OEPA Stream Impact/Avoidance Summary Table

Applicant: Oxford Mining Company, LLC **Project Name:** Adamsville SW **Corps #:** LRH-2011-18
Date: 4/19/2013

Stream Id/Name	Total stream length on-site	Preferred Impacts			Minimal Impacts		
		Stream Length		Describe proposed types of impacts	Stream Length		Describe proposed types of Impacts
		Impacted	Avoided		Impacted	Avoided	
ST-17 eph	656	252	404	252' temp. pond const.	252	404	252' temp. pond const.
ST-19	405	21	384	21' temp. pond const.	21	384	21' temp. pond const.
ST-20	319	44	275	44' temp. pond const.	44	275	44' temp. pond const.
ST-22 eph	355	355	0	355' sed. transport	355	0	355' sed. transport
per	1,564	52	1,512	52' temp. pond const.	52	1,512	52' temp. pond const.
ST-25	281	281	0	207' temp. pond const., 74' sed. transport	281	0	207' temp. pond const., 74' sed. transport
ST-26 eph	880	880	0	880' mined thru	450	430	450' mined thru
int	1,326	430	896	52' reclam. blending, 378' temp. pond const.	0	1,326	avoided
ST-27	239	239	0	239' temp. pond const.	115	124	115' mined thru
ST-30	4,022	93	3,929	93' temp. haul road	85	3,937	85' temp. hual road
ST-33 eph	742	742	0	742' mined thru	742	0	742' mined thru
int	290	290	0	290' mined thru	290	0	290' mined thru
per	263	263	0	155' temp. pond const., 108' mined thru	263	0	155' temp. pond const., 108' mined thru
ST-35	1,572	562	1,010	437' temp. pond const., 125' sed. transport	562	1,010	437' temp. pond const., 125' sed. transport
ST-37	1,009	506	503	506' temp. pond const.	506	503	506' temp. pond const.
ST-38	70	70	0	70' temp. pond const.	70	0	70' temp. pond const.
ST-40	1,431	134	1,297	134' temp haul road	134	1,297	134' temp haul road
Total	15,424	5,214	10,210		4,222	11,202	

Impact Type:

MT = Mine Through
PC = Pond Construction
HR = Haul Road
RB = Reclamation/Blending
SS = Spoil Storage
ST = Sediment Transport
TR = Temporary Relocation
WM = Wetland Mitigation
RC = Reconstruction
AV = Avoided

Table 2 OEPA Stream Impact

JURISDICTIONAL

OEPA Wetlands Impact/Avoidance Summary Table

Applicant: Oxford Mining Company, LLC
ORAM Version Used: 5.0

Project Name: Adamsville SW
Date: 4/19/2013

Corps # LRH-2011-18

Id #	ORAM Score	Total acres on-site	Type of Impact	Preferred Degradation Alternative (acres)						Minimal Degradation Alternative (acres)					
				Impact			Avoidance			Impact			Avoidance		
				Forested	Non-Forested	Total Impact	Forested	Non-Forested	Total Avoided	Forested	Non-Forested	Total Impact	Forested	Non-Forested	Total Avoided
Category 2															
WTL-F	50	0.22	PC/RG	0.00	0.22	0.22	0.00	0.00	0.00	0.00	0.22	0.22	0.00	0.00	0.00
WTLF-1	53	0.20	MT	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.00
WTLF-4	51	0.18	PC	0.00	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18
Total		**0.60**		**0.00**	**0.60**	**0.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.42**	**0.42**	**0.00**	**0.18**	**0.18**

NON-JURISDICTIONAL

Id #	ORAM Score	Total acres on-site	Type of Impact	Preferred Degradation Alternative (acres)						Minimal Degradation Alternative (acres)					
				Impact			Avoidance			Impact			Avoidance		
				Forested	Non-Forested	Total Impact	Forested	Non-Forested	Total Avoided	Forested	Non-Forested	Total Impact	Forested	Non-Forested	Total Avoided
Category 1															
Total															

Non-jurisdictional wetlands do not exist within the permit boundary.

