Public Notice

U.S. Army Corps of Engineers
Pittsburgh District

In Reply Refer to Notice No. below

US Army Corps of Engineers, Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Application No. LRP-2009-1085 Date: 11/8/2017

Notice No. 17-56 Closing Date: 12/8/2017

1. TO ALL 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.

2. APPLICANT: Dennis Grelle, Rosebud Mining Company, 301 Market Street, Kittanning, Pennsylvania 16201

3. LOCATION: Unnamed Tributary of Spring Run in Portage Township, Cambria County, Pennsylvania (approximate center: 40° 23’ 20.7” N, -78° 38’ 41.4” W)

4. PURPOSE AND DESCRIPTION OF WORK: The applicant proposes to construct an expansion to the existing coal refuse disposal area known as the Refuse Area #1 Expansion Project. The proposed work will include 74.3 acres of disposal area and 104.3 acres of support area to extend the life of the nearby preparation plant and coal operation by 16 to 19 years. At the current rate of production/disposal the current refuse area has less than 1 year of storage capacity.

The proposed project will impact Waters of the U.S. in the amount of 0.07 acres of wetland and 2,375 linear feet of stream (UNT to Spring Run). Compensatory mitigation will be provided by creating a new stream channel around the perimeter of the refuse area as shown in Exhibit 15.2. Wetland impacts will be mitigated by payment to the PA Wetland Replacement Fund or with the creation of on-site, in-kind permittee responsible mitigation.

5. ENCROACHMENT PERMIT: The applicant must obtain a Water Obstruction and Encroachment Permit which includes 401 Water Quality Certification from the:

Pennsylvania Department of Environmental Protection
California District Mining Office
25 Technology Drive
California Technology Park
Coal Center, PA 15423

6. IMPACT ON NATURAL RESOURCES: The District Engineer has consulted the most recently available information and has determined that the project may affect, but is not likely to adversely affect endangered species or threatened species, or result in destruction or adverse

modification of habitat of such species which has been determined to be critical. 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 which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended). If the U.S. Fish and Wildlife Service concurs with the may affect, not likely to adversely affect determination please respond with written concurrence.

7. IMPACT ON CULTURAL RESOURCES: The National Register of Historic Places has been consulted, and it has been determined that there are no properties currently listed on the register which would be directly affected by the proposed work. If we are made aware, as a result of comments received in response to this notice, or by other means, of specific archeological, scientific, prehistorical, or historical sites or structures which might be affected by the proposed work, the District Engineer will immediately take the appropriate action necessary pursuant to the National Historic Preservation Act of 1966 - Public Law 89-665 as amended (including Public Law 96-515).

8. PUBLIC INVOLVEMENT: Any person may request, in writing, within the comment period specified in the paragraph below entitled "RESPONSES," that a public hearing be held to consider this application. The requests for public hearing shall state, with particularity, the reasons for holding a public hearing.

9. EVALUATION: 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 which reasonably may be expected to accrue from the proposals must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain 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. 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. 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 overall public interest of the proposed activity. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator,

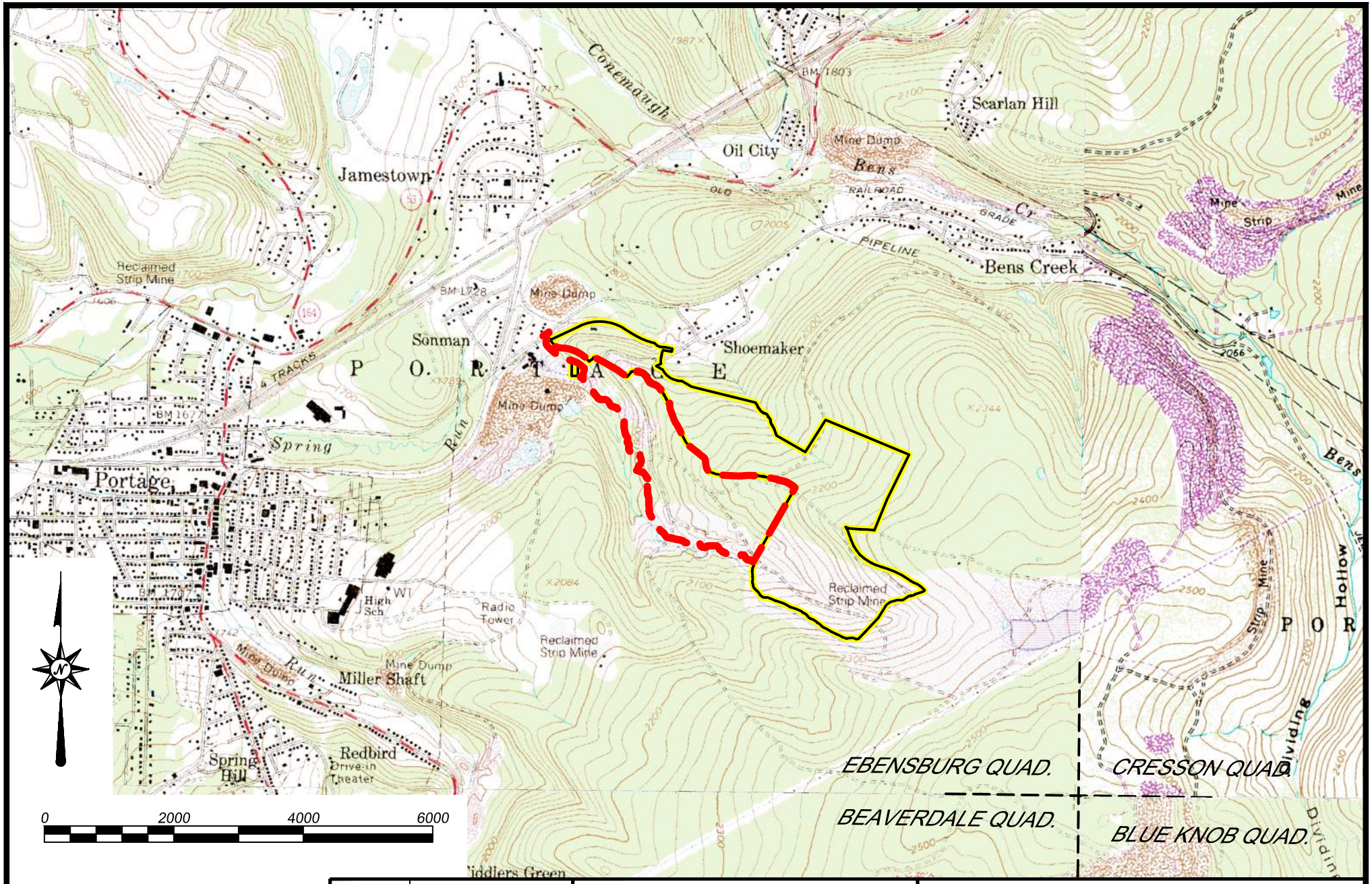
Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

