

August 26, 2024

Mr. Rob LeForce, B.W. Environmental Analyst, Land and Water Resources Associated Electric Cooperative, Inc. 2814 S. Golden Ave Springfield, MO 65801

Re: Turney Energy Center Wetland Delineation Report

Dear Mr. LeForce:

Burns & McDonnell was retained by Associated Electric Cooperative, Inc. (AECI) to provide wetland delineation services for the proposed Turney Energy Center (Project) in Clinton County, Missouri (Figure A-1, Appendix A). The proposed Project and the results of the wetland delineation effort are described below.

#### Introduction

AECI plans to construct the Turney Energy Center (TEC) in Clinton County, Missouri. The Project consists of six parts. These are 1) the TEC, a natural gas-fired simple-cycle electrical generation plant; 2) a new water supply pipeline; 3) an onsite natural gas lateral line; 4) an electrical distribution line upgrade; 5) an electrical interconnection line build; and 6) a new substation south of the City of Turney, Missouri.

The Project has the potential to impact wetlands or other waterbodies that may be under the jurisdiction of the U.S. Army Corps of Engineers (USACE) as designated by Section 404 of the Clean Water Act. Burns & McDonnell conducted a wetland delineation for the Project to evaluate the presence of wetlands and other waterbodies, including streams, drainages, and ponds. The delineation was conducted based on the proposed Project layout (Survey Area). The Survey Area included in this report and displayed in the accompanying figures is based on the latest Project design and encompasses approximately 193 acres.

## **Methods**

The following discussions summarize the methods used to review existing data and conduct the wetland delineation.

## Existing Data Review

Burns & McDonnell reviewed available background information for the Survey Area before conducting a site visit. This available background information included 2018



U.S. Geological Survey (USGS) 7.5-minute topographic maps (Lathrop, Plattsburg), USGS National Hydrography Dataset (NHD), U.S. Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, National Agriculture Imagery Program (NAIP) aerial photography (2019), and U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) 2017 Soil Survey Geographic (SSURGO) digital data for Clinton County, Missouri. Figures A-2 and A-3 in Appendix A depict this data. The USACE Antecedent Precipitation Tool was used to evaluate climate conditions before the site visit.

Wetland presence based only on NWI maps cannot be assumed to be an accurate assessment of potentially occurring jurisdictional wetlands. Wetland identification criteria differ between the USFWS and the USACE. As a result, wetlands shown on an NWI map may not be under the jurisdiction of the USACE, and all USACE-jurisdictional wetlands are not always included on NWI maps. Therefore, a field visit was conducted to identify any wetlands or other aquatic resources that may be present within the proposed Project.

## Wetland Delineation Field Survey

Burns & McDonnell wetland scientists completed an onsite wetland delineation on April 22 and August 6, 2024. The delineation was completed following the 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest — Version 2.0 (Regional Supplement).

Sample plots were established at multiple locations, and Wetland Determination Data Forms from the Regional Supplement were completed to characterize the Survey Area (Appendix B). Vegetation, soil conditions, and hydrologic indicators were recorded at each sample plot. Locations of sample plots and other identified features were recorded using a sub-meter accurate global positioning system (GPS) unit. Natural color photographs were taken onsite and are included in Appendix C.

## Results

The following sections describe the results of the existing data review and the completed wetland delineation.



# Existing Data Review

The USGS topographic maps were reviewed to familiarize Burns & McDonnell wetland personnel with the topography of the Survey Area and potential locations of wetlands and other aquatic resources (Figure A-2). The USGS topographic maps indicate that most of the Survey Area is relatively flat and generally sloping to the south.

The NWI data indicates one palustrine forested (PFO) wetland, five palustrine unconsolidated bottom (PUB) wetlands and nineteen riverine wetlands within the Survey Area. The NHD data indicates twenty stream crossings within the Survey Area. The 2018 aerial photography indicates that the Project Area consists primarily of farmed crop fields and a maintained transmission line right-of-way (Figure A-3 and Figure A-4). According to the FEMA Flood Hazard Rate map for Clinton County, one 100-year flood zone is within the Survey Area on the northwest side (Figure A-2).

The NRCS SSURGO digital data indicates that a portion of ten soil map units are located within the Survey Area (Figure A-3, Soils Index). One of these soils (34020; Colo silty clay loam) is on the national hydric soil list (Figure A-3).

The USACE Antecedent Precipitation Tool indicates that climate conditions near the Survey Area were normal the three months before the April 22 survey and drier than normal conditions for the August 6, 2024 survey (Appendix D).

# Wetland Delineation Field Survey

On April 22, 2024, and August 6, 2024, a two-person team comprised of a wetland scientist and a GPS specialist, both with Burns & McDonnell, conducted a wetland delineation of the Survey Area. The land cover and delineated wetlands and other aquatic resources are discussed below.

Vegetation. The Survey Area was comprised mainly of farmed crop fields, maintained transmission line and road right-of-way, and forests. The dominant vegetation in the upland areas included Japanese bristle grass (Setaria faberi), Kentucky bluegrass (Poa pratensis), henbit deadnettle (Lamium amplexicaule), poison hemlock (Conium maculatum), field pennycress (Thlaspi arvense), tall goldenrod (Solidago altissima), multiflora rose (Rosa multiflora), black willow (Salix nigra), rough-leaf dogwood



(Cornus drummondii), white mulberry (Morus alba), American elm (Ulmus americana), honey locust (Gleditsia triacanthos), Osage orange (Maclura pomifera), and eastern cottonwood (Populus deltoides). Common vegetation observed within delineated wetland areas is described below, and species are indicated on the Data Forms in Appendix B.

Soils. Typical upland soils ranged from black (10YR 2/1) to very dark brown (10YR 2/2) in color and silty clay loam to clay in texture. Typical wetland soils ranged from black (10YR 2/1) to very dark gray (10YR 3/1) in color and silty clay loam to clay in texture. Redoximorphic features were typically present in wetland soils but were uncommon in upland soils.

*Hydrology*. The primary sources of hydrology for the wetlands were groundwater and precipitation. Hydrology indicators within the wetlands included surface water, high water table, saturation, drainage patterns, geomorphic position, and a positive FAC-neutral test.

## **Delineated Areas**

Nine wetlands and 24 streams were identified during the wetland delineation. The wetlands and streams are described by type below, and their locations are shown on Figure A-4 in Appendix A. Sample plots were located in wetlands and adjacent uplands. Data forms for these sample plots are included in Appendix B, and photographs of sample plots, wetlands, and streams are included in Appendix C.

#### Wetlands

Delineated wetland types included palustrine emergent (PEM), PFO, and PUB; each type is described in more detail below (Table 1).

Five PEM wetlands, encompassing 1.81 acres, were delineated. Vegetation in the wetlands was dominated by tufted foxtail (*Alopecurus carolinianus*), reed canary grass (*Phalaris arundinacea*), stinging nettle (*Urtica dioica*), yellow ironweed (*Verbesina alternifolia*), Canada goldenrod (*Solidago canadensis*), narrow-leaf cattail (*Typha angustifolia*), black willow, American sycamore (*Platanus occidentalis*), white mulberry, and American elm. Observed indicators of wetland hydrology included surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test. Soils ranged from black (10YR 2/1) to very dark gray (10YR 3/1) in color,



and redoximorphic concentrations were present. Soils ranged from silty clay loam to clay in texture. Hydric soil was indicated by Redox Dark Surface (F6).

One PFO wetland, encompassing 0.21 acre was delineated. Vegetation in the wetland was dominated by Canadian wood nettle (*Laportea canadensis*), American sycamore, and hackberry (*Celtis occidentalis*). Observed indicators of wetland hydrology included geomorphic position and a positive FAC-neutral test. Soils were very dark gray (10YR 3/1) in color, and redoximorphic concentrations were present. Soils ranged from silty clay loam to clay in texture. Hydric soil was indicated by Depleted Matrix (F3).

Two PUB wetlands, encompassing 2.22 acres, were delineated. PUB wetlands were open water ponds characterized by a combined areal cover of less than 30 percent of vegetation. Vegetation surrounding the PUB wetlands included reed canary grass, stinging nettle, curly dock (*Rumex crispus*), tall goldenrod, black willow, and white mulberry.

Table 1: Delineated Wetlands

Wetland ID	Wetland Type <sup>a</sup>	Delineated Area (acres)	Associated Photos in Appendix C	Figure A-4 Page Number	
W-01	PUB	2.10	C-15	3	
W-02	PEM	1.39	C-1	3	
W-03	PEM	0.26	C-3	11	
W-04	PUB	0.31	C-16	12	
W-05	PEM	0.07	C-6	16	
W-06	PUB	0.12	C-17	19	
W-07	PEM	0.02	C-9	2	
W-08	PFO	0.21	C-10	1	
W-09	PEM	0.07	C-12	1	
	Total:	4.55			

<sup>&</sup>lt;sup>a</sup> Symbols for wetland type: PEM = palustrine emergent, PUB = palustrine unconsolidated bottom, PFO = palustrine forested



## Streams

Thirteen ephemeral stream crossings were identified, extending for a delineated length of 1,639 feet (Table 2). The ephemeral streams were characterized by a defined bed and bank with little or no flow during the site visit. These streams likely carry water only during and after precipitation events. The ephemeral streams ranged from approximately 0.5 to 2 feet wide and from 0.25 to 0.5 foot deep at the ordinary high water mark (OHWM). Bank heights ranged from 0.5 to 1.5 feet. These stream crossings flowed through a maintained transmission line right-of-way and forested riparian corridor within the Survey Area, where common riparian vegetation included Kentucky bluegrass, black willow, honey locust, black walnut (*Juglans nigra*), American elm, and mulberry.

Table 2: Delineated Streams

Stream ID	Stream Type	Delineated Length (feet)	Photograph in Appendix C	Figure A-4 Page Number
S-01	Intermittent	745	C-18	3
S-02	Intermittent	1154	C-19	5
S-03	Ephemeral	109	C-20	5
S-04	Intermittent	301	C-21	5
S-05	Intermittent	115	C-22	5
S-06	Ephemeral	136	C-23	4, 6
S-07	Intermittent	169	C-24	13
S-08	Intermittent	50	C-25	14
S-09	Intermittent	55	C-26	14
S-10	Ephemeral	48	C-27	12
S-11	Ephemeral	55	C-28	11
S-12	Ephemeral	267	C-29	8
S-13	Intermittent	128	C-30	15
S-14	Intermittent	103	C-31	16
S-15	Ephemeral	125	C-32	16
S-16	Ephemeral	104	C-33	17
S-17	Ephemeral	444	C-34	19
S-18	Ephemeral	67	C-35	2
S-19	Ephemeral	87	C-36	2
S-20	Intermittent	51	C-37	2
S-21	Ephemeral	58	C-38	1
S-22	Perennial	52	C-39	1



Stream ID	Stream Type	Delineated Length (feet)	Photograph in Appendix C	Figure A-4 Page Number	
S-23	Ephemeral	60	C-40	1	
S-24	Ephemeral	79	C-41	3	
	Total:	4562			

Nine intermittent stream crossings, extending for a delineated length of 2,871 feet, were identified. The intermittent streams were characterized by the presence of a low volume of flow at the time of the site visit. These streams likely are partially fed by groundwater but may not flow during dry periods. The intermittent streams ranged from approximately 1 to 6 feet wide and from 0.25 to 1 foot deep at the OHWM. Bank height ranged from 1 to 5 feet. The intermittent streams flowed through a maintained transmission line right-of-way within the Survey Area, where common riparian vegetation included Kentucky bluegrass, tall goldenrod, and American elm.

One perennial stream crossing was identified, extending for a delineated length of 52 feet (Table 2). This stream had a substantial flow volume during the site visit and likely flows year-round. The perennial stream was approximately 30 feet wide and 3 feet deep at the OHWM. This stream crossing flowed through a forested riparian corridor within the Survey Area, where common riparian vegetation included jewelweed (*Impatiens pallida*), coralberry (*Symphoricarpos orbiculatus*), honey locust, black walnut, and Osage orange.

## **Summary**

Burns & McDonnell conducted a wetland delineation of the Survey Area to identify the presence of wetlands and other aquatic resources. Seven wetlands and twenty-three streams were identified during the delineation efforts. To avoid the need for a Section 404 Permit from the USACE, the proposed Project should be designed to avoid all impacts to potentially jurisdictional waters. If impacts to jurisdictional features cannot be avoided entirely, they should be minimized, and a Section 404 Nationwide Permit from the USACE would be required.

If you have any questions or require additional information, please contact Jessica Ramirez by telephone at (210) 381-1867 or by email at jramirez2@burnsmcd.com.



Sincerely,

Jessica Ramirez

Assistant Wetland Scientist

# Appendices:

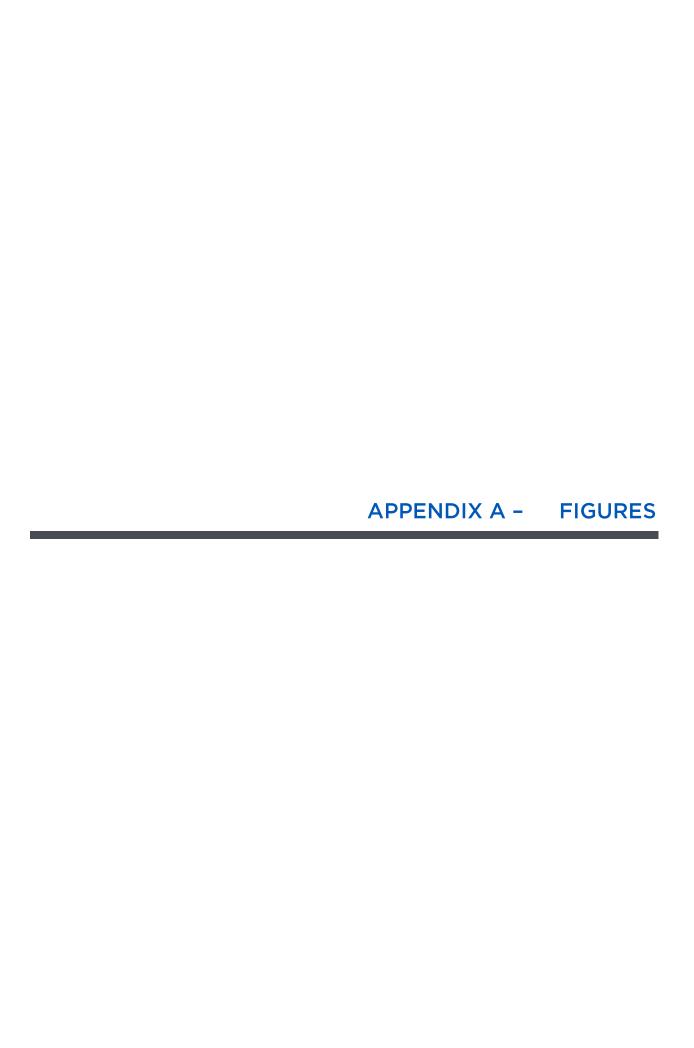
Appendix A - Figures

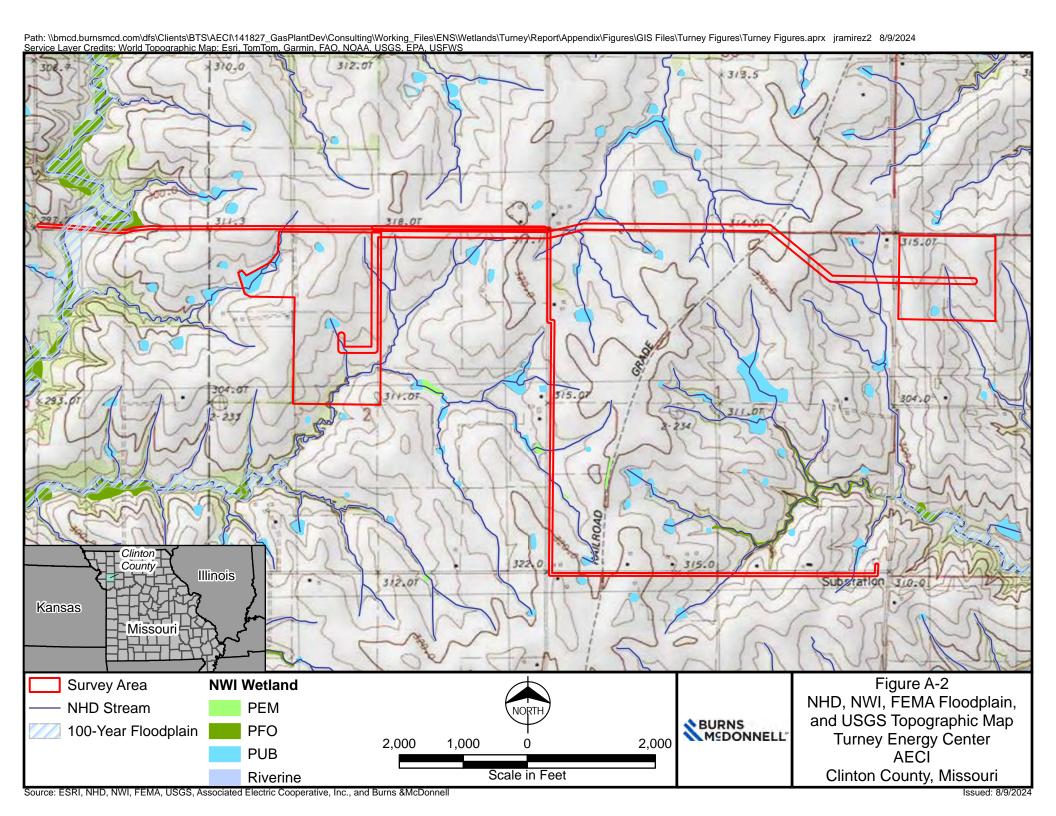
Appendix B - Routine Wetland Determination Forms - Midwest Region

