DRILL HOLE DATA TABLE

DRILLABLE INFORMATION					LOWER KITTANNING			WATER ENCOUNTERED			STATIC WATER LEVEL		
DRILL HOLE NO.	GRID	SURFACE ELEVATION (MSL)	TOTAL HOLE DEPTH (ft)	BOTTOM OF HOLE ELEVATION (MSL)	BOTTOM DEPTH (ft)	BOTTOM HORIZON ELEVATION (MSL)	THICKNESS (ft)	DEPTH (ft)	ELEVATION (MSL)	EST. YIELD (gpm)	DEPTH (ft)	ELEVATION (MSL)	DATE MEASURED
B-15	8H	1620	275	1345	258.6	1361.4	4.1	--	--	--	--	--	--
B-16	11D	1735	396	1339	298	1437	3.5	--	--	--	--	--	--
B-24	15E	1850	475	1375	458.3	1391.7	3.3	--	--	--	--	--	--
B-25	13F	1870	475	1395	461.9	1408.1	3.9	--	--	--	--	--	--
B-27	8F	1605	175	1430	NDE	--	--	--	--	--	--	--	--
B-28	6J	1702	300	1402	NDE	--	--	--	--	--	--	--	--
B-33	8J	1672	325	1347	319.6	1352.4	3.1	--	--	--	--	--	--
DH-133	8L	1780	461	1319	458	1322.0	3.1	--	--	--	--	--	--
DH-136	9C	1600	132	1468	127.7	1472.3	3.2	--	--	--	--	--	--
DH-140	8G	1582	246	1336	242.7	1339.3	3.5	--	--	--	--	--	--
DH-141	9F	1780	387	1393	371.7	1408.3	3.5	--	--	--	--	--	--
DH-229	5K	1640	296.5	1343.5	293.3	1346.7	2.9	--	--	--	--	--	--
DH-232	10G	1620	238	1372	245.3	1374.7	3.7	--	--	--	--	--	--
DH-1225	14C	1693	329	1364	322.6	1370.5	5.6	--	--	--	--	--	--
DH-1226	15D	1892	509	1383	497.4	1394.8	3.5	--	--	--	--	--	--
DH-1227	16C	1926	534	1392	519.3	1406.4	3.3	--	--	--	--	--	--
DH-1228	16F	1886	519	1367	502.9	1383.0	2.8	--	--	--	--	--	--
DH-1229	14E	1841	449	1392	440.8	1400.2	3.2	--	--	--	--	--	--
DH-1230	13H	1699	354	1345	338.2	1360.5	4.0	--	--	--	--	--	--
DH-1231	12G	1849	479	1370	467.8	1380.9	3.1	--	--	--	--	--	--
DH-1233	23O	1787	569	1218	555.4	1231.6	4.6	--	--	--	--	--	--
DH-1301	13G	1820	459	1361	447.7	1372.4	4.1	--	--	--	--	--	--
DH-1302	14H	1755	414	1341	404.4	1350.6	4.1	--	--	--	--	--	--
DH-1303	14J	1782	459	1323	443.3	1338.5	3.3	--	--	--	--	--	--
DH-1304	12K	1775	494	1281	475.1	1299.9	4.0	--	--	--	--	--	--
DH-1305	11N	1713	429	1284	420.1	1292.9	4.4	--	--	--	--	--	--
DH-1306	10N	1662	359	1303	341.6	1320.4	3.9	--	--	--	--	--	--
DH-1307	4J	1741	404	1337	389.6	1351.4	3.6	--	--	--	--	--	--
DH-1308	9K	1789	479	1310	469.1	1319.6	3.5	--	--	--	--	--	--
DH-1309	11C	1812	369	1443	361.7	1450.3	4.9	--	--	--	--	--	--
DH-1320	18C	1735	395	1340	371.7	1363.0	5.0	--	--	--	--	--	--
DH-1321	17B	1739	370	1369	355.2	1383.8	3.4	--	--	--	--	--	--
DH-1322	18E	1835	510	1325	494.0	1341.3	3.0	--	--	--	--	--	--
DH-1323	19F	1833	535	1298	513.0	1320.4	2.8	--	--	--	--	--	--
DH-1324	21E	1820	510	1310	493.5	1326.7	3.3	--	--	--	--	--	--
DH-1903	17A	1803	370	1433	354.6	1448.2	3.6	--	--	--	--	--	--
DH-1904	18C	1768	465	1303	398.6	1369.9	4.6	--	--	--	--	--	--
DH-1905	20C	1709	375	1334	351.5	1357.6	3.3	--	--	--	--	--	--
DH-1944	17L	1762	450	1312	437.2	1324.3	3.6	--	--	--	--	--	--
DH-1945	17J	1684	380	1304	370.4	1313.9	3.5	--	--	--	--	--	--
DH-1946	16I	1682	365	1317	351.7	1329.8	4.3	--	--	--	--	--	--
DH-1947	17I	1680	355	1325	345.6	1334.1	4.2	--	--	--	--	--	--
DH-2001	18I	1660	355	1305	344.5	1315.5	3.4	--	--	--	--	--	--
DH-2002	18N	1864	594	1270	592.3	1271.7	4.2	--	--	--	--	--	--
DH-2003	18P	1770	495	1275	484.3	1285.7	3.0	--	--	--	--	--	--
DH-2004	19P	1824	575	1249	540.7	1283.7	2.1	--	--	--	--	--	--
DH-2005	20O	1817	565	1252	548.7	1267.9	3.0	--	--	--	--	--	--