10. RESPONSES: A permit will be granted unless its issuance is found to be contrary to the public interest. Written statements concerning the proposed activity should be received in this office on or before the closing date of this Public Notice in order to become a part of the record and to be considered in the final determination. Any objections which are received during this period may be forwarded to the applicant for possible resolution before the determination is made whether to issue or deny the requested DA Permit. All responses to this notice should be directed to the Regulatory Branch, attn Josh Shaffer at the above address, by telephoning (412) 395-7121, or by e-mail at Joshua.d.shaffer@usace.army.mil. Please refer to CELRP-OP-F 2009-1085 in all responses.

FOR THE DISTRICT ENGINEER:

// SIGNED //

Jared Pritts
Acting Chief, Southern Section
Regulatory Branch



PROPOSED REFUSE AREA NO. 1 EXPANSION PERMIT BOUNDARY

APPROVED REFUSE AREA NO. 1 PERMIT BOUNDARY

Drawn By:	RJB
Checked By:	BJF
Date:	05-05-2017
Scale:	1" = 2000'
Project No.:	0211-L770
File Name:	Portage Refuse Area 1 Expansion.dwg
Drawing:	1 of 1

CME
ENGINEERING
CME ENGINEERING LP
975 Georges Station Rd, Ste 100, Greensburg, PA 15601
724-672-4800 FAX: 724-672-4801