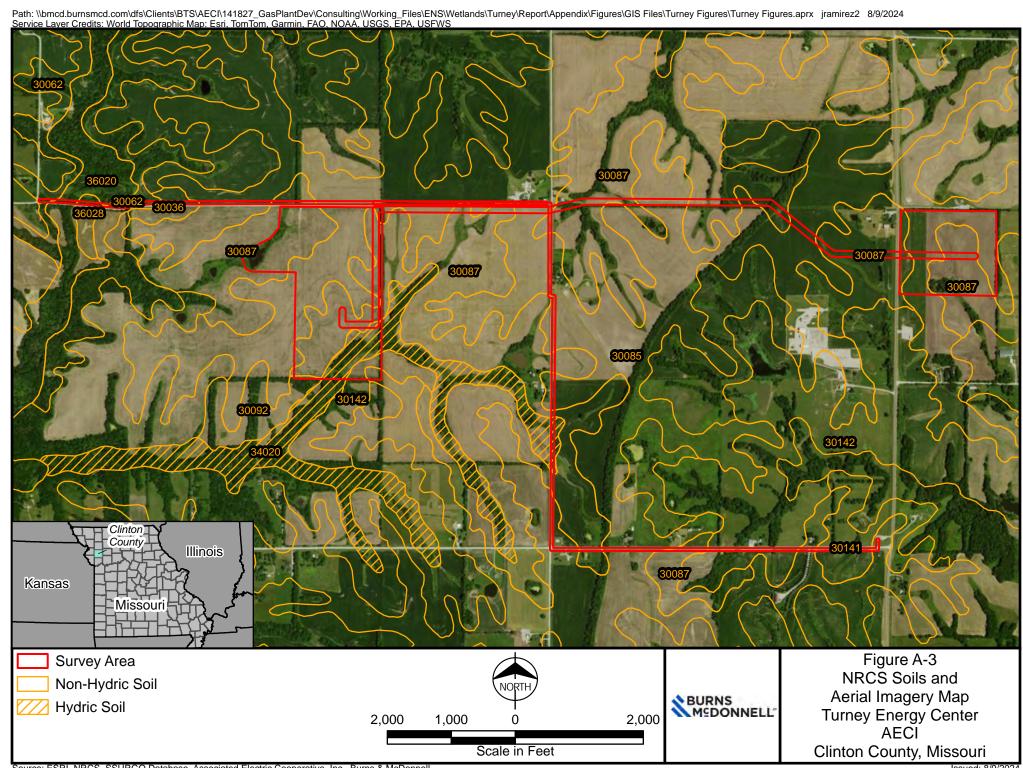
Appendix C - Ground Photographs

Appendix D - Antecedent Precipitation Tool Results

cc: Chris Howell, Burns & McDonnell

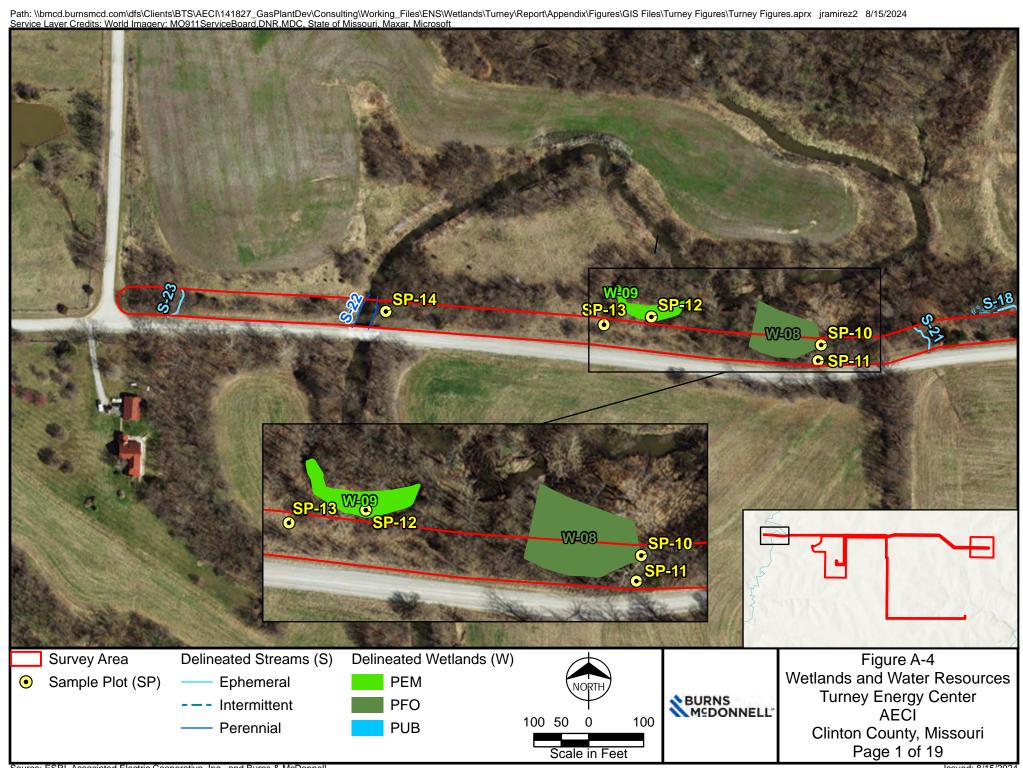


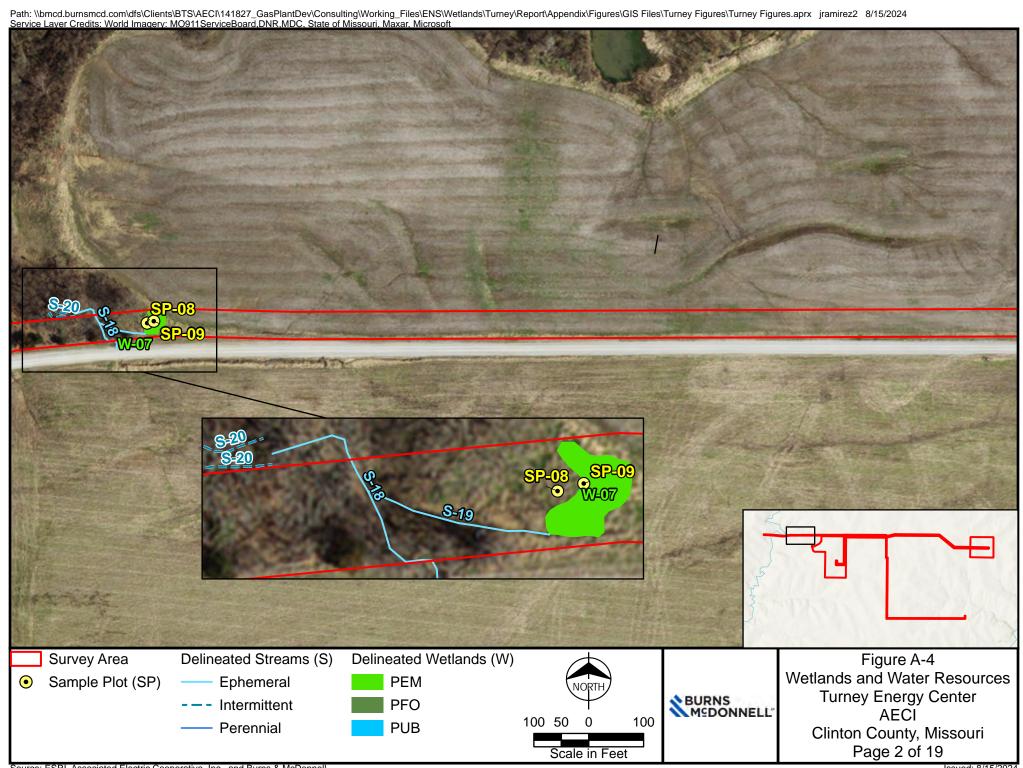


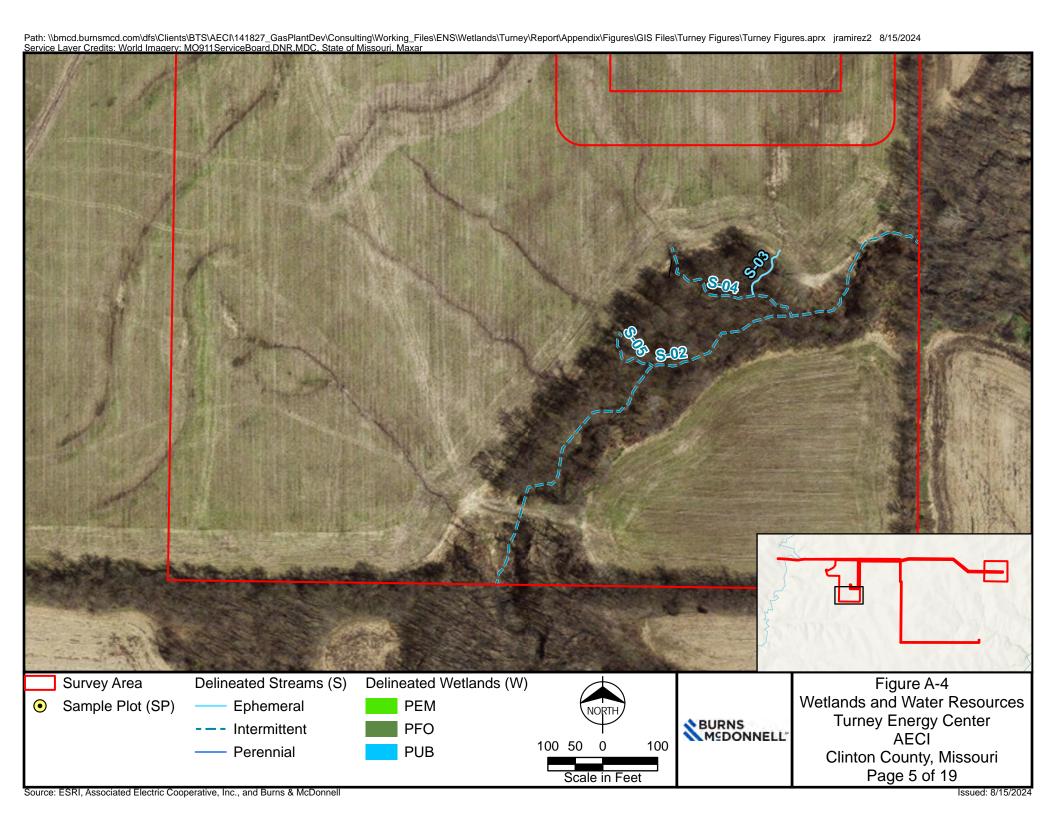


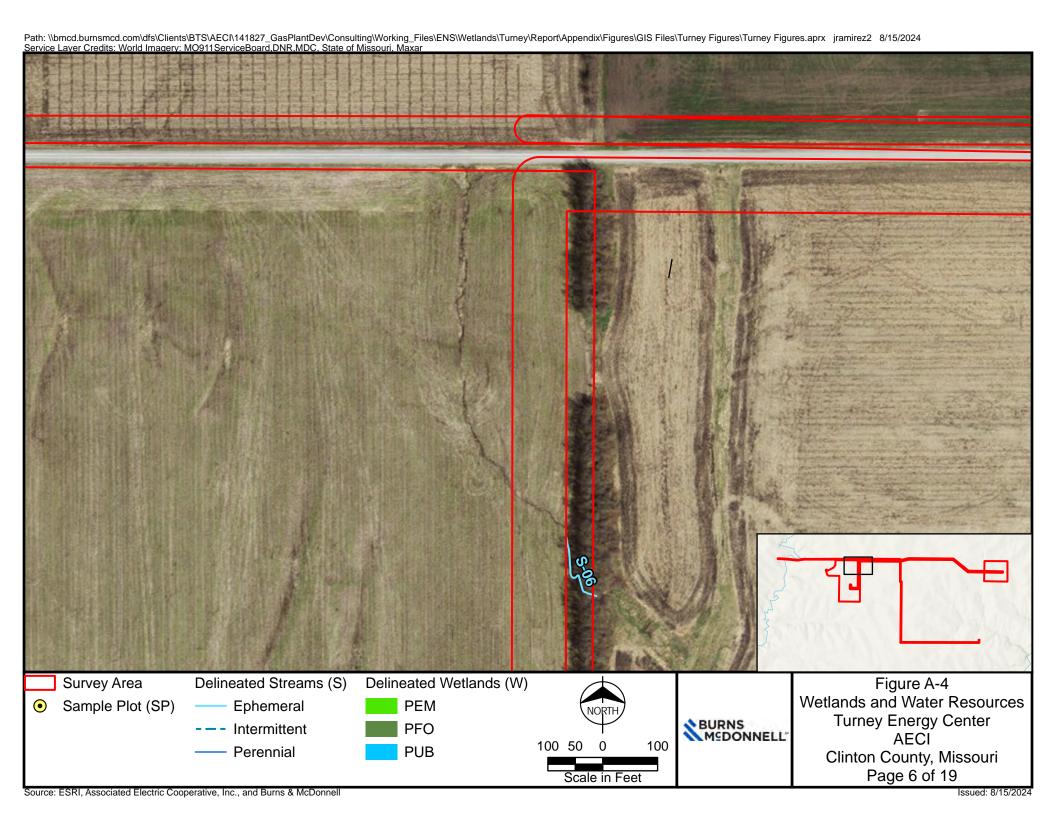
# Figure A-3 Soils Index

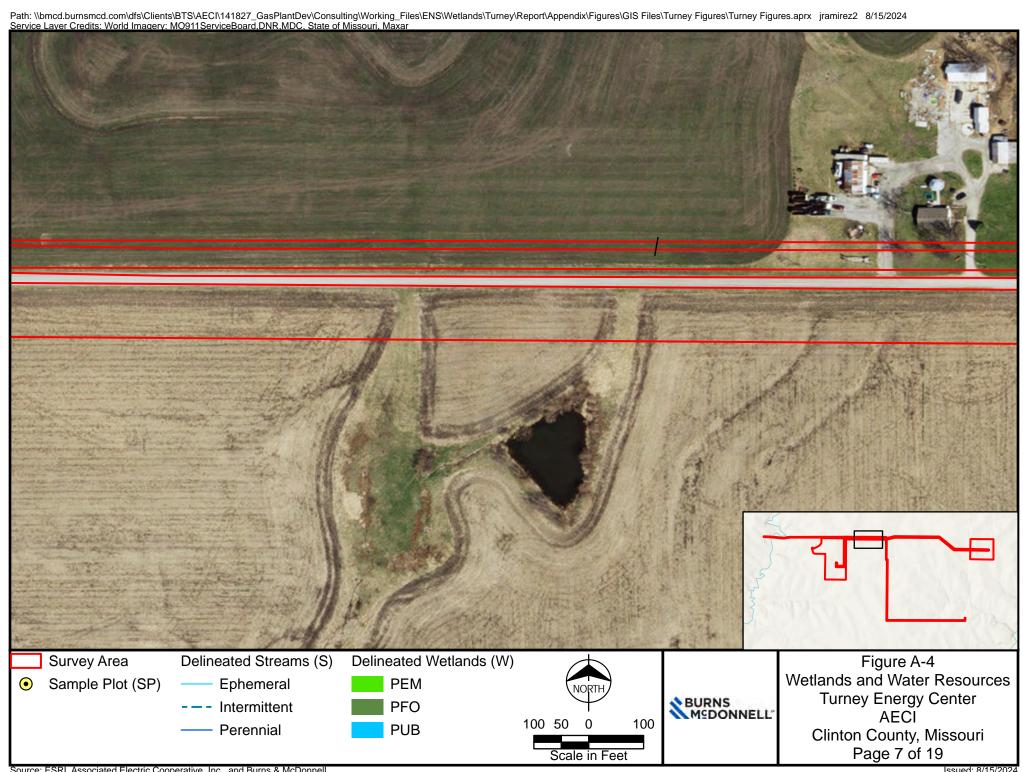
Soil Map Symbol		Map Unit Name				
30036	-	Armstrong loam, 5 to 9 percent slopes				
30062	-	Gara loam, 9 to 14 percent slopes				
30085	-	Grundy silt loam, 2 to 5 percent slopes				
30087	-	Grundy silt loam, 5 to 9 percent slopes				
30092	-	Grundy silty clay loam, 5 to 9 percent slopes, moderately eroded				
30141	-	Lamoni silty clay loam, 5 to 9 percent slopes				
30142	-	Lamoni silty clay loam, 5 to 9 percent slopes, moderately eroded				
34020	-	Colo silty clay loam, drainageway, 2 to 5 percent slopes, frequently flooded				
36020	-	Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded				
36028	-	Nevin silt loam, 0 to 2 percent slopes, rarely flooded				