Non-Jurisdictional														
Grand Total	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Impact Type:

MT = Mine Through
PC = Pond Construction
HR = Highwall Reclamation
RG = Reclamation Grading
SS = Spoil Storage
ST = Sediment Transport
TR = Temporary Relocation
WM = Wetland Mitigation
RC = Reconstruction
AV = Avoided

Table 2 OEPA Wetland Impact

Oxford Mining Company, LLC
Adamsville SW

Table 3
Gain-Loss Summ

Impoundments

Loss Summary				
Existing Impoundment	Type of Impact	Area (ac)	Approx. Wtr Depth (ft)	Volume of fill (cy)
EWI-1	MT	0.49	4	3,162
EWI-2	MT	0.17	4	1,097
EWI-3	PC	0.86	4	5,550
EWI-4	PC	0.08	4	516
EWI-6	PC	0.12	4	774
Total	**Non-Isolated**	**1.72**		**11,100**

Gain Summary		
Pond ID	Permanent (Y/N)	Normal Pool Area (ac)
All sediment ponds are considered temporary.		
Total		

Oxford Mining Company, LLC
Adamsville SW

Table 3
Gain-Loss Summaries

Streams - Perennial and Intermittent

Loss Summary		
Designation	**Regime**	**Impacted Length (ft)**
ST-22	perennial	52
ST-25	perennial	281
ST-26	intermittent	430
ST-30	perennial	93
ST-33	intermittent	290
	perennial	263
ST-35	perennial	562
ST-40	perennial	134
Loss Length (ft)	Perennial	1,385
	Intermittent	720
	Total (ft)	**2,105**

Gain Summary	
Designation	**Constructed Length**
ST-22	886
*SEE NOTE**	
ST-26	430
ST-30	93
*SEE NOTE**	
*SEE NOTE**	
ST-35	437
ST-40	134
Gain Length (ft)	**1,980**
Grand Total (ft)	**1,980**

*** The length of streams 25 and 33 will be included in the reconstructed stream 22.**

Streams - Ephemeral

Loss Summary				
Stream Designation	**Flow Regime**	**Stream Length On-site**	**Width (ft)**	**Area (ac)**
ST-17	ephemeral	252	2.6	0.015
ST-19	ephemeral	21	3.0	0.001
ST-20	ephemeral	44	2.6	0.003
ST-22	ephemeral	355	1.6	0.013
ST-26	ephemeral	880	3.0	0.061
ST-27	ephemeral	239	3.0	0.016
ST-33	ephemeral	742	1.6	0.027
ST-37	ephemeral	506	3.0	0.035
ST-38	ephemeral	70	3.0	0.005
Loss Length (ft)		**3,109**	**Loss Area (ac)**	0.176

Class 1 ephemeral stream loss area will be mitigated as additional wetland mitigation.

Oxford Mining Company, LLC
Adamsville SW

Table 3
Gain-Loss Summaries

Wetlands

Loss Summary					
Jurisdictional Wetlands	ORAM Score	ORAM Category	Designation	Hydrologic Connectivity	Acreage
WTL-F	50	2	PEM	Y	0.22
WTLF-1	53	2	Wetland Fringe	Y	0.20
WTLF-4	51	2	Wetland Fringe	Y	0.18
Total Loss					**0.60**

Gain Summary		
Mitigation Area	former Pond #	Acreage
WMA #1	POND 010	0.66
WMA #2	POND 008	0.44
Total Gain		1.10

Gain Required	
	Acreage
Total Loss	0.60
Mitigation Factor	1.50
Req'd Gain	0.90
Ephemeral Stream Area	0.176
Total Req'd Gain	1.08

Class 1 ephemeral stream loss area will be mitigated as additional wetland mitigation.

APPENDIX C

Site Photographs

Ohio Rapid Assessment Method Forms (ORAM)

Use Attainability Analysis Forms (UAA)

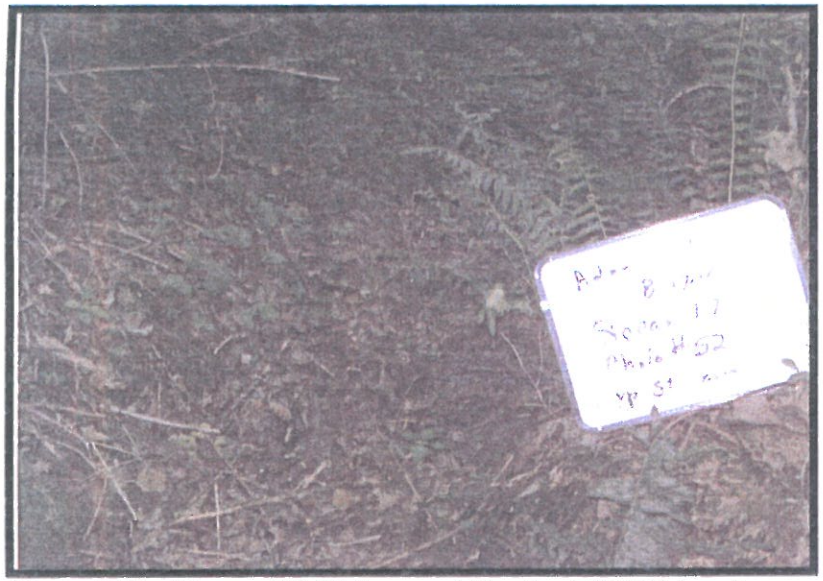

Photo #49 - Stream 17 (Ephemeral Section) HHEI location, facing upstream.

