetated Concavations: in Present?	Imagery (B'e Surface (I'es X'es X	X Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent In Thin Muci To Gauge or B8) Other (Ex No Depth (in	ained Lea auna (B1 alic Plantt sulfide C Rhizosph of Reduc on Reduc on Reduc k Surface Well Dat plain in R anches): 3 nches): 0	3) s (B14) Odor (C1) eres on Lin ced Iron (C tion in Tills (C7) a (D9) cemarks)	4) d Soils (Cl	Secondar Surfa Drain Dry-S X Crayf (C3) Saturt Stunt Geon FAC-	y Indicators (minimum of two required the Soil Cracks (B6) lage Patterns (B10) leason Water Table (C2) lish Burrows (C8) ration Visible on Aerial Imagery (C9) led or Stressed Plants (D1) horphic Position (D2) Neutral Test (D5)

Project/Site: Proposed Highland Solar Farm		City/County. Highland	d County	Sampling Date 1/24/2018
Applicant/Owner: Hecate Energy Highland LLC				Sampling Point: WV-UP
nvestigator(s): S. West, C. Brendel		Section Township, Ra	nge:	
andform (hillslope, terrace, etc.)!		Local relief	(concave, convex, none)	
Slope (%) Lat: 39.061648				
Soil Map Unit Name. Clermont silt loam, 0 to 1 per			NWI classific	ation NA
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation Soil or Hydrology				present? Yes X No
Are Vegetation Soil, or Hydrology			eded, explain any answe	
SUMMARY OF FINDINGS - Attach site ma				
Hydrophytic Vegetation Present? Yes				/ · · · · · · · · · · · · · · · · · · ·
	No X	is the Sampled		
Wetland Hydrology Present? Yes	No_X_	within a Wetlan	nd? Yes	No_X
Remarks:				
VEGETATION – Use scientific names of plan	nts.			
	Absolute	Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant S	0
1		-	That Are OBL. FACW,	or FAC: (A)
2			Total Number of Domin	0
3			Species Across All Stra	ta <u>0</u> (B)
4			Percent of Dominant S	
U		= Total Cover	That Are OBL, FACW,	or FAC: U (A/B)
Sapling/Shrub Stratum (Plot size:)		Prevalence Index wor	ksheet: Multiply by:
1				x1=
3.			FACW species	
4			FAC species	x 3 =
5.			FACU species	x 4 =
		= Total Cover	UPL species 100	x 5 = 500
Herb Stratum (Plot size:)	400	Var. (IB)	Column Totals:	(A) (B)
1 Glycine max	100	Yes UPL	Manustra de Legista	= B/A = 5
2				
3	_	-	Hydrophytic Vegetation	Hydrophytic Vegetation
4			2 - Dominance Tes	A STATE OF THE STA
5			3 - Prevalence Ind	
7				Adaptations [†] (Provide supporting
				s or on a separate sheet)
8 g			Problematic Hydro	pnytic Vegetation (Explain)
10 -				
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VYCOCKY VIII'S STRAIGHT (FIGE SIZE			Hydrophytic	
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111111111111111111111111111111111111111			Vegetation	sNo_X

US Army Corps of Engineers

Midwest Region - Version 2.0

Profile Description: (Desc Depth Mat		Redo	x Feature	5				
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			_	-				
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Histic Epipedon (A2)		Sandy l	Sandy Redox (S5)			Dark Surface (S7)		
Black Histic (A3)		Stripped	Matrix (S	36)		Iron-Manganese Masses (F12)		
Hydrogen Sulfide (A4)		Loamy	Mucky Mir	neral (F1)		Very Shalle	ow Dark Surface (TF12)	
Stratified Layers (A5)		Loamy	Gleyed Ma	alnix (F2)		Other (Exp	lain in Remarks)	
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				Hydric Soil Present? Yes P				
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APPENDIX D – AGENCY CORRESPONDENCE

Office of Real Estate

Paul R. Baldridge, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6649

none: (614) 265-6649 Fax: (614) 267-4764

March 22, 2018

Michael Perkins Terracon 611 Lunken Park Drive Cincinnati, Ohio 45226

Re: 18-312; Highland Solar Farm

Project: The proposed project involves the construction of a solar farm.

Location: The proposed project is located in Buford Township, Highland County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following record at or within a one-mile radius of the project area:

Loggerhead shrike (Lanius ludovicianus), State endangered, federal species of concern

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the Indiana bat (Myotis sodalis), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (Carya ovata), shellbark hickory (Carya laciniosa), bitternut hickory (Carya cordiformis), black ash (Fraxinus nigra), green ash (Fraxinus pennsylvanica), white ash (Fraxinus americana), shingle oak (Quercus imbricaria), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus* americana), eastern cottonwood (Populus deltoides), silver maple (Acer saccharinum), sassafras (Sassafras albidum), post oak (Quercus stellata), and white oak (Quercus alba). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this project is not likely to impact this species

The project is within the range of the bigeye shiner (*Notropis boops*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact this species.