EXHIBIT 1: LOCATION MAP

ROSEBUD MINING COMPANY

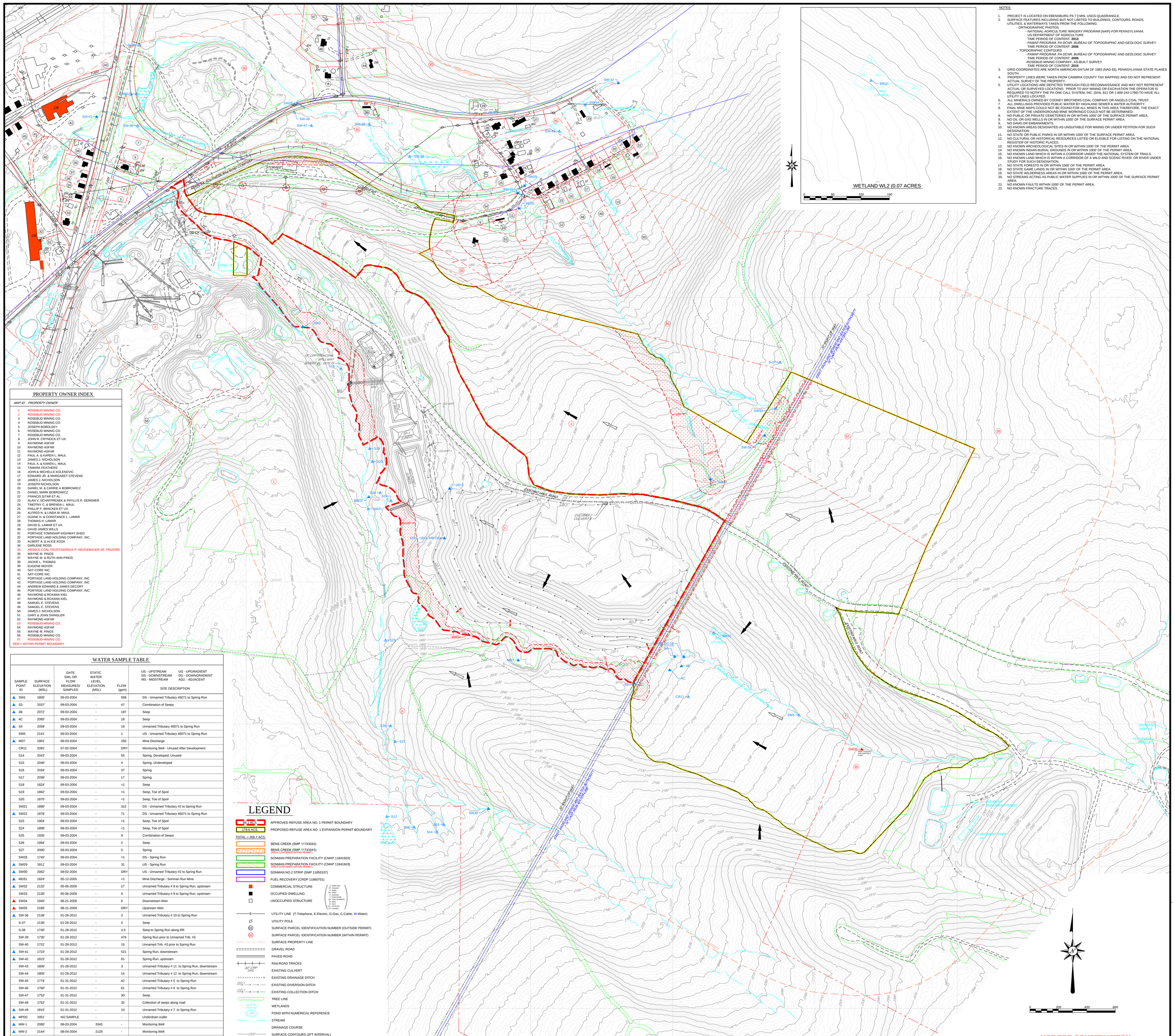
REFUSE AREA NO. 1 EXPANSION

CRDP # 11040701 MSHA ID # 36-09246

PORTAGE TOWNSHIP

CAMBRIA COUNTY, PENNSYLVANIA

G:\Clients\0211 AMFIRE Mining Co\L77 - Refuse No. 1 Expansion\01 2016 Expansion\CAD\Permit dwgs\Current\Portage Refuse Area 1 Expansion.dwg, ACOE Ex1, 5/5/2017 1:21:05 PM, rj.barrick, 1:1



NOTES:

1. PROJECT IS LOCATED ON EBENSBURG PA 7.5' MIN. USGS QUADRANGLE.
2. SURFACE FEATURES INCLUDING BUT NOT LIMITED TO BUILDINGS, CONTOURS, ROADS, UTILITIES, & WATERWAYS TAKEN FROM THE FOLLOWING:
   - ORTHOGRAPHIC PHOTOS
     - *NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP) FOR PENNSYLVANIA,* US DEPARTMENT OF AGRICULTURE TIME PERIOD OF CONTENT: **2013**
     - *PAMAP PROGRAM, PA DCNR, BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY* TIME PERIOD OF CONTENT: **2006**
   - TOPOGRAPHIC CONTOURS
     - *PAMAP PROGRAM, PA DCNR, BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY* TIME PERIOD OF CONTENT: **2006**
     - *ROSEBUD MINING COMPANY, AS-BUILT SURVEY* TIME PERIOD OF CONTENT: **2015**
3. GRID COORDINATES ARE NORTH AMERICAN DATUM OF 1983 (NAD 83), PENNSYLVANIA STATE PLANES SOUTH.
4. PROPERTY LINES WERE TAKEN FROM CAMBRIA COUNTY TAX MAPPING AND DO NOT REPRESENT ACTUAL SURVEY OF THE PROPERTY.
5. UTILITY LOCATIONS ARE DEPICTED THROUGH FIELD RECONNAISSANCE AND MAY NOT REPRESENT ACTUAL OR SURVEYED LOCATIONS. PRIOR TO ANY MINING OR EXCAVATION THE OPERATOR IS REQUIRED TO NOTIFY THE PA ONE CALL SYSTEM, INC. (DIAL 811 OR 1-800-242-1776) TO HAVE ALL UTILITY LINES LOCATED.
6. ALL MINERALS OWNED BY COONEY BROTHERS COAL COMPANY OR ANGELS COAL TRUST.
7. ALL DWELLINGS PROVIDED PUBLIC WATER BY HIGHLAND SEWER & WATER AUTHORITY.
8. FINAL MINE MAPS COULD NOT BE FOUND FOR ALL MINES IN THIS AREA THEREFORE, THE EXACT EXTENT OF THE UNDERGROUND MINE WORKINGS COULD NOT BE DETERMINED.
9. NO PUBLIC OR PRIVATE CEMETERIES IN OR WITHIN 1000' OF THE SURFACE PERMIT AREA.
8. NO OIL OR GAS WELLS IN OR WITHIN 1000' OF THE SURFACE PERMIT AREA.
9. NO DAMS OR EMBANKMENTS.
10. NO KNOWN AREAS DESIGNATED AS UNSUITABLE FOR MINING OR UNDER PETITION FOR SUCH DESIGNATION.
11. NO STATE OR PUBLIC PARKS IN OR WITHIN 1000' OF THE SURFACE PERMIT AREA.
12. NO CULTURAL OR HISTORICAL RESOURCES LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES.
13. NO KNOWN ARCHEOLOGICAL SITES IN OR WITHIN 1000' OF THE PERMIT AREA.
14. NO KNOWN INDIAN BURIAL GROUNDS IN OR WITHIN 1000' OF THE PERMIT AREA.
15. NO KNOWN LAND WHICH IS WITHIN A CORRIDOR UNDER THE NATIONAL SYSTEM OF TRAILS.
16. NO KNOWN LAND WHICH IS WITHIN A CORRIDOR OF A WILD AND SCENIC RIVER, OR RIVER UNDER STUDY FOR SUCH DESIGNATION.
17. NO STATE FORESTS IN OR WITHIN 1000' OF THE PERMIT AREA.
18. NO STATE GAME LANDS IN OR WITHIN 1000' OF THE PERMIT AREA.
19. NO STATE WILDERNESS AREAS IN OR WITHIN 1000' OF THE PERMIT AREA.
20. NO STREAMS ACTING AS PUBLIC WATER SUPPLIES IN OR WITHIN 1000' OF THE SURFACE PERMIT AREA.
21. NO KNOWN FAULTS WITHIN 1000' OF THE PERMIT AREA.
22. NO KNOWN FRACTURE TRACES.