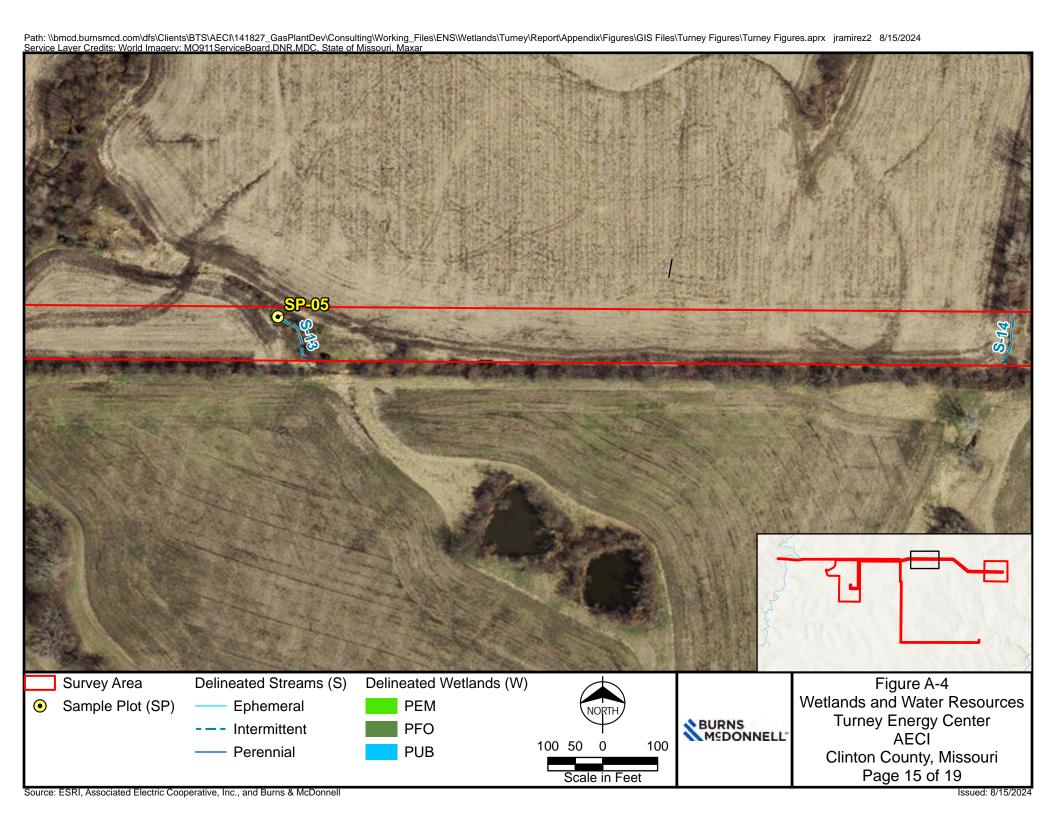


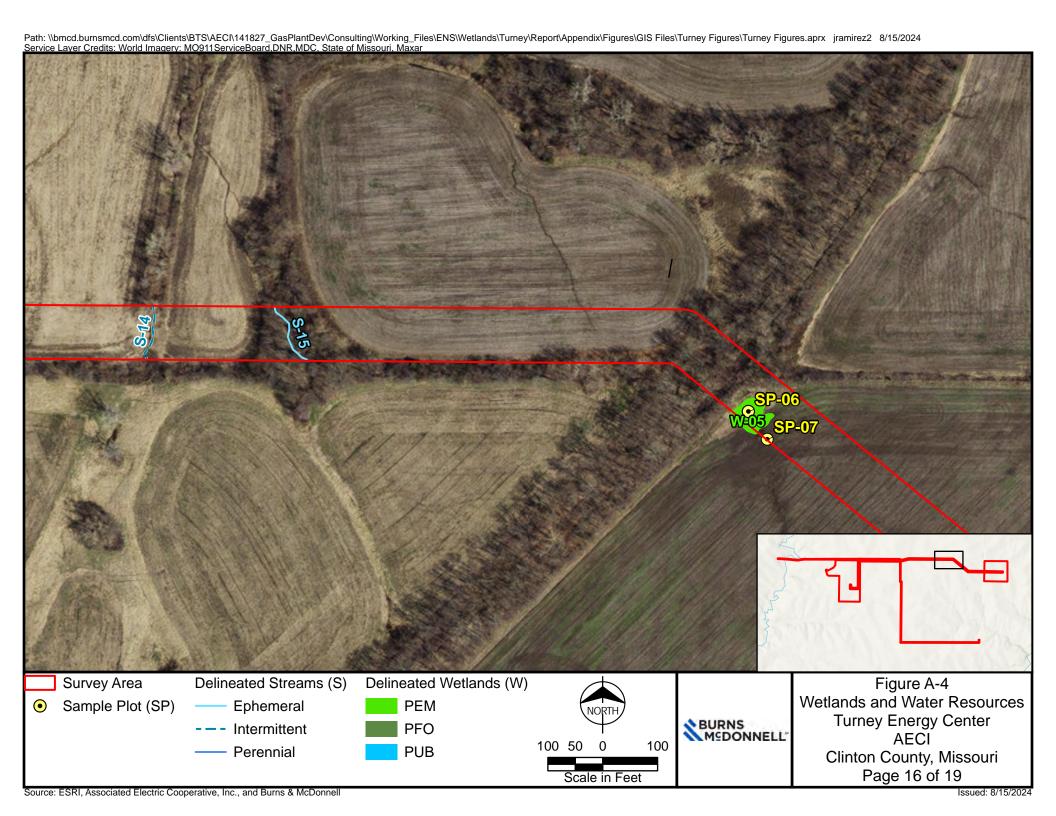


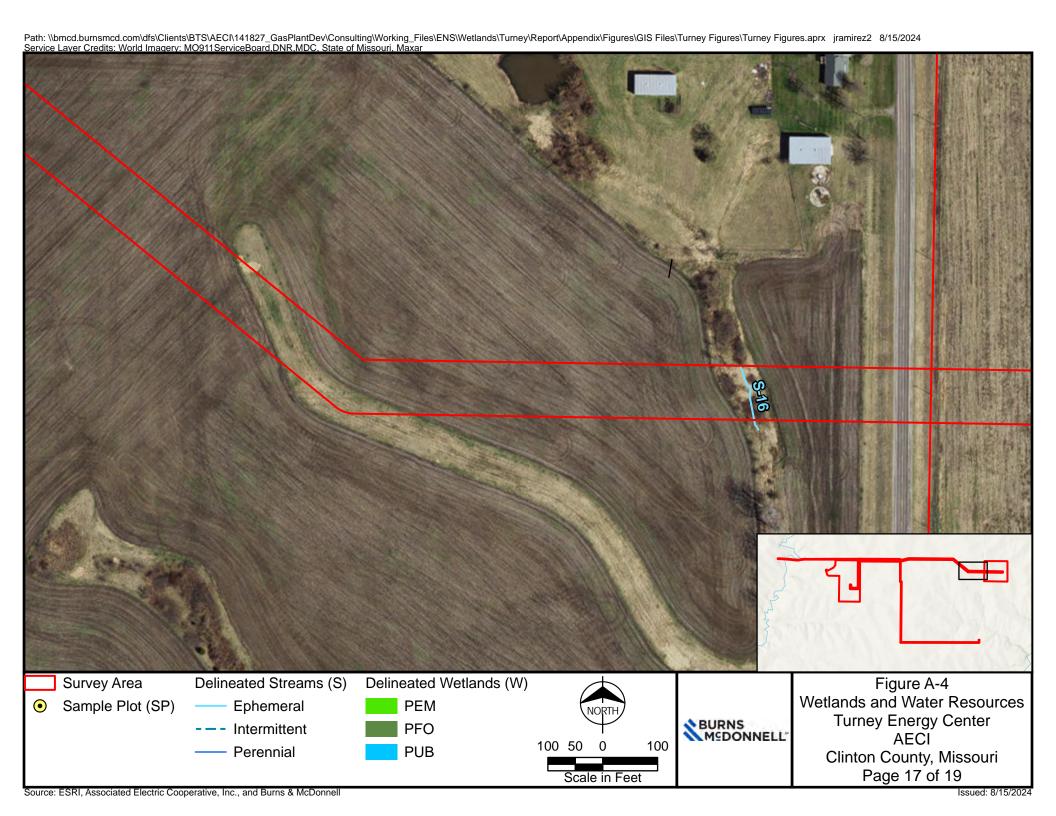


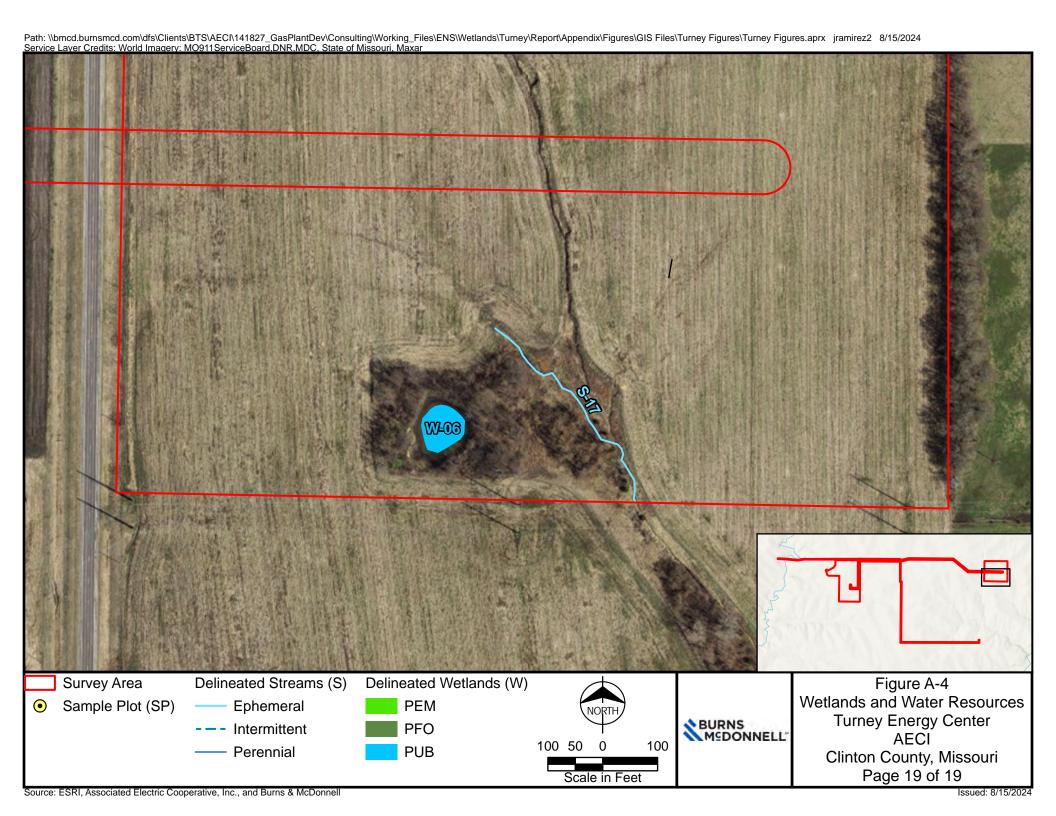


Scale in Feet









APPENDIX B - ROUTINE WETLAND DETERMINATION FORMS - MIDWEST REGION

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Turney Energy Center	(	_ City/County: Clinton County Sampling Date: 2024-0						
Applicant/Owner: Associated Electric Cooperative,	, Inc.	State: Missouri Sampling Point: SP-01						
Investigator(s): J.Ramirez, C. Rogers		Section, Township, Range: S02 T55N R31W						
				(concave, convex, none):				
Slope (%): 0 Lat: 39.61375	ι	_ong:94.	353023	Datum: NAD 83				
Soil Map Unit Name: 30087 - Grundy silt loam, 5 to		NWI classifica	ation: N/A					
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	No _	(If no, explain in Re	emarks.)			
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No								
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)								
SUMMARY OF FINDINGS - Attach site map	showing	sampling	g point le	ocations, transects,	important features, etc.			
Hydrophytic Vegetation Present? Yes No	0							
Hydric Soil Present? Yes No			e Sampled					
Wetland Hydrology Present? Yes No	o	withi	in a Wetlar	nd? Yes	No			
Remarks:	AOE Anto	aadant D		ian Taalindiaataa na				
Wetland sample plot within PEM W-02. The US three months prior to the survey.	ACE AIILE	cedent P	тесірітат	ion Tool indicates no	mai cimatic conditions			
VEGETATION – Use scientific names of plants.								
- 20 ft r	Absolute	Dominant		Dominance Test works	sheet:			
Tree Stratum (Plot size: 30 ft r )  1. Salix nigra	% Cover 20	Species?	OBL	Number of Dominant Sp That Are OBL, FACW, o				
2. Morus alba			FAC	That Ale Obl., FACW, 0	(A)			
3.				Total Number of Domina Species Across All Strat				
4.								
5				Percent of Dominant Sp That Are OBL, FACW, o				
Sapling/Shrub Stratum (Plot size: 15 ft r )	25	= Total Cov	er	Prevalence Index work	sheet:			
1				Total % Cover of:				
2.					x 1 = 20			
3.					x 2 = <u>110</u>			
4.				FAC species 15	x 3 = <u>45</u>			
5.				FACU species 10	x 4 = <u>40</u>			
		= Total Cov	er	UPL species 0	x 5 = 0			
Herb Stratum (Plot size: 5 ft r )  1. Phalaris arundinacea	40	~	FACW	Column Totals: 100	(A) <u>215</u> (B)			
1. Urtica dioica	15	<u> </u>	FACW	Prevalence Index	= R/A = 2.15			
Rumex crispus	10		FAC	Hydrophytic Vegetatio				
4. Solidago altissima	5		FACU	1 - Rapid Test for H	I			
5. Galium aparine	5		FACU	✓ 2 - Dominance Test	I			
6				3 - Prevalence Inde	x is ≤3.0 <sup>1</sup>			
7					daptations <sup>1</sup> (Provide supporting			
8					or on a separate sheet)			
9				Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)			
10				<sup>1</sup> Indicators of hydric soil	and wetland hydrology must			
Woody Vine Stratum (Plot size: 30 ft r )	75	= Total Cov	er	be present, unless distu				
1				Hydrophytic				
2				Vegetation   Present? Yes	No			
Remarks: (Include photo numbers here or on a separate s		= Total Cov	er					
	,							
Dominance test is passed. See Pho	ιο C-1.							

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SOIL Sampling Point: SP-01

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the	indicator	or confin	n the absence of in	dicators.)
Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%_	Type <sup>1</sup> _	_Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 2/1	_ <u>93</u>	5YR 4/6	- 7	_ <u>C</u>	<u>M</u>	Silty Clay Loam	
8-24	10YR 2/1	<u>95</u>	5YR 4/1	5	<u> D</u>	<u>M</u>	Silty Clay Loam	
-								
<u> </u>								
		pletion, RM=	Reduced Matrix, M	S=Maske	ed Sand Gr	ains.		Pore Lining, M=Matrix.
Hydric Soil			0	01	I-4-i (O.4)			roblematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A2)			eyea ۱۷جادی Redox (S	latrix (S4)		Coast Prairi	e Redox (A16)
I —	stic (A3)			d Matrix	,			nese Masses (F12)
ı —	n Sulfide (A4)				ineral (F1)			w Dark Surface (TF12)
	Layers (A5)				latrix (F2)			ain in Remarks)
_	ıck (A10)			d Matrix	. ,			
ı —	d Below Dark Surfa	ce (A11)			face (F6)		3	
_	ark Surface (A12)				Surface (F7	)		drophytic vegetation and rology must be present,
	lucky Mineral (S1) icky Peat or Peat (ន	33)	Redox	Depressi	ons (Fo)		•	rbed or problematic.
	Layer (if observed							ibod of problematic.
l _								.4
	ches):						Hydric Soil Pres	ent? Yes No
Remarks:								
Indicate	r EG is mot							
Indicate	or F6 is met.	•						
HYDROLO	GY							
Wetland Hy	drology Indicators	;;						
Primary India	cators (minimum of	one is requi	red; check all that ag	oply)			Secondary Inc	dicators (minimum of two required)
	Water (A1)		Water-Sta		ves (B9)		Surface S	Soil Cracks (B6)
1 —	iter Table (A2)		Aquatic Fa		, ,			Patterns (B10)
Saturation	, ,		True Aqua	atic Plant	s (B14)		Dry-Seas	on Water Table (C2)
Water M	arks (B1)		Hydrogen	Sulfide (	Odor (C1)		Crayfish I	Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on Liv	ing Roots	(C3) Saturation	n Visible on Aerial Imagery (C9)
Drift De	oosits (B3)		Presence	of Reduc	ed Iron (C	4)	Stunted of	r Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	tion in Tille	d Soils (C	6) 👱 Geomorp	hic Position (D2)
I —	oosits (B5)		Thin Muck	Surface	(C7)		FAC-Neu	tral Test (D5)
ı —	on Visible on Aerial							
	Vegetated Conca	ve Surface (l	B8) Other (Exp	olain in R	emarks)			
Field Obser								
Surface Wat			No Depth (in			-		
Water Table		_	No Depth (in			_		
Saturation P (includes car		Yes	No Depth (in	ches): <u>b</u>		Wet	land Hydrology Pre	sent? Yes No
		m gauge, mo	onitoring well, aerial	photos, p	revious in	spections)	, if available:	
Remarks:								
Indicato	re Λ2 Λ2 Γ	12 and	D5 are met					
indicato	13 MZ, M3, L	, and	D5 are met.					
I								

US Army Corps of Engineers Midwest Region – Version 2.0

# WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Turney Energy Center	City/County: Clinton County Sampling Date: 2024-04-25							
Applicant/Owner: Associated Electric Cooperative	State: Missouri S	Sampling Point: SP-02						
Investigator(s): J.Ramirez, C. Rogers	wnship, Rai	nge: S02 T55N R31W						
Slope (%): 0 Lat: 39.613628				D				
Soil Map Unit Name: 30087 - Grundy silt loam, 5 to								
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	No	(If no, explain in Ren	narks.)			
Are Vegetation, Soil, or Hydrology s	significantly	disturbed?	Are "	Normal Circumstances" pre	esent? Yes No			
Are Vegetation, Soil, or Hydrology r	naturally pro	blematic?	(If ne	eded, explain any answers	in Remarks.)			
SUMMARY OF FINDINGS – Attach site map	showing	sampling	g point le	ocations, transects, i	mportant features, etc.			
Hydrophytic Vegetation Present? Yes N	lo							
Hydric Soil Present? Yes N	lo		e Sampled					
Wetland Hydrology Present? Yes N	lo	withi	in a Wetlan	id? Yes	_ No			
Remarks:	OF A=+===	dant Duasi			akia aandikiana klausa			
Upland sample plot adjacent to PEM W-02. The USA months prior to survey. Vegetation, soils, and hydrol								
<b>VEGETATION</b> – Use scientific names of plants.								
- 20 ft r	Absolute	Dominant		Dominance Test worksh	ieet:			
Tree Stratum (Plot size: 30 ft r )  1. Salix nigra	% Cover 10	Species?	<u>Status</u> OBL	Number of Dominant Spe				
				That Are OBL, FACW, or	FAC: 3 (A)			
2				Total Number of Dominan				
4				Species Across All Strata	: <del>4</del> (B)			
5				Percent of Dominant Spec That Are OBL, FACW, or				
	10	= Total Cov	er	That Ale OBL, FACW, of	FAC. 70.00 (A/B)			
Sapling/Shrub Stratum (Plot size: 15 ft r )	40		ODI	Prevalence Index works				
1. Salix nigra	_ 10		OBL	Total % Cover of:	Multiply by:			
2				ODL species	x 1 = 20			
3				FACW species 20	x = 2 = 40 x = 3 = 0			
4				1710 openies	$\times 4 = 40$			
5	10				$\times 4 = 40$ $\times 5 = 225$			
Herb Stratum (Plot size: 5 ft r )	10	= Total Cov	er	Column Totals: 95	(A) 325 (B)			
1. Lamium amplexicaule	45		UPL					
2. Conium maculatum			FACW	Prevalence Index =	B/A = <u>3.42</u>			
3. Galium aparine	_ 5		FACU_	Hydrophytic Vegetation				
4. Thlaspi arvense	5		FACU_	1 - Rapid Test for Hy				
5				2 - Dominance Test is				
6				3 - Prevalence Index				
7					aptations <sup>1</sup> (Provide supporting or on a separate sheet)			
8				Problematic Hydroph				
9								
10	- <del></del>	- Total Cov			and wetland hydrology must			
Woody Vine Stratum (Plot size: 30 ft r )	<del></del>	= Total Cov	er	be present, unless disturb	ed or problematic.			
1				Hydrophytic				
2				Vegetation	<b>v</b>			
		= Total Cov	er	Present? Yes_	No			
Remarks: (Include photo numbers here or on a separate	sheet.)							
Dominance test is passed. Vegetat	ion is d	listurbe	d due	to being on the $\epsilon$	edge of an active			
farmed field. See Photo C-2.				-				

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	indicator	or confire	n the absence of	indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	<u> </u>	_Type <sup>1</sup>	_Loc <sup>2</sup> _	Texture	Remarks
0 - 18	10YR 2/2	<u> 98</u> -	7.5YR 5/8		<u> </u>	<u> M</u>	Silty Clay	
-								
l —								
-								
¹Type: C=Cd	oncentration, D=Dep	oletion RM=	Reduced Matrix MS	S=Masker	d Sand G	ains	2l ocation: P	L=Pore Lining, M=Matrix.
Hydric Soil		olotion, ravi	reduced matrix, mr	o maonec	a Garia Gi	unio.		Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy (	Gleyed Ma	atrix (S4)			irie Redox (A16)
ı —	pipedon (A2)			Redox (S5			Dark Surfa	
Black Hi	stic (A3)		Stripped	d Matrix (S	36)		Iron-Mang	ganese Masses (F12)
Hydroge	n Sulfide (A4)		Loamy	Mucky Mir	neral (F1)		Very Shall	low Dark Surface (TF12)
	d Layers (A5)			Gleyed Ma			Other (Ex	plain in Remarks)
ı —	ıck (A10)			d Matrix (	,			
ı — ·	d Below Dark Surfac	ce (A11)	_	Dark Surfa			3	
_	ark Surface (A12)			d Dark Su		)		hydrophytic vegetation and
	lucky Mineral (S1) icky Peat or Peat (S	:3)	Redox I	Depressio	ns (F8)		-	drology must be present, durbed or problematic.
	Layer (if observed)						unless dis	itabet of problematic.
I	ompact soil	•						
Depth (inc			_				Hydric Soil Pre	esent? Yes No
	ches): 10							
Remarks:								
1							-	npact soil. Multiple an active farmed field.
HYDROLO	GY							
Wetland Hyd	drology Indicators	:						
Primary Indic	cators (minimum of	one is require	ed; check all that ap	ply)			Secondary I	Indicators (minimum of two required)
	Water (A1)		Water-Sta		es (B9)		Surface	e Soil Cracks (B6)
—	iter Table (A2)		Aquatic Fa		, ,			ge Patterns (B10)
Saturation			True Aqua					ason Water Table (C2)
ı —	arks (B1)		Hydrogen					h Burrows (C8)
I —	nt Deposits (B2)		Oxidized F			ing Roots		ion Visible on Aerial Imagery (C9)
	posits (B3)		Presence					or Stressed Plants (D1)
1	at or Crust (B4)		Recent Iro		•	,		rphic Position (D2)
	oosits (B5)		Thin Muck			`	. —	eutral Test (D5)
I —	on Visible on Aerial	Imagery (B7	Gauge or '	Well Data	(D9)		_	, ,
Sparsely	Vegetated Concav	e Surface (B						
Field Obser		<u> </u>						
Surface Wate	er Present?	res N	lo Depth (in	ches):				
Water Table	Present?	/es N	lo Pepth (in	ches):		_		
Saturation P			lo V Depth (in				land Hydrology P	resent? Yes No
(includes cap			Depart (iii	Ci iC3)		_   ""	iana riyarology r	163 NO
Describe Rec	corded Data (strean	n gauge, mor	nitoring well, aerial	photos, pr	evious in	spections),	, if available:	
Remarks:								
	ator is met.	Hydrolo	ogy is distur	bed d	lue to	being	on the edge	e of an active farmed
field.		-	· <del>-</del>			3	C	

Project/Site: Turney Energy Center	(	City/Co	ounty:	Clinton	County	Sampling Date:	2024-04-25	
Applicant/Owner: Associated Electric Cooperative	re, Inc.	State: Missouri Sampling Point: SP-03						
Investigator(s): J.Ramirez, C. Rogers	;	Section	n, Tov	wnship, Rar	nge: S01 T55N R31W			
Landform (hillslope, terrace, etc.): Depression								
Slope (%): 1 Lat: 39.605663		Long:	-94.	337336		Datum: NAD 8	3	
Soil Map Unit Name: 34020 - Colo silty clay loam, draina								
Are climatic / hydrologic conditions on the site typical for								
Are Vegetation, Soil, or Hydrology							No	
Are Vegetation, Soil, or Hydrology								
SUMMARY OF FINDINGS – Attach site ma							eatures, etc.	
Hydrophytic Vegetation Present? Yes	No							
Hydric Soil Present? Yes				e Sampled				
Wetland Hydrology Present? Yes	No		withi	in a Wetlan	id? Yes	No	_	
Remarks:			_					
Wetland sample plot within PEM W-03. The Uthree months prior to survey. Sample plot was				-		rmal climatic	conditions	
VEGETATION – Use scientific names of plan								
	Absolute	Domi	inant	Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size: 30 ft r	% Cover				Number of Dominant Spe			
1. Morus alba 2. Ulmus americana	$-\frac{10}{10}$			FAC	That Are OBL, FACW, or	r FAC: 4	(A)	
	10			FACW_	Total Number of Domina			
3					Species Across All Strata	a: <u>4</u>	(B)	
4					Percent of Dominant Spe			
5		= Tota	L Cov		That Are OBL, FACW, or	r FAC: 100.0	0 (A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft r )		- 10ta	11 COV	CI	Prevalence Index works	sheet:		
1. Salix nigra	30			OBL	Total % Cover of:			
2					l .	x 1 = 60		
3					l	x 2 = <u>30</u>		
4						x 3 = 45		
5					FACU species 0	x 4 = 0		
Herb Stratum (Plot size: 5 ft r )	30	= Tota	l Cov	er	UPL species 0	$\times 5 = \frac{0}{135}$		
1 Typha angustifolia	30	V	•	OBL	Column Totals: 90	(A) 135	(B)	
2. Conium maculatum				FACW	Prevalence Index :	= B/A = 1.50		
3. Rumex crispus	5			FAC	Hydrophytic Vegetation	n Indicators:		
4.					1 - Rapid Test for Hy	ydrophytic Vege	tation	
5					✓ 2 - Dominance Test	is >50%		
6					3 - Prevalence Index			
7					4 - Morphological Ac	daptations1 (Prov	vide supporting	
8					Problematic Hydropl		· '	
9					Problematic Hydropi	Tytic vegetation	(Explain)	
10					Indicators of hydric soil	and wetland hyd	Irology must	
Woody Vine Stratum (Plot size: 30 ft r	40	= Tota	l Cov	er	be present, unless distur			
1					Undergraphystic			
2					Hydrophytic Vegetation			
			I Cov	er	Present? Yes	No		
Remarks: (Include photo numbers here or on a separat					1			
Dominance test is passed. See Pr	noto C-3	Ve	aet	ation is	s disturbed due	to being i	n a	
•			_		J GIOTAI DOG GGE	to boiling i	4	
drainage ditch alongside of a road	a andrarr	ned	ne	ıu.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (in a land)	Matrix (assist)	0/		x Feature		1 2	T d	Downsto
(inches)	Color (moist)	%	Color (moist)	%_	Type'	Loc <sup>2</sup>		Remarks
0 - 24	10YR 3/1	_ <u>95</u>	10YR 5/1	_ <u>5</u>	_ <u>D</u>	<u> M</u>	Clay	
_								
_								
¹Type: C=Co	oncentration D=De	nletion RM	I=Reduced Matrix, M	S=Maske	d Sand G	rains	<sup>2</sup> I ocation:	PL=Pore Lining, M=Matrix.
Hydric Soil		piotion, rav	T TOUGOOG MIGHTX, IN	o maone	u cunu c	anio.		for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy (	Gleved M	atrix (S4)			Prairie Redox (A16)
ı —	pipedon (A2)			Redox (S			_	urface (S7)
Black Hi	stic (A3)			d Matrix (			Iron-Ma	anganese Masses (F12)
Hydroge	n Sulfide (A4)		Loamy	Mucky M	ineral (F1)	)	Very Sh	nallow Dark Surface (TF12)
	Layers (A5)				latrix (F2)		Other (	Explain in Remarks)
2 cm Mu	, ,			d Matrix				
	Below Dark Surfa	ce (A11)	_	Dark Surf			3	
_	ark Surface (A12)				urface (F7	<b>()</b>		of hydrophytic vegetation and
	lucky Mineral (S1)	22)	Redox	Depression	ons (F8)			hydrology must be present, disturbed or problematic.
	cky Peat or Peat (S ayer (if observed						unless	disturbed of problematic.
	Layer (II Observed	,.						
Type:							Hydric Soil	Present? Yes No
Depth (inc	cnes):							
Remarks:								
No indic	cators are m	net. So	il is disturbed	d due	to bei	na in a	drainage	ditch alongside of a
								<b>9</b>
road.								
HYDROLO	GY							
Wetland Hvo	drology Indicators	:						
			ired; check all that ar	(vlac			Seconda	ry Indicators (minimum of two required)
	Water (A1)	One io requ	Water-Sta		/es (RQ)			ace Soil Cracks (B6)
_	iter Table (A2)		Aquatic Fa		, ,			nage Patterns (B10)
Saturation			True Aqua					Season Water Table (C2)
—	arks (B1)		Hydrogen					fish Burrows (C8)
ı —	nt Deposits (B2)					vina Roots		ration Visible on Aerial Imagery (C9)
	oosits (B3)		Presence					ted or Stressed Plants (D1)
ı —	at or Crust (B4)		Recent Iro		•	•		morphic Position (D2)
-	oosits (B5)		Thin Muck			Ja Collo (C	. —	-Neutral Test (D5)
ı —	on Visible on Aerial	Imagery (F			, ,			rest (50)
	Vegetated Conca							
Field Obser		re Suriace	(B8) Other (EX	Jiaiii III IX	emarks)			
		Voc	No Depth (in	choc):				
Surface Water			No Depth (in			<del>-</del>		
Water Table						一		
Saturation Projection (includes cap		Yes	No Depth (in	ches): <u>∠</u>		Wet	land Hydrology	Present? Yes No
		n gauge, m	onitoring well, aerial	photos, p	revious in	spections)	, if available:	
	•		-			,		
Remarks:								
			55					
∣Indicato	rs A2, A3, D	)2, and	D5 are met.	Hydr	ology	distur	bed due to	being in a drainage
ditch ald	ongside of a	road.						
	95.5.0 01 0							

