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Bair, Goodie And Associates, Inc.

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December 2, 2010

Ms. Sheila Newman
Army Corps of Engineers
Dillon Lake Office
4969 Dillon Dam Road
Zanesville, Ohio 43701-9652

RE: Wetland and Stream Delineation
Oxford Mining Company, LLC - Gibson
Guernsey and Noble Counties, Ohio

Dear Ms. Newman,

Enclosed for your review is one (1) Wetland and Stream Delineation Report for Oxford Mining Company, LLC's Gibson site. Oxford Mining is proposing a surface mining operation for the site and is requesting a Jurisdictional Determination. This will allow Clean Water Act Section 401 and 404 permitting to proceed.

If you have any questions, please contact this office at your earliest convenience.

Sincerely,
BAIR, GOODIE AND ASSOCIATES, INC.

Michael Wellman
Project Manager

cc: Rachel Taulbee, OEPA (Packet)
Nate Leggett, Oxford Mining Company, LLC (Letter and Map only)

Oxford Mining Company, LLC

Gibson

Sections 1 & 7
T-9-N, R-7-W
Millwood Township
Guernsey County, Ohio

and

Sections 6 & 12
T-8-N, R-7-W
Beaver Township
Noble County, Ohio

Approximately 324.7 Acres

Wetland and Stream Delineation Report

Prepared by:
BAIR, GOODIE & ASSOCIATES, INC.
153 North Broadway
New Philadelphia, Ohio 44663

Prepared: December 2010

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EXECUTIVE SUMMARY

A delineation of Waters of the United States was conducted by Bair, Goodie and Associates, Inc. in November of 2010 to determine the presence of wetlands and other Waters of the United States on Oxford Mining Company's proposed mine area. A site review was conducted on April 7, 2011 and revisions made and included. The approximate 324.7 acre site is located in sections 1 and 7 of Millwood Township Guernsey County, Ohio and sections 6 and 12 Beaver Township Noble County, Ohio. The proposed activity is to surface mine coal within the delineated limits.

All areas were investigated for the presence of Waters of the United States. Potential wetland boundaries were delineated using the "Wetland Determination Method – Eastern Mountains and Piedmont", as described in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) and the Eastern Mountains and Piedmont Regional Supplement (2009). One (1) area within the study boundary was identified as an emergent wetland, totaling 0.57 acres. Multiple stream complexes were also delineated with a total of 22,703 linear feet within the study area. Streams were assessed in the field for habitat quality. The proposed project area is part of the Leatherwood Creek Drainage Basin.

INTRODUCTION

Purpose

Oxford Mining Company, LLC has proposed mining the coal seam within the delineation boundary. Completion of the project requires compliance with Section 404 of the Clean Water Act, as amended, including the delineation of wetlands and other Waters of the United States.

The enclosed report has been prepared by Bair, Goodie and Associates, Inc. on behalf of Oxford Mining Company, LLC according to the manual: "Guidance for Preparing a Preliminary Jurisdictional Determination Report for Mining Projects within the State of Ohio". As stated in the manual: *To determine whether a permit is required under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for a project, it is necessary to delineate the location and boundaries of waters of the U.S., including adjacent wetlands, and navigable waters of the U.S. within the project area.* Therefore the determinations made regarding identification and delineation of waters of the U.S. within the project site are based on the opinions of this office. Only the Army Corps of Engineers has the authority to determine the jurisdictional status of the waters herein identified.

METHODS

Wetland Definition

In reference to the publication entitled "Corps of Engineers Wetlands Delineation Manual" (1987), wetlands are defined as: *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.* According to this definition, the three indicative parameters for a wetland must be met in order to designate an area as a wetland: (1) hydrophytic vegetation, (2) hydric soils or soils under reducing conditions, and (3) hydrology: *Area is inundated either permanently or periodically at mean water depths <6.6', or soil is saturated to the surface at some time during the growing season of the prevalent vegetation.*

Wetland Determination and Delineation

A number of data sources were reviewed to assist in making a preliminary wetland determination, and locating areas where wetlands could possibly occur. These include: the Quaker City (1976), Ohio USGS 7.5-minute series quadrangle map, Soil Surveys of Guernsey and Noble Counties, Ohio, and aerial photography. Copies of the maps can be found in Appendix A.