PROPERTY OWNER INDEX

MAP ID	PROPERTY OWNER
1	ROSEBUD MINING CO.
2	ROSEBUD MINING CO.
3	ROSEBUD MINING CO.
4	ROSEBUD MINING CO.
5	JOSEPH BOBOLSKY
6	ROSEBUD MINING CO.
7	ROSEBUD MINING CO.
8	JOHN R. CRYNOCK ET UX.
9	RAYMOND ASFAR
10	RAYMOND ASFAR
11	RAYMOND ASFAR
12	PAUL A. & KAREN L. MAUL
13	JAMES J. NICHOLSON
14	PAUL A. & KAREN L. MAUL
15	TAMARA FEATHERS
16	JOHN & MICHELLE KOLENOVIC
17	EDWARD JR. & MARGARET STEVENS
18	JAMES J. NICHOLSON
19	JOSEPH NICHOLSON
20	DANIEL M. & CARRIE A BOBROWICZ
21	DANIEL MARK BOBROWICZ
22	FRANCIS SITAR ET AL.
23	ALAN V. SCHAFFRENIEK & PHYLLIS R. DEREMER
24	TIMOTHY C. & BRENDA L. MAUL
25	PHILLIP F. BRACKEN ET UX.
26	ALFRED N. & LINDA M. MAUL
27	DUANE H. & CONSTANCE L. LAMAR
28	THOMAS H. LAMAR
29	DAVID G. LAMAR ET UX.
30	DAVID JAMES WILLS
31	PORTAGE TOWNSHIP HIGHWAY SHED
32	PORTAGE LAND HOLDING COMPANY, INC.
33	ALBERT A. & ALICE KOZA
34	DARLENE ROSS
35	ANGELS COAL TRUST/GERALD P. NEUGEBAUER JR. TRUSTEE
36	WAYNE M. PINOS
37	WAYNE M. & RUTH ANN PINOS
38	JACKIE L. THOMAS
39	EUGENE MOYER
40	SAY-CORE INC.
41	SAY-CORE INC.
42	PORTAGE LAND HOLDING COMPANY, INC
43	PORTAGE LAND HOLDING COMPANY, INC
44	ANDREW EDWARD & JAMES DECORT
45	PORTAGE LAND HOLDING COMPANY, INC.
46	RAYMOND & ROXANA KIEL
47	RAYMOND & ROXANA KIEL
48	SAMUEL E. STEVENS
49	SAMUEL E. STEVENS
50	JAMES J. NICHOLSON
51	GARY & JOAN SHINGLER
52	RAYMOND ASFAR
53	ROSEBUD MINING CO.
54	RAYMOND ASFAR
55	WAYNE M. PINOS
56	ROSEBUD MINING CO.
57	ROSEBUD MINING CO.

RED = WITHIN PERMIT BOUNDARY

WATER SAMPLE TABLE

SAMPLE POINT ID	SURFACE ELEVATION (MSL)	DATE SWL OR FLOW MEASURED/ SAMPLED	STATIC WATER LEVEL ELEVATION (MSL)	FLOW (gpm)	SITE DESCRIPTION (US - UPSTREAM, DS - DOWNSTREAM, MS - MIDSTREAM, UG - UPGRADIENT, DG - DOWNGRADIENT, ADJ. - ADJACENT)
▲ SW1	1805'	09-03-2004	-	598	DS - Unnamed Tributary 46071 to Spring Run
▲ S3	2037'	09-03-2004	-	47	Combination of Seeps
▲ 4B	2072'	09-03-2004	-	187	Seep
▲ 4C	2065'	09-03-2004	-	18	Seep
▲ S4	2059'	09-03-2004	-	19	Unnamed Tributary 46071 to Spring Run
SW5	2141'	09-03-2004	-	1	US - Unnamed Tributary 46071 to Spring Run
▲ MD7	1991'	09-03-2004	-	250	Mine Discharge
CR11	2091'	07-02-2004	-	DRY	Monitoring Well - Unused After Development
S14	2043'	09-03-2004	-	55	Spring, Developed, Unused
S15	2040'	09-03-2004	-	4	Spring, Undeveloped
S16	2034'	09-03-2004	-	37	Spring
S17	2036'	09-03-2004	-	17	Spring
S18	1824'	09-03-2004	-	<1	Seep
S19	1862'	09-03-2004	-	<1	Seep, Toe of Spoil
S20	1870'	09-03-2004	-	<1	Seep, Toe of Spoil
SW21	1880'	09-03-2004	-	312	DS - Unnamed Tributary #2 to Spring Run
▲ SW22	1878'	09-03-2004	-	71	DS - Unnamed Tributary 46071 to Spring Run
S23	1904'	09-03-2004	-	<1	Seep, Toe of Spoil
S24	1898'	09-03-2004	-	<1	Seep, Toe of Spoil
S25	1935'	09-03-2004	-	9	Combination of Seeps
S26	1994'	09-03-2004	-	2	Seep
S27	2000'	09-03-2004	-	5	Spring
SW28	1745'	09-03-2004	-	<1	DS - Spring Run
▲ SW29	1811'	09-03-2004	-	31	US - Spring Run
▲ SW30	2062'	08-02-2004	-	DRY	US - Unnamed Tributary #2 to Spring Run
▲ MD31	1824'	05-12-2005	-	<1	Mine Discharge - Sonman Run Mine
▲ SW32	2132'	05-06-2009	-	17	Unnamed Tributary # 8 to Spring Run. upstream
SW33	2130'	05-06-2009	-	9	Unnamed Tributary # 9 to Spring Run. upstream
▲ SW34	1945'	08-21-2009	-	6	Downstream Weir
▲ SW35	2185'	08-21-2009	-	DRY	Upstream Weir
▲ SW-36	2136'	01-26-2012	-	3	Unnamed Tributary # 10 to Spring Run
S-37	2130'	01-26-2012	-	3	Seep
S-38	1740'	01-28-2012	-	4.5	Seep to Spring Run along RR
SW-39	1735'	01-28-2012	-	476	Spring Run prior to Unnamed Trib. #3
SW-40	1731'	01-28-2012	-	10	Unnamed Trib. #3 prior to Spring Run
▲ SW-41	1723'	01-28-2012	-	521	Spring Run, downstream
▲ SW-42	1815'	01-28-2012	-	61	Spring Run, upstream
SW-43	1806'	01-28-2012	-	3	Unnamed Tributary # 11 to Spring Run, downstream
SW-44	1805'	01-28-2012	-	14	Unnamed Tributary # 12 to Spring Run, downstream
SW-45	1774'	01-31-2012	-	42	Unnamed Tributary # 5 to Spring Run
SW-46	1760'	01-31-2012	-	61	Unnamed Tributary # 4 to Spring Run
SW-47	1753'	01-31-2012	-	30	Seep
SW-48	1752'	01-31-2012	-	32	Collection of seeps along road
▲ SW-49	1815'	01-31-2012	-	10	Unnamed Tributary # 7 to Spring Run
▲ MPDC	1951'	NO SAMPLE	-	-	Underdrain outlet
▲ MW-1	2080'	08-03-2004	2045	-	Monitoring Well
▲ MW-2	2144'	08-04-2004	2128	-	Monitoring Well
▲ MW-3	1934'	08-05-2004	1925	-	Monitoring Well
▲ MW-6	1988'	NO SAMPLE	-	-	Short term monitoring well located on refuse bench to monitor refuse pile water level
▲ MW-7	1960'	02-02-2012	115.8'	-	Monitoring Well in Lower Freeport Mine
▲ MW-8	1921'	12-23-2013	DRY	-	Monitoring Well Downgradient
▲ UD-1/UD-2	1951'	NO SAMPLE	-	-	Combined UD-1 & UD-2 Leachate Collector Outlet
▲ UD-3	1978'	NO SAMPLE	-	-	Leachate Collecter UD-3 outlet
▲ LC-1B	2066'	NO SAMPLE	-	-	Leachate Collecter LC-1B outlet
▲ DC-1B	2066'	NO SAMPLE	-	-	Dewatering Collector DC-1B outlet

