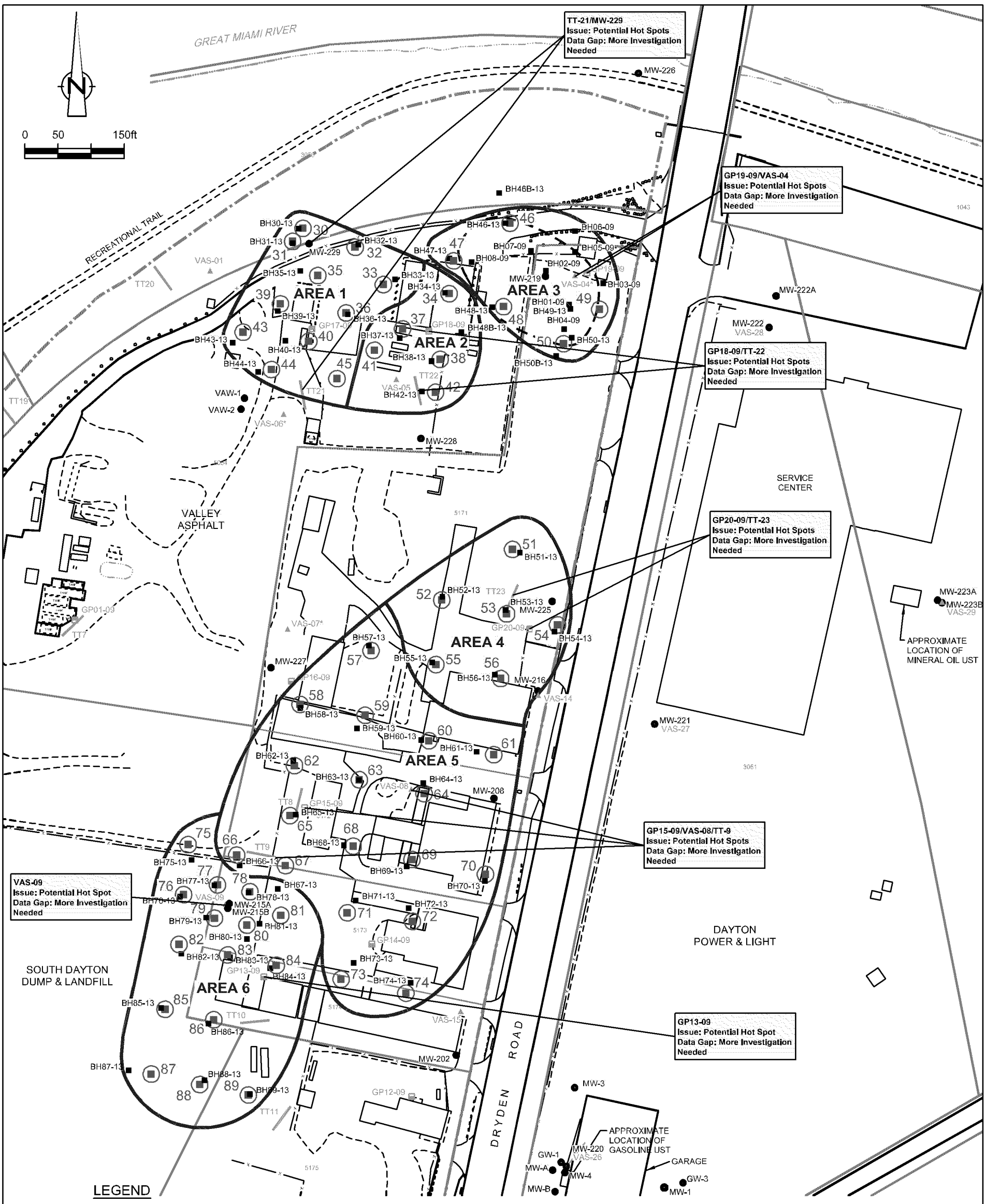