In addition, a field review was conducted in November of 2010 to establish locations of wetlands within the permit area using techniques outlined in the "Corps of Engineers Wetlands Delineation Manual" (1987) and the "Eastern Mountains and Piedmont" regional supplement (2009). The three wetland indicators described in the manual were applied during field studies to accurately locate wetland boundaries. A wetland determination form and an ORAM were completed within the wetland and can be found in Appendix B. Hydrophytic vegetation was identified using the manual "Field Guide to Nontidal Wetland Identification" (Tiner, Jr. 1988). Wetland perimeters were flagged and plotted using GPS, and can be seen mapped in Appendix A.

Stream Delineation

Leatherwood Creek was analyzed using a QHEI (Qualitative Habitat Evaluation Index) form during field reviews conducted in November of 2010. In addition, each stream on site was determined to be perennial, intermittent, or ephemeral and documented with photos. These photos can be found in Appendix D and the field form in Appendix C. The site was returned to during July of 2011 to conduct further habitat assessment.

RESULTS/EXISTING CONDITIONS

Description of Proposed Project

Location

The study area consists of approximately 324.7 acres situated in Millwood Township Guernsey County, Ohio and Beaver Township Noble County, Ohio. Driving directions to the site are as follows: From Interstate 70, take OH-513 south to Quaker City, Ohio. From there, travel east on CR-265 approximately 3 miles to the site on the south side of the road. The central location of the major impact area to waters of the United States within the project area is at the following NAD83 Coordinates: 39.9515°N - 81.2548°W.

Land Use
Present land use within the study area consists of some previously mined land, hayland, and undeveloped immature forest.

Geology/Hydrology
Guernsey and Noble Counties are located within the unglaciated Allegheny Plateau Region. The area has been dissected by drainage ways that eventually empty into the Ohio River. The bedrock in the counties consists of sedimentary rocks of the Pennsylvanian period. The various strata exposed in the county generally consists of numerous beds of sandstone, shale, siltstone, and coal.

Soils
Soil types within the permit site were identified using the Soil Survey of Guernsey County, Ohio (2004) and Noble County, Ohio (1990). See the following Table 1 for a list of soils within the delineation area.

Wetlands/Open Waters

One (1) area within the study boundary was identified and found to meet the definition of a wetland, totaling 0.57 acres. No other wetlands or open waters were identified within the delineation limits. See Table 2.

Wetland A: is an emergent wetland located in the northwest portion of the study area. Wetland A is an herbaceous wetland dominated by black willow, cattail, goldenrod, multiflora rose, and rice cutgrass. Primary wetland hydrology indicators include saturation of the ground to the surface. Wetland A has received an ORAM score of 38, which designates it as a Modified Category 2. This 0.57 acre wetland lies entirely within the proposed study area, and can be seen in pictures Appendix D. No indicators of wetland hydrologic conditions were observed in the surrounding upland areas.

Streams

Multiple stream complexes were found within the delineation limits. Lengths totaled 6,085 feet of perennial, 12,947 feet of intermittent, and 3,671 feet of ephemeral stream channel. See Table 3. These streams were found to be perennial, intermittent, or ephemeral. Photographs associated with these streams are located in Appendix D. Revisions and updates from additional habitat assessment can be found in Appendix C as well as the associated Tables and Narrative.

Leatherwood Creek: This perennial stream flows from the east to the west through the study area for approximately 6,084 feet. The predominant substrate types are silt, sand, and gravel with smaller amounts of cobble present. The channel had good riffle-run-pool development. The riparian width is moderate to wide, consisting of forest on both sides.

This perennial stream received a QHEI score of 63.5 and can be seen in pictures in Appendix D.