Project/Site: Turney Energy Center	(	City/Co	unty	Clinton	County Sampling Date: 2024-04-25			
Applicant/Owner: Associated Electric Cooperative	Applicant/Owner: Associated Electric Cooperative, Inc.							
Investigator(s): J.Ramirez, C. Rogers	;	Section	n, To	wnship, Rai	nge: S01 T55N R31W			
					(concave, convex, none): None			
Slope (%): 0 Lat: 39.605601		Long: _	-94	.337159	Datum: NAD 83			
Soil Map Unit Name: 34020 - Colo silty clay loam, drainag	eway, 2 to 5 p	percent	t slop	es, frequen	tly flooded NWI classification: N/A			
Are climatic / hydrologic conditions on the site typical for the	nis time of yea	ar? Ye	s	No	(If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology								
Are Vegetation, Soil, or Hydrology								
SUMMARY OF FINDINGS - Attach site map	showing	samı	pling	g point le	ocations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes	No							
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes  Yes	No			e Sampled	_			
Wetland Hydrology Present? Yes	No		with	in a Wetlan	nd? Yes No			
Remarks:	AOF Amtoon	al a .a. 4 . T	\:					
Upland sample plot adjacent to PEM W-03. The US months prior to survey. Vegetation, soils, and hydr				•				
VEGETATION – Use scientific names of plants	S.							
- 20 ft r	Absolute			Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size: 30 ft r )  1. Ulmus americana	<u>% Cover</u> 15	Speci		FACW	Number of Dominant Species			
Morus alba	- <del>10</del>			FAC	That Are OBL, FACW, or FAC: 2 (A)			
3			_		Total Number of Dominant Species Across All Strata: 4 (B)			
4					Species Across Air Strata.			
5					Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)			
15 64	25	= Tota	I Cov	er				
Sapling/Shrub Stratum (Plot size: 15 ft r )					Prevalence Index worksheet:			
1					Total % Cover of:  OBL species  OBL species  Multiply by:  x 1 = 0			
2					OBL species $0 \times 1 = 0$ FACW species $15 \times 2 = 30$			
3					FAC species 10			
4					FACU species 65 x 4 = 260			
0		= Total	L Cov	er	UPL species 10 x 5 = 50			
Herb Stratum (Plot size: 5 ft r )					Column Totals: 100 (A) 370 (B)			
1. Solidago altissima	_ 45			FACU				
2. Setaria faberi	$-\frac{20}{10}$			FACU	Prevalence Index = B/A = 3.70			
3. Lamium amplexicaule	_ 10			UPL	Hydrophytic Vegetation Indicators:			
4					1 - Rapid Test for Hydrophytic Vegetation			
5					2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹			
6					4 - Morphological Adaptations <sup>1</sup> (Provide supporting			
7					data in Remarks or on a separate sheet)			
8					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
9								
		= Tota	I Cov	er	<sup>1</sup> Indicators of hydric soil and wetland hydrology must			
Woody Vine Stratum (Plot size: 30 ft r )		1014		0.	be present, unless disturbed or problematic.			
1					Hydrophytic			
2					Vegetation Present? Yes No			
Demontro (Inchelo de la Control de la Contro		= Tota	I Cov	er	16310			
Remarks: (Include photo numbers here or on a separate								
No indicators are met. Vegetation	is distu	rbed	l dı	ie to be	eing adjacent to a farmed crop			
field. See Photo C-4.								

	Matrix		Red	ox Feature	s			
(inches) Color (n		%	Color (moist)	%	_Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0 - 18 10YR 2/	1 9	95	5YR 3/4	_ <u>5</u>	<u>C</u>	<u>M</u>	Sandy Clay Loam	
-								
-								
<sup>1</sup> Type: C=Concentration	, D=Depleti	ion, RM=I	Reduced Matrix, M	/IS=Masked	d Sand Gr	ains.	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:							Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Sandy	Gleyed Ma	atrix (S4)		Coast I	Prairie Redox (A16)
Histic Epipedon (A2)	)			Redox (S5	-		_	urface (S7)
Black Histic (A3)				ed Matrix (S	,		_	anganese Masses (F12)
Hydrogen Sulfide (A				Mucky Mi				hallow Dark Surface (TF12)
Stratified Layers (A5 2 cm Muck (A10)	))			Gleyed Med Med Med Med Med Med Med Med Med M			Other (	Explain in Remarks)
Depleted Below Dark	k Surface (A	A11)		Dark Surfa				
Thick Dark Surface (	•	,		ed Dark Su		)	3Indicators	of hydrophytic vegetation and
Sandy Mucky Minera	al (S1)		Redox	Depressio	ns (F8)		wetland	hydrology must be present,
5 cm Mucky Peat or							unless	disturbed or problematic.
Restrictive Layer (if obs								
Type: Compact so	OII						Hydric Soil	Present? Yes No
Depth (inches): 18							Tiyano oon	1030iii. 103 110
					•			ompact soil. Multiple farmed crop field.
locations atten					•			•
locations atten	npted.				•			•
locations atten	npted.	Soil is	s disturbed	I due to	•		cent to a	farmed crop field.
Iocations atten IYDROLOGY Wetland Hydrology Ind Primary Indicators (minin	npted.	Soil is	s disturbed	due to	bein		cent to a	farmed crop field.
IOCATIONS ATTEM  IYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)	npted.	Soil is	s disturbed	I due to	b bein		cent to a  Seconda  Surf	farmed crop field.  ry Indicators (minimum of two required) ace Soil Cracks (B6)
HYDROLOGY Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A	npted.	Soil is	ed; check all that a	apply) ained Leav	es (B9)		Seconda  Seconda  Seconda  Drai	farmed crop field.  ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10)
IVDROLOGY Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3)	npted.	Soil is	ed: check all that a  Water-St Aquatic F True Aqu	apply) ained Leav Fauna (B13) actic Plants	es (B9) ) (B14)		Seconda  Seconda  Surfi Draii Dry-	farmed crop field.  ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
IVDROLOGY Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	npted.	Soil is	ed: check all that a  Water-St  Aquatic F  True Aqu  Hydroger	apply) ained Leaverauna (B13 aitic Plants	es (B9) ) (B14) dor (C1)	g adja	Seconda Surfa Drain Dry- Cray	farmed crop field.  ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10)
IVDROLOGY Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3)	npted.	Soil is	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized	apply) ained Leav Fauna (B13) actic Plants	es (B9) ) (B14) dor (C1) rres on Liv	g adja	Seconda Surfi Draii Dry- Cray (C3) Satu	farmed crop field.  Ty Indicators (minimum of two required) ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (	npted.	Soil is	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence	apply) ained Leav Fauna (B13 attic Plants in Sulfide O Rhizosphe	es (B9) ) (B14) dor (C1) res on Lived Iron (C	g adja	Seconda Surfi Drain Dry- Cray (C3) Satu	farmed crop field.  ry Indicators (minimum of two required) ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3)	npted.	Soil is	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	apply) ained Leave Fauna (B13 attic Plants in Sulfide O Rhizosphe	es (B9) ) (B14) dor (C1) eres on Lived Iron (C	g adja	Seconda	ry Indicators (minimum of two required) 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)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (  Drift Deposits (B3)  Algal Mat or Crust (B	icators: num of one (B2)	Soil is	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	apply) ained Leav Fauna (B13 actic Plants a Sulfide O Rhizosphe e of Reduce	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille	g adja	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Ivalia Augusta Services  In Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B  Iron Deposits (B5)	icators: num of one (B2) (B2) n Aerial Ima	is require	ed: check all that a  Water-St  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent Ir  Thin Muc	apply) anined Leav Fauna (B13 natic Plants n Sulfide O Rhizosphe of Reduce con Reducti	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille (C7) (D9)	g adja	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B1)  Iron Deposits (B5)  Inundation Visible or	icators: num of one (B2) (B2) n Aerial Ima Concave Si	is require	ed: check all that a  Water-St  Aquatic F  True Aqu  Hydroger  Oxidized  Presence  Recent Ir  Thin Muc  Gauge on  Other (Ex	apply) ained Leav Fauna (B13 attic Plants in Sulfide O Rhizosphe e of Reduct on Reduct ck Surface or r Well Data	es (B9) ) (B14) dor (C1) eres on Lived Iron (C on in Tille (C7) (D9) emarks)	ring Roots 4) d Soils (Co	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B1)  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated	icators: num of one (B2) (B2) n Aerial Ima Concave Si	is required agery (B7)	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or B) Other (E)	apply) ained Leaver auna (B13 attic Plants on Sulfide O Reduction	es (B9) ) (B14) dor (C1) eres on Lived Iron (C on in Tille	g adja	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated  Field Observations:	icators: num of one (B2) (B2) A Aerial Ima Concave Si	is required is required in the second is second in the sec	ed; check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge on B) Other (Ex	apply) ained Leav Fauna (B13 latic Plants in Sulfide O Rhizosphe e of Reduce fon Reduct ck Surface or well Data xplain in Re nches):	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille (C7) (D9) emarks)	ring Roots 4) d Soils (Co	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage 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)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B1)  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated  Field Observations:  Surface Water Present?  Water Table Present?	icators: num of one (B2) (B2) A Aerial Ima Concave Si Yes Yes Yes	is required is required in the second is second in the sec	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or B) Other (E)	apply) ained Leav Fauna (B13 latic Plants in Sulfide O Rhizosphe e of Reduce fon Reduct ck Surface or well Data xplain in Re nches):	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille (C7) (D9) emarks)	ring Roots 4) d Soils (Co	Seconda	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B1)  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated  Field Observations:  Surface Water Present?	icators: num of one  (B2) (B2) (A) Aerial Ima Concave So Yes Yes Yes	is required is required in the second is second in the sec	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of B) Other (Ex	apply) ained Leaver Fauna (B13 attic Plants in Sulfide O Reduction	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille (C7) (D9) emarks)	ring Roots 4) d Soils (Co	Seconda Surfi Surfi Draii Dry- Cray Stun (C3) Satu Stun 6) Geo FAC	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage 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)
Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	icators: num of one  (B2) (B2) (A) Aerial Ima Concave So Yes Yes Yes	is required is required in the second is second in the sec	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of B) Other (Ex	apply) ained Leaver Fauna (B13 attic Plants in Sulfide O Reduction	es (B9) ) (B14) dor (C1) res on Lived Iron (C on in Tille (C7) (D9) emarks)	ring Roots 4) d Soils (Co	Seconda Surfi Surfi Draii Dry- Cray Stun (C3) Satu Stun 6) Geo FAC	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage 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)
IVDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  (includes capillary fringe)  Describe Recorded Data	icators: num of one (B2) (B2) (A) Aerial Ima Concave So Yes Yes Yes (Stream ga	is required is required in the second is second in the sec	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of B) Other (Ex	apply) ained Leaver Fauna (B13 attic Plants in Sulfide O Reduction	es (B9) ) (B14) dor (C1) eres on Lived Iron (C on in Tille (C7) (D9) emarks)	g adja  ving Roots 4) d Soils (Columbia) Weti	Seconda Surfi Surfi Draii Dry- Cray Stun Stun 6) Geo FAC	farmed crop field.  ry Indicators (minimum of two required) 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)
IVDROLOGY  Wetland Hydrology Ind  Primary Indicators (minin  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B3)  Algal Mat or Crust (B  Iron Deposits (B5)  Inundation Visible or  Sparsely Vegetated  Field Observations:  Surface Water Present?  Water Table Present?  Saturation Present?  (includes capillary fringe)  Describe Recorded Data	icators: num of one (B2) (B2) (A) Aerial Ima Concave So Yes Yes Yes (Stream ga	is required is required in the second is second in the sec	ed: check all that a  Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of B) Other (Ex	apply) ained Leaver Fauna (B13 attic Plants in Sulfide O Reduction	es (B9) ) (B14) dor (C1) eres on Lived Iron (C on in Tille (C7) (D9) emarks)	g adja  ving Roots 4) d Soils (Columbia) Weti	Seconda Surfi Surfi Draii Dry- Cray Stun Stun 6) Geo FAC	ry Indicators (minimum of two required) ace Soil Cracks (B6) nage 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: Turney Energy Center	(	City/Co	ounty:	Clinton	Sampling Date:	2024-04-25	
Applicant/Owner: Associated Electric Cooperation	re, Inc.				State: Missouri	Sampling Point:	SP-05
Investigator(s): J.Ramirez, C. Rogers	:	Section, Township, Range: S36 T56N R31W					
					(concave, convex, none):	_	
Slope (%): 1 Lat: 39.615667		Long: _	-94	.333342		Datum: NAD 8	3
Soil Map Unit Name: 30087 - Grundy silt loam, 5	to 9 percer	nt sloj	pes		NWI classifica	ation: R5UBH	
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Ye	s	No	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology	_ significantly	disturb	ed?	Are "	'Normal Circumstances" p	resent? Yes	✓ No
Are Vegetation, Soil, or Hydrology	_ naturally pro	blemat	tic?		eded, explain any answer		
SUMMARY OF FINDINGS - Attach site ma	p showing	sam	plin	g point le	ocations, transects,	, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes	No						
Hydric Soil Present? Yes	No			e Sampled			
Wetland Hydrology Present? Yes	No		withi	in a Wetlar	nd? Yes	No	_
Remarks:							
Upland sample plot. The USACE Antecedent to survey.	Precipitation	on To	ol in	dicates n	iormal climatic condi	tions three m	onths prior
VEGETATION – Use scientific names of plan	ts.						
	Absolute	Domi	nant	Indicator	Dominance Test works	sheet:	
Tree Stratum (Plot size: 30 ft r ) 1.	% Cover			Status	Number of Dominant Sp That Are OBL, FACW, o	pecies or FAC: 2	(A)
2.					Total Number of Domina		
3					Species Across All Strat		(B)
4					Percent of Dominant Sp	pecies	
5					That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Tota	l Cov	er	Prevalence Index work	ksheet:	
1. Cornus drummondii	40	~	•	FAC	Total % Cover of:	Multip	ly by:
2. Ulmus americana	10		,	FACW	OBL species 0	x 1 = 0	
3					FACW species 10	x 2 = <u>20</u>	
4					FAC species 40	x 3 = <u>120</u>	
5					FACU species 55	x 4 = 22	
Julian State 5 ftr	50	= Tota	l Cov	er	UPL species 0	x 5 = 0	
Herb Stratum (Plot size: 5 ft r )  Poa pratensis	40	,	,	FACU	Column Totals: 105	(A) <u>36</u>	0 (B)
2 Solidago altissima			,	FACU	Prevalence Index	= B/A = 3.42	
3.					Hydrophytic Vegetatio	n Indicators:	
4.					1 - Rapid Test for H	lydrophytic Vege	tation
5					2 - Dominance Test		
6					3 - Prevalence Inde		
7					4 - Morphological A	daptations¹ (Prov s or on a separate	vide supporting
8					Problematic Hydrop		,
9					Problematic Trydrop	mytic vegetation	(Explain)
10					<sup>1</sup> Indicators of hydric soil	and wetland hvo	Irology must
Woody Vine Stratum (Plot size: 30 ft r )		= Tota			be present, unless distu		
1					Hydrophytic		
2					Vegetation Present? Yes	s No _	<u> </u>
Remarks: (Include photo numbers here or on a separa		= Tota	ı Cov	ег			
	,						
No indicators are met. See Photo	U-3.						