The project is within the range of the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species, utilizing dry slopes and rocky outcrops. In addition to using wooded areas, the timber rattlesnake utilizes sunlit gaps in the canopy for basking and deep rock crevices for overwintering. Due to the location, the habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The DOW has records within the project area for the loggerhead shrike (*Lanius ludovicianus*), a state endangered bird. The loggerhead shrike nests in hedgerows, thickets and fencerows. They hunt over hayfields, pastures, and other grasslands. If thickets or other types of dense shrubbery habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 to August 1. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

 $\frac{http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community \\ \%20Contact%20List 8 16.pdf$

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): October 4, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Applicant: Represented by: Patti Shore Scott West

Hecate Energy Highland LLC

621 Randolph Street

Chicago, Illinois 60661

Terracon Consultants, Inc.
611 Lunken Park Drive
Cincinnati, OH 45226

- C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
- **D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** The project is located on OH 138 Buford, Highland County, Ohio. The property is approximately 3,100-acres and is primarily agricultural and forested land. Topography across the property ranges in elevation between 975 and 1000 feet above mean sea level (msl). The project applicant is proposing to develop the property with construction of a solar farm.

Terracon Consultants completed a wetland delineation survey in August 2018 and identified 31 wetlands, 30 streams, and 10 ponds on the property. Additional information regarding the onsite water is described in the attached table.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: Ohio County/parish/borough: Highland

City: Buford

Center coordinates of site (lat/long in degree decimal format):

Lat. 39° 05' 00.02" N, Long. 83° 47' 57.80" W.

Universal Transverse Mercator:

Name of nearest waterbody: Ohio Brush Whiteoak watershed (HUC # 05090201).

Identify (estimate) amount of waters in the review area:

Wetlands: 287.18 acres

Cowardin Classifications: PFO and PEM

Non-wetland waters:

Streams: 49,821 linear feet

Cowardin Classification: Riverine

Ponds: 4.45 acres

Cowardin Classification: Palustrine

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A

Non-Tidal: N/A

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Field Determination. Date(s):

- 1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
- 2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all

wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33) C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and
requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the
applicant/consultant:
Data sheets prepared/submitted by or on behalf of the
applicant/consultant.
Office concurs with data sheets/delineation report.
Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
Corps navigable waters' study:
U.S. Geological Survey Hydrologic Atlas: .
USGS NHD data.
USGS 8 and 12 digit HUC maps.
U.S. Geological Survey map(s). Cite scale & quad name:
 ✓ USDA Natural Resources Conservation Service Soil Survey. Citation: ✓ National wetlands inventory map(s). Cite name: Cincinnati, Ohio
☐ State/Local wetland inventory map(s):
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum
of 1929)
☐ Photographs: ☐ Aerial (Name & Date): or ☐ Other (Name & Date):
Previous determination(s). File no. and date of response letter: .
Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

<u> </u>		<u> </u>	

Signature and date of Regulatory Project Manager (REQUIRED) Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

555 6-6A

Proposed Highland Solar Farm OH 138 Buford, Highland County, Ohio

Site number	Estimated amount of aquatic resource in review area	Cowardin Class	Latitude	Longitude	Class of aquatic resource
W-A	8.82	PFO	39.0667505	-83.78925332	Non-section 10
W-B	0.06	PFO	39.06517375	-83.78532864	Non-section 10
W-C	0.23	PEM	39.0625831	-83.76842168	Non-section 10
W-D	4.32	PFO	39.06355686	-83.76700837	Non-section 10
W-E	3.8	PFO	39.07471996	-83.76700851	Non-section 10
W-F	0.36	PFO	39.07552635	-83.76317064	Non-section 10
W-G	22.4	PFO	39.07964474	-83.78041663	Non-section 10
W-H	0.33	PFO	39.08793148	-83.76172325	Non-section 10
W-I	7.10	PFO	39.09060725	-83.76894604	Non-section 10
W-J	6.45	PFO/PEM	39.08498538	-83.80026393	Non-section 10
W-K	9.03	PFO	39.07753139	-83.80046814	Non-section 10
W-L	12.79	PFO	39.08702168	-83.79659628	Non-section 10
W-M	80.84	PFO	39.08162283	-83.80962082	Non-section 10
W-N	7.19	PFO	39.07776925	-83.82005381	Non-section 10
W-O	6.19	PFO	39.09119555	-83.81955155	Non-section 10
W-P	12.53	PEM	39.095081	-83.81524858	Non-section 10
W-Q	20.81	PFO/PEM	39.08839424	-83.82658452	Non-section 10
W-R	2.84	PFO/PEM	39.09573421	-83.82922543	Non-section 10
W-S	0.54	PEM	39.09535873	-83.82492216	Non-section 10
W-T	0.55	PFO	39.07015931	-83.7978563	Non-section 10
W-U	5.87	PFO	39.07850483	-83.78454847	Non-section 10
W-V	1.47	PFO	39.06163085	-83.78273822	Non-section 10
W-W	23.74	PFO	39.07026237	-83.75850041	Non-section 10
W-X	6.92	PFO/PEM	39.06333664	-83.77375085	Non-section 10