Stream 1: This intermittent stream originates in the northwest portion of the study area and flows northeast for approximately 637 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 2: This ephemeral and intermittent stream originates in the northwest portion of the study area and flows north for approximately 326 feet before entering Leatherwood Creek. The channel was dry at the time of the delineation. The riparian width is wide, consisting of forest on both sides.

Stream 2A: This ephemeral stream originates in the northwest portion of the study area and flows northeast for approximately 1,121 feet before entering Stream 2.

Stream 2A1: This intermittent stream was delineated during the field review and since added.

Stream 2A2: This intermittent stream was delineated during the field review and since added.

Stream 2A3: This ephemeral stream was delineated during the field review and since added.

Stream 2B: This ephemeral stream originates in the northwest portion of the study area and flows east for approximately 392 feet before entering Stream 2A. The riparian width is wide, consisting of forest on both sides.

Stream 3: This intermittent stream originates in the south central portion of the study area and flows north for approximately 2,525 feet before entering Leatherwood Creek. The riparian width is moderate to wide, consisting of forest on both sides.

Stream 3A: This intermittent stream originates in the west central portion of the study area and flows east for approximately 1,739 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 3B: This intermittent stream originates in the northwest portion of the study area and flows east for approximately 487 feet before entering Stream 3A. The riparian width is wide, consisting of forest on both sides.

Stream 3C: This intermittent stream originates in the central portion of the study area and flows northeast for approximately 800 feet before entering Stream 3. The riparian width is wide, consisting of forest on both sides.

Stream 3D: This ephemeral stream originates in the central portion of the study area and flows east for approximately 282 feet before entering Stream 3C. The riparian width is wide, consisting of forest on both sides.

Stream 3E: This intermittent stream was delineated during the field review and since added.

Stream 4: This intermittent stream originates in the northern portion of the study area and flows north for approximately 546 feet before entering Leatherwood CreekThe riparian width is wide, consisting of forest on both sides.

Stream 4A: This ephemeral stream originates in the northern portion of the study area and flows north for approximately 148 feet before entering Stream 4The riparian width is wide, consisting of forest on both sides.

Stream 5: This intermittent stream originates in the north portion of the study area and flows north for approximately 531 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 5A: This ephemeral stream originates in the northern portion of the study area and flows northeast for approximately 95 feet before entering Stream 5. The riparian width is wide, consisting of forest on both sides.

Stream 6: This intermittent stream originates in the north portion of the study area and flows north for approximately 403 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 7: This intermittent stream originates in the northeast portion of the study area and flows northeast for approximately 1,197 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 8: This intermittent stream originates in the northeast portion of the study area and flows northeast for approximately 832 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 9: This intermittent stream originates in the east portion of the study area and flows east for approximately 709 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 10: This stream originates as an ephemeral stream and then continues as intermittent in the southeastern portion of the study area. It flows northeast for approximately 1,423 feet before entering Leatherwood Creek. The riparian width is wide, consisting of forest on both sides.

Stream 10A: This intermittent stream originates in the eastern portion of the study area and flows east for approximately 395 feet before entering Stream 10. The riparian width is wide, consisting of forest on both sides.

Stream 10B: This ephemeral stream originates in the eastern portion of the study area and flows east for approximately 236 feet before entering Stream 10A. The riparian width is wide, consisting of forest on both sides.

Stream 10C: This ephemeral stream originates in the southeastern portion of the study area and flows east for approximately 382 feet before entering Stream 10. The riparian width is wide, consisting of forest on both sides.

Stream 11: This intermittent stream originates outside of the study area and flows south for approximately 235 feet before entering Leatherwood Creek. The channel had a maximum pool depth of 18 cm at the time of the delineation but the hydrology of this limited portion of stream is highly influenced by Leatherwood Creek itself. The riparian width is limited, passing through two culverts to reach Leatherwood Creek.

Stream 12: This intermittent stream originates outside of the study area and flows south for approximately 287 feet before entering Leatherwood Creek. The channel had a maximum pool depth of 4 cm at the time of the delineation. The riparian width is limited, passing through two culverts to reach Leatherwood Creek.