▲ = MONITORING POINT ▲ = SUBCHAPTER F MONITORING POINT

LEGEND

- 88.1 ACS. — APPROVED REFUSE AREA NO. 1 PERMIT BOUNDARY
- 178.6 ACS. — PROPOSED REFUSE AREA NO. 1 EXPANSION PERMIT BOUNDARY
- TOTAL = 266.7 ACS.
- BENS CREEK (SMP 11743043)
- BENS CREEK (SMP 11743043) AREA CONTAINED WITHIN PERMIT
- SONMAN PREPARATION FACILITY (CMAP 11841603)
- SONMAN PREPARATION FACILITY (CMAP 11841603) AREA CONTAINED WITHIN PERMIT
- SONMAN NO.2 STRIP (SMP 11850107)
- FUEL RECOVERY (CRDP 11860701)
- COMMERCIAL STRUCTURE
- OCCUPIED DWELLING
- UNOCCUPIED STRUCTURE
  - (F DWELLING, FT TRAILER, B BARN, S SHED, G GARAGE, P POOL/POND, MF MINE/ BUSINESS, M MINE, O OILO, WV WV/ALCN, CH CHURCH)
- UTILITY LINE (T-Telephone, E-Electric, G-Gas, C-Cable, W-Water)
- UTILITY POLE
- SURFACE PARCEL IDENTIFICATION NUMBER (OUTSIDE PERMIT)
- SURFACE PARCEL IDENTIFICATION NUMBER (WITHIN PERMIT)
- SURFACE PROPERTY LINE
- GRAVEL ROAD
- PAVED ROAD
- RAILROAD TRACKS
- EXISTING CULVERT
- EXISTING DRAINAGE DITCH
- EXISTING DIVERSION DITCH
- EXISTING COLLECTION DITCH
- TREE LINE
- WETLANDS
- POND WITH NUMERICAL REFERENCE
- STREAM
- DRAINAGE COURSE
- SURFACE CONTOURS (2FT INTERVAL)
- BARRIER AREA (Road)
- BARRIER AREA (Stream)
- BARRIER AREA (Dwelling)
- BARRIER AREA (Utility)
- SAMPLE NAME — BACKGROUND SAMPLE LOCATION
- SAMPLE NAME — MONITORING SAMPLE LOCATION
- PZ / MW NAME — PIEZOMETER / MONITORING WELL LOCATION
- PWS — PUBLIC WATER SUPPLY
- LOCAL WATER FLOW DIRECTION
- REGIONAL WATER FLOW DIRECTION

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

REVISIONS			
No.	By	Date	Description

Drawn By:	RJB
Checked By:	BJF
Date:	05-16-2017
Scale:	AS NOTED
Project No.:	0211-L770
File Name:	Portage Refuse Area 1 Expansion.dwg
Drawing:	1 of 1

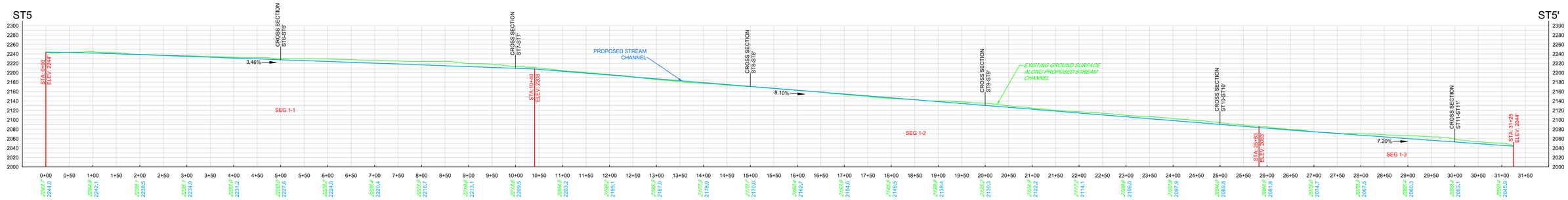
CME ENGINEERING
CME ENGINEERING LP
975 Georges Station Rd, Ste 100, Greensburg, PA 15601
724-672-4800 FAX: 724-672-4801