DRILL HOLE DATA TABLE

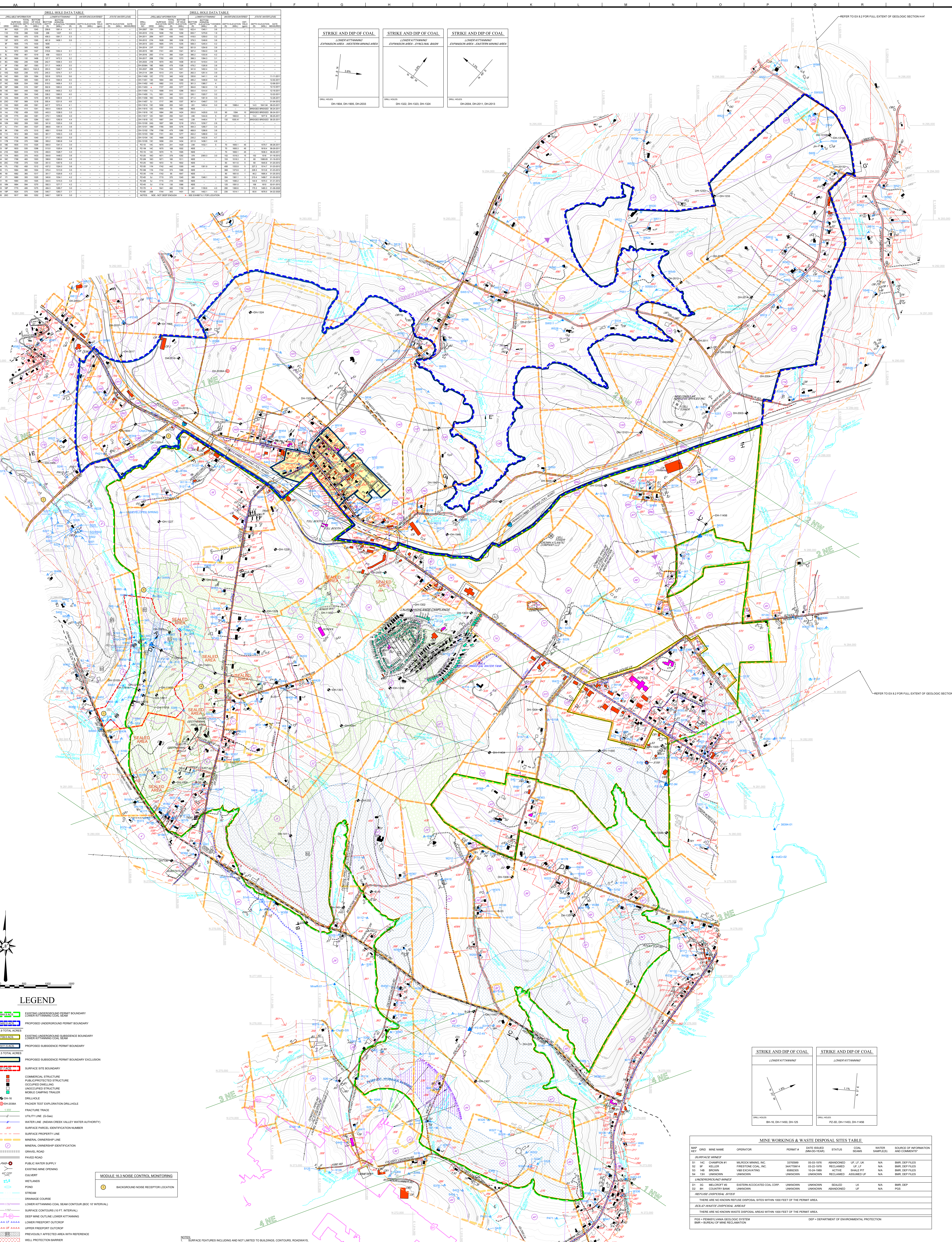
DRILLABLE INFORMATION					LOWER KITTANNING			WATER ENCOUNTERED			STATIC WATER LEVEL		
DRILL HOLE NO.	GRID	SURFACE ELEVATION (MSL)	TOTAL HOLE DEPTH (ft)	BOTTOM OF HOLE ELEVATION (MSL)	BOTTOM DEPTH (ft)	BOTTOM HORIZON ELEVATION (MSL)	THICKNESS (ft)	DEPTH (ft)	ELEVATION (MSL)	EST. YIELD (gpm)	DEPTH (ft)	ELEVATION (MSL)	DATE MEASURED
DH-2007	15H	1768	435	1333	422.4	1345.1	3.6	--	--	--	--	--	--
DH-2010	21Q	1936	705	1258	655.7	1279.8	1.9	--	--	--	--	--	--
DH-2011	20N	1677	430	1443	418.0	1259.0	3.2	--	--	--	--	--	--
DH-2012	21N	1628	390	1238	379.3	1248.6	3.6	--	--	--	--	--	--
DH-2013	22O	1805	570	1235	559.3	1245.4	4.2	--	--	--	--	--	--
DH-2014	21P	1757	515	1242	501.9	1254.8	3.9	--	--	--	--	--	--
DH-2015	18D	1741	400	1341	387.4	1354.0	3.8	--	--	--	--	--	--
DH-2016	20D	1714	390	1324	380.2	1333.8	4.2	--	--	--	--	--	--
DH-2017	20B	1793	420	1373	398.3	1394.3	3.1	--	--	--	--	--	--
DH-2033	21B	1870	462	1408	451.6	1418.4	3.4	--	--	--	--	--	--
DH-2036A	19E	1805	479	1326	478.2	1326.8	3.8	--	--	--	--	--	--
DH-2037	20B	1744	343	1401	341.6	1402.4	3.3	--	--	--	--	--	--
DH-2114	20K	1513	272	1241	262.3	1251.4	3.9	--	--	--	--	--	--
DH-11450	12C	1772	340	1432	330.6	1441.1	4.9	--	--	--	--	--	11-11-2011
DH-11451	13D	1894	495	1399	485.2	1408.8	5.0	--	--	--	--	--	12-02-2011
DH-11452	14G	1682	310	1372	301.3	1380.7	4	--	--	--	--	--	12-06-2011
DH-11453	*	1727	450	1277	364.8	1362.0	1.9	--	--	--	--	--	12-12-2011
DH-11454	11J	1908	610	1298	593.4	1314.4	3.1	--	--	--	--	--	12-19-2011
DH-11455	11L	1651	340	1311	330.1	1320.7	3.2	--	--	--	--	--	12-22-2011
DH-11456	16O	1673	440	1233	371.4	1301.9	3.3	--	--	--	--	--	12-28-2011
DH-11457	5J	1717	380	1337	367.4	1349.7	3.3	--	--	--	--	--	01-04-2012