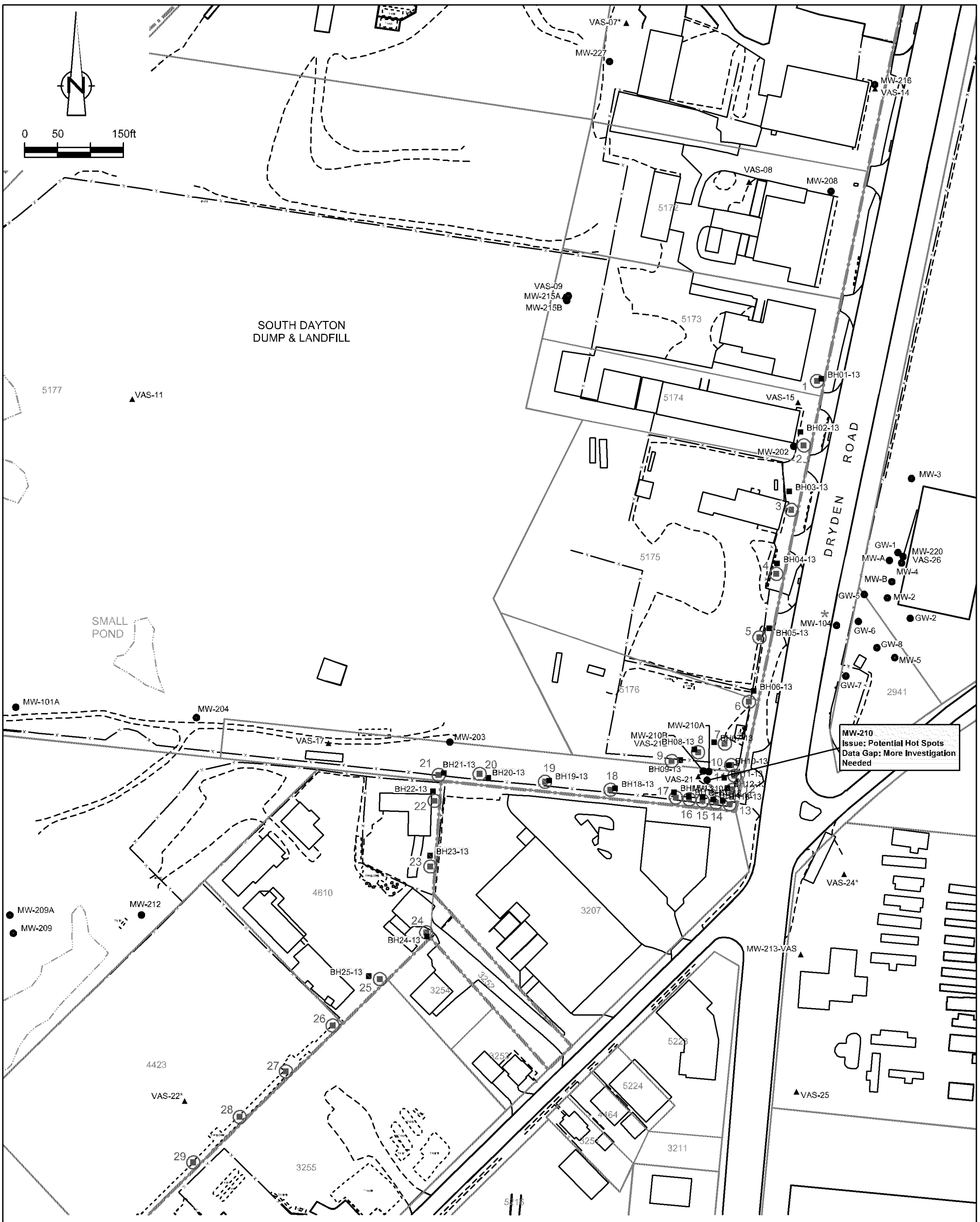


