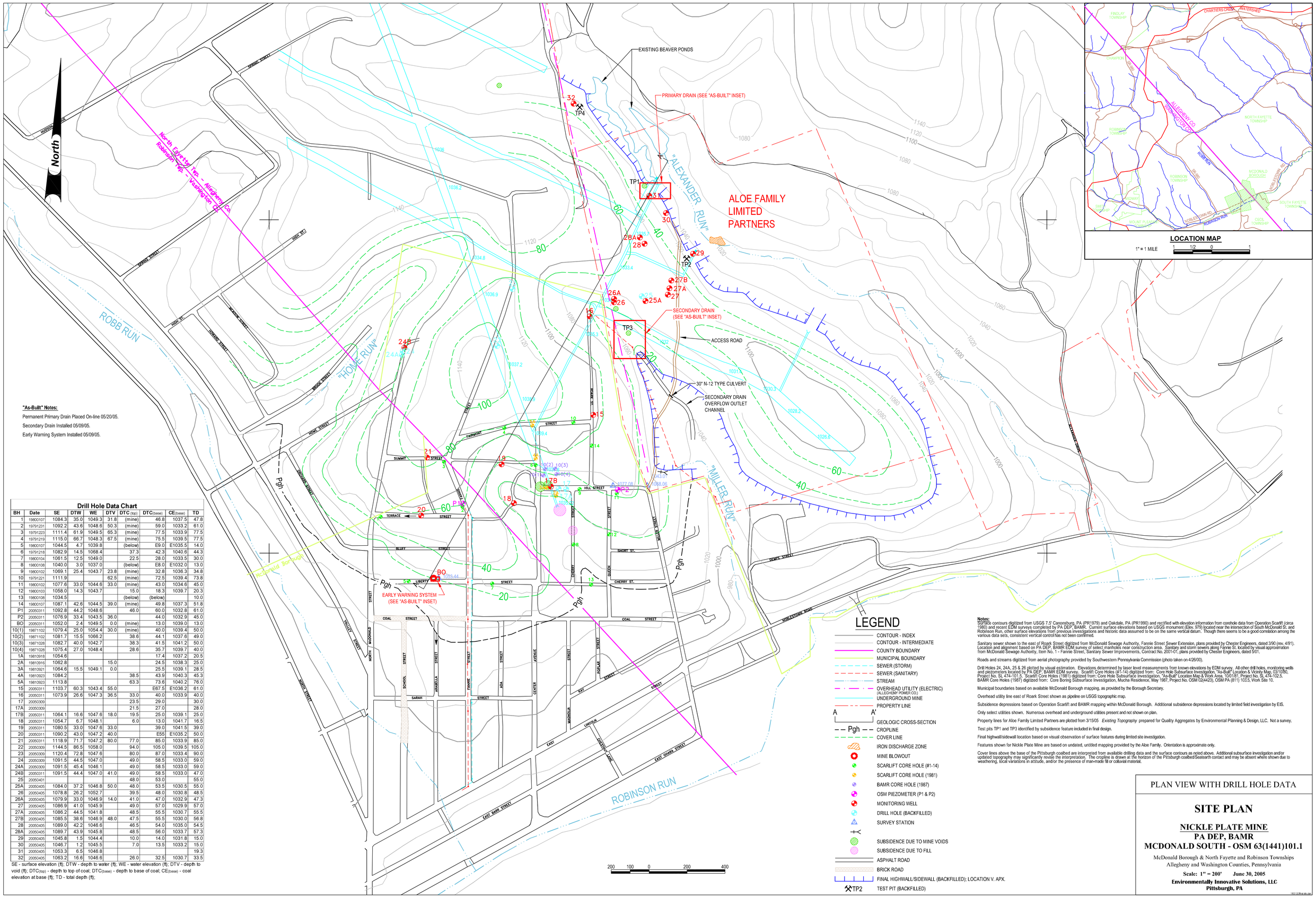

"As-Built" Notes:

Permanent Primary Drain Placed On-line 05/20/05.

Secondary Drain Installed 05/09/05.

Early Warning System Installed 05/09/05.