SIGN: CME MANAGEMENT LLC, GENERAL PARTNER OF CME ENGINEERING LP

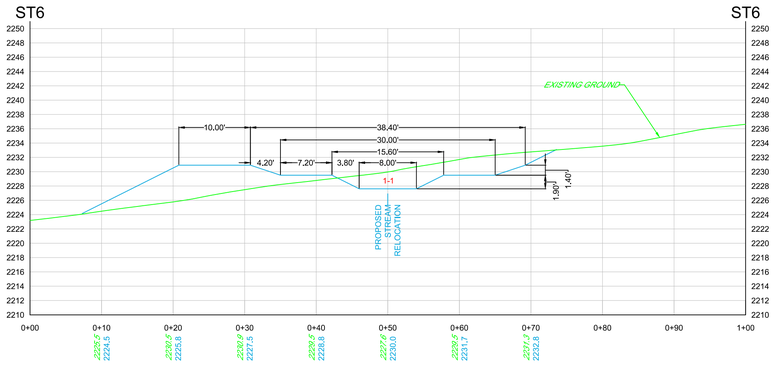
EXHIBIT 6: AQUATIC RESOURCE MAP

ROSEBUD MINING COMPANY

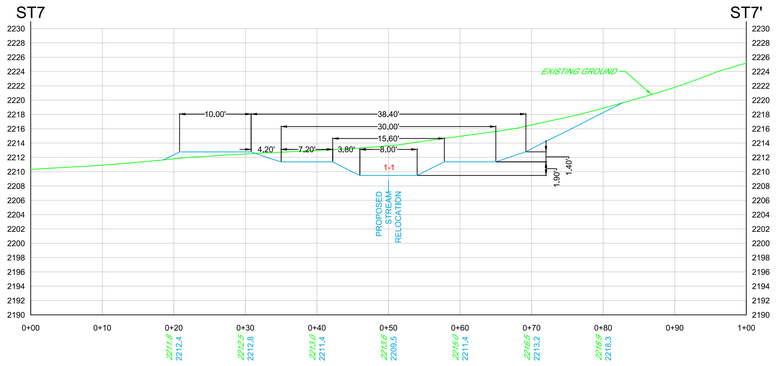
REFUSE AREA NO. 1 EXPANSION
CRDP # 11040701 MSHA ID # 36-09246
PORTAGE TOWNSHIP
CAMBRIA COUNTY, PENNSYLVANIA



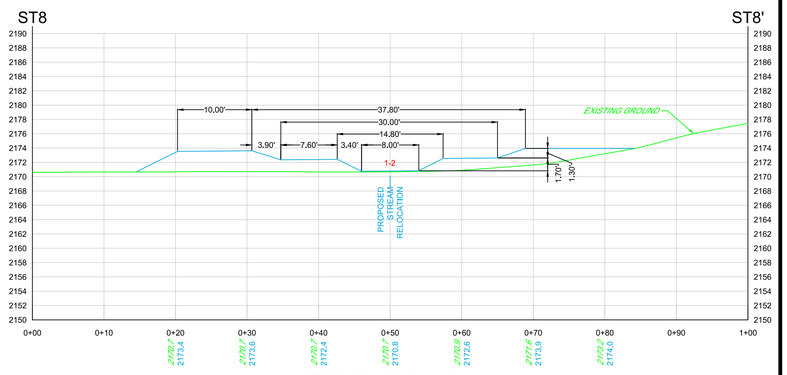
PROFILE ST5-ST5'
PROPOSED RELOCATED STREAM
SCALE: 1" = 100'



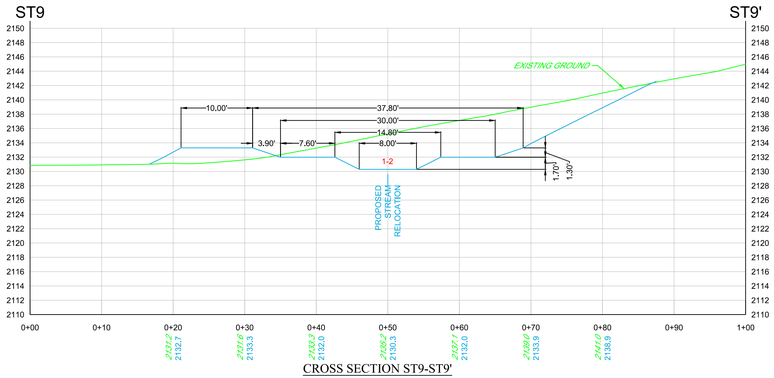
CROSS SECTION ST6-ST6'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'



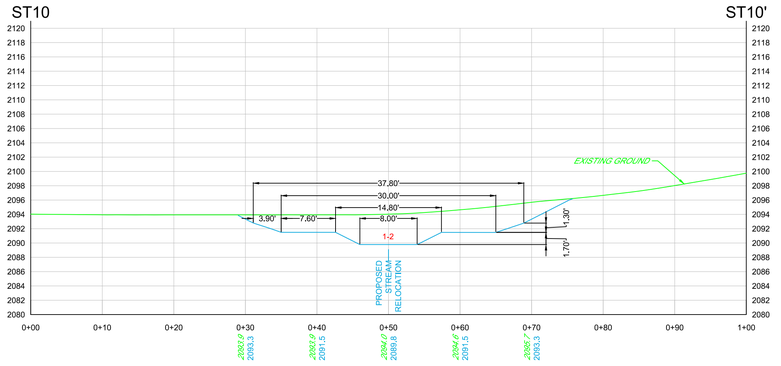
CROSS SECTION ST7-ST7'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'



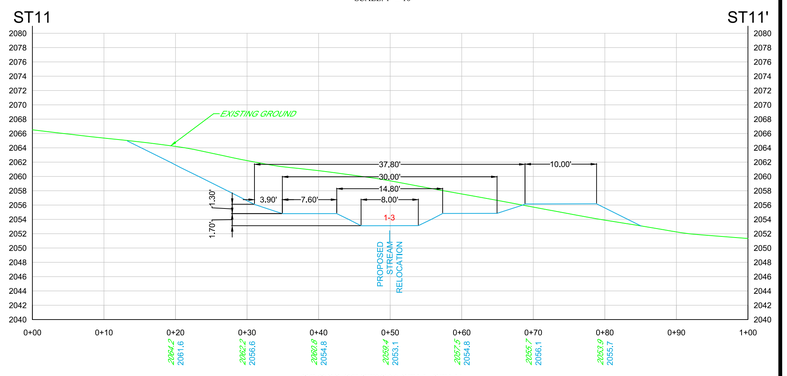
CROSS SECTION ST8-ST8'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'