DH-11614	13C	1656	205	1451	201	1455.4	5.0	63	1588.4	8	14.5	1641.94	08-23-2011
DH-11615	12C	1650	70	1580	NDE	--	--	--	--	--	BRIDGED	BRIDGED	08-24-2011
DH-11616	13C	1684	260	1424	255.0	1428.8	5.0	90	1594	10	BRIDGED	BRIDGED	08-24-2011
DH-11617	12C	1691	250	1441	246	1444.6	5	27	1663.6	5	13.2	1677.8	08-25-2011
DH-11618	12C	1687	244	1443	239	1448.4	5	132	1555.41	7	BRIDGED	BRIDGED	08-25-2011
DH-13100	24Q	1807	589	1218	576.3	1230.7	2.6	--	--	--	--	--	--
DH-13101	18M	1785	509	1276	494.3	1290.7	3.4	--	--	--	--	--	--
DH-13102	17M	1768	479	1289	468.9	1298.6	3.6	--	--	--	--	--	--
DH-13103	15M	1741	464	1277	452.2	1288.8	3.2	--	--	--	--	--	--
DH-13104	13C	1668	239	1429	235.2	1432.8	4.7	--	--	--	--	--	--
DH-13105	13C	1658	224	1434	221.9	1436.1	4.9	--	--	--	--	--	--
PZ-1D	14C	1670	241	1429	238	1432.1	5	70	1600.1	45	--	1579.7	08-26-2011
PZ-1M	14C	1670	168	1502	NDE	--	--	70	1600.3	45	--	1618.4	08-29-2011
PZ-1S	14C	1670	75	1595	NDE	--	--	70	1600.1	45	--	1636.3	08-30-2011
PZ-2D	16O	1671	379	1292	378	2393.3	3.0	152	1519.3	15	152	1518	01-18-2012
PZ-2M	16O	1671	160	1511	NDE	--	--	153	1518.3	6	60	1588.65	01-19-2012
PZ-2S	16O	1672	70	1602	NDE	--	--	60	1611.6	5	60	1645.6	01-20-2012
PZ-3D	11N	1742	442	1300	440	1301.9	4	408	1333.9	5	227.2	1514.7	01-23-2012
PZ-3M	11N	1742	374	1368	NDE	--	--	368	1373.9	2	228.3	1513.6	01-23-2012
PZ-3S	11N	1742	95	1647	NDE	--	--	90	1651.6	1	46.2	1695.4	01-25-2012
PZ-4D	5J	1715	370	1345	369	1346.1	3	354	1361.1	3	215.4	1499.7	01-30-2012
PZ-4M	5J	1715	216	1499	NDE	--	--	125	1590.2	1	144.9	1570.3	01-31-2012
PZ-4S	5J	1716	130	1586	NDE	--	--	125	1591.0	1	106	1610	02-01-2012
PZ-7D	*	1641	482	1159	481	1159.6	4.0	280	1360.6	--	175.3	1465.3	01-08-2020
PZ-9D	20B	1744	343	1401	342	1402.1	4.0	230	1514.1	2	65.6	1678.5	04-22-2020

