



**U S Army Corps  
of Engineers**  
Huntington District

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# Public Notice

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In reply refer to Public Notice No. **2003001255** Issuance Date: **June 1, 2006**

Stream: **Un Trib Tuscarawas River** Closing Date: **July 3, 2006**

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**Please address all comments and inquiries to:**

U.S. Army Corps of Engineers, Huntington District  
**ATTN: CELRH-OR-F** Public Notice No. (*reference above*)  
502 Eighth Street  
Huntington, West Virginia 25701-2070

Phone: (304) 399-5710

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**PUBLIC NOTICE:** The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

**REGULATORY PROGRAM:** Since its early history, the U.S. Army Corps of Engineers (Corps) has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the Corps Regulatory Program.

**SECTION 10:** The Corps is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the United States (U.S.). The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

**SECTION 404:** The Corps is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the United States, including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

**TO WHOM IT MAY CONCERN:** The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act. This notice serves as the Corps of Engineers' request to the Ohio Environmental Protection Agency (Ohio EPA) to act on Section 401 Water Quality Certification for the following application.

**APPLICANT:** Penn Ohio Coal Co. dba Kimble Clay and Limestone  
3596 State Route 39 NW  
Dover, Ohio 44622

**LOCATION:** The proposed project is located in unnamed tributaries to the Tuscarawas River in Salem Township, Tuscarawas County, Ohio.

**DESCRIPTION OF THE PROPOSED WORK:** The applicant requests authorization to discharge dredged and/or fill material into waters of the United States to facilitate the removal of coal at the Port Washington Mine Site. The proposed project includes the removal of coal from the Lower Kittanning #5, Middle Kittanning #6 and Upper Freeport # 7 coal seams. Contour strip mining using the box cut method would be utilized on portions of the #5, #6 and #7 coal seams, and augur mining using a conventional augur would be utilized on portions of the #5 and #6 coal seams. Overburden material would be removed and stored on site to reach proper depths to extract coal. Upon completion of coal removal, the remaining highwall would be covered and graded to approximate original contours. The proposed action is identified as Ohio EPA's Minimal Degradation Alternative.

Approximately 8,057 linear feet of intermittent streams and 0.041 acre jurisdictional wetlands were identified within the proposed 206-acre project area. These waters of the United States are tributaries to the Tuscarawas River, a navigable water of the United States.

Implementation of the mine plan would result in impacts to a total of 6,276 linear feet of intermittent streams. Direct impacts associated with the project include mining through approximately 2,963 linear feet of stream and constructing sediments ponds in approximately 1,375 linear feet of stream. The applicant has requested to leave all sediment ponds (001, 002, and 007) constructed within the streambeds of Stream A, Stream D, and Streams G and F, respectively, as permanent ponds and not remove them after reclamation. An additional 1,938 linear feet of stream would be indirectly impacted through sediment transport.

**ALTERNATIVE ANALYSIS:** The project is not water dependent and does not require access to or siting within waters of the United States to fulfill its basic purpose. Practicable alternatives that do not involve waters of the United States are presumed to be available unless clearly demonstrated otherwise. The applicant is required to provide an alternative analysis that must overcome that presumption prior to receiving authorization for the placement of fill material. The applicant has submitted the required alternative analysis and it is currently being reviewed.

**MITIGATION PLAN:** The applicant submitted a compensatory mitigation plan (CMP) to compensate for the proposed unavoidable permanent impacts to approximately 6,276 linear feet of intermittent stream and 0.041 acre wetlands regulated by the Corps of Engineers. The entire permit area would be reclaimed to approximate original contour and approximate original drainage patterns. The applicant proposes to compensate for these unavoidable impacts by performing on-site, in-kind restoration of 4,901 linear feet of stream using natural stream channel design techniques. A 0.063-acre emergent wetland would be constructed within the upper reaches of Permanent Pond 002 on Stream D.

**WATER QUALITY CERTIFICATION:** A Section 401 Water Quality Certification is required for this project. It is the applicant's responsibility to obtain certification from the Ohio EPA.

**HISTORIC AND CULTURAL RESOURCES:** The National Register of Historic Places (NRHP) has been consulted and it has been determined there are no properties currently listed on the register that are in the area affected by the project. This public notice serves as coordination

with the State Historic Preservation Office for their review regarding historic properties. Comments concerning archeological sensitivity of a project area should be based upon collected data.

**ENDANGERED/THREATENED SPECIES REVIEW:** This public notice also serves as coordination with the U. S. Fish and Wildlife Service (USFWS) regarding threatened or endangered species. This public notice serves as a request to the U.S. Fish and Wildlife Service for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area that would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

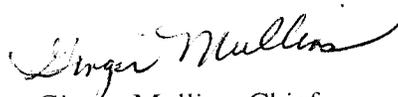
The proposed project lies within the distribution range of the endangered Indiana bat (*Myotis sodalis*). The applicant prepared an Indiana bat habitat evaluation and protection and enhancement plan. In a letter dated January 27, 2006 USFWS indicated the plan satisfies the requirement of the ODNR, DMRM Permitting Policy and Procedure Directive 2004-1: Measures for Protecting the Endangered Indiana Bat.

The Huntington District has consulted the most recently available information and has determined the project is not likely to affect the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat of such species that has been determined to be critical.

**PUBLIC INTEREST REVIEW AND COMMENT:** Any person who has an interest that may be adversely affected by the issuance of a permit may request a public hearing. The request must be submitted in writing to the District Engineer on or before the expiration date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity. This application will be reviewed in accordance with 33 CFR 320-331, the Regulatory Program of the U. S. Army Corps of Engineers (USACE), and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U. S. Environmental Protection Agency pursuant to Section 404(b)(1) of the CWA. Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof; of those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. Written statements on these factors received in this office on or before the expiration date of this public notice will become a part of the record and will be considered in the final determination. A permit will be granted unless its issuance is found to be contrary to the public interest.

**SOLICITATION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. For accuracy and completeness of the administrative record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**CLOSE OF COMMENT PERIOD:** All comments pertaining to this Public Notice must reach this office on or before the close of the comment period listed on page one of this Public Notice. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to Ms. Tammy R. Fudge, Regulatory Project Manager, South Regulatory Section, CELRH-OR-FS, U. S. Army Corps of Engineers Huntington District, 502 Eighth Street, Huntington, West Virginia 25701-2070. Please note names and addresses of those who submit comments in response to this public notice may be made publicly available. Thank you for your interest in our nation's water resources. If you have any questions concerning this public notice, you may reach Ms. Tammy R. Fudge of the South Regulatory Section at 304-399-5710 or [tammy.r.fudge@lrh01.usace.army.mil](mailto:tammy.r.fudge@lrh01.usace.army.mil).

  
Ginger Mullins, Chief  
Regulatory Branch

(O)

**Minimal Degradation Alternative (Proposed Action)**

MT - mine through, SP - spoil in, ST - sediment transport, PC - pond construction

**A. Streams**

Stream I.D.	Type E, I, or P	HHEI Score	PHWH Class	Total Length on Site (ft.) <sup>1</sup>	Total Length Impacted (ft.)	MT/SP Impact (ft.)	ST Impact (ft.)	PC Impact (ft.)	% Avoided
S-A	I	59	3	2,485	1910	1,050	375	485	23
S-B	I	55	2	680	680	575	105	--	0
S-B-1	I	17	1	252 <sup>2</sup>	252	88	164	--	0
S-C	I	46	2	400	400	225	175	--	0
S-D	I	46	2	2,030	1,630	695	455	480	20
S-D-1	I	24	1	370	364	205	159	--	2
S-E	I	55	3	680	250	125	125	--	63
S-F	I	55	3	130	130	--	--	130	0
S-G	I	55	3	660	660	--	380	280	0
S-H	I	18	Mod. 1	110	0	--	--	--	100
S-I	I	20	Mod. 1	260	0	--	--	--	100
<b>Totals</b>	NA	NA	NA	8,057 <sup>3</sup>	6,276	2,963	1,938	1,375	22%

<sup>1</sup>Includes stream-length located in original permit area, prior to avoidance/minimization revisions.

<sup>2</sup> Stream S-B-1 was reported as 190 linear feet in the delineation report. Actual length of stream is 252 linear feet.

<sup>3</sup> Total stream length reported as 7,995 in the delineation report. Length of 8,057 includes new length of S-B-1, described above.