W-Y	4.81	PFO	39.07038604	-83.77565256	Non-section 10
W-Z	6.84	PFO	39.07917006	-83.7594426	Non-section 10
W-AA	9.25	PFO	39.07610582	-83.76109415	Non-section 10
W-AB	0.65	PFO	39.07407015	-83.75666197	Non-section 10
W-AC	9.4	PFO	39.08158275	-83.82373282	Non-section 10
W-AD	8.7	PFO	39.09009762	-83.79649711	Non-section 10
W-AE	2.35	PFO	39.09269829	-83.79414083	Non-section 10
S-1	2647	Riverine	39.064628	-83.767753	Non-section 10
S-2	5182	Riverine	39.079917	-83.7885	Non-section 10
S-3	997	Riverine	39.088497	-83.761861	Non-section 10
S-4 (Bell's Run)	4289	Riverine	39.072756	-83.775589	Non-section 10
S-5 (Flat Run)	2865	Riverine	39.079917	-83.7885	Non-section 10
S-6	3233	Riverine	39.071267	-83.792889	Non-section 10
S-7	325	Riverine	39.067628	-83.795183	Non-section 10
S-8	82	Riverine	39.069378	-83.771742	Non-section 10
S-9	262	Riverine	39.071956	-83.802264	Non-section 10
S-10	3511	Riverine	39.080225	-83.804967	Non-section 10
S-11	2171	Riverine	39.077422	-83.816647	Non-section 10
S-12	5500	Riverine	39.084847	-83.813428	Non-section 10
S-13 (Ruble Run)	5654	Riverine	39.088386	-83.817522	Non-section 10
S-14	1077	Riverine	39.088978	-83.816475	Non-section 10
S-15	975	Riverine	39.088386	-83.817522	Non-section 10
S-16	653	Riverine	39.095997	-83.829464	Non-section 10
S-17	1751	Riverine	39.096361	-83.827608	Non-section 10
S-18	178	Riverine	39.095117	-83.824803	Non-section 10
S-19	148	Riverine	39.097417	-83.825447	Non-section 10
S-20 (North Fork White Oak Creek)	1530	Riverine	39.096361	-83.827608	Non-section 10
S-21	1855	Riverine	39.1115	-83.814311	Non-section 10

S-22	658	Riverine	39.1115	-83.814311	Non-section 10
S-23	218	Riverine	39.099483	-83.813447	Non-section 10
S-24	381	Riverine	39.080528	-83.787939	Non-section 10
S-25	814	Riverine	39.053208	-83.784653	Non-section 10
S-26	1424	Riverine	39.0695969	-83.754611	Non-section 10
S-27	132	Riverine	39.077392	-83.749797	Non-section 10
S-28	904	Riverine	39.078953	-83.750983	Non-section 10
S-29	236	Riverine	39.079181	-83.748992	Non-section 10
S-30	169	Riverine	39.078953	-83.750983	Non-section 10
P-A	0.27	PUB	39.0711	-83.790306	Non-section 10
P-B	0.18	PUB	39.085378	-83.802025	Non-section 10
P-C	0.13	PUB	39.082572	-83.8138	Non-section 10
P-D	0.73	PUB	39.089039	-83.806269	Non-section 10
P-E	1.05	PUB	39.070636	-83.776389	Non-section 10
P-F	0.62	PUB	39.062806	-83.773131	Non-section 10
P-G	0.41	PUB	39.065578	-83.769467	Non-section 10
P-H	0.26	PUB	39.078175	-83.75475	Non-section 10
P-I	0.11	PUB	39.074042	-83.756242	Non-section 10
P-J	0.69	PUB	39.0756	-83.772483	Non-section 10

APPENDIX D SITE PLANS

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 18-1334-EL-BGN

Summary: Application Exhibit G (Part 4) electronically filed by Ms. Karen A. Winters on behalf of Hecate Energy Highland LLC