NOTES: NDE - NOT DEEP ENOUGH * - SEE EXHIBIT 6.1 FOR LOCATION

STRIKE AND DIP OF COAL
LOWER KITTANNING
EXPANSION AREA - WESTERN MINING AREA
N 6° E 3.8%
DRILL HOLES: DH-1904, DH-1905, DH-2033

STRIKE AND DIP OF COAL
LOWER KITTANNING
EXPANSION AREA - SYNCLINAL BASIN
N 36° W 0.9%
DRILL HOLES: DH-1322, DH-1323, DH-1324

STRIKE AND DIP OF COAL
LOWER KITTANNING
EXPANSION AREA - EASTERN MINING AREA
N 49° E 1.3%
DRILL HOLES: DH-2004, DH-2011, DH-2013



STRIKE AND DIP OF COAL
LOWER KITTANNING
N 23° W 1.8%
DRILL HOLES: BH-16, DH-11450, DH-125

STRIKE AND DIP OF COAL
LOWER KITTANNING
N 5° E 1.1%
DRILL HOLES: PZ-3D, DH-11453, DH-11456

MINE WORKINGS & WASTE DISPOSAL SITES TABLE

MAP KEY	GRID	MINE NAME	OPERATOR	PERMIT #	DATE ISSUED (MM-DD-YEAR)	STATUS	COAL SEAMS	WATER SAMPLE(S)	SOURCE OF INFORMATION AND COMMENTS*
SURFACE MINES									
S1	14C	CHAMPION #1	MILROCK MINING, INC.	3376SM9	05-03-1976	ABANDONED	UF, LF, UK	N/A	BMR, DEP FILES
S2	9F	KELLER	FIRESTONE COAL, INC.	34A77SM14	03-22-1978	RECLAIMED	UF, LF	N/A	BMR, DEP FILES
S3	14B	BROWN	V&B EXCAVATING	65892305	10-24-1989	ACTIVE	SHALE PIT	N/A	BMR, DEP FILES
S4	13H	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	RECLAIMED	ASSUMED UF	N/A	BMR, DEP FILES
UNDERGROUND MINES									
D1	3G	MELCROFT #3	EASTERN ACCOCIATED COAL CORP.	UNKNOWN	UNKNOWN	SEALED	LK	N/A	BMR, DEP
D2	8H	COUNTRY BANK	UNKNOWN	UNKNOWN	UNKNOWN	ABANDONED	UF	N/A	PGS
REFUSE DISPOSAL SITES									
THERE ARE NO KNOWN REFUSE DISPOSAL SITES WITHIN 1000 FEET OF THE PERMIT AREA.									
SOLID WASTE DISPOSAL AREAS									
THERE ARE NO KNOWN WASTE DISPOSAL AREAS WITHIN 1000 FEET OF THE PERMIT AREA.									

PGS = PENNSYLVANIA GEOLOGIC SYSTEM