Drill Hole Data Chart

BH	Date	SE	DTW	WE	DTV	DTC (top)	DTC(base)	CE(base)	TD
1	19800107	1084.3	35.0	1049.3	31.8	(mine)	46.8	1037.5	47.8
2	19791231	1092.2	43.6	1048.6	50.3	(mine)	59.0	1033.2	61.0
3	19791223	1111.4	61.9	1049.5	65.3	(mine)	77.5	1033.9	77.5
4	19791219	1115.0	66.7	1048.3	67.5	(mine)	75.5	1039.5	77.5
5	19800107	1044.5	4.7	1039.8		(below)	E9.0	E1035.5	14.0
6	19791218	1082.9	14.5	1068.4		37.3	42.3	1040.6	44.3
7	19800104	1061.5	12.5	1049.0		22.5	28.0	1033.5	30.0
8	19800108	1040.0	3.0	1037.0		(below)	E8.0	E1032.0	13.0
9	19800102	1069.1	25.4	1043.7	23.8	(mine)	32.8	1036.3	34.8
10	19791221	1111.9			62.5	(mine)	72.5	1039.4	73.8
11	19800102	1077.6	33.0	1044.6	33.0	(mine)	43.0	1034.6	45.0
12	19800103	1058.0	14.3	1043.7		15.0	18.3	1039.7	20.3
13	19800108	1034.5				(below)	(below)		10.0
14	19800107	1087.1	42.6	1044.5	39.0	(mine)	49.8	1037.3	51.8
P1	20050311	1092.8	44.2	1048.6		46.0	60.0	1032.8	61.0
P2	20050311	1076.9	33.4	1043.5	36.0		44.0	1032.9	45.0
BO	20050311	1052.0	2.4	1049.5	0.0	(mine)	13.0	1039.0	13.0
10(1)	19871102	1079.4	25.0	1054.4	30.0	(mine)	40.0	1039.4	50.0
10(2)	19871102	1081.7	15.5	1066.2		38.6	44.1	1037.6	49.0
10(3)	19871028	1082.7	40.0	1042.7		38.3	41.5	1041.2	50.0
10(4)	19871028	1075.4	27.0	1048.4		28.6	35.7	1039.7	40.0
1A	19810918	1054.6					17.4	1037.2	20.5
2A	19810916	1062.8			15.0		24.5	1038.3	25.0
3A	19810921	1064.6	15.5	1049.1	0.0		25.5	1039.1	28.5
4A	19810923	1084.2				38.5	43.9	1040.3	45.3
5A	19810923	1113.8				63.3	73.6	1040.2	76.0
15	20050311	1103.7	60.3	1043.4	55.0		E67.5	E1036.2	61.0
16	20050311	1073.9	26.6	1047.3	36.5	33.0	40.0	1033.9	40.0
17	20050309					23.5	29.0		30.0
17A	20050309					21.5	27.0		28.0
17B	20050311	1064.1	16.6	1047.6	18.0	19.5	25.0	1039.1	25.0
18	20050311	1054.7	6.7	1048.1		6.0	13.0	1041.7	16.5
19	20050311	1080.5	33.0	1047.6	33.0		39.0	1041.5	39.0
20	20050311	1090.2	43.0	1047.2	40.0		E55	E1035.2	50.0
21	20050311	1118.9	71.7	1047.2	80.0	77.0	85.0	1033.9	85.0
22	20050309	1144.5	86.5	1058.0		94.0	105.0	1039.5	105.0
23	20050309	1120.4	72.8	1047.6		80.0	87.0	1033.4	90.0
24	20050309	1091.5	44.5	1047.0		49.0	58.5	1033.0	59.0
24A	20050309	1091.5	45.4	1046.1		49.0	58.5	1033.0	59.0
24B	20050311	1091.5	44.4	1047.0	41.0	49.0	58.5	1033.0	47.0
25	20050401					48.0	53.0		55.0
25A	20050405	1084.0	37.2	1046.8	50.0	48.0	53.5	1030.5	55.0
26	20050405	1078.8	26.2	1052.7		39.5	48.0	1030.8	48.5
26A	20050405	1079.9	33.0	1046.9	14.0	41.0	47.0	1032.9	47.3
27	20050405	1086.9	41.0	1045.9		49.0	57.0	1029.9	57.0
27A	20050405	1086.2	44.5	1041.8		48.5	55.5	1030.7	55.5
27B	20050405	1085.5	38.6	1046.9	48.0	47.5	55.5	1030.0	56.8
28	20050405	1089.0	42.2	1046.6		46.5	54.0	1035.0	54.5
28A	20050405	1089.7	43.9	1045.8		48.5	56.0	1033.7	57.3
29	20050405	1045.8	1.5	1044.4		10.0	14.0	1031.8	15.0
30	20050405	1046.7	1.2	1045.5		7.0	13.5	1033.2	15.0
31	20050405	1053.3	6.5	1046.8					19.3
32	20050405	1063.2	16.6	1046.6		26.0	32.5	1030.7	33.5

SE - surface elevation (ft); DTW - depth to water (ft); WE - water elevation (ft); DTV - depth to void (ft); DTC(top) - depth to top of coal; DTC(base) - depth to base of coal; CE(base) - coal elevation at base (ft); TD - total depth (ft);