epth <u>Matrix</u>			dox Feature				
nches) Color (moist)		Color (moist)	%	Type <sup>1</sup> _	Loc²	Texture	Remarks
0 - 18 10YR 2/2	90 7.5	SYR 5/8	10	_ <u>C</u>	<u>M</u>	Clay	
<u> </u>							
-							
<del>-</del> ———							
-							
ype: C=Concentration, D=Dep	letion, RM=Red	luced Matrix,	MS=Maske	ed Sand Gr	ains.		PL=Pore Lining, M=Matrix.
dric Soil Indicators:							or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			y Gleyed M			_	rairie Redox (A16)
_ Histic Epipedon (A2) _ Black Histic (A3)			y Redox (S ed Matrix (				rface (S7) nganese Masses (F12)
Hydrogen Sulfide (A4)			y Mucky M			_	allow Dark Surface (TF12)
Stratified Layers (A5)			y Gleyed N				Explain in Remarks)
2 cm Muck (A10)		Deple	eted Matrix	(F3)			•
Depleted Below Dark Surface	e (A11)	✓ Redo	x Dark Surf	face (F6)			
Thick Dark Surface (A12)			eted Dark S	,	)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	2)	Redo	x Depression	ons (F8)			hydrology must be present,
5 cm Mucky Peat or Peat (S3 strictive Layer (if observed):						uniess d	listurbed or problematic.
Type: Compact soil							
Type. Compactorn						Hydric Soil P	Present? Yes No
Depth (inches): 18						1.,,	
Depth (inches): 18 emarks: ndicator F6 is met. ocations attempted		on below	/ 18" w	as pre	vente		
emarks: adicator F6 is met. acations attempted		on below	/ 18" w	as pre	vente		
emarks:  ndicator F6 is met.  nocations attempted  DROLOGY		on below	/ 18" w	as pre	vente		
marks: dicator F6 is met. cations attempted DROLOGY etland Hydrology Indicators:				as pre	vente	d by comp	act soil. Multiple
marks: dicator F6 is met. cations attempted DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o		check all that	apply)		vente	d by comp	act soil. Multiple
marks: dicator F6 is met. cations attempted  DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o		check all that		ves (B9)	vente	d by comp  Secondar  Surfa	act soil. Multiple  y Indicators (minimum of two requice Soil Cracks (B6)
marks: dicator F6 is met. cations attempted DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o		check all that Water-S Aquatic	apply)	ves (B9)	vente	d by comp  Secondar  Surfa Drain	act soil. Multiple
marks: dicator F6 is met. cations attempted DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o Surface Water (A1) High Water Table (A2)		check all that Water-S Aquatic True Aq	apply) Stained Lea Fauna (B1:	ves (B9) 3) s (B14)	vente	Secondar  Surfa Drain Dry-S	act soil. Multiple  y Indicators (minimum of two requice Soil Cracks (B6) age Patterns (B10)
dicator F6 is met. cations attempted  DROLOGY  etland Hydrology Indicators: mary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3)		check all that  Water-S  Aquatic  True Aq  Hydroge	apply) stained Lea Fauna (B1 uatic Plants	ves (B9) 3) s (B14) Odor (C1)		Secondar  Surfa  Drain  Dry-S  Crayf	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) ish Burrows (C8)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized	apply) itained Lea Fauna (B1 uatic Plants en Sulfide C	ves (B9) 3) s (B14) )dor (C1) eres on Liv	ving Roots	Secondar  Surfa Dry-S Crayf S (C3) Satur	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) ish Burrows (C8)
DROLOGY etland Hydrology Indicators: mary Indicators (minimum of o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		check all that  Water-S  Aquatic  True Aq  Hydroge  Oxidized  Presence	apply) stained Lear Fauna (B1; uatic Plants en Sulfide C	ves (B9) 3) s (B14) Odor (C1) eres on Liv	ring Roots 4)	Secondar Surfa Drain Crayf (C3) Saturt Stunt	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) season Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C8)
productions attempted atte		check all that  Water-S  Aquatic  True Aq  Hydroge  Oxidized  Presence	apply) Stained Lear Fauna (B1: uatic Plants en Sulfide C d Rhizosph ee of Reduc	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C	ring Roots 4)	Secondar Surfar Drain Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) leason Water Table (C2) lish Burrows (C8) ation Visible on Aerial Imagery (C8) ed or Stressed Plants (D1)
productions attempted atte	ne is required;	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized  Presend	apply) Stained Lear Fauna (B1) uatic Plants en Sulfide C d Rhizosph be of Reduct lron Reduct ck Surface	ves (B9) 3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7)	ring Roots 4)	Secondar Surfar Drain Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (CS) ded or Stressed Plants (D1) morphic Position (D2)
emarks:  Idicator F6 is met.	ne is required;	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent	apply)  Itained Lear Fauna (B1: uatic Plants en Sulfide C d Rhizosph e of Reduct fron Reduct ck Surface or Well Data	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	ring Roots 4)	Secondar Surfar Drain Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requires Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (CS) ded or Stressed Plants (D1) morphic Position (D2)
emarks:  Indicator F6 is met.  Indicator F6	ne is required; of the second	check all that  Water-S  Aquatic  True Aq  Hydroge  Oxidized  Presend  Recent I  Thin Mu  Gauge o	apply) Stained Lear Fauna (B1: uatic Plants en Sulfide C d Rhizosphote of Reduct fron Reduct ck Surface or Well Data Explain in R	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	ring Roots 4) d Soils (C	Secondar Surfar Drain Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requices Soil Cracks (B6)) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C8) ed or Stressed Plants (D1) morphic Position (D2)
emarks:  Indicator F6 is met.  Indicator F6	magery (B7) e Surface (B8)	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent I  Thin Mu Gauge C  Other (E	apply)  stained Lear  Fauna (B1)  uatic Plants  en Sulfide C  d Rhizosphote  e of Reduct  fron Reduct  ck Surface  or Well Data  explain in R	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	ring Roots 4) d Soils (C	Secondar Surfar Drain Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requices Soil Cracks (B6)) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C8) ed or Stressed Plants (D1) morphic Position (D2)
emarks:  Indicator F6 is met.  Indicator F6	magery (B7) e Surface (B8) es No _ es No _	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized  Presend Recent I  Thin Mu Gauge C  Other (E	apply) Stained Lear Fauna (B1: uatic Plants en Sulfide C d Rhizosphice of Reduct iron Reduct ck Surface or Well Data explain in R (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9)	ring Roots 4) d Soils (C	Secondar Surfar Dry-S Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requice Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
emarks:  Indicator F6 is met.  Indicator F6	magery (B7) e Surface (B8)	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized  Presend Recent I  Thin Mu Gauge C  Other (E	apply) Stained Lear Fauna (B1: uatic Plants en Sulfide C d Rhizosphice of Reduct iron Reduct ck Surface or Well Data explain in R (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9)	ring Roots 4) d Soils (C	Secondar Surfar Dry-S Crayf (C3) Satur Stunt G6) Geom	y Indicators (minimum of two requice Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
emarks:  Indicator F6 is met.  Decations attempted  DROLOGY  etland Hydrology Indicators: imary Indicators (minimum of oracle 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 Concavered Observations: urface Water Present? Atturation Present? Victuration Present? Victuration Present? Victured Observations: Victuration Present? Victured Observations Vic	magery (B7) e Surface (B8) es No _ es No _ es No _	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent Thin Mu Gauge of Other (E	apply)  stained Lear Fauna (B1) uatic Plants en Sulfide C d Rhizosphice of Reduct lron Reduct ck Surface or Well Data explain in R (inches): (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	ring Roots 4) d Soils (C	Secondar Surfa Dry-S Crayf (C3) Satur Stunt FAC-	y Indicators (minimum of two requices Soil Cracks (B6)) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (CS) ded or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
emarks:  Indicator F6 is met.  Indicator F6	magery (B7) e Surface (B8) es No _ es No _ es No _	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent Thin Mu Gauge of Other (E	apply)  stained Lear Fauna (B1) uatic Plants en Sulfide C d Rhizosphice of Reduct lron Reduct ck Surface or Well Data explain in R (inches): (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	ring Roots 4) d Soils (C	Secondar Surfa Dry-S Crayf (C3) Satur Stunt FAC-	y Indicators (minimum of two requices Soil Cracks (B6)) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C8) ed or Stressed Plants (D1) morphic Position (D2)
cations attempted  Cations attem	magery (B7) e Surface (B8) es No _ es No _ es No _	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent Thin Mu Gauge of Other (E	apply)  stained Lear Fauna (B1) uatic Plants en Sulfide C d Rhizosphice of Reduct lron Reduct ck Surface or Well Data explain in R (inches): (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	ring Roots 4) d Soils (C	Secondar Surfa Dry-S Crayf (C3) Satur Stunt FAC-	y Indicators (minimum of two requices Soil Cracks (B6)) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (CS) ded or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
emarks:  Indicator F6 is met.  Indicator F6	magery (B7) e Surface (B8) es No _ es No _ gauge, monitor	check all that  Water-S  Aquatic  True Aq  Hydroge Oxidized Presend Recent Thin Mu Gauge of Other (E	apply)  stained Lear Fauna (B1) uatic Plants en Sulfide C d Rhizosphice of Reduct lron Reduct ck Surface or Well Data explain in R (inches): (inches): (inches):	ves (B9) 3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	ring Roots 4) d Soils (C	Secondar Surfa Dry-S Crayf (C3) Satur Stunt FAC-	y Indicators (minimum of two requice Soil Cracks (B6) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

Landform (hillslope, terrace, etc.) Depression	Project/Site: Turney Energy Center	City	y/County:	Clinton (	County	Sampling Date:	2024-04-25
Landform (hilalope, terrace, etc): Depression	Applicant/Owner: Associated Electric Cooperative,	Inc.			State: Missouri	Sampling Point:	SP-06
Landform (hilalope, terrace, etc): Depression	Investigator(s): J.Ramirez, C. Rogers	Se	ction, Tow	vnship, Ran	ge: S01 T55N R31W		
No							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed?	Slope (%): 1 Lat: 39.615151	Loi	ng:94.	324743		Datum: NAD 8	3
Are Vegetation	Soil Map Unit Name: 30087 - Grundy silt loam, 5 to	9 percent	slopes		NWI classifica	ation: N/A	
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?	Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes_	No	(If no, explain in Re	emarks.)	
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes V No Welland Hydrotology Present? Yes V No Westand Hydrotology is disturbed due to being in a farmed crop field.  VEGETATION — Use scientific names of plants.  Tree Stratum (Plot size: 30 ftr ) Absolute Species? Status Number of Dominant Species North Present North P	Are Vegetation, Soil, or Hydrology sig	gnificantly dis	turbed?	Are "I	Normal Circumstances" p	resent? Yes	No
Hydrophytic Vegetation Present? Yes V No within a Wetland Pytoropytogy Present? Yes V No within a Wetland Pytoropytogy Present? Yes V No within a Wetland Pytoropytogy Present? Yes V No within a Wetland? Yes No No within a Wetland? Yes No No within a Wetland Pytoropytogy Present? Yes V No Wetland Hydrology Free Present of Plants:    Remarks:   Wetland sample plot with PEM W-05. The USACE Antecedent Precipitation Tool indicates that normal climatic conditions three months prior to survey. Vegetation, soils, and hydrology is disturbed due to being in a farmed crop field.    Vegetation - Use scientific names of plants.	Are Vegetation, Soil, or Hydrology na	turally proble	ematic?	(If nee	eded, explain any answer	rs in Remarks.)	
Hydric Soil Present? Yes V No within a Wetland? Yes No No within a Wetland Hydrology Present? Yes V No within a Wetland? Yes No No Within a Wetland? Yes No No No Notland Sample plot with PEM W-05. The USACE Antecedent Precipitation Tool indicates that normal climatic conditions three months prior to survey. Vegetation, soils, and hydrology is disturbed due to being in a farmed crop field.  VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: 30 ft r )	SUMMARY OF FINDINGS - Attach site map s	howing sa	ampling	point lo	cations, transects	, important fe	eatures, etc.
Hydric Soil Present? Yes V No within a Wetland? Yes No No within a Wetland Hydrology Present? Yes V No within a Wetland? Yes No No Within a Wetland? Yes No No No Notland Sample plot with PEM W-05. The USACE Antecedent Precipitation Tool indicates that normal climatic conditions three months prior to survey. Vegetation, soils, and hydrology is disturbed due to being in a farmed crop field.  VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: 30 ft r )	Hydrophytic Vegetation Present? Yes No						
Remarks:	Hydric Soil Present? Yes No						
Wetland sample plot with PEM W-05. The USACE Antecedent Precipitation Tool indicates that normal climatic conditions three months prior to survey. Vegetation, soils, and hydrology is disturbed due to being in a farmed crop field.  VEGETATION — Use scientific names of plants.  Interestratum (Plot size: 30 ft r			within	n a Wetlan	d? Yes	No	-
VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: 30 ft r )			! ! !				<b>4</b> 1
Dominant Indicator   Species   30 ft r     Absolute   % Cover   Species   Status   Status   Species   Spe	l ' '		•			iatic conditions	tnree
Number of Dominant Species   1.	<b>VEGETATION</b> – Use scientific names of plants.						
1. 2.	To Charles (Blataine 30 ft r				Dominance Test works	sheet:	
2			pecies?	<u>Status</u>		pecies	(Δ)
3.							(^)
4						_	(B)
That Are OBL, FACW, or FAC: 100.00 (A/B)							(5)
Prevalence Index worksheet:   Total % Cover of:	5						0 (A/B)
1	Sanling/Shrub Stratum (Plat size: 15 ft r	=	Total Cove	er .	Pravalence Index work	reheat:	
2.							ly by:
3							<u>., </u>
4							)
5							
Herb Stratum (Plot size: 5 ft r   1. Alopecurus carolinianus   20	5						
1. Alopecurus carolinianus 2. Persicaria maculosa 20	5 ft r	=	Total Cove	er			
Persicaria maculosa  20		40	~	FACW	Column Totals: 60	(A) <u>120</u>	) (B)
3.	· · _ · ·	20			Prevalence Index	= B/A = 2.00	
4					Hydrophytic Vegetatio	n Indicators:	
5	1			I	✓ 1 - Rapid Test for H	lydrophytic Veget	tation
6	1				2 - Dominance Test	t is >50%	
7					3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
9							
10	8						
Woody Vine Stratum (Plot size: 30 ft r )  1	9				Problematic Hydrop	onytic vegetation	(Explain)
Woody Vine Stratum (Plot size: 30 ft r ) be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? Yes No No Remarks: (Include photo numbers here or on a separate sheet.)  Rapid test for hydrophytic vegetation is passed. See Photo C-6. Vegetation is disturbed	10				<sup>1</sup> Indicators of hydric soil	and wetland hvd	rology must
1	Woody Vine Stratum (Plot size: 30 ft r	60 = -	Total Cove	er			
2					Hydronhytic		
Remarks: (Include photo numbers here or on a separate sheet.)  Rapid test for hydrophytic vegetation is passed. See Photo C-6. Vegetation is disturbed					Vegetation		
Rapid test for hydrophytic vegetation is passed. See Photo C-6. Vegetation is disturbed			Total Cove	er er	Present? Yes	s No	
	Remarks: (Include photo numbers here or on a separate shape)	neet.)					
	Rapid test for hydrophytic vegetation	on is pas	ssed. S	See Ph	oto C-6. Veaet	ation is dis	sturbed
ade to bellia ili a latillea ci ob ficia.	due to being in a farmed crop field.	•			3		

Profile Description: (Describe to the dep	oth needed to docu	ment the	indicator	or confirm	n the absence of indicators.)	
Depth <u>Matrix</u>		ox Feature				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup> _	_Loc <sup>2</sup>	Texture Remarks	
0 - 16 10YR 2/2 90	5YR 3/4	_ <u>10</u>	_ <u>C</u>	<u> M</u>	Silty Clay	
-						
-						
						_
						—
<del></del>						
-						
<sup>1</sup> Type: C=Concentration, D=Depletion, RM	=Reduced Matrix. M	S=Maske	d Sand G	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	_
Hydric Soil Indicators:	,				Indicators for Problematic Hydric Soils <sup>3</sup> :	
Histosol (A1)	Sandy	Gleyed M	atrix (S4)		Coast Prairie Redox (A16)	
Histic Epipedon (A2)		Redox (S			Dark Surface (S7)	
Black Histic (A3)	Strippe	d Matrix (	S6)		Iron-Manganese Masses (F12)	
Hydrogen Sulfide (A4)			ineral (F1)		Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)			latrix (F2)		Other (Explain in Remarks)	
2 cm Muck (A10)		ed Matrix	. ,			
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	_	Dark Surf	ace (F6) urface (F7	`	<sup>3</sup> Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)		Depression	,	,	wetland hydrology must be present,	
5 cm Mucky Peat or Peat (S3)		Боргосок	) (i 0)		unless disturbed or problematic.	
Restrictive Layer (if observed):						
Type: High water table						
Depth (inches): 16					Hydric Soil Present? Yes No	_
Remarks:						-
disturbed due to being in			-		d by high water table. Soil is	
HYDROLOGY						
Wetland Hydrology Indicators:						
Primary Indicators (minimum of one is requ	ired: check all that a	nnly)			Secondary Indicators (minimum of two require	ed)
Surface Water (A1)	Water-Sta		res (B9)		Surface Soil Cracks (B6)	
✓ High Water Table (A2)	Aquatic F		, ,		Drainage Patterns (B10)	
Saturation (A3)	True Aqu				Dry-Season Water Table (C2)	
Water Marks (B1)	Hydrogen				Crayfish Burrows (C8)	
Sediment Deposits (B2)				ing Roots		)
Drift Deposits (B3)	Presence				Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)	Recent Ir	on Reduct	ion in Tille	ed Soils (C		
Iron Deposits (B5)	Thin Muc	k Surface	(C7)		✓ FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (E	(7) Gauge or	Well Data	a (D9)			
Sparsely Vegetated Concave Surface	(B8) Other (Ex	plain in R	emarks)			
Field Observations:						
Surface Water Present? Yes	No Depth (ir	nches):		_		
Water Table Present? Yes	No Depth (ir	nches): 10	)	_		
Saturation Present? Yes	No Depth (ir	nches): 0		Wet	land Hydrology Present? Yes No	
(includes capillary fringe)  Describe Recorded Data (stream gauge, m	onitoring well, aerial	photos, p	revious in	spections)	if available:	
	oo.mg won, donar	p.1101.00, p	. 5 1 1 5 4 5 11 1	-p-00110110),	,	
Remarks:						
Indicators A2, A3, D2, and	D5 are met.	Hydr	ology	is dist	urbed due to being in a farmed	
crop field.		-			-	

Project/Site: Turney Energy Center	c	City/County: Clinton County Sampling Date: 2024-04-					
Applicant/Owner: Associated Electric Cooperative,	Inc.	State: Missouri Sampling Point: SP-07					
Investigator(s): J.Ramirez, C. Rogers	8	Section, Township, Range: S01 T55N R31W					
				(concave, convex, none): <u>h</u>	lone		
Slope (%): 1 Lat: 39.615012				D		3	
Soil Map Unit Name: 30087 - Grundy silt Ioam, 5 to	9 percen	t slopes					
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology si	gnificantly d	isturbed?	Are "	Normal Circumstances" pre	sent? Yes	No	
Are Vegetation, Soil, or Hydrology na	aturally prob	lematic?	(If ne	eded, explain any answers	in Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	showing	sampling	g point lo	ocations, transects, i	mportant fe	atures, etc.	
Hydrophytic Vegetation Present? Yes No	·						
Hydric Soil Present? Yes No			Sampled		🗸		
Wetland Hydrology Present? Yes No	·	withi	n a Wetlan	d? Yes	_ No		
Remarks:	NE Antono	lant Drasi	oitation Ta	al indicates normal alim	atia aanditian	o throo	
Upland sample plot adjacent to PEM W-05. The USAC months prior to survey. Vegetation, soils, and hydrological process.					auc conditions	s tillee	
VEGETATION – Use scientific names of plants.							
Tree Stratum (Plot size: 30 ft r )	Absolute	Dominant		Dominance Test worksh	ieet:		
1	% Cover	_	Status	Number of Dominant Spe- That Are OBL, FACW, or	^	(A)	
2.						(''	
3				Total Number of Dominan Species Across All Strata:	^	(B)	
4				·			
5				Percent of Dominant Spec That Are OBL, FACW, or		(A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft r )	:	Total Cov	er	Prevalence Index works	heet:		
Sapling/Snrub Stratum (Plot size:)  1				Total % Cover of:		v bv.	
2.					x 1 = 10	<del>y 5y.</del>	
3				FACW species 0			
4.					x 3 = 0		
5.					x 4 = <u>80</u>		
F 44	:	Total Cov	er		x 5 = 200	<u> </u>	
Herb Stratum (Plot size: 5 ft r   )   1 Lamium amplexicaule	40	~	UPL	Column Totals: 70	(A) <u>290</u>	) (B)	
Thlaspi arvense	20		FACU	Prevalence Index =	B/A = 4.14		
3. Alopecurus aequalis	10		OBL	Hydrophytic Vegetation			
4.				1 - Rapid Test for Hyd	drophytic Veget	ation	
5.				2 - Dominance Test is	s >50%		
6.				3 - Prevalence Index	is ≤3.0 <sup>1</sup>		
7				4 - Morphological Ada			
8				data in Remarks o		· · ·	
9				Problematic Hydroph	ytic vegetation	(Explain)	
10				<sup>1</sup> Indicators of hydric soil a	and wetland hyd	rology must	
Woody Vine Stratum (Plot size: 30 ft r )	70=	Total Cov	er	be present, unless disturb			
1				Hydrophytic			
2				Vegetation Present? Yes	No	·	
Domosto: (Include whate assessment to a second		Total Cov	er	163			
Remarks: (Include photo numbers here or on a separate s		_					
No indicators are met. See Photo Coron field	-7. Veg	etatior	ı is dis	turbed due to be	ing in a fa	armed	

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confire	n the absence of in	dicators.)
Depth	Matrix		Rede	ox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 2/1	_ <u>97</u>	10YR 3/6	_ 3	<u> </u>	<u>M</u>	Silty Clay	
-								
<u> </u>								
	oncentration, D=De	pletion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		=Pore Lining, M=Matrix.
Hydric Soil								Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,			Gleyed Ma			_	ie Redox (A16)
I —	oipedon (A2) istic (A3)			Redox (St d Matrix (\$			Dark Surfac	ce (S7) nese Masses (F12)
ı —	en Sulfide (A4)			Mucky Mi	,			w Dark Surface (TF12)
	d Layers (A5)			Gleyed M				ain in Remarks)
I —	ıck (A10)			ed Matrix (			_ ` ` `	,
	d Below Dark Surfa	ce (A11)	_	Dark Surf	, ,		•	
_	ark Surface (A12)			ed Dark Si	,	)		ydrophytic vegetation and
ı —	Mucky Mineral (S1) ucky Peat or Peat (S	221	Redox	Depression	ns (F8)		•	rology must be present, irbed or problematic.
	Layer (if observed)						uniess disti	irbed or problematic.
1	ompact soil	,.						_
	ches): 16						Hydric Soil Pres	sent? Yes No
Remarks:	<u> </u>							
	or F6 is met. ns attempte		ation below	16" wa	as pre	vente	d by compac	t soil. Multiple
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
1	cators (minimum of		ed: check all that a	(vlqq			Secondary In	dicators (minimum of two required)
	Water (A1)			ained Leav	res (B9)		Surface S	Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic F	auna (B13	3)		Drainage	Patterns (B10)
Saturation	on (A3)		True Aqu	atic Plants	(B14)		Dry-Seas	son Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide O	dor (C1)		Crayfish	Burrows (C8)
Sedimer	nt Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) Saturatio	n Visible on Aerial Imagery (C9)
Drift De	oosits (B3)		Presence	of Reduce	ed Iron (C	4)		or Stressed Plants (D1)
-	at or Crust (B4)		Recent Ire			d Soils (C	<i>-</i> -	phic Position (D2)
I —	posits (B5)		Thin Muc				FAC-Neu	ıtral Test (D5)
ı —	on Visible on Aerial		. —		. ,			
	y Vegetated Concav	/e Suпасе (в	38) Other (Ex	plain in Re	emarks)			
Field Obser		V I	No Depth (ir	ahaa):				
Surface Wat			No Depth (ir					
Water Table							land Hudralagu Bra	esent? Yes No
Saturation P (includes car	oillary fringe)		No Depth (ir					sent? Yes No
Describe Re	corded Data (strear	n gauge, mo	nitoring well, aerial	photos, p	revious ins	spections),	, if available:	
Remarks:								
	ators are m	et. Hvd	rology is die	sturbe	d due	to hei	ng in a farme	ed crop field.
		y u	. Sidey id die					55 51 5p 115161.