BMR = BUREAU OF MINE RECLAMATION
DEP = DEPARTMENT OF ENVIRONMENTAL PROTECTION

0 500 1000 1500

LEGEND

- 2844.9 ACS. — EXISTING UNDERGROUND PERMIT BOUNDARY LOWER KITTANNING COAL SEAM
- 1452.0 ACS. — PROPOSED UNDERGROUND PERMIT BOUNDARY
- 4296.9 TOTAL ACRES
- 2739.0 ACS. — EXISTING UNDERGROUND SUBSIDENCE BOUNDARY LOWER KITTANNING COAL SEAM
- 1411.5 ACS. — PROPOSED SUBSIDENCE PERMIT BOUNDARY
- 4150.5 TOTAL ACRES
- PROPOSED SUBSIDENCE PERMIT BOUNDARY EXCLUSION
- 67.7 ACS. — SURFACE SITE BOUNDARY
- COMMERCIAL STRUCTURE
- PUBLIC/PROTECTED STRUCTURE
- OCCUPIED DWELLING
- UNOCCUPIED STRUCTURE
- MOBILE CAMPING TRAILER
- DH-16 — DRILLHOLE
- DH-2036A — PACKER TEST EXPLORATION DRILLHOLE
- 1 NW — FRACTURE TRACE
- G — UTILITY LINE (G-Gas)
- W — WATER LINE (INDIAN CREEK VALLEY WATER AUTHORITY)
- 305 — SURFACE PARCEL IDENTIFICATION NUMBER
- SURFACE PROPERTY LINE
- MINERAL OWNERSHIP LINE
- 3 — MINERAL OWNERSHIP IDENTIFICATION
- GRAVEL ROAD
- PAVED ROAD
- PWS — PUBLIC WATER SUPPLY
- EXISTING MINE OPENING
- 40" CPP — CULVERT
- WETLANDS
- POND
- STREAM
- DRAINAGE COURSE
- 1750 — LOWER KITTANNING COAL SEAM CONTOUR (BOC 10' INTERVAL)
- 1750 — SURFACE CONTOURS (10 FT. INTERVAL)
- D1 — DEEP MINE OUTLINE LOWER KITTANNING
- LF — LOWER FREEPORT OUTCROP
- UF — UPPER FREEPORT OUTCROP
- S1 — PREVIOUSLY AFFECTED AREA WITH REFERENCE
- WELL PROTECTION BARRIER
- BARRIER - HYDRAULIC (NO MINING)
- BARRIER - PRIVATE AGREEMENT (NO MINING)
- S159 — PUBLIC WATER SUPPLY
- WELL_NAME (W) - WELL (S) - SPRING — BACKGROUND POINT LOCATION
- WELL_NAME — MONITORING POINT LOCATION
- PZ_NAME — PIEZOMETER LOCATION
- RUSTIC RIDGE #1 MINE WORKINGS (DATE OF SURVEY 08/23/2021)
- A A' — GEOLOGIC CROSS SECTION LINE