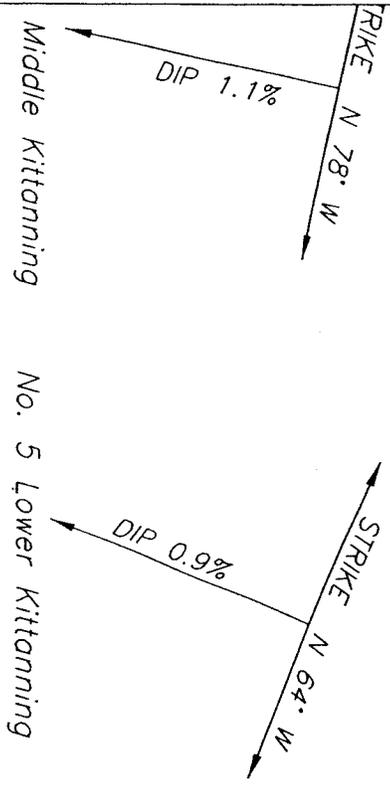
**Total** On-site **Impacted** **Avoided**  
 Intermittent Streams 8,057 6,276 1,781

**B. Wetlands**

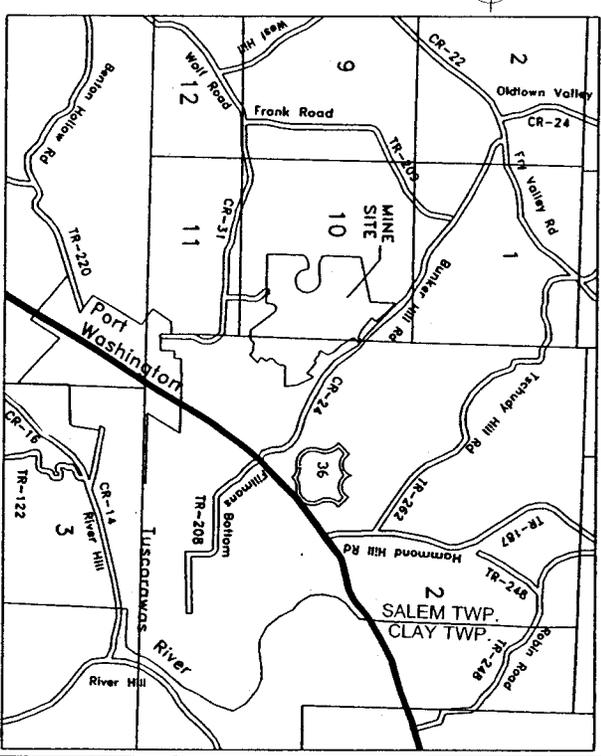
Wetland I.D.	Isolated or Jurisdictional	Forested or Non (F) / (N)	ORAM Score	ORAM Category	Total Acreage on site <sup>1</sup>	Total Acreage Impacted	<sup>1</sup> MT Impact (ac.)	<sup>1</sup> ST Impact (ac.)	<sup>1</sup> PC Impact (ac.)	<sup>1</sup> SE Impact (ac.)	% Avoided
WD-1	Jurisdictional	N	26.5	I	0.163	0	--	--	--	--	100
WD-2	Jurisdictional	F	43	Mod. 2	0.133	0	--	--	--	--	100
WD-3	Jurisdictional	N	41	Mod. 2	0.395	0	--	--	--	--	100
WD-4	Jurisdictional	N	28.5	I	0.040	0	--	--	--	--	100
WD-5	Jurisdictional	N	33	1 or 2	0.041	0.041	--	--	0.041	--	0
WD-6	Isolated	F	21	I	0.001	0.001	--	--	--	0.001	0
<b>Totals</b>	NA	NA	NA	NA	0.773	0.042	0	0	0.041	0.001	95%

<sup>1</sup>Includes acreage located in original permit area, prior to avoidance/minimization revisions. Revisions have removed WD's 1-4 from the Permit Area.

DRAINAGE BASIN  
TUSCARAWAS RIVER



-LOCATION MAP-



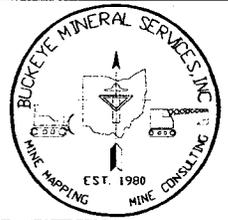
LOCATION MAP  
SCALE: 1" = 1 MILE

-LEGEND-

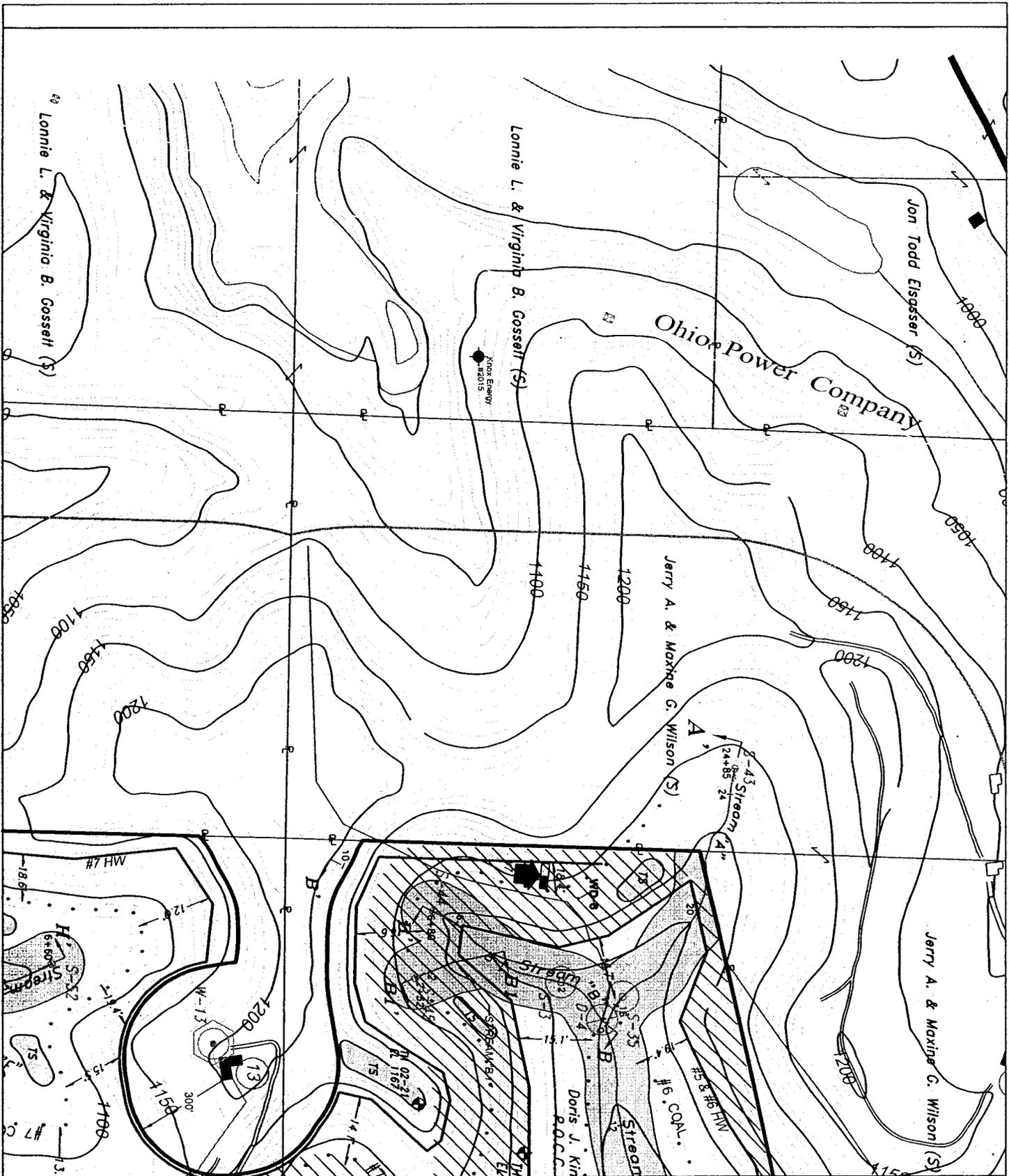
- Natural drainage
- Intermittent Stream
- Perennial Stream
- Previous Strip Mining
- Contour Line
- Haul Road
- Stream Crossing
- Underground Mine Entry
- Existing Sediment Pond
- Public Road
- Utility Line
- Pumped Drainage
- Diversion Ditch
- Permit Area
- Test Hole
- Property Line
- Topsoil Storage
- Alternative Resolving Material
- Hydric Soil Storage
- Underground Mine Shaft
- Entrance Sign
- Proposed Sediment Pond
- Inaccessible Public Road