CROSS SECTION ST9-ST9'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'



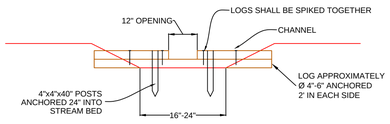
CROSS SECTION ST10-ST10'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'



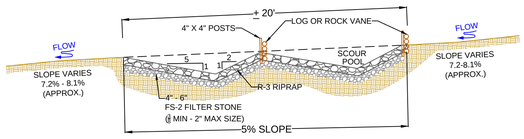
CROSS SECTION ST11-ST11'
PROPOSED RELOCATED STREAM
SCALE: 1" = 10'

NOTES:

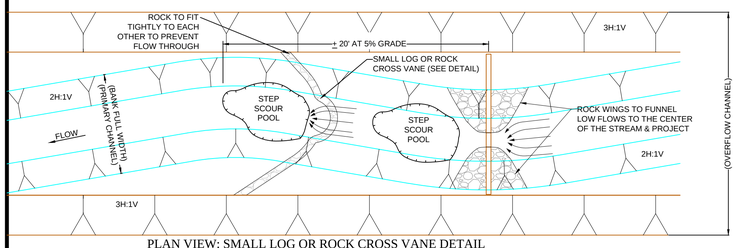
1. LOG OR ROCK DAMS SHALL BE SPACED APPROXIMATELY EVERY 100'
2. ANCHORING SHALL BE 2' INTO THE SIDES OF THE PRIMARY CHANNEL AND 2' DEEP ON THE 4"x4" ANCHOR POSTS.
3. LOG DIAMETER SHALL BE APPROX. 4" FOR EACH LOG.
4. THE TWO BASE LOGS SHALL BE SPIKED TOGETHER FOR STABILITY.
5. PRIMARY CHANNEL TO BE INSTALLED TO MEANDER WITHIN OVERFLOW CHANNEL.
6. MEANDERS TO BE SPACED ALONG STREAM CENTERLINE 3-5 TIMES THE BANKFULL WIDTH
7. IF EXCAVATION FINDS SUITABLE NATURAL SOIL, THIS MATERIAL WILL BE USED FOR THE CHANNEL BOTTOM. AN ATTEMPT WILL BE MADE TO MAKE AS MUCH OF THE STREAM CHANNEL LINED WITH SOIL MATERIAL AS POSSIBLE. IF THIS IS NOT THE CASE, AND SPOIL OR UNCONSOLIDATED MATERIAL IS FOUND, THE REMAINING LENGTH SHALL BE LEFT FOR THE INSTALLATION OF A 30 MIL PVC OR CLAY LINER. THE LINED AREAS WILL BE TOPPED WITH APPROXIMATELY 12 INCHES OF UNGRADED RIVER ROCK, ALTERNATED WITH LIMESTONE AT A MAXIMUM SIZE OF R-4 THRU R-5 RIPRAP.



TYPICAL DETAIL OF LOG VANE
SCALE: NTS

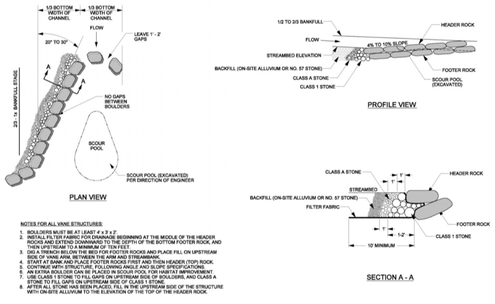


TYPICAL STEP DROP SCOUR POOL CONSTRUCTION
SCALE: NTS



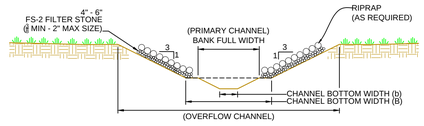
PLAN VIEW: SMALL LOG OR ROCK CROSS VANE DETAIL
SCALE: N.T.S.