MODULE 16.3 NOISE CONTROL MONITORING

- 1 — BACKGROUND NOISE RECEPTOR LOCATION

NOTES:

1. SURFACE FEATURES INCLUDING AND NOT LIMITED TO BUILDINGS, CONTOURS, ROADWAYS, UTILITIES, & WATERWAYS TAKEN FROM THE FOLLOWING:
   - ORTHOGRAPHIC PHOTOS
     - *PEMA PROGRAM - Pennsylvania Emergency Management Agency*
     - *TIME PERIOD OF CONTENT: APRIL 19, 2006*
   - TOPOGRAPHIC CONTOURS
     - *PAMAP PROGRAM, PA DCNR, BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY*
     - TIME PERIOD OF CONTENT: APRIL 2006
   - DONEGAL, STAHLSTOWN, AND SEVEN SPRINGS USGS QUADRANGLES.
     - *U.S. GEOLOGICAL SURVEY*, 1996
2. PROPERTY LINES WERE TAKEN FROM WESTMORELAND AND FAYETTE COUNTY TAX MAPPING AND DO NOT REPRESENT ACTUAL SURVEY OF THE PROPERTY.
3. COORDINATES ARE NORTH AMERICAN DATUM OF 1983 (NAD 83), PENNSYLVANIA STATE PLANES SOUTH.
4. THERE ARE NO KNOWN OIL OR GAS WELLS INSIDE THE PERMIT AREA.
5. WATERLINE INFORMATION PROVIDED BY INDIAN CREEK VALLEY WATER AUTHORITY AND ALL LOCATIONS ARE APPROXIMATE. SIZE AND COMPOSITION ARE UNKNOWN UNLESS NOTED.
6. REFER TO EXHIBIT 8.2 FOR EXTENT OF GEOLOGIC CROSS SECTION A-A' AND H-H'.

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP - CALL BEFORE YOU DIG!

REVISIONS

No.	By	Date	Description
01	JRM	10-18-2013	DEP Comment Letter 9-18-2013
02	JRM	04-04-2014	DEP Comment Letter 2-13-2014
03	JRM	10-05-2015	DEP Comment Letter 9-04-2015
04	JRM	01-25-2016	DEP Technical Review Letter 2 12-23-2015
05	JRM	06-22-2016	Additional Information, County Comment Letter
06	EKT	03-12-2018	Formal Permit Revision
07	TMC	10-01-2021	Formal Permit Revision - UG Expansion

Drawn By:	AJS
Checked By:	JML
Date:	06-20-2013
Scale:	1" = 500'
Project No.:	0721-S164
File Name:	RUSTIC RIDGE #1 EXPANSION.DWG
Drawing:	1 of 1

CME ENGINEERING
CME ENGINEERING LP
165 East Union Street, Suite 100, Somerset, PA 15501
814-443-3344 FAX: 814-444-0365

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BENJAMIN J STUFFT GEOLOGIST PG005270
SIGN: 10/1/2021
OF CME MANAGEMENT LLC, GENERAL PARTNER OF CME ENGINEERING LP

EXHIBIT 6.3: ENVIRONMENTAL RESOURCE MAP
LCT ENERGY, LP
RUSTIC RIDGE #1 EXPANSION
LOWER KITTANNING COAL SEAM
CMAP # 65131301 MSHA ID # 3610089
DONEGAL & SALTLICK TOWNSHIPS
WESTMORELAND & FAYETTE COUNTIES