LEGEND

- CONTOUR - INDEX
- CONTOUR - INTERMEDIATE
- COUNTY BOUNDARY
- MUNICIPAL BOUNDARY
- SEWER (STORM)
- SEWER (SANITARY)
- STREAM
- OVERHEAD UTILITY (ELECTRIC) (ALLEGHENY POWER CO.)
- UNDERGROUND MINE
- PROPERTY LINE
- A A' GEOLOGIC CROSS-SECTION
- Pgh CROPLINE
- COVER LINE
- IRON DISCHARGE ZONE
- MINE BLOWOUT
- SCARLIFT CORE HOLE (#1-14)
- SCARLIFT CORE HOLE (1981)
- BAMR CORE HOLE (1987)
- OSM PIEZOMETER (P1 & P2)
- MONITORING WELL
- DRILL HOLE (BACKFILLED)
- SURVEY STATION
- SUBSIDENCE DUE TO MINE VOIDS
- SUBSIDENCE DUE TO FILL
- ASPHALT ROAD
- BRICK ROAD
- FINAL HIGHWALL/SIDEWALL (BACKFILLED); LOCATION V. APX.
- TP2 TEST PIT (BACKFILLED)

Notes:

Topography contours digitized from USGS 7.5' Canonsburg, PA (PR1979) and Oakdale, PA (PR1990) and rectified with elevation information from coreHole data from Operation Scarlift (circa 1980) and recent EDM surveys completed by PA DEP, BAMR. Current surface elevations based on USGS monument (Elev. 979) located near the intersection of South McDonald St. and Robinson Run, other surface elevations from previous investigations and historic data assumed to be on the same vertical datum. Though there seems to be a good correlation among the various data sets, consistent vertical control has not been confirmed.

Sanitary sewer shown to the east of Roark Street digitized from McDonald Sewage Authority, Fannie Street Sewer Extension, plans provided by Chester Engineers, dated 3/90 (rev. 4/91). Location and alignment based on PA DEP, BAMR EDM survey of select manholes near construction area. Sanitary and storm sewers along Fannie St. located by visual approximation from McDonald Sewage Authority, Item No. 1 - Fannie Street, Sanitary Sewer Improvements, Contract No. 2001-01, plans provided by Chester Engineers, dated 5/01.

Roads and streams digitized from aerial photography provided by Southwestern Pennsylvania Commission (photo taken on 4/26/00).

Drill Holes 24, 24A, 25 & 26 plotted by visual estimation. Elevations determined by laser level measurements from known elevations by EDM survey. All other drill holes, monitoring wells and piezometers located by PA DEP, BAMR EDM survey. Scarlift Core Holes (#1-14) digitized from: Core Hole Subsurface Investigation, "As-Built" Location & Vicinity Map, (3/10/06), Project No. SL 474-101.5. Scarlift Core Holes (1981) digitized from: Core Hole Subsurface Investigation, "As-Built" Location Map & Work Area, 10/01/81, Project No. SL 474-102.5. BAMR Core Holes (1987) digitized from: Core Boring Subsurface Investigation, Mucha Residence, May 1987, Project No. OSM 02(4423), OSM PA (811) 102.5, Work Site 10.

Municipal boundaries based on available McDonald Borough mapping, as provided by the Borough Secretary.

Overhead utility line east of Roark Street shown as pipeline on USGS topographic map.

Subsidence depressions based on Operation Scarlift and BAMR mapping within McDonald Borough. Additional subsidence depressions located by limited field investigation by EIS.

Only select utilities shown. Numerous overhead and underground utilities present and not shown on plan.

Property lines for Aloe Family Limited Partners are plotted from 3/15/05 *Existing Topography* prepared for Quality Aggregates by Environmental Planning & Design, LLC. Not a survey.

Test pits TP1 and TP3 identified by subsidence feature included in final design.

Final highwall/sidewall location based on visual observation of surface features during limited site investigation.

Features shown for Nickle Plate Mine are based on undated, untitled mapping provided by the Aloe Family. Orientation is approximate only.

Cover lines above the base of the Pittsburgh coalbed are interpreted from available drilling data and the surface contours as noted above. Additional subsurface investigation and/or updated topography may significantly revise the interpretation. The cropline is drawn at the horizon of the Pittsburgh coalbed/Seatearth contact and may be absent where shown due to weathering, local variations in altitude, and/or the presence of man-made fill or colluvial material.

PLAN VIEW WITH DRILL HOLE DATA

SITE PLAN

NICKLE PLATE MINE
PA DEP, BAMR
MCDONALD SOUTH - OSM 63(1441)101.1

McDonald Borough & North Fayette and Robinson Townships
Allegheny and Washington Counties, Pennsylvania

Scale: 1" = 200' **June 30, 2005**

Environmentally Innovative Solutions, LLC
Pittsburgh, PA