Stream 13: This ephemeral stream originates in the southwestern portion of the study area and flows south for approximately 575 feet before leaving the delineation limits. The predominant substrate types are silt and leaf pack with boulders also in place. The channel was dry at the time of the delineation. The riparian width is wide, consisting of hayland on both sides.

CONCLUSION

Oxford Mining Company, LLC's proposed coal mine site in Guernsey and Noble Counties was analyzed for streams and areas meeting the three definitive parameters of wetlands. One (1) area within the study boundary was identified as an emergent wetland, totaling 0.57 acres. Multiple stream complexes were also delineated with a total of 22,703 linear feet within the study area. The proposed project area is part of the Leatherwood Creek Drainage Basin.

This report is provided to the United States Army Corps of Engineers for review and assistance in completing a Jurisdictional Determination. A preliminary Jurisdictional Determination is requested.

Table 2: Wetlands/Open Waters
Oxford Mining Company – Gibson

		Jurisdictional			Non-Jurisdictional		
ID	Type	Wetland	Open Water	ORAM	Wetland	OpenWater	ORAM
		(acre)	(acre)		(acre)	(acre)	
WLA	Herbaceous	0.57		38			
TOTAL		0.57	0		0	0	

Table 3: Streams
Oxford Mining Company – Gibson

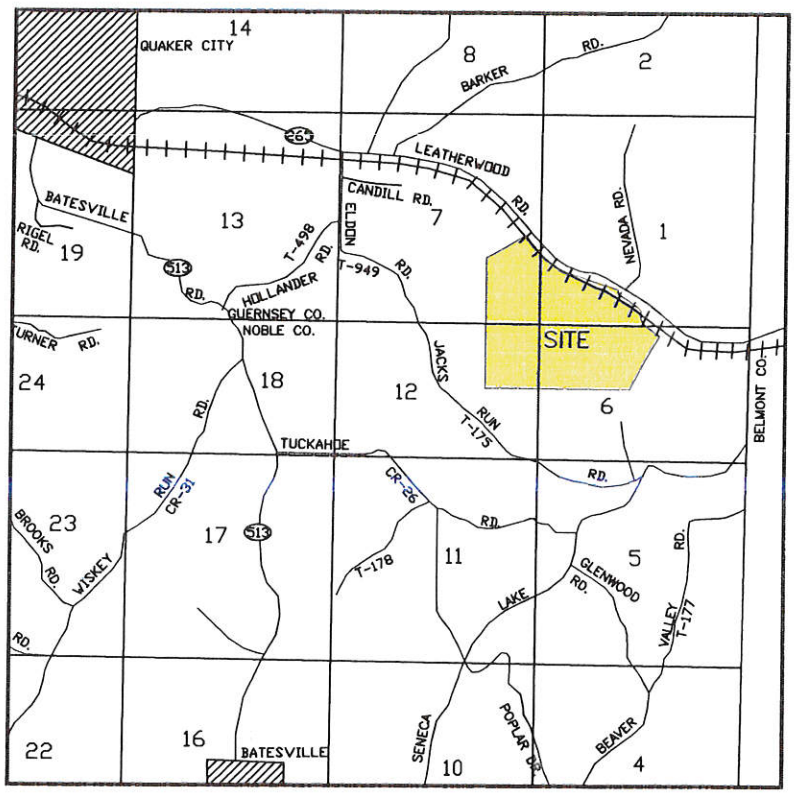
Stream	Designation	Length (ft)	Bank Full Width (m)	Water Area (ac.)
Leatherwood Creek	Perennial	6085	4.88	2.24
1	Intermittent	637	0.75	0.04
2	Intermittent	97	0.40	0.00
2	Ephemeral	229	0.40	0.01
2A	Ephemeral	1121	1.00	0.08
2A1	Intermittent	81	0.03	0.00
2A2	Intermittent	34	0.03	0.00
2A3	Ephemeral	72	0.03	0.00
2B	Ephemeral	392	0.60	0.02
3	Intermittent	2525	2.00	0.38
3A	Intermittent	1739	0.60	0.08
3B	Intermittent	487	0.75	0.03
3C	Intermittent	800	1.20	0.07
3D	Ephemeral	282	0.85	0.02
3E	Intermittent	128	0.66	0.01
4	Intermittent	546	0.75	0.03
4A	Ephemeral	148	0.55	0.01
5	Intermittent	531	1.16	0.05
5A	Ephemeral	95	0.67	0.00
6	Intermittent	403	1.50	0.05
7	Intermittent	1197	0.85	0.08
8	Intermittent	832	0.75	0.05
9	Intermittent	709	2.10	0.11