Application Acreage Summary	
Proposed for: Year 1	20.0 Acres
Year 2	46.1 Acres
Year 3	46.1 Acres
Year 4	46.1 Acres
Year 5	46.0 Acres
<b>Total Permit</b>	<b>204.3 Acres</b>
#7 Strip Coal	37.5 Acres
#6 Strip Coal	27.3 Acres
#6 Auger Coal	39.9 Acres
#5 Strip Coal	49.8 Acres
#5 Auger Coal	39.9 Acres

A B C D E F G H I J K L M N O P	SHEET TITLE: <b>APPLICATION MAP</b>	DATE: 2/9/06
	PROJECT NAME: <b>PORT WASHINGTON</b>	DRAWN BY: CJW
	COMPANY NAME: <b>PENN-OHIO COAL CO. dba KIMBLE CLAY &amp; LIMESTONE</b>	SCALE: 1" = 400'







A	E
B	F
C	G
D	H
M	I
N	J
O	K
P	L

SHEET TITLE:  
**APPLICATION MAP**

PROJECT NAME:  
**PORT WASHINGTON**

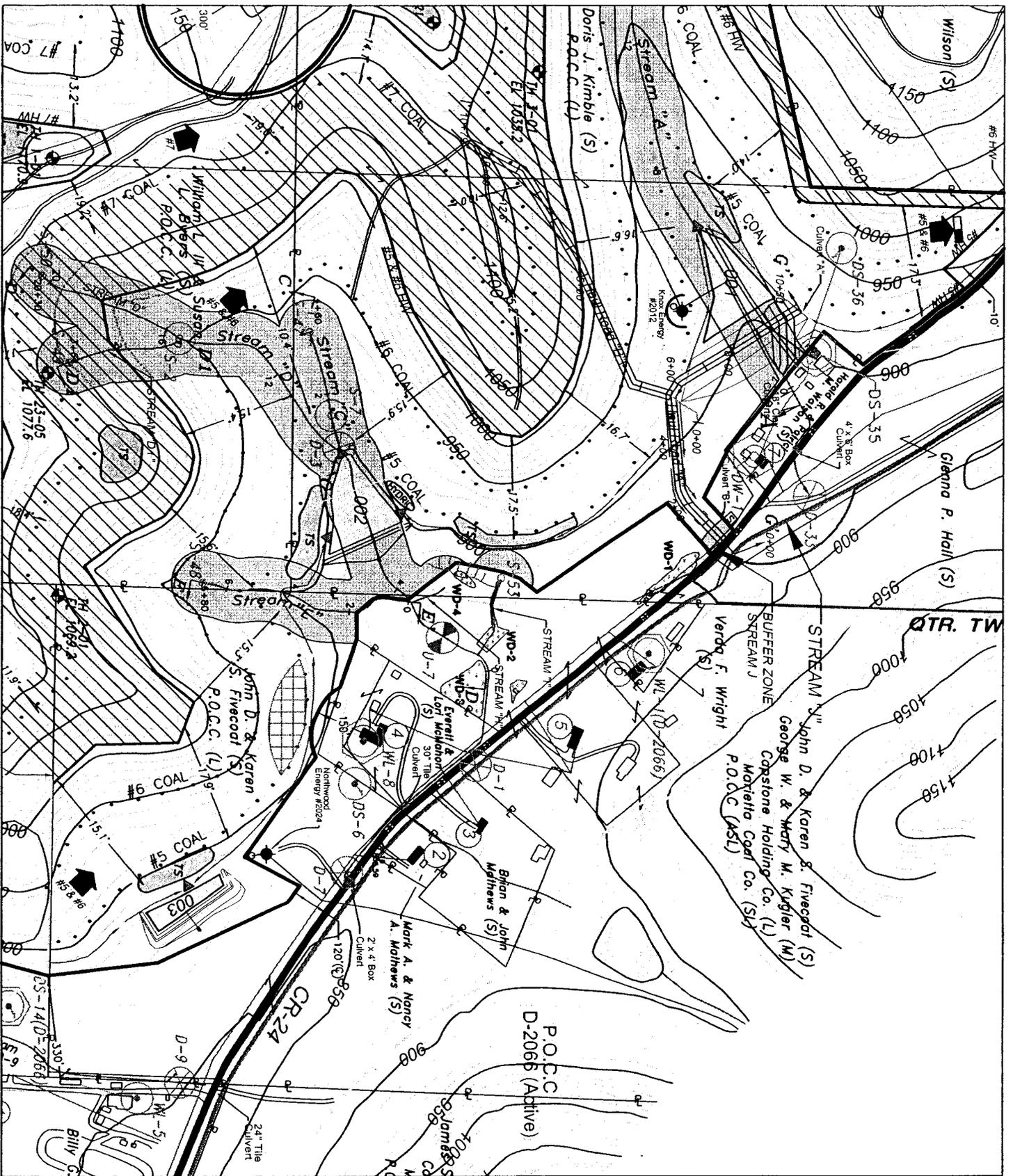
COMPANY NAME:  
**PENN-OHIO COAL CO. dba KIMBLE CLAY & LIMESTONE**

DATE: 2/9/06

DRAWN BY: CJW

SCALE: 1" = 400'





A	E
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SHEET TITLE:  
**APPLICATION MAP**

PROJECT NAME:  
**PORT WASHINGTON**

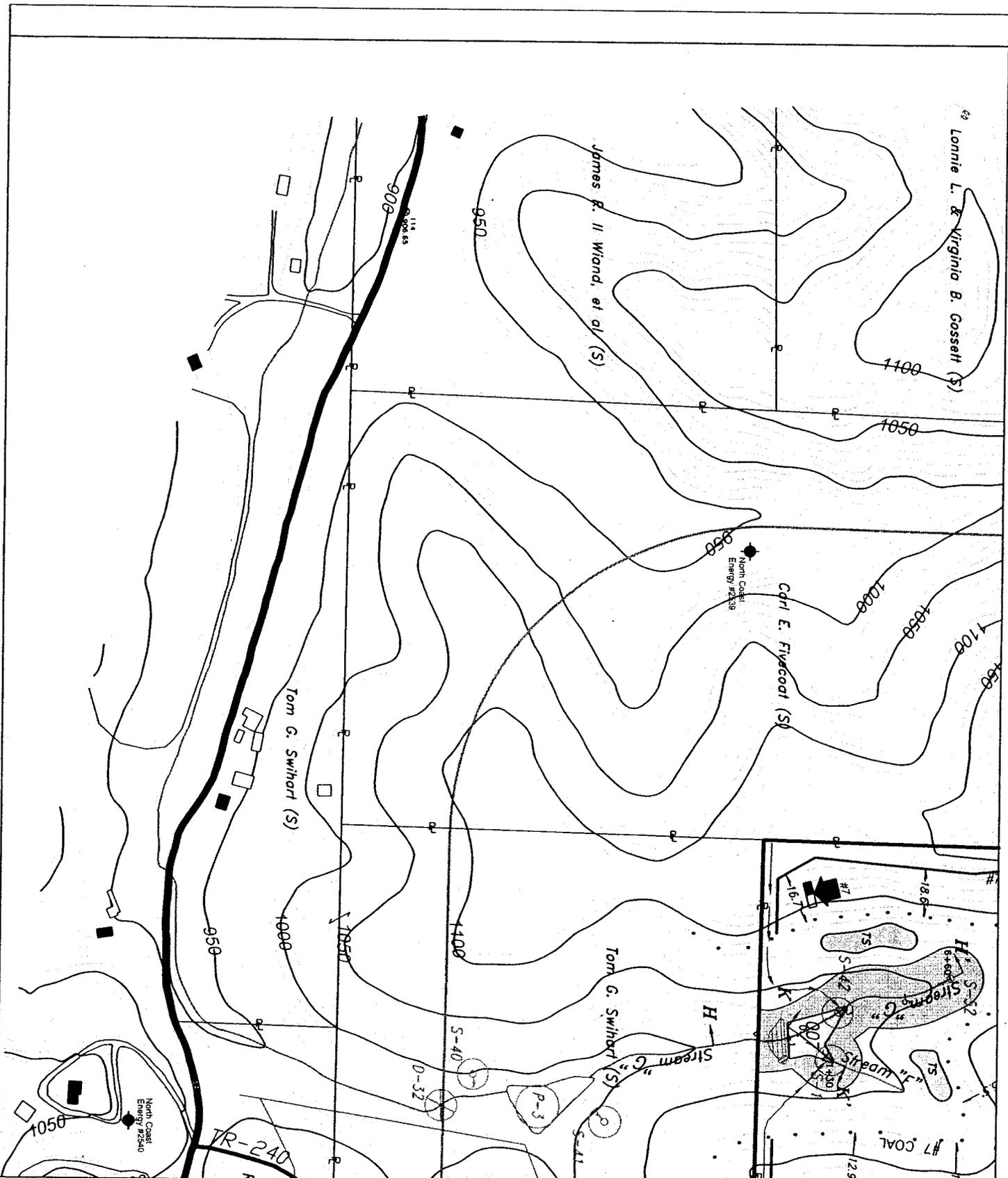
COMPANY NAME:  
**PENN-OHIO COAL CO. dba KIMBLE CLAY & LIMESTONE**