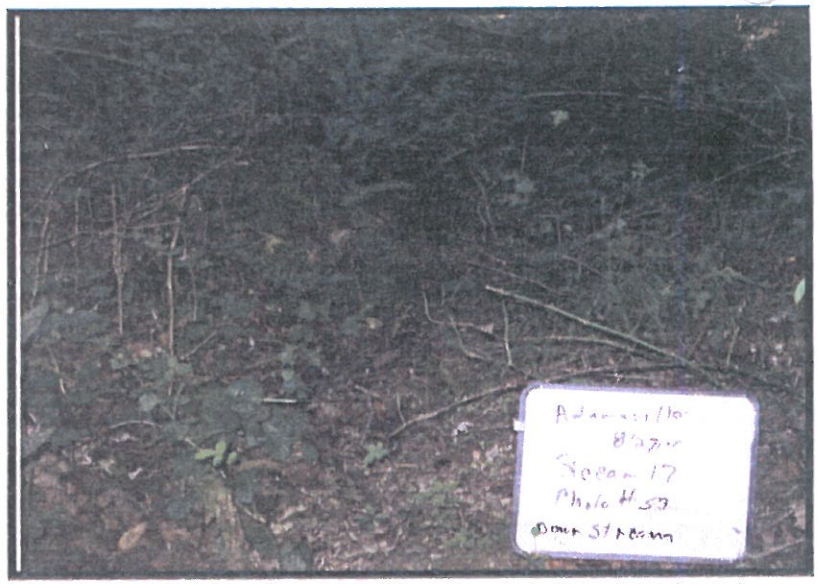

Photo #50 - Stream 17 (Ephemeral Section) HHEI location, facing downstream.

Photo #51 - Stream 18 (Blount Run) (Perennial Section) QHEI/HMFEI location, facing upstream.

Photo #52 - Stream 18 (Blount Run) (Perennial Section) QHEI/HMFEI location, facing downstream.

Photo #53 - Stream 19 (Ephemeral Section) HHEI location, facing upstream.

Photo #54 - Stream 19 (Ephemeral Section) HHEI location, facing downstream.

Photo #55 - Stream 20 (Ephemeral Section) HHEI location, facing upstream.

Photo #56 - Stream 20 (Ephemeral Section) HHEI location, facing downstream.

Photo #57 - Stream 21 (Ephemeral Section) HHEI location, facing upstream.

Photo #58 - Stream 21 (Ephemeral Section) HHEI location, facing downstream.

Photo #59 - Stream 22 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #60 - Stream 22 (Perennial Section) HHEI/HMFEI location, facing downstream.

Photo #65 - Stream 24 (Ephemeral Section) HHEI location, facing upstream.

Photo #66 - Stream 24 (Ephemeral Section) HHEI location, facing downstream.

Photo #67 - Stream 25 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #68 - Stream 25 (Perennial Section) HHEI/HMFEI location, facing downstream.

Photo #73 - Stream 26 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #74 - Stream 26 (Perennial Section) HHEI/HMFEI location, facing downstream.

Photo #75 - Stream 27 (Ephemeral Section) HHEI location, facing upstream.

Photo #76 - Stream 27 (Ephemeral Section) HHEI location, facing downstream.

Photo #77 - Stream 28 (Intermittent Section) HHEI/HMFEI location, facing upstream.

Photo #78 - Stream 28 (Intermittent Section) HHEI/HMFEI location, facing downstream.

Photo #79 - Stream 29 (Ephemeral Section) HHEI location, facing upstream.

Photo #80 - Stream 29 (Ephemeral Section) HHEI location, facing downstream.

Photo #81 - Stream 30 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #82 - Stream 30 (Perennial Section) HHEI/HMFEI location, facing downstream.

Photo #83 - Stream 31 (Perennial Section) HHEI location, facing upstream.

Photo #84 - Stream 31 (Perennial Section) HHEI location, facing downstream.

Photo #85 - Stream 32 (Intermittent Section) HHEI location, facing upstream.

Photo #86 - Stream 32 (Intermittent Section) HHEI location, facing downstream.

Photo #87 - Stream 33 (Intermittent Section) HHEI location, facing upstream.

Photo #88 - Stream 33 (Intermittent Section) HHEI location, facing downstream.

Photo #89 - Stream 33 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #90 - Stream 33 (Perennial Section) HHEI/HMFEI location, facing downstream.

Photo #91 - Stream 34 (Perennial Section) HHEI/HMFEI location, facing upstream.

Photo #92 - Stream 34 (Perennial Section) HHEI/HMFEI location, facing downstream.