Table 3: Streams (Continued)
Oxford Mining Company – Gibson

Stream	Designation	Length (ft)	Bank Full Width (m)	Water Area (ac.)
10	Intermittent	1284	2.20	0.21
10	Ephemeral	139	2.20	0.02
10A	Intermittent	395	1.50	0.04
10B	Ephemeral	236	0.75	0.01
10C	Ephemeral	382	0.85	0.02
11	Intermittent	235	3.67	0.06
12	Intermittent	287	1.03	0.02
13	Ephemeral	575	0.75	0.03
TOTALS		**22,703**		**3.775**

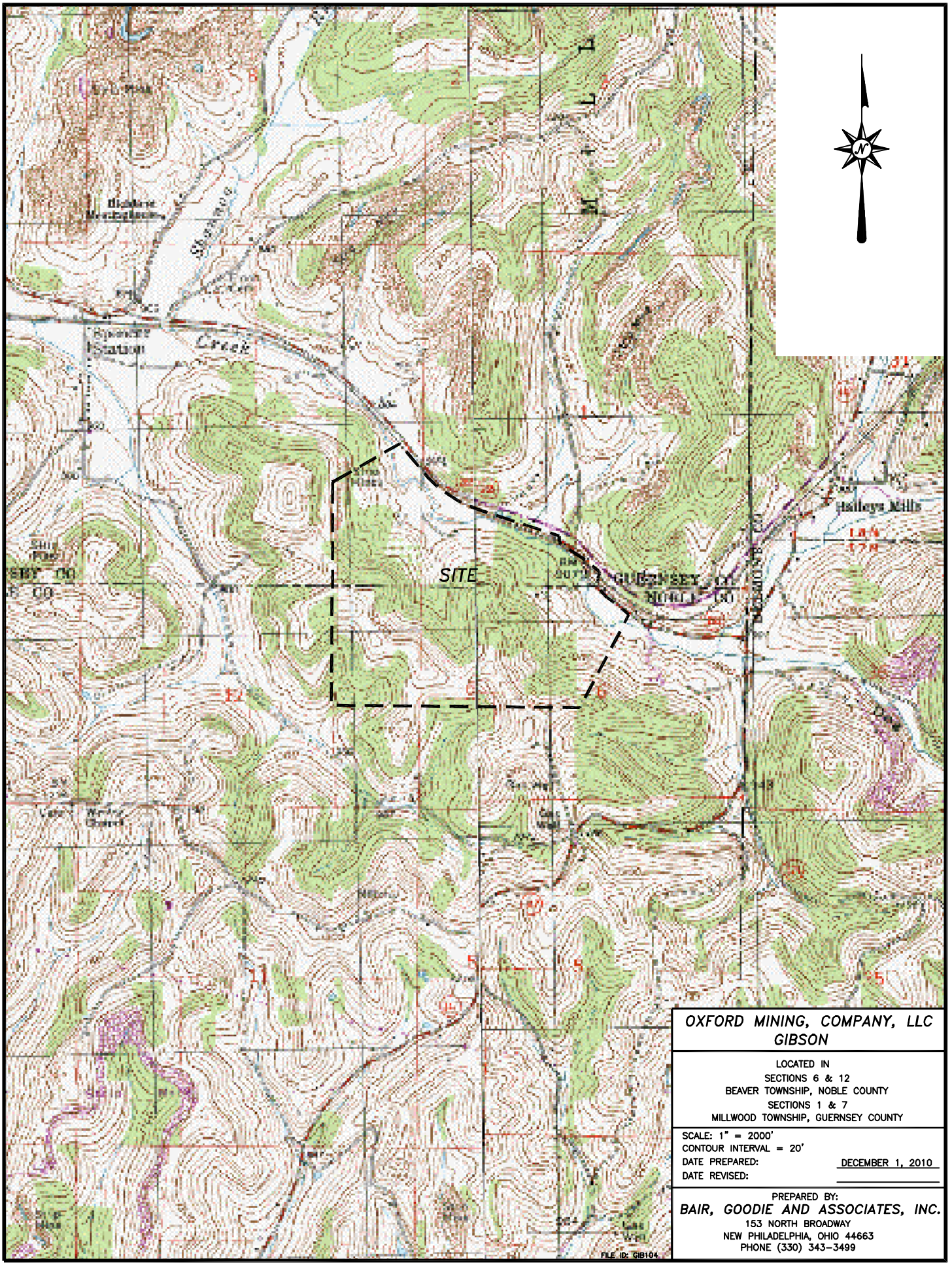
ORM Upload Sheet								
Waters_Name	Cowadin_Code	HGM_Code	Area (acres)	Linear (ft)	Waters Types	Latitude(dd nad83)	Longitude dd nad83)	Local_Waterway
Leatherwood Creek				6085	RPW	39.9572	-81.2550	Leatherwood Creek
ST 1				637	RPW	39.9573	-81.2556	Leatherwood Creek
ST 2				97	RPW	39.9573	-81.2556	Leatherwood Creek
ST 2				229	NRPW	39.9556	-81.2541	Leatherwood Creek
ST 2A				1121	NRPW	39.9556	-81.2546	Leatherwood Creek
ST 2A1				81	RPW	39.9535	-81.2568	Leatherwood Creek
ST 2A2				34	RPW	39.9535	-81.2568	Leatherwood Creek
ST 2A3				72	NRPW	39.9531	-81.2571	Leatherwood Creek
ST 2B				392	NRPW	39.9557	-81.2551	Leatherwood Creek
ST 3				2525	RPW	39.9541	-81.2532	Leatherwood Creek