DATE: 2/9/06

DRAWN BY: CJW

SCALE: 1" = 400'





M	1
N	2
O	3
P	4
L	5
K	6
J	7
I	8
H	9
G	10
F	11
E	12

SHEET TITLE:  
**APPLICATION MAP**

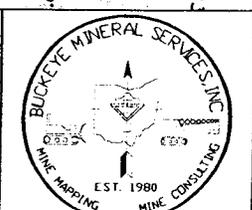
PROJECT NAME:  
**PORT WASHINGTON**

COMPANY NAME:  
**PENN-OHIO COAL CO. dba KIMBLE CLAY & LIMESTONE**

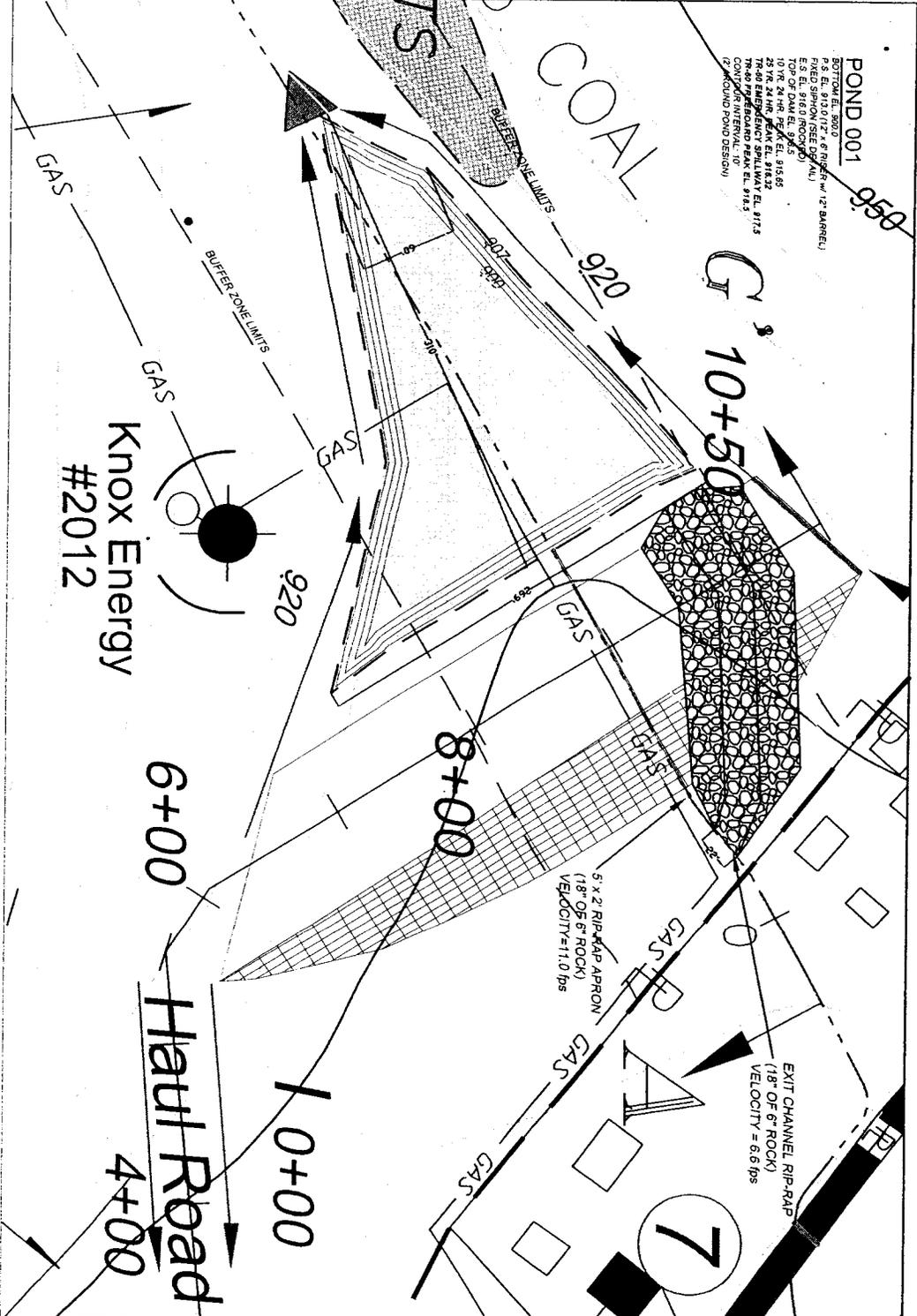
DATE: 2/9/06

DRAWN BY: CJW

SCALE: 1" = 400'



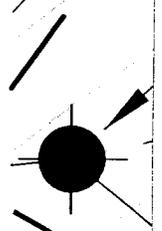
**POND 001**  
 950  
 BOTTOM EL. 990  
 P.S. EL. 913.0 FT. x 6" RIP-RAP w/ 12" SANDREU  
 FIXED SIPHON (SEE DES. PLAN)  
 5.0' EL. 913.0 (ROCK)  
 10' W/ 24" HD PE. EL. 915.65  
 25' W/ 24" HD PE. EL. 916.32  
 TR-40 EMERGENCY SPILLWAY EL. 917.5  
 CONTROL STRUCTURE EL. 918.3  
 (2" ROUND POND DESIGN)



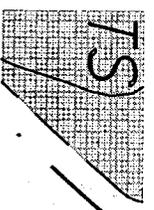
NOTES: THE G  
 POND 001 WILL  
 TO AGREEMENT  
 PRIOR TO THE  
 THE FIXED SIF  
 THE PERMANE  
 SIPHON DESIG  
 SIPHON DESIG  
 ATTACHMENT