Project/Site: Turney Energy Center	C	ity/Count	ty: Clinton	County	Sampling Date: 2024-08-06	
Applicant/Owner: Associated Electric Cooperative,	Inc.	State: Missouri Sampling Point: SP-08				
Investigator(s): J. Ramirez, S. Glaeser	s	ection, T	Township, Rar	nge: S34 T56N R31W	<u> </u>	
				(concave, convex, none):		
Slope (%): 2 Lat: 39.61558		ong:9	4.359576		Datum: NAD 83	
Soil Map Unit Name: 30062 - Gara loam, 9 to 14 per	rcent slop	es		NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this	time of year	r? Yes_	No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology si	gnificantly di	isturbed?	? Are "I	Normal Circumstances" p	resent? Yes No	
Are Vegetation, Soil, or Hydrology na	aturally prob	lematic?	(If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	showing s	sampli	ng point lo	ocations, transects	, important features, etc.	
Hydrophytic Vegetation Present? Yes No	, <u> </u>					
Hydric Soil Present? Yes No			the Sampled			
Wetland Hydrology Present? Yes No	·	wit	thin a Wetlan	d? Yes	No	
Remarks:	a a da wak Dwa air		T 1 : 1: 4	alui - u Ale - u - u - u - l - lius - Ai		
Upland sample plot adjacent to PEM W-07. The USACE Antec survey. Vegetation, soils, and hydrology is disturbed due to		•			; conditions three months prior to	
VEGETATION – Use scientific names of plants.						
20.4	Absolute	Dominar	nt Indicator	Dominance Test work	sheet:	
	% Cover	Species'		Number of Dominant Sp		
1. Ulmus americana	10		_ FACW_	That Are OBL, FACW, o	or FAC: 2 (A)	
2				Total Number of Domin		
3				Species Across All Stra	ta: <u>4</u> (B)	
4				Percent of Dominant Sp		
5	10 =	: Total Co	over	That Are OBL, FACW, o	or FAC: 50.00 (A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft r )		Total O	0401	Prevalence Index work	ksheet:	
1. Platanus occidentalis	5		_ FACW_	Total % Cover of:		
2					x 1 = 0	
3				FACW species 35		
4					x 3 = 0	
5				FACU species 75		
Herb Stratum (Plot size: 5 ft r )	<u>5</u> =	: Total Co	over		$\times 5 = \frac{0}{370}$ (B)	
1 Bromus inermis	40	~	FACU	Column Totals: 110	(A) 370 (B)	
2 Solidago canadensis	20	·	FACU	Prevalence Index	= B/A = 3.36	
3. Solanum carolinense	15		FACU	Hydrophytic Vegetation	n Indicators:	
4. Verbesina alternifolia	15		FACW	1 - Rapid Test for H	lydrophytic Vegetation	
5. Urtica dioica	5		FACW_	2 - Dominance Tes		
6				3 - Prevalence Inde		
7				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)	
8					phytic Vegetation <sup>1</sup> (Explain)	
9				Troblematic riyarop	mytic vegetation (Explain)	
10				<sup>1</sup> Indicators of hydric soil	I and wetland hydrology must	
Woody Vine Stratum (Plot size: 30 ft r )	95=	Total Co	over	be present, unless distu		
1				Hydrophytic		
2.				Vegetation		
		: Total Co	over	Present? Yes	s No	
Remarks: (Include photo numbers here or on a separate s	heet.)					
No test is passed. Vegetation is dis	turbed	due t	o beina	in a drainage a	rea along an active	
agriculture field. See Photo C-8.						

Profile Desc	cription: (Describe	to the de	pth needed to docu	ment the	indicator	or confin	m the absence of ind	cators.)
Depth	Matrix			ox Feature		. 2		
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		Remarks
0-4	10YR 3/3	100					Clay Loam	
4 - 10	10YR 3/2	<u>95</u>	7.5YR 5/8	_ <u>5</u>	<u> </u>	<u> M</u>	Clay Loam	
10 - 14	10YR 2/2	98	7.5YR 4/6	2	С	M	Clay Loam	
-								
-								
		oletion, RN	/I=Reduced Matrix, M	IS=Maske	d Sand Gr	ains.		Pore Lining, M=Matrix.
Hydric Soil			Candu	Clayed M	ntriv (CA)			oblematic Hydric Soils <sup>3</sup> :
Histosol	oipedon (A2)			Gleyed Markedox (St			Coast Prairie Dark Surface	, ,
ı —	istic (A3)			d Matrix (				ese Masses (F12)
ı —	en Sulfide (A4)			Mucky Mi	,			Dark Surface (TF12)
Stratified	d Layers (A5)			Gleyed M				n in Remarks)
_	ıck (A10)			ed Matrix (	,			
ı — ·	d Below Dark Surfac	e (A11)		Dark Surf			3	
	ark Surface (A12)			ed Dark S	,	)	•	rophytic vegetation and
ı — ·	/lucky Mineral (S1) ucky Peat or Peat (S	(3)	Redox	Depression	ons (Fo)			ology must be present, bed or problematic.
	Layer (if observed)						unicos distart	or problematio.
1	ompact soil							,
	ches): 14						Hydric Soil Prese	nt? Yes No
Remarks:			<del></del>					
field.		JUII 15	uistui beu uue			uranie	age area along	an active agriculture
HYDROLO								
1	drology Indicators							
Primary India	cators (minimum of	one is requ	uired; check all that a					cators (minimum of two required)
_	Water (A1)			ained Leav				il Cracks (B6)
	ater Table (A2)		Aquatic F					Patterns (B10)
Saturatio	, ,		True Aqu					n Water Table (C2)
Water M	nt Deposits (B2)		Hydrogen Oxidized			rina Pooto	Crayfish B	Visible on Aerial Imagery (C9)
Drift Der			Oxidized Presence					Stressed Plants (D1)
ı —	at or Crust (B4)		Recent Ir					
Iron Dep			Thin Muc			.u 00113 (0	FAC-Neutr	• •
I —	on Visible on Aerial	Imagery (E	_		, ,			
ı —	y Vegetated Concav		· — ·		, ,			
Field Obser	vations:							
Surface Water	er Present?	/es	No Depth (ir	nches):		_		
Motor Toble	Present?	/es	No Depth (ir	nches):		_		
vvater rable			No Depth (ir				land Hydrology Pres	ent? Yes No
Saturation P	i cociit :							
Saturation P	oillary fringe)		:				if accellable.	
Saturation P	oillary fringe)	n gauge, m	nonitoring well, aerial	photos, p	revious in	spections)	, if available:	
Saturation P	oillary fringe)	n gauge, m	nonitoring well, aerial	photos, p	revious in:	spections)	, if available:	
Saturation Projection (includes caped Describe Records)  Remarks:	oillary fringe) corded Data (strean							a drainage area

Project/Site: Turney Energy Center	(	City/Co	unty:	Clinton	County	Sampling Date:	2024-08-06
Applicant/Owner: Associated Electric Cooperative,	Inc.				State: Missouri	Sampling Point:	SP-09
Investigator(s): J. Ramirez, S. Glaeser	;	Section	n, Tov	vnship, Raı	nge: S34 T56N R31W		
					(concave, convex, none):		
Slope (%): 2 Lat: 39.615589							33
Soil Map Unit Name: 30062 - Gara loam, 9 to 14 per	rcent slo	pes			NWI classifica	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Ye	s	No	(If no, explain in Re	marks.)	
Are Vegetation, Soil, or Hydrology si							✓ No
Are Vegetation, Soil, or Hydrology na					eded, explain any answers		
SUMMARY OF FINDINGS - Attach site map s					ocations, transects,	important f	eatures, etc.
Hydrophytic Vegetation Present? Yes No	)						
				e Sampled			
Wetland Hydrology Present? Yes No			withi	n a Wetlan	id? Yes	No	_
Remarks:			. <b>.</b>				
Wetland sample plot within PEM W-07. The USACE A months prior to survey. Vegetation, soils, and hydrolegy and the survey of the			•				
<b>VEGETATION</b> – Use scientific names of plants.							
- 20 ft r	Absolute			Indicator	Dominance Test works	heet:	
Tree Stratum (Plot size: 30 ft r )  1. Ulmus americana	% Cover 10	Speci		FACW	Number of Dominant Spe		(4)
"	<del>10</del>		—	TACV	That Are OBL, FACW, or	r FAC: 4	(A)
2 3			_		Total Number of Dominal	_	(D)
4					Species Across All Strata	a: <u>5</u>	(B)
5			_		Percent of Dominant Spe		) (A(D)
	10	= Total	I Cov	er	That Are OBL, FACW, or	FFAC: 00.00	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r )					Prevalence Index works	sheet:	
1. Platanus occidentalis	5			FACW	Total % Cover of:		oly by:
2					OBL species 0	x 1 = 0	
3					FACW species 70	x 2 = 14	
4						x 3 = 30	
5					FACU species 30		
Herb Stratum (Plot size: 5 ft r )	5	= Total	I Cov	er		x = 0 (A) 29	
1. Urtica dioica	30	~	•	FACW	Column Totals: 110	(A) <u>29</u>	(B)
Verbesina alternifolia	25		,	FACW	Prevalence Index =	= B/A = 2.63	
3. Solidago canadensis	20		_	FACU	Hydrophytic Vegetation	n Indicators:	
4. Bromus inermis	10			FACU	1 - Rapid Test for Hy	ydrophytic Vege	etation
5. Verbena urticifolia	10			FAC	2 - Dominance Test	is >50%	
6					3 - Prevalence Index		
7					4 - Morphological Addata in Remarks		
8					Problematic Hydroph		
9					Problematic Hydropi	Trytic vegetation	(Explain)
10			_		<sup>1</sup> Indicators of hydric soil a	and wetland hve	drology must
Woody Vine Stratum (Plot size: 30 ft r )	95	= Total	I Cov	er	be present, unless distur		
1					H. duambudia		
2.					Hydrophytic Vegetation		
		= Total	I Cov	er	Present? Yes	No_	
Remarks: (Include photo numbers here or on a separate s					<u> </u>		
Dominance test is passed. Vegetati	on is d	istu	rhe	d due	to being in a dra	ainage are	ea along
·				- G G G G	to boning in a are	aniage are	a diong
an active agriculture field. See Phot	.u U-9.						

Profile Desc	cription: (Describe	to the dep	th needed to docur	ment the	indicator	or confir	m the absence of in	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> _	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 3/2	_ 100					Clay Loam	
6-16	10YR 3/2	<u> 95 </u>	10YR 6/2	5	<u> </u>	<u>M</u>	Clay Loam	
-								
							·	
					- ——			
		pletion, RM	=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		Pore Lining, M=Matrix.
Hydric Soil			Conduc	Olava d M	-4-i (C.4)			roblematic Hydric Soils <sup>3</sup> :
Histosol	pipedon (A2)			Gleyed Ma Redox (St			Coast Prairi	e Redox (A16)
I —	istic (A3)			d Matrix (	,			nese Masses (F12)
ı —	en Sulfide (A4)				neral (F1)			w Dark Surface (TF12)
Stratified	d Layers (A5)				atrix (F2)		Other (Expla	ain in Remarks)
ı —	uck (A10)			d Matrix (	. ,			
ı — ·	d Below Dark Surfa	ce (A11)	_	Dark Surf			31 - 41 - 24 - 22 - 26 - 2	
_	ark Surface (A12)  Mucky Mineral (S1)			Depressio	urface (F7	)		drophytic vegetation and rology must be present,
	ucky Peat or Peat (	S3)		Бергеззіс	) (1 O)		-	rbed or problematic.
	Layer (if observed							•
Type: C	ompact soil							
Depth (in	ches): 16						Hydric Soil Pres	ent? Yes No
Remarks:								
		Soil is	disturbed du	ue to l	being i	n a dr	ainage area	along an active
agricult	ure field.							
LIVERGIA	ov.							
HYDROLO								
1	drology Indicators						0	di-at (i-if.tid)
		one is requi	red; check all that ap		· (DO)			dicators (minimum of two required)
I —	Water (A1)		Water-Sta		, ,			Soil Cracks (B6)
Saturati	ater Table (A2)		Aquatic Fa True Aqua					Patterns (B10) on Water Table (C2)
ı —	larks (B1)		Hydrogen				Crayfish	, ,
	nt Deposits (B2)		Oxidized F			ina Roots		n Visible on Aerial Imagery (C9)
	posits (B3)		Presence					r Stressed Plants (D1)
I	at or Crust (B4)		Recent Iro			,		hic Position (D2)
	posits (B5)		Thin Muck			,	✓ FAC-Neu	
Inundati	on Visible on Aerial	Imagery (B	7) Gauge or	Well Data	(D9)			
Sparsely	y Vegetated Conca	ve Surface (	B8) Other (Exp	olain in Re	emarks)			
Field Obser								
Surface Wat	er Present?	Yes	No Depth (in	ches):		_		
Water Table			No Depth (in					
Saturation P		Yes	No Depth (in	ches):		Wet	land Hydrology Pre	sent? Yes No
	pillary fringe) corded Data (strear	n gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								
	or D2 and D5	are m	et. Hvdrolog	v is di	sturbe	ed due	to beina in a	a drainage area along
	e agricultur		,	,		,. J. C. C		

Project/Site: Turney Energy Center	(	City/Cou	unty: <u>CI</u>	linton C	County	Sampling Date:	2024-08-06	
Applicant/Owner: Associated Electric Cooperative	, Inc.				State: Missouri Sampling Point: SP-10			
Investigator(s): J. Ramirez, S. Glaeser	;	Section	, Towns	hip, Ran	ge: S03 T55N R31W	1		
Landform (hillslope, terrace, etc.): Depression								
Slope (%): 1 Lat: 39.615456	ו	Long: _	-94.36	1188		Datum: NAD 8	3	
Soil Map Unit Name: 30062 - Gara loam, 9 to 14 pe	ercent slo	pes			NWI classifica	ation: PFO1A		
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes	s	_ No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology s	significantly of	disturbe	ed?	Are "N	Normal Circumstances" p	resent? Yes	No	
Are Vegetation, Soil, or Hydrology	naturally prol	blemati	c?	(If nee	eded, explain any answer	rs in Remarks.)		
SUMMARY OF FINDINGS - Attach site map	showing	samp	oling p	oint lo	cations, transects,	, important fe	atures, etc.	
Hydrophytic Vegetation Present? Yes N	lo							
Hydric Soil Present? Yes N	lo	1	ls the Sa	ampled A				
Wetland Hydrology Present? Yes V	lo	٧	within a	Wetland	d? Yes	No	-	
Remarks:								
Wetland sample plot within PFO W-08. The US	SACE Ante	ceder	nt Prec	cipitatio	on Tool indicates dri	er than norma	ıl climatic	
conditions three months prior to survey.								
<b>VEGETATION</b> – Use scientific names of plants								
Tree Stratum (Plot size:30 ft r)	Absolute % Cover		nant Indi		Dominance Test works			
1. Juniperus virginiana	10	Specie		ACU	Number of Dominant Sp. That Are OBL, FACW, or		(A)	
2 Platanus occidentalis	10			CW	mat Ale Obl, I AOV, c	71 AO. <u>-</u>	(^)	
3. Celtis occidentalis	5		— <u> </u>		Total Number of Domina Species Across All Strat		(B)	
4. Ulmus americana	5			ACW	Species Across Air Strai	<u>.</u>	(b)	
5					Percent of Dominant Sp That Are OBL, FACW, of		(A/B)	
	30	= Total	Cover	[			(٨/٥)	
Sapling/Shrub Stratum (Plot size: 15 ft r )	_				Prevalence Index work			
1. Celtis occidentalis	_ 5			<del>(C</del>	Total % Cover of:		y by:	
2				—— I		x 1 = 0		
3				—— I		x 2 = 110		
4				— I		x 3 = 66		
5				— I	^			
Herb Stratum (Plot size: 5 ft r )	5	= Total	Cover		UPL species 0  Column Totals: 97			
1. Laportea canadensis	40	~	FA	ACM	Column Totals. O7	(A) <u>256</u>	(B)	
2. Ribes aureum	10		FA	4C	Prevalence Index	= B/A = 2.63		
3. Symphoricarpos orbiculatus	_ 10		FA	CU_	Hydrophytic Vegetatio	n Indicators:		
4. Campanulastrum americanum	2		FA	/C	1 - Rapid Test for H	lydrophytic Veget	ation	
5					2 - Dominance Test	t is >50%		
6					3 - Prevalence Inde			
7				I	4 - Morphological A	daptations¹ (Prov s or on a separate	ide supporting	
8				I	Problematic Hydrop			
9				l	i robiematic riyarop	mytic vegetation	(Explain)	
10	~~			—— I	<sup>1</sup> Indicators of hydric soil	and wetland hvd	rology must	
Woody Vine Stratum (Plot size: 30 ft r )	62	= Total	Cover		be present, unless distu			
1					Hydrophytic			
2.					Vegetation			
					Present? Yes	s No	—	
Remarks: (Include photo numbers here or on a separate	sheet.)							
Dominance test is passed. See Pho	oto C-10	<b>)</b> .						

Profile Description: (Describe to the de	pth needed to docu	ıment the	indicator	or confin	m the absence of indicators.)	_
Depth <u>Matrix</u>		lox Feature				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup> _	_Loc <sup>2</sup>	Texture Remarks	_
0 - 4 10YR 3/1 100					Silt Loam	_
<u>4 - 12</u> <u>10YR 4/2</u> <u>98</u>	10YR 6/8	_ 2	<u> </u>	<u>M</u>	Silt Loam	_
-						
-						_
						_
					·	-
					· —— ——	_
<del></del>					·	_
<sup>1</sup> Type: C=Concentration, D=Depletion, RN	I=Reduced Matrix, N	/IS=Maske	d Sand Gr	ains.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	_
Hydric Soil Indicators:					Indicators for Problematic Hydric Soils <sup>3</sup> :	
— Histosol (A1)		Gleyed M			Coast Prairie Redox (A16)	
Histic Epipedon (A2) Black Histic (A3)		Redox (S ed Matrix (			Dark Surface (S7) Iron-Manganese Masses (F12)	
Hydrogen Sulfide (A4)			ineral (F1)		Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)		Gleyed N			Other (Explain in Remarks)	
2 cm Muck (A10)		ed Matrix				
Depleted Below Dark Surface (A11)		Dark Surf				
Thick Dark Surface (A12)			urface (F7)	)	<sup>3</sup> Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	Redox	Depression	ons (F8)		wetland hydrology must be present,	
5 cm Mucky Peat or Peat (S3)  Restrictive Layer (if observed):					unless disturbed or problematic.	_
Type: Gravel						
Depth (inches): 12					Hydric Soil Present? Yes No	_
Remarks:						_
attempted.	ation below	IZ W	as pre	vente	d by gravel. Multiple locations	
HYDROLOGY						
Wetland Hydrology Indicators:						_
Primary Indicators (minimum of one is requ	uired; check all that a	apply)			Secondary Indicators (minimum of two required	(b
Surface Water (A1)		ained Lea	ves (B9)		Surface Soil Cracks (B6)	_
High Water Table (A2)	Aquatic F	auna (B1	3)		Drainage Patterns (B10)	
Saturation (A3)		atic Plants			Dry-Season Water Table (C2)	
Water Marks (B1)	Hydroger	n Sulfide C	odor (C1)		Crayfish Burrows (C8)	
Sediment Deposits (B2)	Oxidized	Rhizosph	eres on Liv	ing Roots	s (C3) Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)	Presence	e of Reduc	ed Iron (C	1)	Stunted or Stressed Plants (D1)	
Algal Mat or Crust (B4)	Recent Ir	on Reduc	tion in Tille	d Soils (C	66) <u>Comorphic Position (D2)</u>	
Iron Deposits (B5)	Thin Muc	k Surface	(C7)		FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (I	B7) Gauge or	r Well Data	a (D9)			
Sparsely Vegetated Concave Surface	(B8) Other (Ex	xplain in R	emarks)			
Field Observations:						
	No Depth (i					
	No Depth (i					
(includes capillary fringe)	No _ Depth (i				tland Hydrology Present? Yes No	_
Describe Recorded Data (stream gauge, n	ionitoring well, aeria	i priotos, p	revious ins	pections)	ı, іі avaliaDle:	
Remarks:						_
Indicators D2 and D5 are i	met					
	1100.					