ST 3A				1739	RPW	39.9547	-81.2541	Leatherwood Creek
ST 3B				487	RPW	39.9546	-81.2566	Leatherwood Creek
ST 3C				800	RPW	39.9498	-81.2529	Leatherwood Creek
ST 3D				282	NRPW	39.9504	-81.2540	Leatherwood Creek
ST 3E				128	RPW	39.9529	-81.2535	Leatherwood Creek
ST 4				546	RPW	39.9534	-81.2496	Leatherwood Creek
ST 4A				148	NRPW	39.9532	-81.2502	Leatherwood Creek
ST 5				531	RPW	39.9535	-81.2482	Leatherwood Creek
ST 5A				95	NRPW	39.9529	-81.2488	Leatherwood Creek
ST 6				403	RPW	39.9532	-81.2474	Leatherwood Creek
ST 7				1197	RPW	39.9524	-81.2465	Leatherwood Creek
ST 8				832	RPW	39.9522	-81.2455	Leatherwood Creek
ST 9				709	RPW	39.9504	-81.2440	Leatherwood Creek
ST 10				1284	RPW	39.9495	-81.2434	Leatherwood Creek
ST 10				139	NRPW	39.9495	-81.2434	Leatherwood Creek
ST 10A				395	RPW	39.9483	-81.2459	Leatherwood Creek
ST 10B				236	NRPW	39.9477	-81.2461	Leatherwood Creek
ST 10C				382	NRPW	39.9468	-81.2458	Leatherwood Creek
ST 11				235	RPW	39.9545	-81.2479	Leatherwood Creek
ST 12				287	RPW	39.9561	-81.2524	Leatherwood Creek
ST 13				575	NRPW	39.948	-81.2584	Leatherwood Creek
WLA	PEM	DEPRESS	0.57		RPWWD	39.9545	-81.2534	Leatherwood Creek