Knox Energy  
 #2012

Haul Road  
 4+00  
 6+00  
 8+00  
 10+00



**POND 003**  
 BOTTOM EL. 870

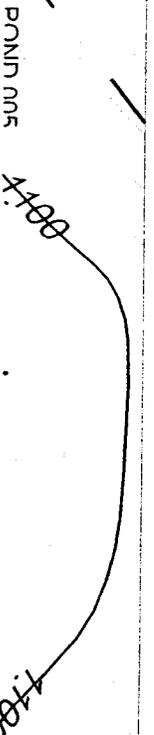
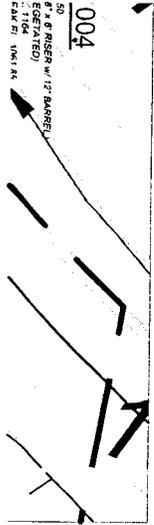
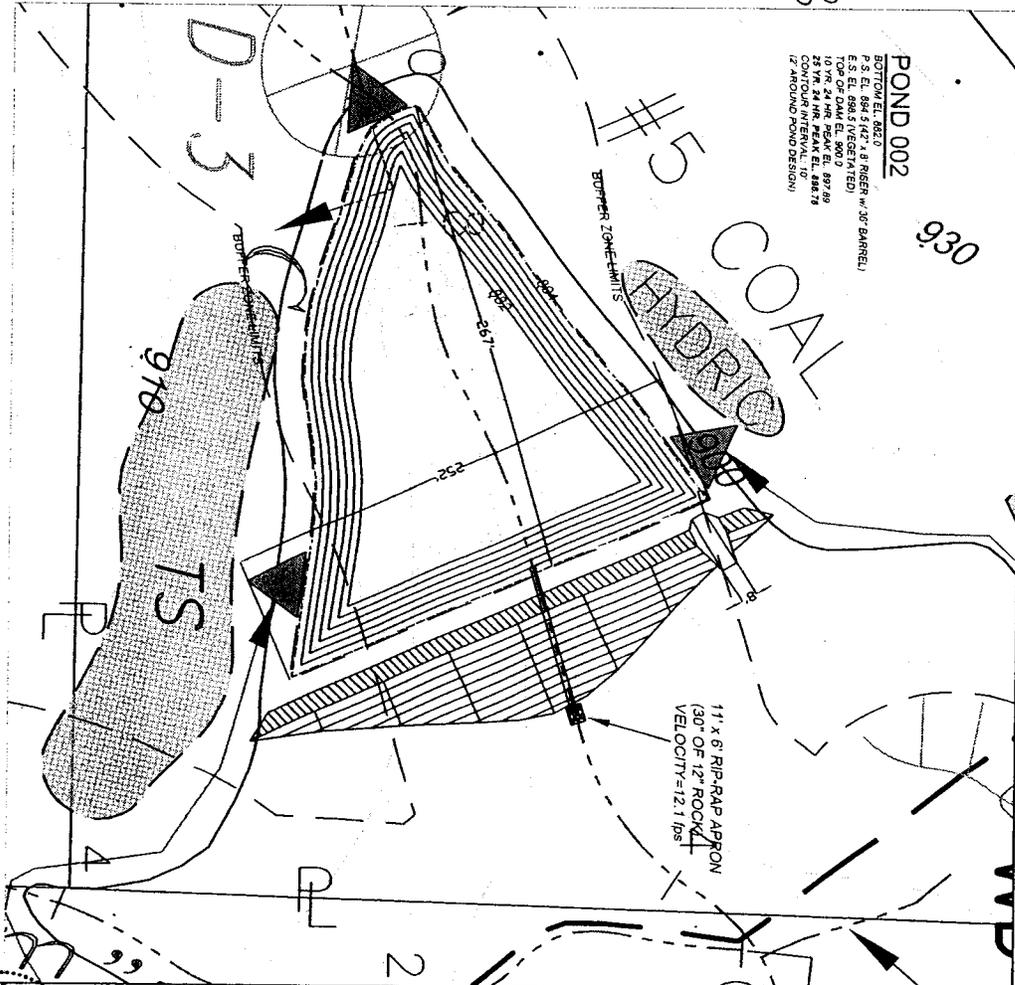


**POND 004**  
 BOTTOM EL. 1050  
 P.S. EL. 1000.0 FT. x 6" RIP-RAP w/ 12" SANDREU  
 TOP OF SANDREU EL. 1014  
 10' W/ 24" HD PE. EL. 1015.65

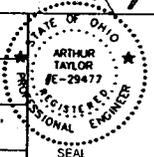


NOTES: THE GAS LINE THAT RUNS THROUGH POND 001 WILL BE RELOCATED, ACCORDING TO AGREEMENT WITH THE GAS COMPANY, PRIOR TO THE CONSTRUCTION OF THE POND. THE FIXED SIPHON WILL BE LEFT AS PART OF THE PERMANENT DESIGN OF POND 001. FIXED SIPHON DESIGN SHEET INCLUDED WITH THE ATTACHMENT 20.

**POND 002**  
 BOTTOM EL. 882.0  
 P. S. EL. 894.5 (42' x 8' RIGER w/ 30" BARREL)  
 E. S. EL. 894.5 (VEGETATED)  
 10 YR. 24 HR. PEAK EL. 897.89  
 25 YR. 24 HR. PEAK EL. 898.75  
 CONTROL INTERVAL: 10'  
 (2' MINIMUM POND DESIGN)



1/13/05  
 1/5/06  
 E: 1" = 50'



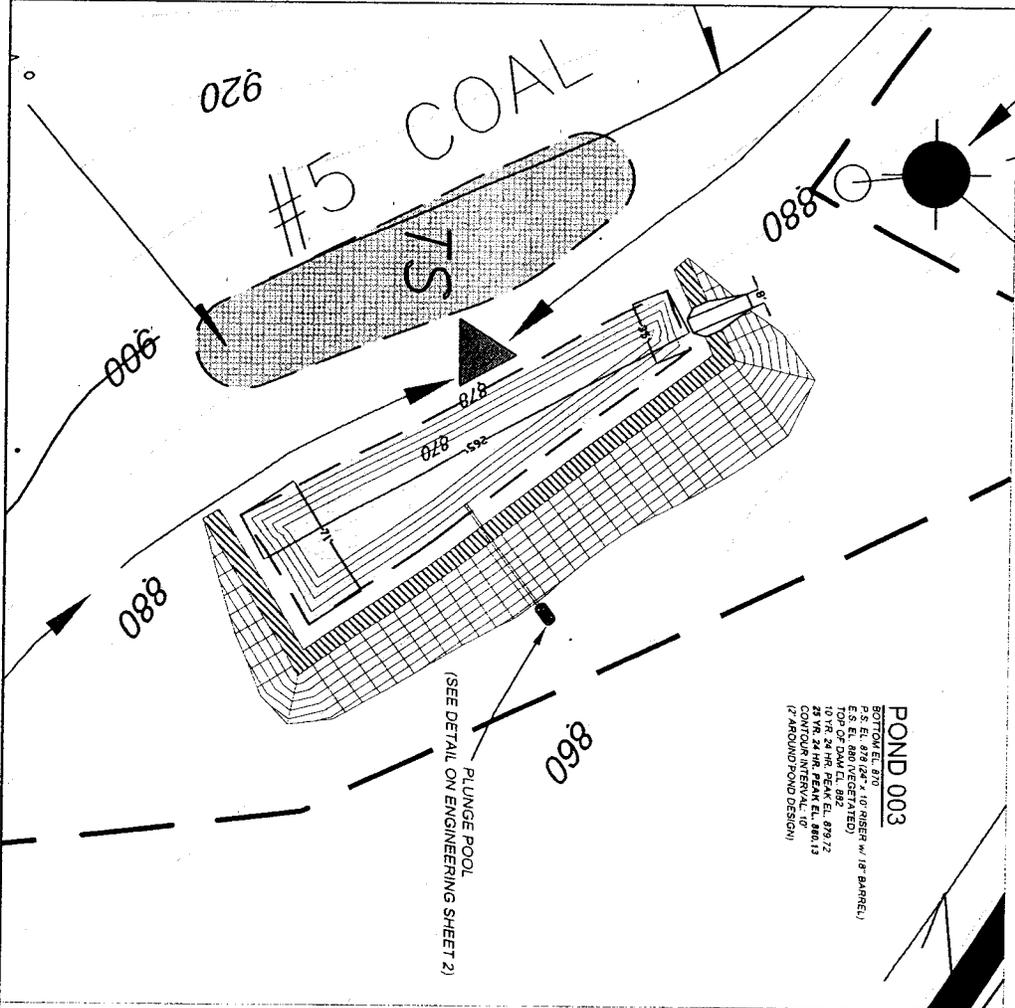
ARTHUR TAYLOR, P.E.