Project/Site: Turney Energy Center	(	City/Co	ounty	: Clinton	Sampling Date: 202	4-08-06		
Applicant/Owner: Associated Electric Cooperative	re, Inc.				State: Missouri	Sampling Point: SP-11		
Investigator(s): J. Ramirez, S. Glaeser		Section, Township, Range: S03 T55N R31W						
Landform (hillslope, terrace, etc.): Hillslope				Local relief	(concave, convex, none):	Convex		
Slope (%): 1 Lat: 39.615377		Long:	-94	.361208		Datum: NAD 83		
Soil Map Unit Name: 30062 - Gara loam, 9 to 14					NWI classific			
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Ye	es	No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology	_ significantly	disturb	ed?	Are "	Normal Circumstances" p	resent? Yes	No	
Are Vegetation, Soil, or Hydrology					eded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma					ocations, transects	, important featu	res, etc.	
Hydrophytic Vegetation Present? Yes	No							
Hydric Soil Present? Yes	No			e Sampled		.,		
Wetland Hydrology Present? Yes	No		with	in a Wetlan	nd? Yes	No		
Remarks:		_						
Upland sample plot adjacent to PFO W-08. T		Ante	cede	nt Precip	itation Tool indicate	s drier than norma	al	
climatic conditions three months prior to surv	vey.							
<b>VEGETATION</b> – Use scientific names of plant	ts.							
Tree Stratum (Plot size:30 ft r)	Absolute			Indicator	Dominance Test work	sheet:		
1. Juniperus virginiana	<u>% Cover</u> 15	Spec		FACU	Number of Dominant Sp That Are OBL, FACW, of		(A)	
2 Celtis occidentalis	10		,	FAC	, ,		_ (^)	
3					Total Number of Domini Species Across All Stra	^	(B)	
4							_ (5)	
5					Percent of Dominant Sp That Are OBL, FACW, of		(A/B)	
15 ft r	25	= Tota	al Cov	/er			_ ( )	
Sapling/Shrub Stratum (Plot size: 15 ft r )  1. Celtis occidentalis	20	V	,	FAC	Prevalence Index work			
2. Cornus drummondii	$-\frac{20}{5}$			FAC	Total % Cover of:  OBL species  0	$ \qquad $	_	
3		_			FACW species 0		_	
4					· ·	x 3 = 180		
5						x 4 = 140	_	
		= Tota	al Cov	/er	UPL species 0	x 5 = <u>0</u>		
Herb Stratum (Plot size: 5 ft r )  1 Campanulastrum americanum	15		,	FAC	Column Totals: 95	(A) <u>320</u>	(B)	
2. Ageratina altissima	$-\frac{10}{10}$			FACU	Prevalence Index	= B/A = 3.36		
3. Phlox divaricata	$-\frac{10}{10}$	_	_	FACU	Hydrophytic Vegetation			
4 Ribes aureum				FAC	' ' ' '	lydrophytic Vegetation		
5					✓ 2 - Dominance Tes	t is >50%		
6.					3 - Prevalence Inde			
7					4 - Morphological A	daptations¹ (Provide s	upporting	
8					Problematic Hydron	s or on a separate shee		
9					Problematic Hydrop	mytic vegetation (Exp	naiii)	
10					<sup>1</sup> Indicators of hydric soil	and wetland hydrolog	v must	
Woody Vine Stratum (Plot size: 30 ft r	45	= Tota	al Cov	/er	be present, unless distu		,	
1					Hydrophytic			
2.					Vegetation	<b>V</b>		
		= Tota	al Cov	/er	Present? Yes	s No	.	
Remarks: (Include photo numbers here or on a separat	e sheet.)							
Dominance test is passed. See Ph	noto C-11	۱.						

Depth		։ ւս աւ սեր	th needed to docu	ment the	indicator	or confirn	n the absence of	indicators.)
	Matrix			ox Feature				,
(inches)	Color (moist)	%	Color (moist)	%	_Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-6	2.5Y 3/3	_ <u>70</u>	2.5Y 5/6	30	_ <u>C</u>	<u>M</u>	Silt Loam _	
<u>6 - 20</u>	2.5Y 6/6	_ 100_					Silt Loam _	
-								
_								
Hydric Soil		pletion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Gleyed M	atrix (S4)			airie Redox (A16)
ı —	pipedon (A2)			Redox (S			Dark Surf	
ı —	stic (A3)			d Matrix (	,			ganese Masses (F12)
	en Sulfide (A4)			-	neral (F1)			llow Dark Surface (TF12)
_	d Layers (A5) ick (A10)			Gleyed M ed Matrix (			Other (Ex	plain in Remarks)
_	d Below Dark Surfa	ce (A11)		Dark Surf				
	ark Surface (A12)	( ,	_		urface (F7	)	<sup>3</sup> Indicators of	hydrophytic vegetation and
ı —	lucky Mineral (S1)		Redox	Depression	ns (F8)		wetland h	ydrology must be present,
	icky Peat or Peat (	-					unless dis	sturbed or problematic.
	Layer (if observed	):						
Type:	ah a a ):						Hydric Soil Pr	esent? Yes No
Remarks:	ches):							
No indid	cators are m	net.						
HYDROLO	GY							
	GY drology Indicators	:						
Wetland Hy	drology Indicators		red; check all that a	pply)			Secondary	Indicators (minimum of two required)
Wetland Hyd	drology Indicators		red; check all that a		ves (B9)			Indicators (minimum of two required) e Soil Cracks (B6)
Wetland Hyder Primary Indice	drology Indicators cators (minimum of			ained Leav	, ,		Surface	•
Wetland Hyder Primary Indice	drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-Sta	ained Leav auna (B13	3)		Surface Draina Dry-Se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Wetland Hydelic Primary India Surface High Water Mater	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide C	B) (B14) dor (C1)		Surface Drainage Dry-Se Crayfis	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Wetland Hydelicon Primary India Surface High Water Mater Mat	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv	-	Surface Drainage Dry-Se Crayfis (C3) Satura	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indid Surface High Wa Saturatid Water M Sedimer Drift Dep	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduc	B) (B14) dor (C1) eres on Lived Iron (C	4)	Surface Drainag Dry-Se Crayfis (C3) Saturat	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Wetland Hydeling Primary India Surface High Wa Saturatic Water M Sedimer Drift Dep	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reducton Reduct	B) (B14) (dor (C1) eres on Lived Iron (C- ion in Tille	4)	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hydelicon Primary India  — Surface — High Water Mater Material Material Material Materia	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iro Thin Muci	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface	B) (B14) (dor (C1) eres on Lived Iron (C4) ion in Tille (C7)	4)	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Wetland Hydelicon Primary India Surface High Water Mater Mat	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4)	one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	B) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (C7) Idor (D9)	4)	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hydelicon Primary India Surface High Water Mater Mat	drology Indicators cators (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 Aerial y Vegetated Concav	one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	B) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (C7) Idor (D9)	4)	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hydelicon Primary India Surface High Water Mage Sedimer Drift Dep Algal Male Iron Dep Inundati Sparsely	drology Indicators cators (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 Aerial of Vegetated Concar vations:	one is requi Imagery (B ve Surface (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	(B14) dor (C1) eres on Lived Iron (C-1) ion in Tille (C7) i (D9) emarks)	4) d Soils (C6	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hydelian Primary India Surface High Water Mater Mate	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) on Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concavations: er Present?	one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl T) Gauge or B8) Other (Ex	ained Leavauna (B13 atic Plants Sulfide ORhizosphe of Reducton Reduct & Surface Well Data plain in Reductor Red	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (C9)	4) d Soils (C6	Surface Drainag Dry-Se Crayfis (C3) Saturag Stuntee	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hyderimary India Surface High Water Management Sedimer Drift Dep Algal Management Inundati Sparsely Field Obser Surface Water Mater Table Saturation P	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concavity vations: er Present? Present?	Imagery (Bive Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru Thin Mucl Gauge or Gauge or Other (Ex	ained Leavauna (B13 atic Plants Sulfide OR Reduct & Surface Well Data plain in Reductes):	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (D9) Idor (D9) Idor (C1)	4) d Soils (C6	Surface Drainae Dry-Se Crayfis (C3) Saturae Stuntee Geome FAC-N	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Wetland Hydelian Primary India Surface High Water Mage Sedimer Sedimer Drift Deg Algal Mage Iron Deg Inundati Sparsely Field Obser Surface Water Water Table Saturation Perincludes cap	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concar vations: er Present? Present? resent?	Imagery (Bive Surface (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl To Gauge or Bab) Other (Ex	ained Leavauna (B13 atic Plants Sulfide OR Reduct Surface Well Data plain in Ronches):nches):nches):nches):	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (D9) Idor (D9) Idor (C1)	4) d Soils (C6	Surface  Drainay  Dry-Se  Crayfis  (C3) Saturay  Stunted  FAC-N	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface High Water Mager Mater Table Saturation Pager Mager	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concar vations: er Present? Present? resent?	Imagery (Bive Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl To Gauge or Bab) Other (Ex	ained Leavauna (B13 atic Plants Sulfide OR Reduct Surface Well Data plain in Ronches):nches):nches):	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (D9) Idor (D9) Idor (C1)	4) d Soils (C6	Surface  Drainay  Dry-Se  Crayfis  (C3) Saturay  Stunted  FAC-N	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface High Water Mage Saturation Sedimer Drift Dep Algal Mage Iron Dep Inundation Sparsely Field Obser Surface Water Table Saturation Perincludes cap Describe Res	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concar vations: er Present? Present? resent? corded Data (strean	Imagery (B' ve Surface (I Yes Yes Yes m gauge, mo	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl To Gauge or Bab) Other (Ex	ained Leavauna (B13 atic Plants Sulfide OR Reduct Surface Well Data plain in Ronches):nches):nches):	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (D9) Idor (D9) Idor (C1)	4) d Soils (C6	Surface  Drainay  Dry-Se  Crayfis  (C3) Saturay  Stunted  FAC-N	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Wetland Hyderimary India Surface High Water Mage Saturation Sedimer Drift Dep Algal Mage Iron Dep Inundation Sparsely Field Obser Surface Water Table Saturation Perincludes cap Describe Res	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5) on Visible on Aerial of Vegetated Concar vations: er Present? Present? resent?	Imagery (B' ve Surface (I Yes Yes Yes m gauge, mo	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Mucl To Gauge or Bab) Other (Ex	ained Leavauna (B13 atic Plants Sulfide OR Reduct Surface Well Data plain in Ronches):nches):nches):	(B14) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C1) Idor (C7) Idor (D9) Idor (D9) Idor (C1)	4) d Soils (C6	Surface  Drainay  Dry-Se  Crayfis  (C3) Saturay  Stunted  FAC-N	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Turney Energy Center	c	ity/County:	Clinton	linton County Sampling Date: 2			
Applicant/Owner: Associated Electric Cooperative, Ir	nc.			State: Missouri Sampling Point: SP-12			
Investigator(s): J. Ramirez, S. Glaeser	s	ection, Tov	vnship, Rar	nge: S34 T56N R31W	!		
				(concave, convex, none):	_		
Slope (%): 2 Lat: 39.615598	L	ong: -94.	362286		Datum: NAD 8	3	
Soil Map Unit Name: 36020 - Kennebec silt loam, 0 to 2	percent :	slopes, oc	casionally	y flooded NWI classifica	ation: N/A		
Are climatic / hydrologic conditions on the site typical for this ti	me of year	r? Yes	No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology sign	nificantly d	isturbed?	Are "I	Normal Circumstances" p	resent? Yes	✓ No	
Are Vegetation, Soil, or Hydrology nate	urally prob	lematic?	(If ne	eded, explain any answer	s in Remarks.)		
SUMMARY OF FINDINGS - Attach site map sh	nowing	sampling	g point lo	ocations, transects,	, important fe	eatures, etc.	
Hydrophytic Vegetation Present? Yes No _							
Hydric Soil Present? Yes No _			Sampled				
Wetland Hydrology Present? Yes No _		withi	n a Wetlan	d? Yes	No		
Remarks:	CE Anto	aadant D	raainitati	on Tool indicates dr	ior than narm	al alimatia	
Wetland sample plot within PEM W-09. The USA conditions three months prior to survey. Wetland			-		ier than norm	al Cilillatic	
	113 04(3)	ac or sar	vey area	•			
<b>VEGETATION</b> – Use scientific names of plants.	Absolute	Dominant	Indicator	Dominance Test works	shoot:		
		Species?		Number of Dominant Sp			
	5		FAC	That Are OBL, FACW, o		(A)	
2. Maclura pomifera	5	<u> </u>	FACU_	Total Number of Domina	ant		
3				Species Across All Strat	_	(B)	
4				Percent of Dominant Sp	pecies		
5				That Are OBL, FACW, o		(A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft r )	<u>0                                    </u>	Total Cov	er	Prevalence Index work	ksheet:		
1				Total % Cover of:		oly by:	
2.					x 1 = 0		
3.				FACW species 70	x 2 = 140	0	
4.				FAC species 5	x 3 = <u>15</u>		
5				FACU species 10		<u> </u>	
F #	=	Total Cov	er	UPL species 0	x 5 = <u>0</u>		
Herb Stratum (Plot size: 5 ft r )  1 Phalaris arundinacea	60	~	FACW	Column Totals: 85	(A) <u>19</u> 5	5 (B)	
	10		FACW	Prevalence Index	= B/A = 2.29		
	5		FACU	Hydrophytic Vegetatio			
4				1 - Rapid Test for H	lydrophytic Vege	tation	
5				✓ 2 - Dominance Test			
6				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
7.				4 - Morphological A	daptations¹ (Prov	vide supporting	
8.					s or on a separate	,	
9				Problematic Hydrop	hytic Vegetation	(Explain)	
10				<sup>1</sup> Indicators of hydric soil	and wetland hve	drology must	
Woody Vine Stratum (Plot size: 30 ft r )	75 =	Total Cov	er	be present, unless distu			
1							
2.				Hydrophytic Vegetation			
		Total Cov		Present? Yes	s No_		
Remarks: (Include photo numbers here or on a separate she							
Dominance test is passed. See Photo	n C-12						
Passed: See 1 Hote	J 12	•					

Profile Desc	cription: (Describe	to the dept	th needed to docur	ment the	indicator	or confire	n the absence of	indicators.)
Depth	Matrix			x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> _	_Loc <sup>2</sup>	Texture	Remarks
0 - 20	10YR 2/1	90	10YR 4/6	10	_ <u>C</u>	<u>M</u>	Clay	
<u> </u>								
<u> </u>								
	oncentration, D=Dep	oletion, RM=	Reduced Matrix, M	S=Maske	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil								r Problematic Hydric Soils <sup>3</sup> :
Histosol				-	atrix (S4)		_	airie Redox (A16)
I —	pipedon (A2) istic (A3)			Redox (S: d Matrix (			Dark Surf	ace (S7) ganese Masses (F12)
ı —	en Sulfide (A4)				ineral (F1)			llow Dark Surface (TF12)
1 — , ,	d Layers (A5)				latrix (F2)			plain in Remarks)
	uck (A10)			d Matrix (				
	d Below Dark Surfac	ce (A11)		Dark Surf	` '			
_	ark Surface (A12)				urface (F7	)		hydrophytic vegetation and
1 — 1	Mucky Mineral (S1) ucky Peat or Peat (S	3)	Redox I	Depression	ons (F8)			ydrology must be present, sturbed or problematic.
	Layer (if observed)						unless dis	starbed of problematic.
	ches):		_				Hydric Soil Pr	esent? Yes No
Remarks:								
	<b>50</b>							
Indicate	or F6 is met.							
HYDROLO	GY							
Wetland Hy	drology Indicators:	:						
Primary Indi	cators (minimum of	one is requir	ed; check all that ap	oply)			Secondary	Indicators (minimum of two required)
Surface	Water (A1)		Water-Sta	ined Leav	ves (B9)		Surface	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Fa	auna (B13	3)		Draina	ge Patterns (B10)
Saturati	on (A3)		True Aqua	atic Plants	(B14)		Dry-Se	ason Water Table (C2)
Water M	larks (B1)		Hydrogen	Sulfide O	dor (C1)		Crayfis	h Burrows (C8)
Sedime	nt Deposits (B2)		Oxidized F			-	(C3) Satural	tion Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence		,	,		d or Stressed Plants (D1)
	at or Crust (B4)		Recent Iro			d Soils (C	<i>-</i>	orphic Position (D2)
	oosits (B5)	I(D	Thin Muck		` '		FAC-N	eutral Test (D5)
I —	on Visible on Aerial y Vegetated Concav							
Field Obser		e Suriace (i	38) Other (Exp	Jiaiii iii Ki	emarks)			
Surface Wat		/es l	No Depth (in	ches).				
Water Table			No Depth (in					
Saturation P			No Depth (in				land Hydrology P	resent? Yes No
	pillary fringe)		To Depti (iii	Ci 163)		_   ****	iana riyarology r	resent: res No
Describe Re	corded Data (stream	n gauge, mo	nitoring well, aerial	photos, p	revious ins	spections)	, if available:	
Remarks:								
Indicato	rs B10 and [	D2 are r	net.					

Project/Site: Turney Energy Center	(	City/Cou	nty: Clinton	Sampling Date: 2024-08-06			
Applicant/Owner: Associated Electric Cooperative	e, Inc.		State: Missouri Sampling Point: SP-13				
Investigator(s): J. Ramirez, S. Glaeser	;	Section,	Township, Rar	, Range: S34 T56N R31W			
				(concave, convex, none):	_		
Slope (%): 1 Lat: 39.615559		Long:	94.362593		Datum: NAD 83		
Soil Map Unit Name: 36028 - Nevin silt Ioam, 0 to							
Are climatic / hydrologic conditions on the site typical for the							
Are Vegetation, Soil, or Hydrology							
Are Vegetation, Soil, or Hydrology				eded, explain any answer			
SUMMARY OF FINDINGS – Attach site map							
Hydrophytic Vegetation Present? Yes	No V						
Hydric Soil Present? Yes		Is	the Sampled				
Wetland Hydrology Present? Yes	No	w	ithin a Wetlan	id? Yes	No		
Remarks:		•					
Upland sample plot adjacent to PEM W-09. TI			•		s drier than normal		
climatic conditions three months prior to surv	ey. Wetlan	d is ou	itside of sur	vey area.			
<b>VEGETATION</b> – Use scientific names of plants	S.						
7 01 1 20 1 30 ft r	Absolute		ant Indicator	Dominance Test works	sheet:		
Tree Stratum (Plot size: 30 ft r )  1. Maclura pomifera		Specie	s? Status FACU	Number of Dominant Sp			
1. Maclura pomifera 2.				That Are OBL, FACW, o	r FAC: (A)		
3				Total Number of Domina Species Across All Strat	7		
4							
5				Percent of Dominant Sp That Are OBL, FACW, o			
	_	= Total (	Cover				
Sapling/Shrub Stratum (Plot size: 15 ft r )	20	~	FACU	Prevalence Index work			
1. Maclura pomifera 2. Gleditsia triacanthos	- <del>20</del>			Total % Cover of:	Multiply by: x 1 = 0		
				l .	$x = \frac{10}{10}$		
3					x 3 = 0		
4 5.				FACU species 50	x 4 = 200		
		= Total (	Cover	UPL species 0	x 5 = 0		
Herb Stratum (Plot size: 5 ft r )	10	.,	FACU	Column Totals: 55	(A) <u>210</u> (B)		
1. Rosa multiflora 2. Desmodium paniculatum	$-\frac{10}{5}$		FACU	Prevalence Index	- B/A - 3.81		
3. Solidago canadensis	$-\frac{3}{5}$		FACU	Hydrophytic Vegetatio			
Verbesina alternifolia	$-\frac{5}{5}$		FACW	1 - Rapid Test for H			
5				2 - Dominance Test			
6				3 - Prevalence Inde	x is ≤3.0 <sup>1</sup>		
7.				4 - Morphological A	daptations <sup>1</sup> (Provide supporting		
8					or on a separate sheet)		
9				Problematic Hydrop	ohytic Vegetation <sup>1</sup> (Explain)		
10				<sup>1</sup> Indicators of hydric soil	and wetland hydrology must		
Woody Vine Stratum (Plot size: 30 ft r	<u>25</u>	= Total (	Cover	be present, unless distu			
1				Undranbutia			
2				Hydrophytic Vegetation	.,		
		= Total (		Present? Yes	No		
Remarks: (Include photo numbers here or on a separate	sheet.)			1			
No test is passed. See Photo C-13	3.						