APPENDIX A



LOCATION MAP
SCALE: 1" = 1 MILE

QUAKER CITY
QUADRANGLE



OXFORD MINING, COMPANY, LLC
GIBSON

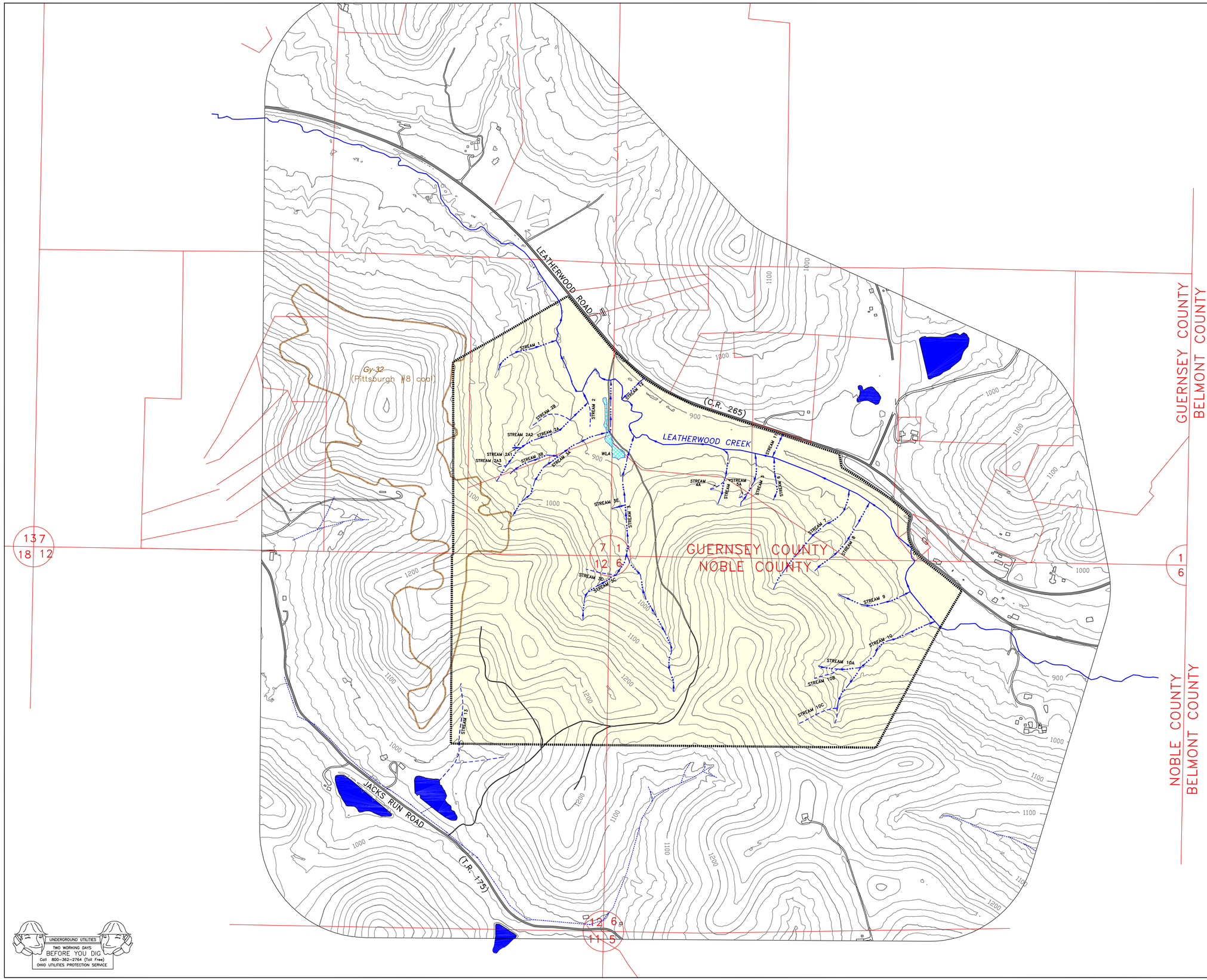
LOCATED IN
SECTIONS 6 & 12
BEAVER TOWNSHIP, NOBLE COUNTY
SECTIONS 1 & 7
MILLWOOD TOWNSHIP, GUERNSEY COUNTY