**BUCKEYE MINERAL SERVICES, INC.**  
 834 COOKSON AVE.  
 P.O. BOX 546  
 NEW PHILADELPHIA, OHIO 44663  
 (330)339.2100

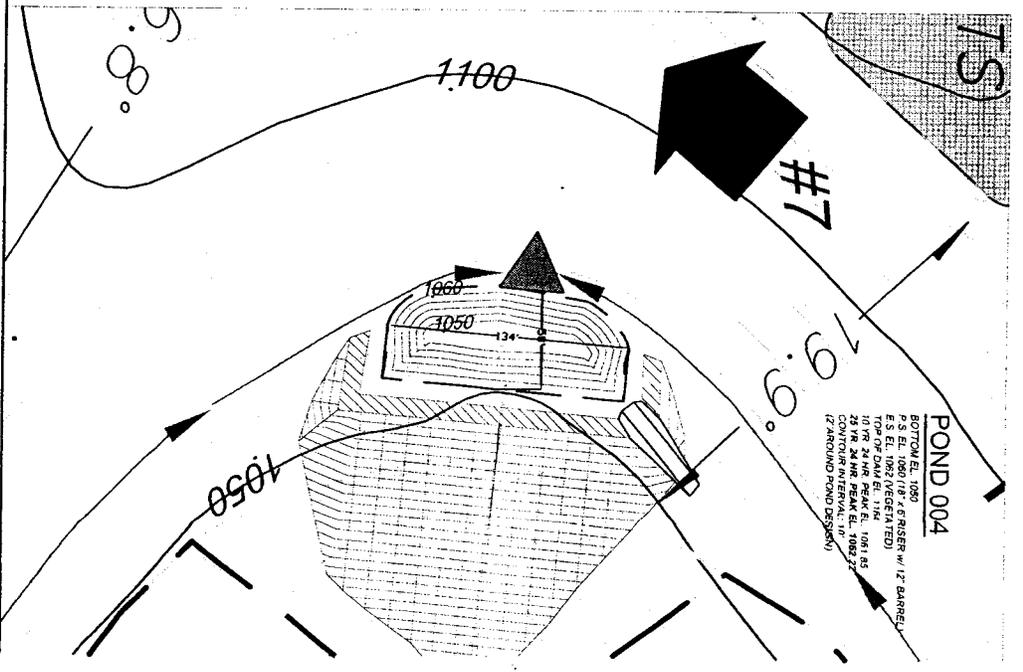


#2U12

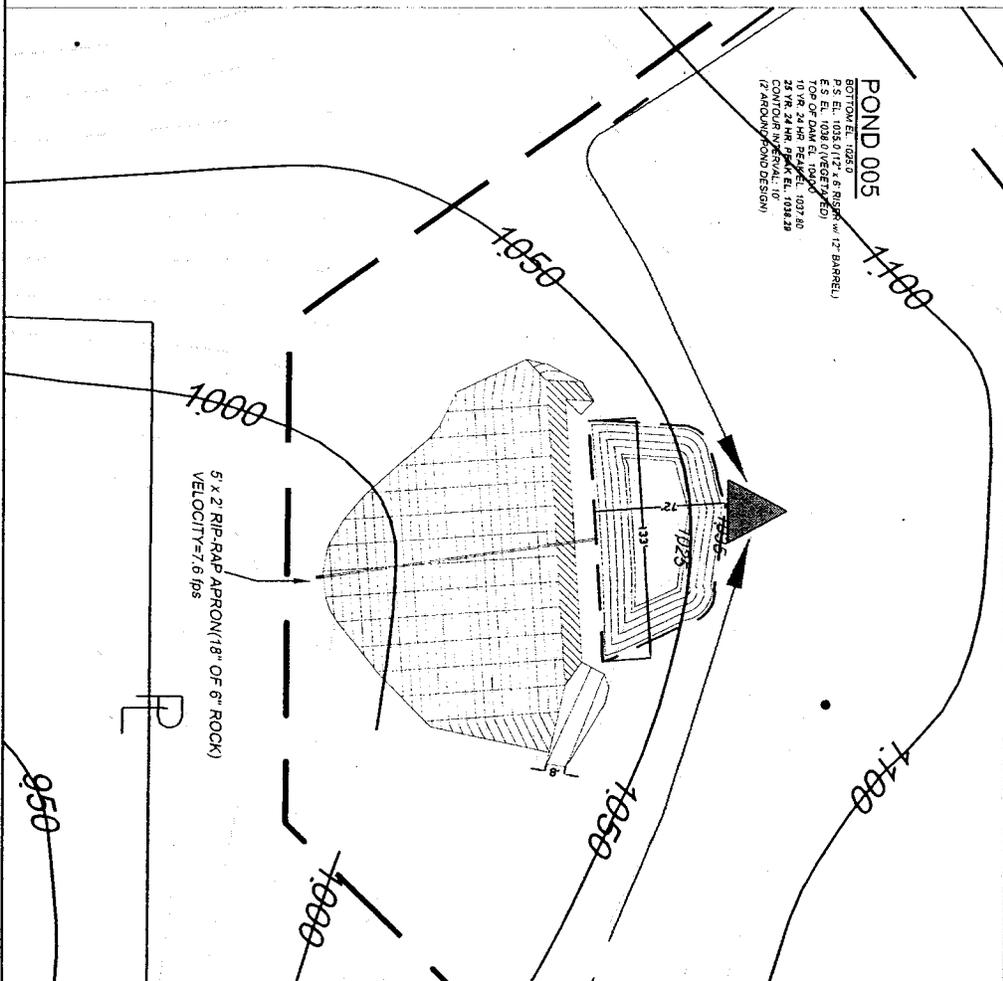
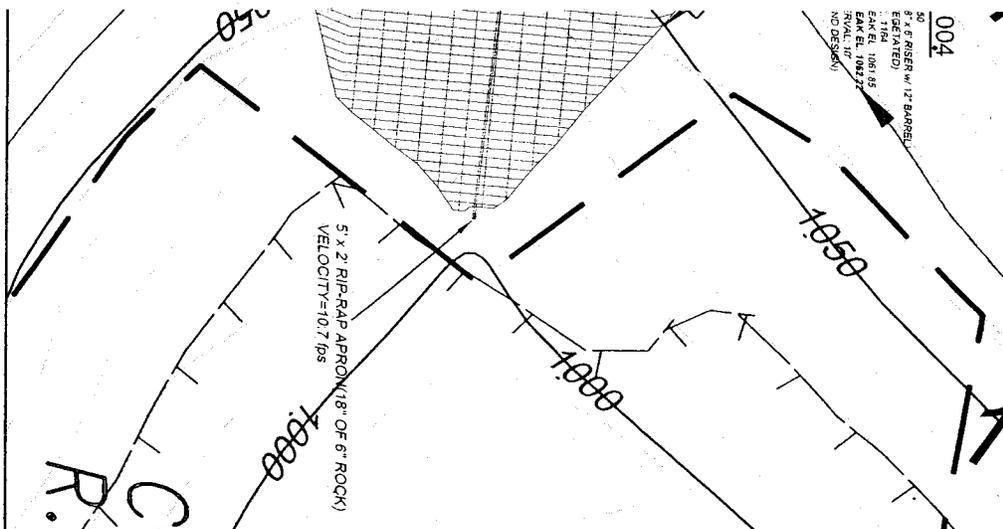
GAS



**POND 003**  
 BOTTOM EL. 870  
 P.S. EL. 878.64' x 10' RISER w/ 18' BARREL  
 P.S. EL. 878.64' (VEGETATED)  
 TOP OF DAM / 10' RISER  
 10 YR. 24 HR. PEAK EL. 879.72  
 25 YR. 24 HR. PEAK EL. 880.13  
 (2' AROUND POND DESIGN)



**POND 004**  
 BOTTOM EL. 1060  
 P.S. EL. 1060.18' x 6' RISER w/ 12' BARREL  
 P.S. EL. 1062 (VEGETATED)  
 TOP OF DAM / 10' RISER  
 10 YR. 24 HR. PEAK EL. 1061.85  
 25 YR. 24 HR. PEAK EL. 1062.27  
 CONTOUR INTERVAL: 10'  
 (2' AROUND POND DESIGN)



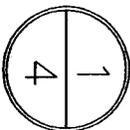
004

50  
 8' x 6' RISER w/ 12 BARRELS  
 (SEE PLAN)  
 BANK EL. 1061.55  
 BANK EL. 1062.77  
 (NO DESIGN)

5' x 2' RIP-RAP APRON (18" OF 6" ROCK)  
 VELOCITY=10.7 fps

POND 005  
 BOTTOM EL. 1025.0  
 P.S. EL. 1035.0 (12' x 6' RISER w/ 12 BARRELS)  
 E.S. EL. 1038.0 (VEGETATED)  
 TOP OF DAM EL. 1050.0  
 25' W. 24' H. P.S. EL. 1037.55  
 25' W. 24' H. P.S. EL. 1041.55  
 CONTOUR INTERVAL: 1.0'  
 (2 AROUND POND DESIGN)