,	scribe to the de	oth needed to docum	ent the ir	idicator (	or confirm	n the absence of in	dicators.)
	latrix		Features	- 1	. 2		
(inches) Color (me		Color (moist)	%	Type'	_Loc <sup>2</sup>		Remarks
0 - 20 10YR 4/1	<u>100</u>					Clay Loam	
<u> </u>							
-							
_							
<sup>1</sup> Type: C=Concentration,	D=Depletion, RM	=Reduced Matrix, MS	=Masked	Sand Gra	ains.	<sup>2</sup> Location: PL	=Pore Lining, M=Matrix.
Hydric Soil Indicators:						Indicators for I	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy G	leyed Mat	rix (S4)		Coast Prair	ie Redox (A16)
Histic Epipedon (A2)			edox (S5)			Dark Surfac	
Black Histic (A3)			Matrix (Se	,			nese Masses (F12)
Hydrogen Sulfide (A4	,		lucky Min				w Dark Surface (TF12)
Stratified Layers (A5) 2 cm Muck (A10)			Bleyed Ma I Matrix (F			Other (Expl	ain in Remarks)
Depleted Below Dark	Surface (A11)		ark Surfac	,			
Thick Dark Surface (A	, ,	_	Dark Sur			3Indicators of h	ydrophytic vegetation and
Sandy Mucky Mineral			epression	, ,			Irology must be present,
5 cm Mucky Peat or F	eat (S3)					unless distu	irbed or problematic.
Restrictive Layer (if obs	erved):						
Туре:						Unidaia Cail Dasa	and Van Na V
Depth (inches):						Hydric Soil Pres	sent? Yes No
Remarks:						<u> </u>	
No indicators a	ro mot						
INO IIIUICATOIS AI	e met.						
HYDROLOGY							
Wetland Hydrology India	ators:						
Primary Indicators (minim	um of one is requ	ired; check all that ap	oly)			Secondary In	dicators (minimum of two required)
Surface Water (A1)		Water-Stai	ned Leave	s (B9)		Surface	Soil Cracks (B6)
High Water Table (A2	.)	Aquatic Fa	una (B13)			Drainage	Patterns (B10)
Saturation (A3)		True Aquat	ic Plants (	B14)		Dry-Seas	son Water Table (C2)
Water Marks (B1)		Hydrogen S	Sulfide Od	or (C1)		Crayfish	Burrows (C8)
Sediment Deposits (E	2)	Oxidized R	hizospher	es on Livi	ing Roots	(C3) Saturation	n Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of		•	,	_	or Stressed Plants (D1)
Algal Mat or Crust (B	1)	Recent Iron			d Soils (C	. —	phic Position (D2)
Iron Deposits (B5)		Thin Muck	,			FAC-Net	ıtral Test (D5)
	Aprial Imagent (F	B7) Gauge or V					
Inundation Visible on			lain in Rer	marke)			
Inundation Visible on Sparsely Vegetated 0		(B8) Other (Exp	allililite	iiaiks)			
Inundation Visible on Sparsely Vegetated 0 Field Observations:	Concave Surface						
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present?	Concave Surface Yes	No Depth (inc	hes):	-			
Inundation Visible on Sparsely Vegetated 0 Field Observations:	Yes Yes	No Depth (inc	hes): hes):		_		
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Yes Yes	No Depth (inc	hes): hes):		_	land Hydrology Pre	esent? Yes No
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present?	Yes Yes Yes	No V Depth (inc	hes): hes): hes):		_ Wet		esent? Yes No
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes Yes Yes	No V Depth (inc	hes): hes): hes):		_ Wet		esent? Yes No
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes Yes Yes	No V Depth (inc	hes): hes): hes):		_ Wet		esent? Yes No
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data ( Remarks:	Yes Yes Yes Yes	No V Depth (inc	hes): hes): hes):		_ Wet		esent? Yes No
Inundation Visible on Sparsely Vegetated C Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (	Yes Yes Yes Yes	No V Depth (inc	hes): hes): hes):		_ Wet		esent? Yes No

Project/Site: Turney Energy Center		City/County: Clinton County Sampling Date: 2024					
Applicant/Owner: Associated Electric Cooperative	e, Inc.	State: Missouri Sampling Point: SP-14					
Investigator(s): J. Ramirez, S. Glaeser		Section, To	wnship, Ra	nge: S34 T56N R31W	'		
Landform (hillslope, terrace, etc.): Plain		ا	ocal relief	(concave, convex, none):	None		
Slope (%): N/A Lat: 39.615627		Long: <u>-94</u>	.364005		Datum: NAD 83		
Soil Map Unit Name: 36020 - Kennebec silt loam, 0 t							
Are climatic / hydrologic conditions on the site typical for the	his time of ye	ar? Yes	No _	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology	significantly	disturbed?	Are °	Normal Circumstances" p	resent? Yes No		
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 features, etc.		
Hydrophytic Vegetation Present? Yes	No						
Hydric Soil Present? Yes			e Sampled				
Wetland Hydrology Present? Yes	No	with	in a Wetlar	nd? Yes	No		
Remarks:							
Upland confirmation sample plot. The USACE	Antecede	nt Precipi	tation I d	ool indicates drier tha	n normal climatic		
conditions three months prior to survey.							
VEGETATION – Use scientific names of plants							
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?		Dominance Test works			
1. Juglans nigra	10	~	FACU	Number of Dominant Sp That Are OBL, FACW, or			
2. Maclura pomifera	10	~	FACU	Total Number of Bossies			
3. Gleditsia triacanthos	5		FACU	Total Number of Domina Species Across All Strat			
4				Percent of Dominant Sp	pecies		
5				That Are OBL, FACW, o			
Sapling/Shrub Stratum (Plot size: 15 ft r )	25	= Total Cov	er	Prevalence Index work	sheet:		
1. Symphoricarpos orbiculatus	10	~	FACU	Total % Cover of:			
2					x 1 = 0		
3.					x 2 = 140		
4.				FAC species 0	x 3 = <u>0</u>		
5.				FACU species 35	x 4 = <u>140</u>		
F. ft	10	= Total Cov	er	UPL species 0	x 5 = <u>0</u>		
Herb Stratum (Plot size: 5 ft r )  1. Laportea canadensis	30	~	FACW	Column Totals: 105	(A) <u>280</u> (B)		
2. Elymus virginicus	$-\frac{30}{30}$		FACW	Prevalence Index	= B/A = 2.66		
3 Impatiens pallida	- <del>10</del>		FACW	Hydrophytic Vegetatio			
4				1 - Rapid Test for H			
5				2 - Dominance Test	t is >50%		
6				3 - Prevalence Inde	x is ≤3.0 <sup>1</sup>		
7					daptations <sup>1</sup> (Provide supporting		
8					or on a separate sheet)		
9				Problematic Hydrop	ohytic Vegetation <sup>1</sup> (Explain)		
10				<sup>1</sup> Indicators of hydric soil	and wetland hydrology must		
Woody Vine Stratum (Plot size: 30 ft r )	70	= Total Cov	er	be present, unless distu			
1				Hydrophytic			
2				Vegetation Present? Yes	s No		
Demonto: (Include photo purchase have as a constant		= Total Cov	er	163			
Remarks: (Include photo numbers here or on a separate	,						
No test is passed. See Photo C-14	<b>l.</b>						

Profile Description: (Describe to the dept	h needed to document the	indicator or co	nfirm the absence o	f indicators.)	
Depth Matrix Redox Features					
(inches) Color (moist) %	Color (moist) %	Type <sup>1</sup> Lo		Remarks	
0 - 20 10YR 3/1 100			Silt Loam _		
_ <del>-</del>					
-					
-					
_ <del>-</del>					
¹Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Maske	ed Sand Grains.		PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:				or Problematic Hydric Soils <sup>3</sup> :	
1 —	Histosol (A1)  Sandy Gleyed Matrix (S4)		_	Coast Prairie Redox (A16) Dark Surface (S7)	
Histic Epipedon (A2) Black Histic (A3)	Sandy Redox (S5) Stripped Matrix (S6)		_	lron-Manganese Masses (F12)	
Hydrogen Sulfide (A4)			_	Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)				Other (Explain in Remarks)	
2 cm Muck (A10)	Depleted Matrix	(F3)			
Depleted Below Dark Surface (A11)	Redox Dark Sur				
Thick Dark Surface (A12)	Depleted Dark S	, ,		of hydrophytic vegetation and	
Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3)	Redox Depressi	ons (F8)		hydrology must be present, listurbed or problematic.	
Restrictive Layer (if observed):			unless o	isturbed or problematic.	
Type:					
Depth (inches):	_		Hydric Soil P	resent? Yes No	
Remarks:					
No indicators are met.					
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one is required; check all that apply)  Secondary Indicators (minimum of two required)					
Surface Water (A1) Water-Stained Leaves (B9)			Surface Soil Cracks (B6)		
High Water Table (A2) Aquatic Fauna (B13)			Drainage Patterns (B10)		
Saturation (A3) True Aquatic Plants (B14)			Dry-S	eason Water Table (C2)	
Water Marks (B1) Hydrogen Sulfide Odor (C1) 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 Sparsely Vegetated Concave Surface (B	·				
Field Observations:	8) Other (Explain in R	emarks)			
	lo Depth (inches):				
	lo Depth (inches):				
	lo Depth (inches):		Wetland Hydrology Present? Yes No		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					
No indicators are met.					





Photograph C-1: View of Sample plot (SP)-01 within PEM W-02, facing east.



Photograph C-2: View of upland SP-02 adjacent to PEM W-02, facing west.





Photograph C-3: View of SP-03 within PEM W-03, facing southeast.



Photograph C-4: View of upland SP-04 adjacent to PEM W-03, facing west.





Photograph C-5: View of upland SP-05, facing south.



Photograph C-6: View of SP-06 within PEM W-05, facing northwest.





Photograph C-7: View of upland SP-07 adjacent to PEM W-05, facing northwest.



Photograph C-8: View of upland SP-08 adjacent to PEM W-07, facing northwest.





Photograph C-9: View of SP-09 within PEM W-07, facing west.



Photograph C-10: View of SP-10 within PFO W-08, facing northwest.





Photograph C-11: View of upland SP-11 adjacent to PFO W-08, facing northwest.



Photograph C-12: View of SP-12 within PEM W-09, facing west. Wetland is outside of survey area.





Photograph C-13: View of upland SP-13 adjacent to PEM W-09, facing west. Wetland is outside of survey area.



Photograph C-14: View of upland confirmation SP-14, facing east.





Photograph C-15: View of PUB Wetland (W)-01, facing south.



Photograph C-16: View of PUB W-04, facing south. Wetland is outside of survey area.





Photograph C-17: View of PUB W-06, facing northeast.



Photograph C-18: View of intermittent Stream (S)-01, facing northeast.





Photograph C-19: View of intermittent S-02, facing east.



Photograph C-20: View of ephemeral S-03, facing east.





Photograph C-21: View of intermittent S-04, facing west.



Photograph C-22: View of intermittent S-05, facing northeast.





Photograph C-23: View of ephemeral S-06, facing north.



Photograph C-24: View of intermittent S-07, facing south.





Photograph C-25: View of intermittent S-08, facing south.



Photograph C-26: View of intermittent S-09, facing east.





Photograph C-27: View of ephemeral S-10, facing south.



Photograph C-28: View of ephemeral S-11, facing east.





Photograph C-29: View of ephemeral S-12, facing east.



Photograph C-30: View of intermittent S-13, facing west.





Photograph C-31: View of intermittent S-14, facing south.



Photograph C-32: View of ephemeral S-15, facing south.





Photograph C-33: View of ephemeral S-16, facing south.



Photograph C-34: View of ephemeral S-17, facing west.





Photograph C-35: View of ephemeral S-18, facing south.



Photograph C-36: View of ephemeral S-19, facing southeast.





Photograph C-1: View of intermittent S-20, facing northwest.



Photograph C-2: View of ephemeral S-21, facing south.





Photograph C-3: View of perennial S-22, facing south.



Photograph C-4: View of ephemeral S-23, facing southwest.



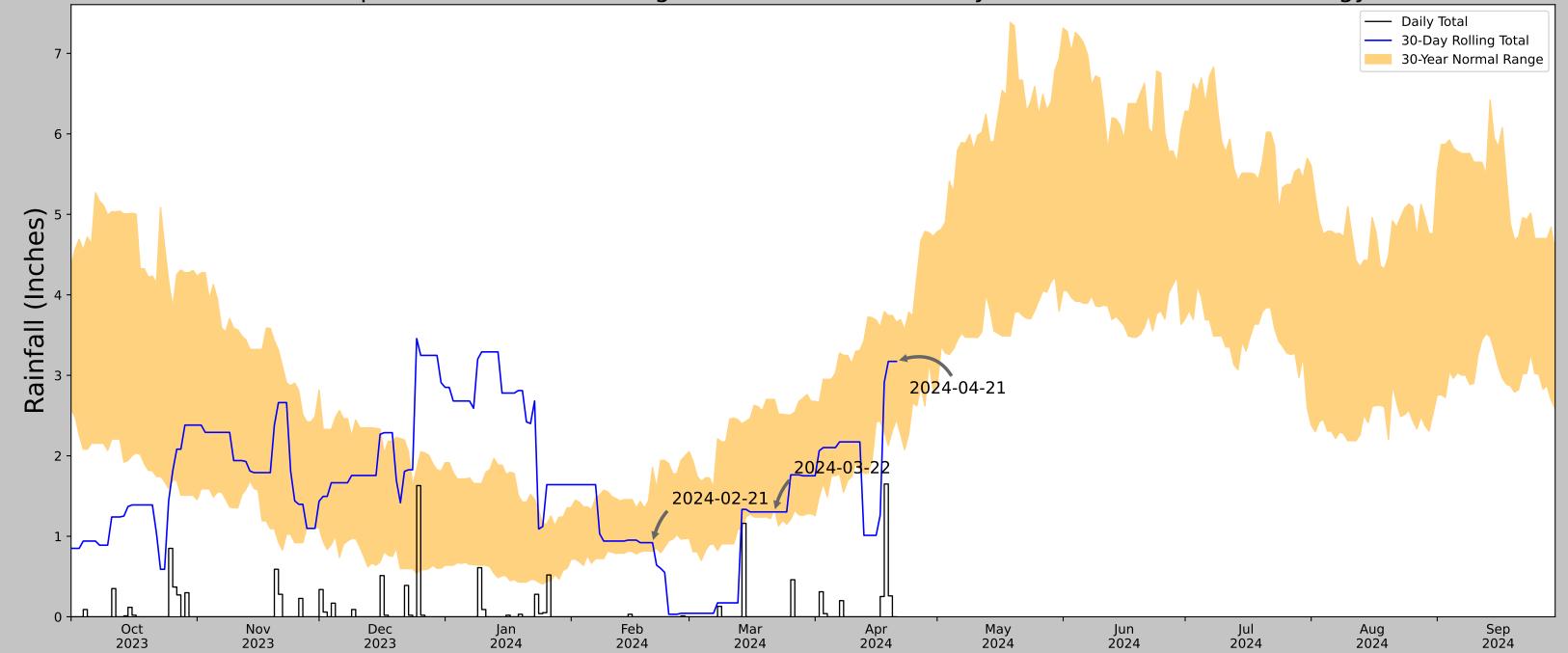


Photograph C-5: View of ephemeral S-24, facing south.



APPENDIX D - ANTECEDENT PRECIPITATION TOOL RESULTS

## Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



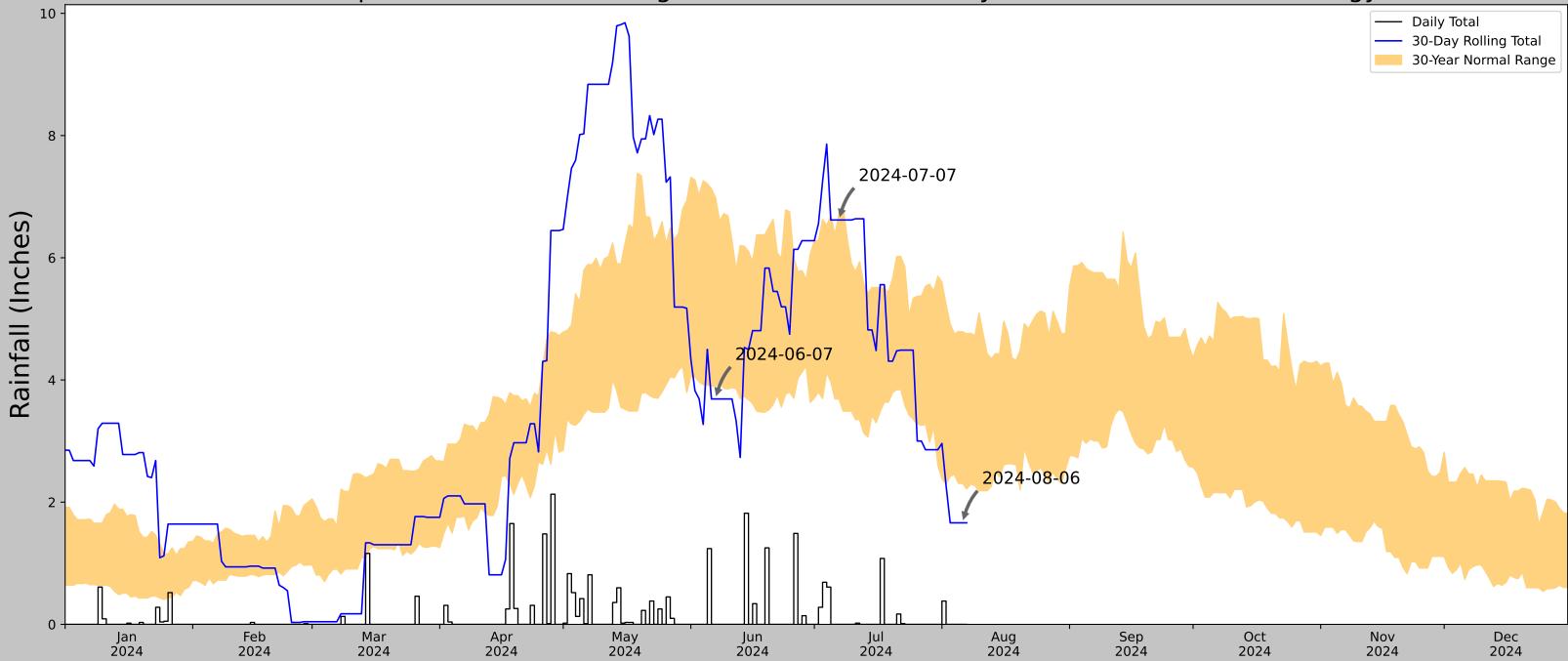
Coordinates	39.61375, -94.3353023
Observation Date	2024-04-21
Elevation (ft)	1034.616
Drought Index (PDSI)	Moderate drought (2024-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-04-21	2.45	3.659055	3.173228	Normal	2	3	6
2024-03-22	1.336614	2.700394	1.30315	Dry	1	2	2
2024-02-21	0.816535	1.856299	0.92126	Normal	2	1	2
Result							Normal Conditions - 10

WwW	Figures and tables made by the
March.	Antecedent Precipitation Tool
US Army Corps of Engineers	Version 2.0
or Engineers,	Developed by:
	U.S. Army Corps of Engineers and
<b>ERDG</b>	U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PLATTSBURG 0.6 W	39.5647, -94.474	944.882	8.126	89.734	4.386	6122	87
PLATTSBURG	39.5669, -94.4544	904.856	1.055	40.026	0.517	3325	0
PLATTSBURG 3.5 S	39.5143, -94.4689	986.877	3.493	41.995	1.719	147	2
PLATTSBURG 5.7 S	39.4847, -94.4417	974.081	5.789	29.199	2.774	26	0
GOWER 2.7 S	39.5729, -94.6013	858.924	6.804	85.958	3.647	67	1
EDGERTON	39.5075, -94.6328	839.895	9.339	104.987	5.183	1316	0
SMITHVILLE LAKE	39.3903, -94.5497	903.871	12.708	41.011	6.24	330	0
KEARNEY 3E	39.3667, -94.3294	839.895	15.705	104.987	8.716	10	0
CAMERON	39.7469, -94.2531	1009.843	17.221	64.961	8.868	3	0
AMITY 4 NE	39.8914, -94.36	974.081	23.372	29.199	11.2	6	0

## Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	39.61558, -94.359576
Observation Date	2024-08-06
Elevation (ft)	978.783
Drought Index (PDSI)	Incipient wetness (2024-07)
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-06	2.30748	4.790551	1.661417	Dry	1	3	3
2024-07-07	3.688189	6.720866	6.61811	Normal	2	2	4
2024-06-07	3.895276	6.98504	3.688976	Dry	1	1	1
Result							Drier than Normal - 8

WwW	Figures and tables made by the
17 21	Antecedent Precipitation Tool
US Army Corps of Engineers	Version 2.0
or Engineers,	Developed by:
	U.S. Army Corps of Engineers and
<b>ERDC</b>	U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PLATTSBURG 0.6 W	39.5647, -94.474	944.882	7.034	33.901	3.404	6122	69
PLATTSBURG	39.5669, -94.4544	904.856	1.055	40.026	0.517	3325	0
PLATTSBURG 3.5 S	39.5143, -94.4689	986.877	3.493	41.995	1.719	147	21
PLATTSBURG 5.7 S	39.4847, -94.4417	974.081	5.789	29.199	2.774	26	0
GOWER 2.7 S	39.5729, -94.6013	858.924	6.804	85.958	3.647	67	0
EDGERTON	39.5075, -94.6328	839.895	9.339	104.987	5.183	1316	0
SMITHVILLE LAKE	39.3903, -94.5497	903.871	12.708	41.011	6.24	330	0
KEARNEY 3E	39.3667, -94.3294	839.895	15.705	104.987	8.716	10	0
CAMERON	39.7469, -94.2531	1009.843	17.221	64.961	8.868	3	0
AMITY 4 NE	39.8914, -94.36	974.081	23.372	29.199	11.2	6	0