J-HOOK VANE



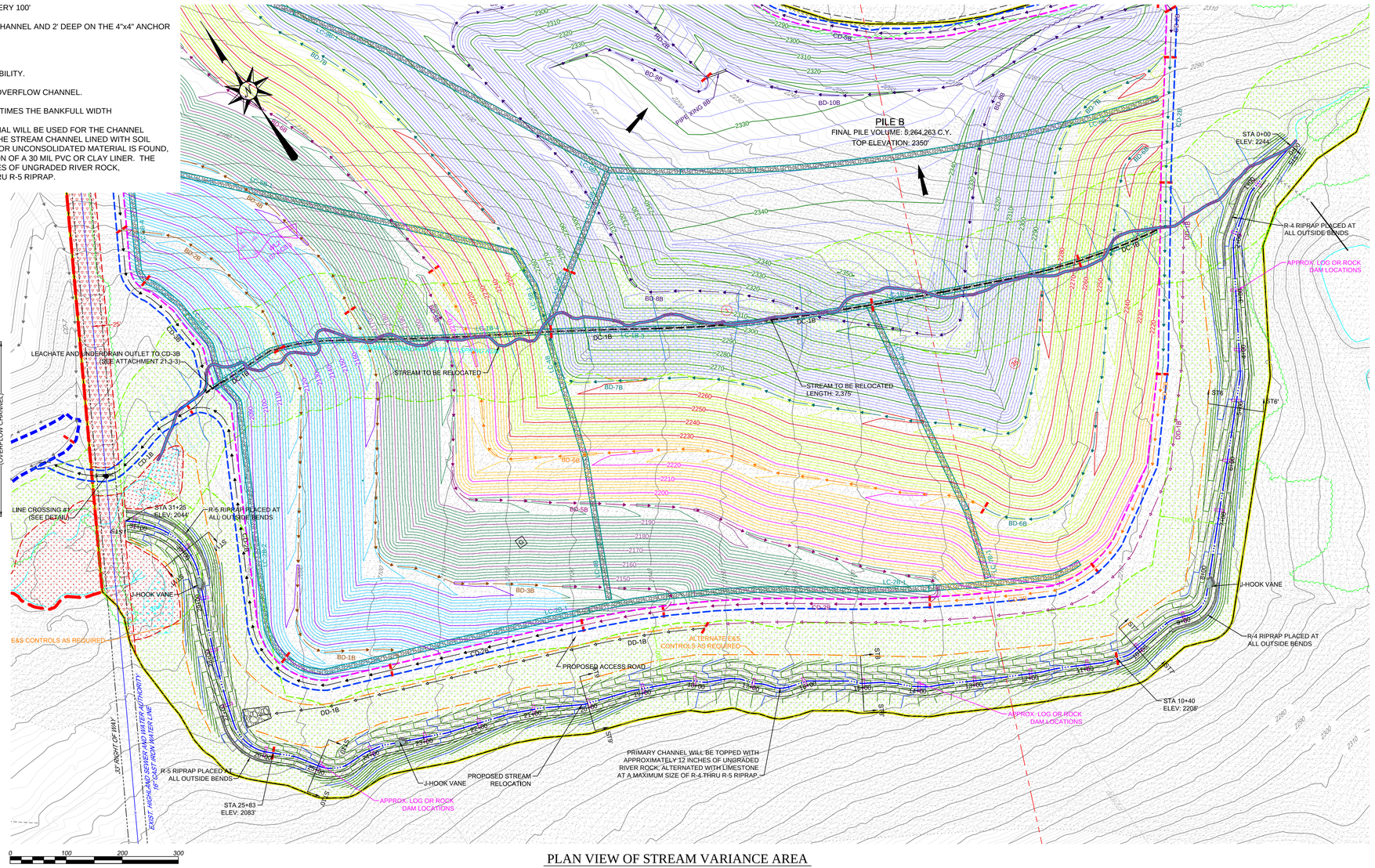
NOTES FOR ALL VANE STRUCTURES:

1. BOULDERS MUST BE AT LEAST 4' x 3' x 2'
2. INSTALL FILTER FABRIC FOR DRAINAGE BEGINNING AT THE MIDDLE OF THE HEADER ROCKS AND EXTEND DOWNWARD TO THE DEPTH OF THE BOTTOM FOOTER ROCK, AND ALONG THE UPSTREAM SIDE OF THE STRUCTURE
3. DIG A TRENCH BELOW THE BED FOR FOOTER ROCKS AND PLACE FILL ON UPSTREAM SIDE OF VANE ARM, BETWEEN THE ARM AND STREAMBANK
4. PLACE FOOTER ROCK ON FILTER FABRIC AND BACKFILL BEHIND HEADER (TOP) ROCK.
5. CONTINUE WITH STRUCTURE, FOLLOWING ANGLE AND SLOPE SPECIFICATIONS.
6. AN EXTRA BOULDER CAN BE PLACED IN SCOUR POOL FOR HABITAT IMPROVEMENT
7. FILL THE ARM BEHIND THE HEADER ROCKS WITH ALLUVIUM, BACKFILL, AND CLASS A STONE TO FILL GAPS ON UPSTREAM SIDE OF CLASS 1 STONE
8. AFTER ALL STONE HAS BEEN PLACED, FILL IN THE UPSTREAM SIDE OF THE STRUCTURE WITH ON-SITE ALLUVIUM TO THE ELEVATION OF THE TOP OF THE HEADER ROCK.



TYPICAL PROPOSED PERMANENT STREAM CHANNEL
SCALE: N.T.S.

STREAM REPLACEMENT TABLE		CHANNEL WIDTH		STA.
REPLACEMENT STREAM ID	TOTAL LENGTH (LINEAR FEET)	(b) (FT)	(B) (FT)	
1-1	1040	8	30	0+00 - 10+40
1-2	1543	8	30	10+40 - 25+83
1-3	542	8	30	25+83 - 31+25
TOTAL	3,125			



PLAN VIEW OF STREAM VARIANCE AREA
SCALE: 1" = 100'

NOT FOR CONSTRUCTION

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

REVISIONS

No.	By	Date	Description
1	DJP	01-17-2017	DEP Requested Revisions

Drawn By:	DJP
Checked By:	SWH
Date:	08-23-2016
Scale:	AS NOTED
Project No.:	0211-L770
File Name:	Portage Refuse Area 1 Expansion.dwg
Drawing:	1 of 1

CME ENGINEERING
CME ENGINEERING LP
975 Georges Station Rd, Ste 100, Greensburg, PA 15601
724-672-4800 FAX: 724-672-4801

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL BRAD R. COLE ENGINEER 052976-E

SEAL OF CME MANAGEMENT LLC, GENERAL PARTNER OF CME ENGINEERING LP

EXHIBIT 15.2: STREAM MITIGATION / REPLACEMENT MAP

ROSEBUD MINING COMPANY

REFUSE AREA NO. 1 EXPANSION

CRDP # 11040701 MSHA ID # 36-09246

PORTAGE TOWNSHIP

CAMBRIA COUNTY, PENNSYLVANIA

G:\Clients\0211-AMFIRE Mining Co\LT7 - Refuse No. 1 Expansion\01 2016 Expansion\CAD\Permit dwgs\Current\Portage Refuse Area 1 Expansion.dwg, Ex15-2, 1/17/2017 12:34:41 PM, drew.plevelich, 1:1