5' x 2' RIP-RAP APRON (18" OF 6" ROCK)  
 VELOCITY=7.6 fps

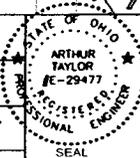


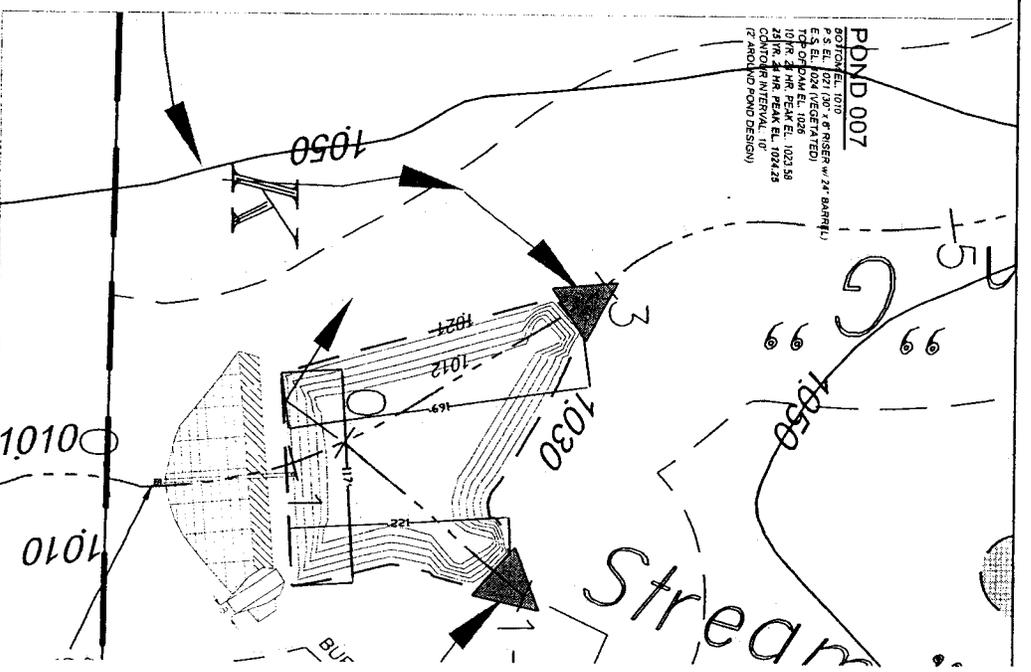
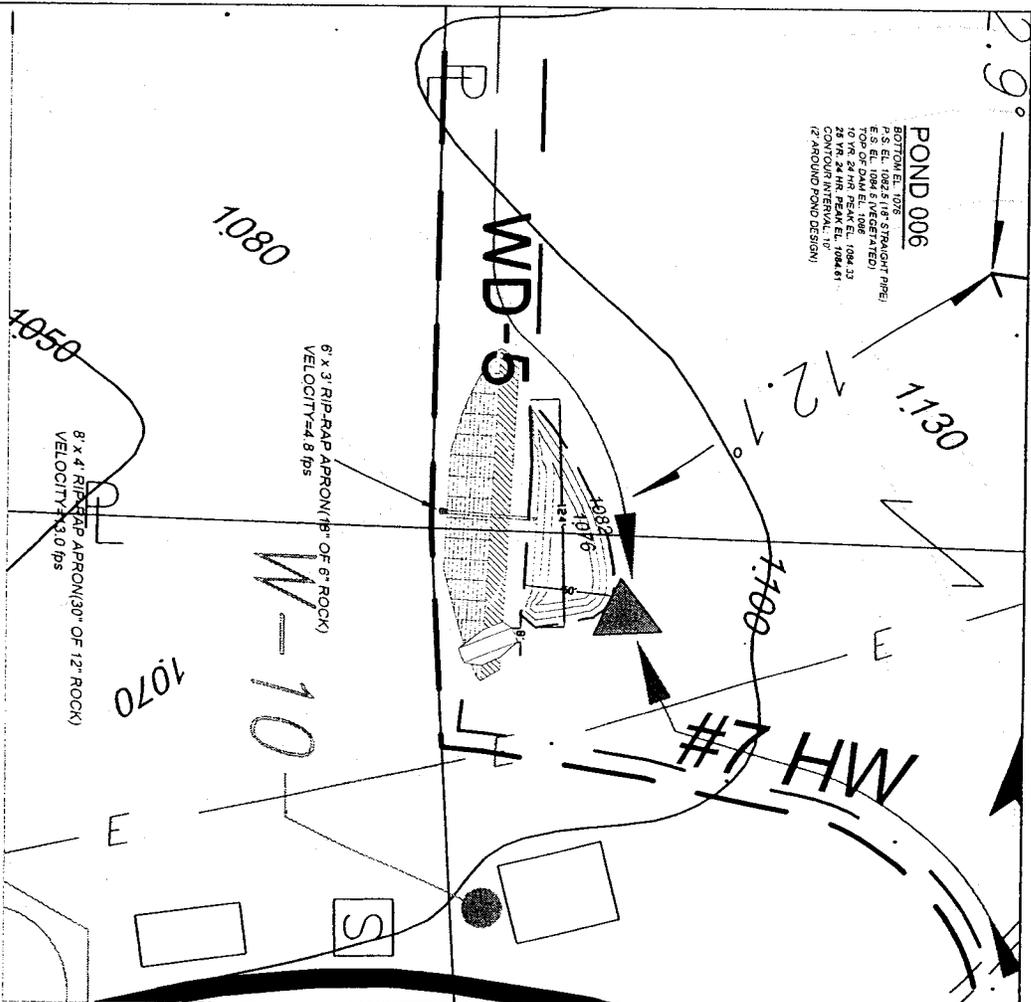
ENGINEERING DESIGN SHEETS FOR:  
**PENN-OHIO COAL CO.**  
 dba **KIMBLE CLAY & LIMESTONE**  
 PORT WASHINGTON

DATE: 1/13/05

REV: 1/5/06

SCALE: 1" = 50'

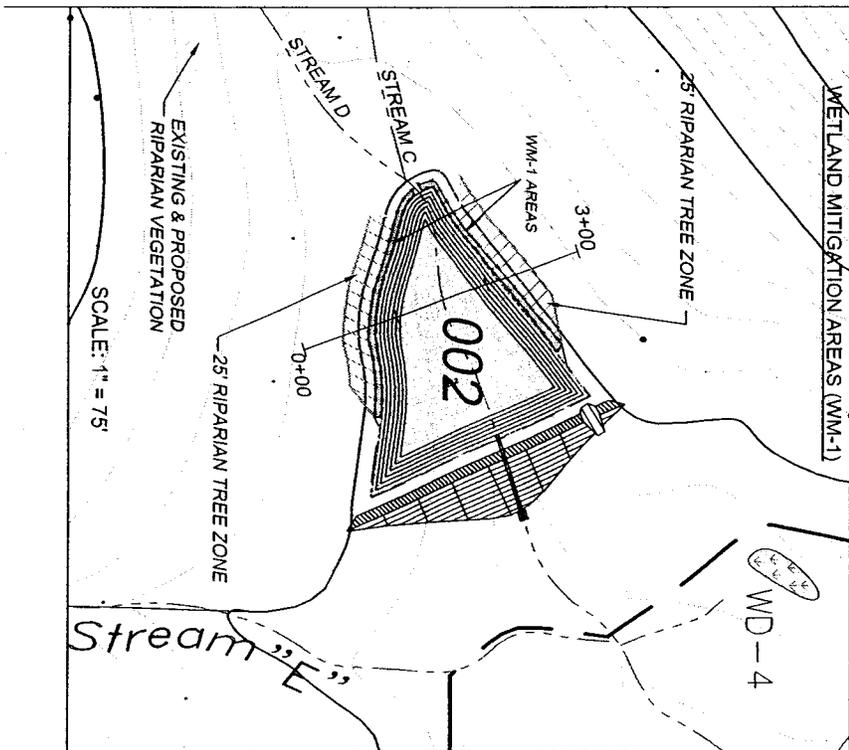




ADDENDUM TO PART 3, E(2) - CULVERT  
 DESIGNS/PROPOSED HAUL ROAD

CULVERT IDENTIFICATION	A	B
EXISTING (E) / PROPOSED (P) / OR	P	P
EXISTING TO BE IMPROVED (E)		

ADDENDUM TO PART 3, ITEM H(3)



Addendum to Part 3, Item D(4), Wetland Mitigation Plan

**WETLAND MITIGATION PLAN**

APPROXIMATELY 2.02 ACRES OF WETLAND HABITAT (WETLAND #3 - 0.01 ACRES AND WETLAND #4 - 2.01 ACRES) WILL BE DESTROYED AS A RESULT OF THE PROPOSED CONSTRUCTION. TO COMPENSATE FOR THE LOSS OF WETLAND HABITAT, THE RECONSTRUCTED WETLAND AREA WILL BE RESTORED TO A MITIGATION RATIO OF 1:1.5 FOR A MINIMUM OF 0.283 ACRES OF WETLANDS. THE INCLUDED DRAWING DEPICTS THE PROPOSED WETLAND AREA.

PRIOR TO MINING, THE HYDRIC SOILS PRESENT IN THE DELINEATED WETLANDS WILL BE REMOVED AND STOCKPILED SEPARATELY FROM THE OTHER REMOVED TOPSOIL. THE REMOVED HYDRIC SOIL WILL BE USED TO RE-SOIL THE RECONSTRUCTED WETLANDS TO A MINIMUM SOIL THICKNESS OF 0.5 FEET, FOLLOWING MINING AND RECLAMATION.