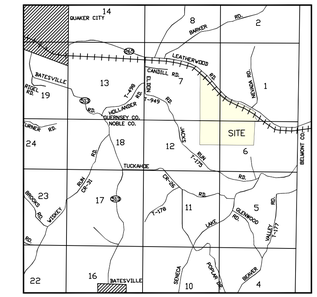
SCALE: 1" = 2000'
CONTOUR INTERVAL = 20'
DATE PREPARED: DECEMBER 1, 2010
DATE REVISED:

PREPARED BY:
BAIR, GOODIE AND ASSOCIATES, INC.
153 NORTH BROADWAY
NEW PHILADELPHIA, OHIO 44663
PHONE (330) 343-3499

Soils Map

Oxford - Gibson





LOCATION MAP
SCALE: 1" = 1 MILE

QUAKER CITY
QUADRANGLE

LEGEND

- PERMIT LIMITS
- PERENNIAL STREAM
- INTERMITTENT STREAM
- EPHEMERAL STREAM
- E T GAS — UTILITY e.g. gas(G), electric(E), telephone(T)
- RIGHT-OF-WAY LINE
- EXISTING IMPOUNDMENT
- (S) INDICATES SURFACE OWNER
- (M) INDICATES MINERAL OWNER
- (L) INDICATES LESSEE
- OCCUPIED AND UNOCCUPIED STRUCTURE
- COMMERCIAL BUILDING
- PROPERTY LINE
- ROAD
- GY-90 — DEEP MINE LIMITS (#8 COAL)
- GAS WELL
- ABANDONED GAS WELL
- 1000' BOUNDARY LINE
- JURISDICTIONAL WETLANDS WL A = 0.57 AC.

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE

ADDENDUM TO PART 3 (D) (16)

☒ WATERS OF THE U.S. MAP

PERMIT NO._____
(KING-GIBSON)

OXFORD MINING COMPANY, LLC

LOCATED IN
SECTIONS 6 & 12
BEAVER TOWNSHIP, NOBLE COUNTY
SECTIONS 1 & 7
MILLWOOD TOWNSHIP, GUERNSEY COUNTY
OHIO

SCALE: 1" = 400'
CONTOUR INTERVAL = 20'
DATE PREPARED: DECEMBER 1, 2010
DATE REVISED: FEBRUARY 25, 2013

PREPARED BY:
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FILE ID: GIB122

APPENDIX B

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Gibson City/County: Guernsey Sampling Date: 11-11-10

Applicant/Owner: Oxford Mining Company, LLC State: OH Sampling Point: WLA

Investigator(s): Michael Wellman, BGA Section, Township, Range: S1 & S7 T9N R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____

Slope (%): _____ Lat: 39.954496 Long: -81.253426 Datum: NAD83

Soil Map Unit Name: KaB - Kanawha loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No _____
Hydric Soil Present?	Yes X	No _____
Wetland Hydrology Present?	Yes X	No _____

Is the Sampled Area within a Wetland? Yes X No _____

Remarks:

Roadbed through wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: All)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	2	No	FACW
2.			
3.			
4.			
5.			
	2 = Total Cover		
Sapling/Shrub Stratum (Plot size: All)			
1. *Salix nigra*	8	Yes	FACW
2.			
3.			
4.			
5.			
	8 = Total Cover		
Herb Stratum (Plot size: All)			
1. *Leersia oryzoides*	55	Yes	OBL
2. *Scirpus cyperinus*	5	No	FACW
3. *Typha latifolia*	10	Yes	OBL
4. *Rosa multiflora*	10	Yes	FACU
5. *Solidago sp.*	10	Yes	FACW
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)