THE WETLAND MITIGATION AREAS (WM-1) WILL BE CREATED IN THE VALLEY OF PROPOSED SEDIMENT POND 002 AS SHOWN ON THE PLAN VIEW. THE TWO WETLAND AREAS WILL BE CONSTRUCTED ON THE NORTHERN & SOUTHERN SLOES OF POND 002 AND WILL COMPRISE A TOTAL AREA OF AT LEAST 0.80 ACRES. AFTER RECONSTRUCTION ARE COMPLETED AND FINAL GRADING WILL BE COMPLETED, THIS AREA WILL BE PERIODICALLY FLOODED IN A SIMILAR MANNER TO WHICH EXISTING WETLAND AREAS ARE INUNDA TED.

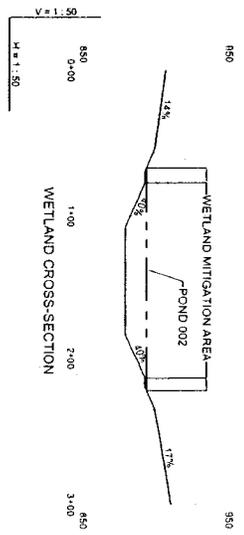
'S' RIPARIAN TREE ZONE. THIS AREA WILL HAVE TREES AND SHRUBS PLANTED AS TO CONTROL SEDIMENT RUNOFF, ADD NATURAL SHADING AND WIND PROTECTION FOR INTERIOR STRUCTURES, AND TO PROVIDE POTENTIAL INDIANA BAT ROOSTING HABITAT IN THE FUTURE.

THIS PROPOSAL WILL PROVIDE A DIVERSE QUALITY WETLAND HABITAT THAT WILL ENHANCE THE RECONSTRUCTED WETLAND AREA FOR WATERFOWL AND AQUATIC LIFE.

**REVEGETATION PLAN**

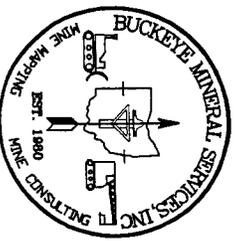
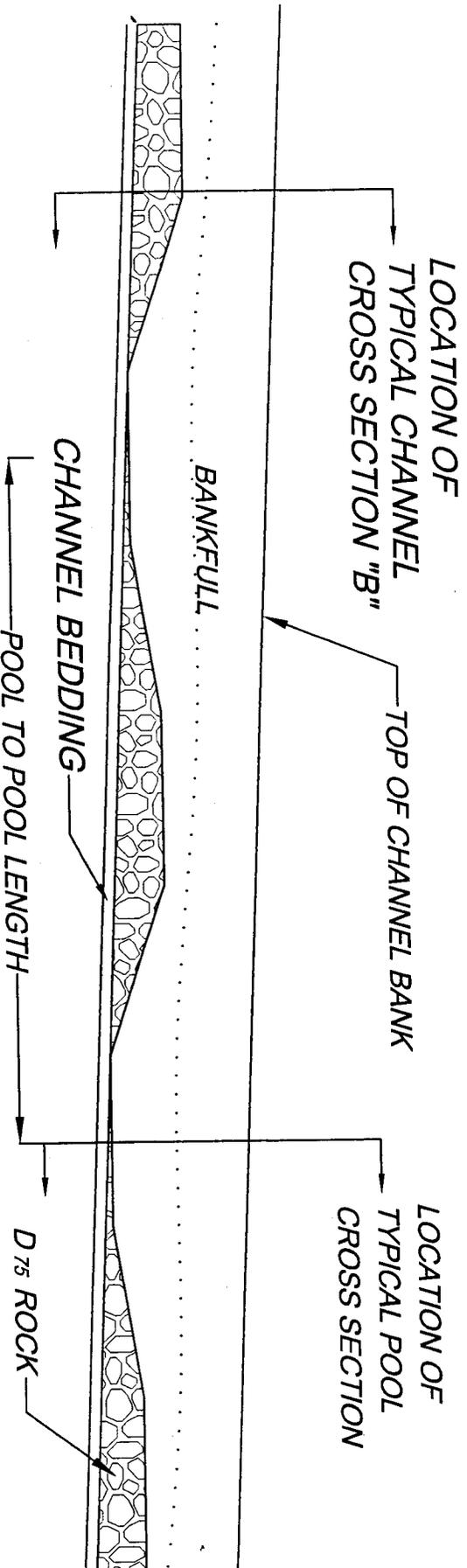
THE REVEGETATION PLAN AS ADDRESSED IN ADDENDUM TO PART 3, ITEM D(4), WILL BE USED FOR THE REVEGETATION OF THE AREA AROUND THE CONSTRUCTED WETLAND. THE MONITORING PERIOD SHOULD ALLOW FOR THE ESTABLISHMENT OF NATURAL WETLAND VEGETATION.

SUCCESS OF REVEGETATION WILL ADHERE TO CONNEC DIVISION OF MINERAL RESOURCES MANAGEMENT REQUIREMENTS. THE RECONSTRUCTED SCOUR SHOULDER WETLANDS WILL BE MONITORED ANNUALLY FOR VEGETATIVE SUCCESS. ANY AREAS DEEMED UNSATISFACTORY DURING ANNUAL MONITORING WILL BE REVEGETATED PER THE REVEGETATION PLAN. PERFORMANCE IS NOT ACHIEVED BY THE END OF THE 5-YEAR ANNUAL MONITORING PERIOD PERMICHIO COAL CO. 600 KIMBLE CLAY & LIMESTONE WILL NEGOTIATE WITH THE CONNEC APPROPRIATE ACTIONS TO ACHIEVE THE DESIRED PERFORMANCE.



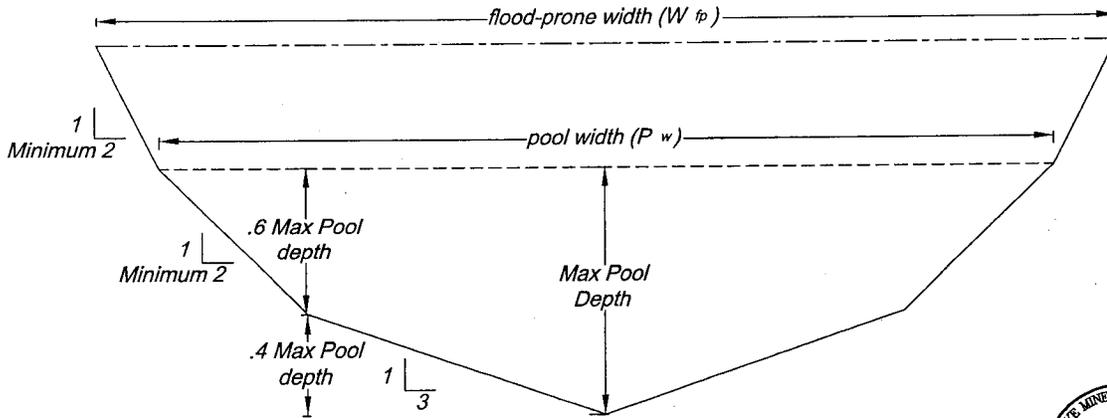
Addendum to Natural Channel Design, Page 3

TYPICAL CHANNEL PROFILE  
for  
SLOPES GREATER THAN 4%  
(Drawing Not to Scale)



*Addendum to Natural Channel Design, Page 3*

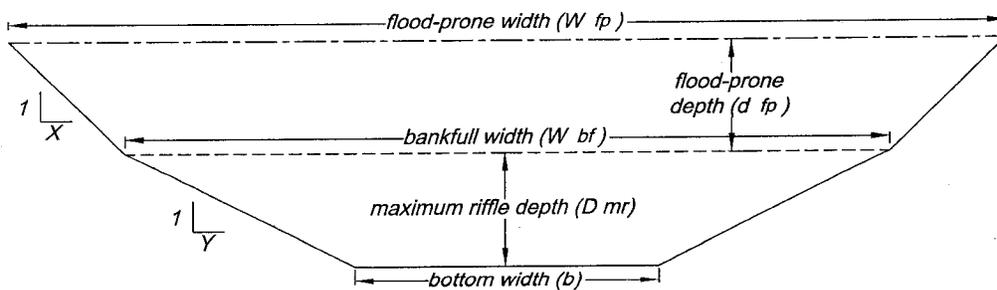
**TYPICAL POOL CROSS SECTION**  
*(Drawing Not to Scale)*



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*Addendum to Natural Channel Design, Page 4*

**TYPICAL CHANNEL CROSS SECTION "B"**  
for  
**SLOPES GREATER THAN 4%**  
*(Drawing Not to Scale)*



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