figure 1

OU1 PHASE 1A AREA
INVESTIGATIVE LOCATIONS
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA006 AUG 15/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- 3696 PARCEL NUMBER
- MW-206 UPPER AQUIFER MONITORING WELL LOCATION
- VAS-01 VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- BH01-13 BOREHOLE LOCATION
- 1 PROPOSED GROUNDWATER SAMPLING LOCATION

figure 2

MW-210 AREA GROUNDWATER INVESTIGATIVE LOCATIONS
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA007 AUG 15/2013

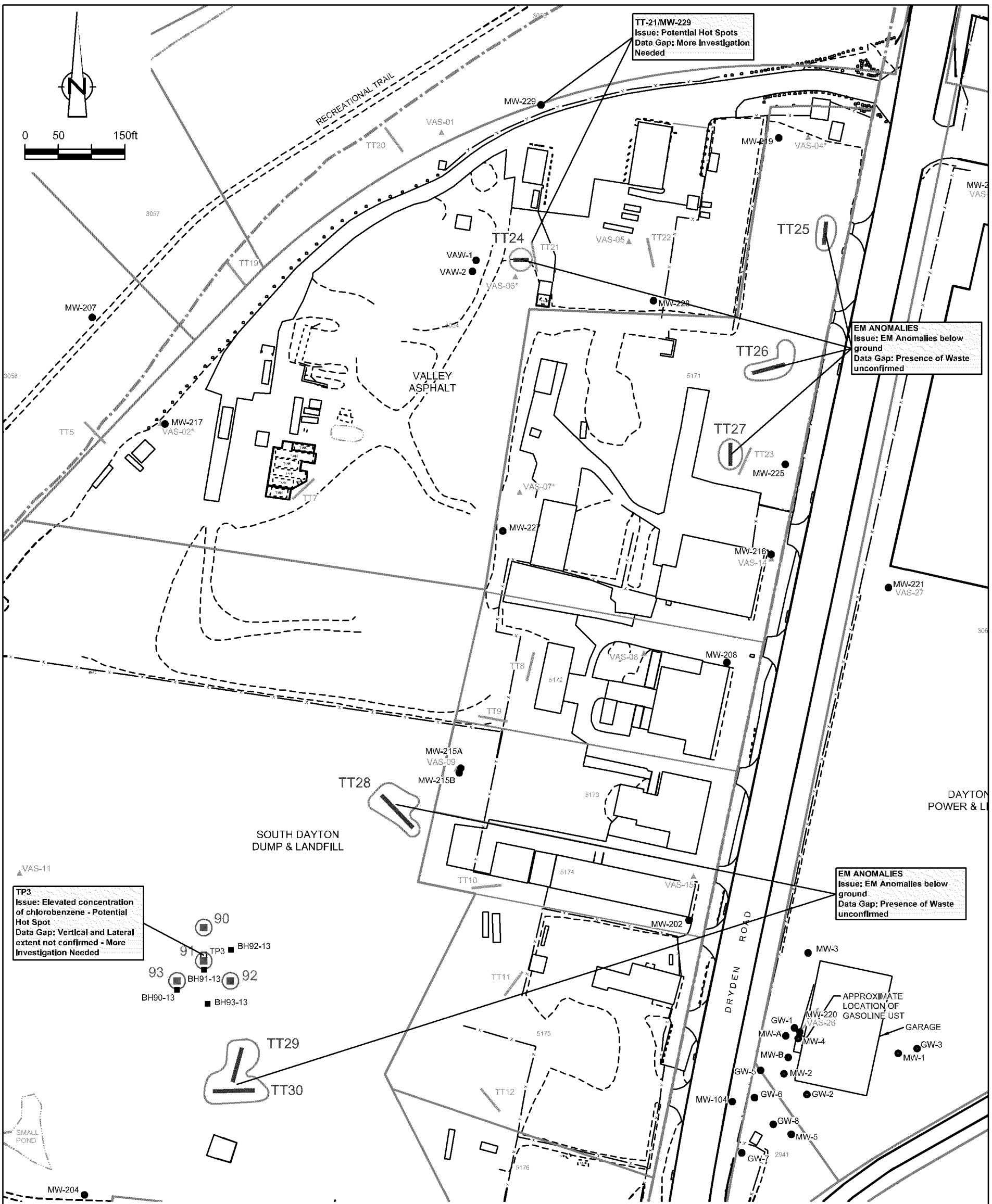
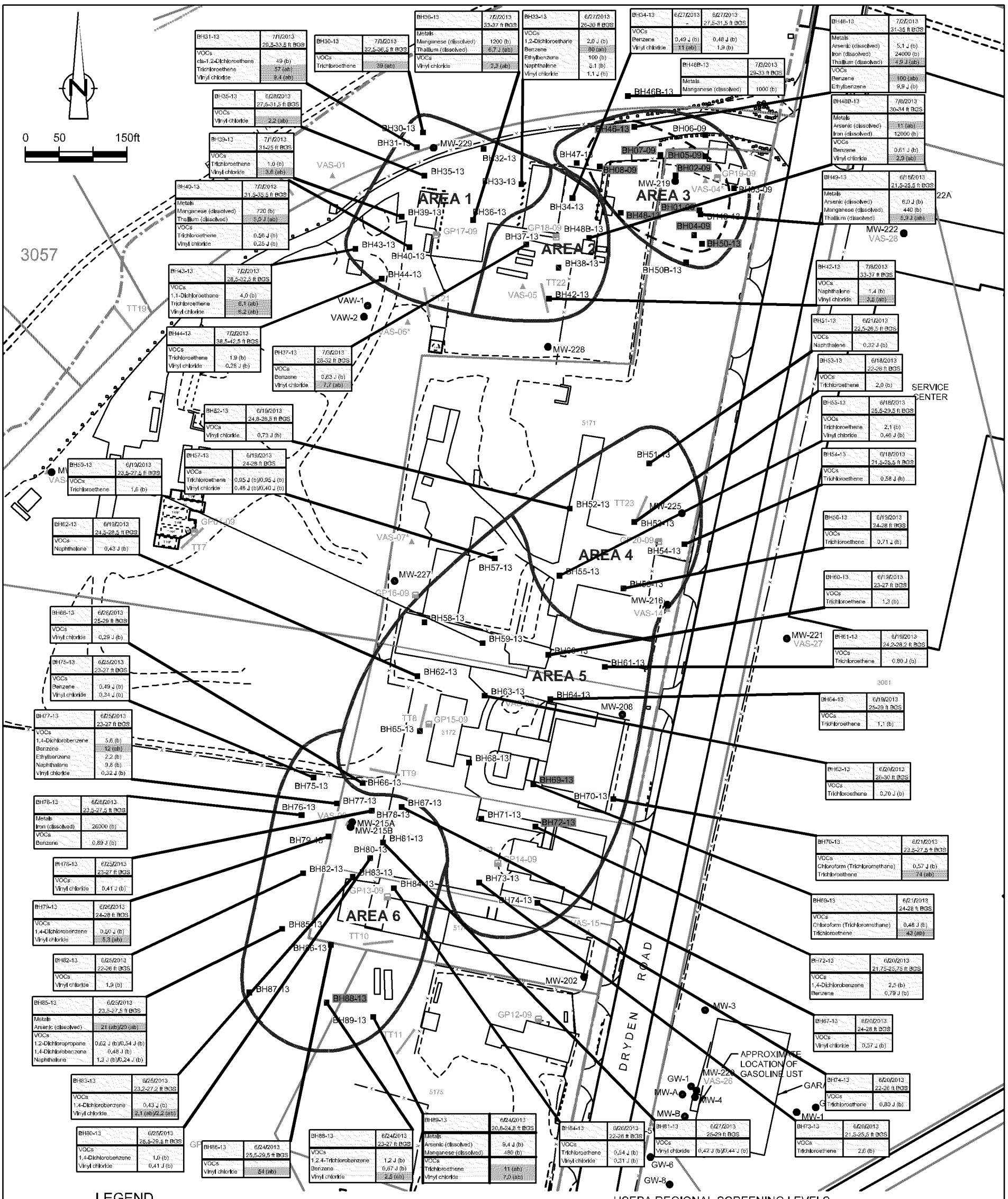


figure 3

OU1 PHASE 1A TEST TRENCH LOCATIONS
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE,
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA008 AUG 15/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- EXTENT OF NAPL PLUME
- MW-206 ● MONITORING WELL LOCATION
- TT1 TEST TRENCH LOCATION
- VAS01 VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- GP01-09 SHALLOW LANDFILL GAS PROBE
- GP02-09 DEEP LANDFILL GAS PROBE
- BH01-13 ■ BOREHOLE LOCATION
- POSITIVE SUDAN IV DYE TEST

BH78-13	6/25/2013 23-27 ft BGS
VOCs	
Vinyl chloride	0.41 J (b)

- SAMPLE IDENTIFICATION
- SAMPLE DATE
- SAMPLE DEPTH
- CRITERIA
- CONCENTRATION µg/L
- PARAMETER
- J ESTIMATED
- EXCEEDS USEPA MCL

USEPA REGIONAL SCREENING LEVELS

Chemical	Maximum Contaminant Levels (MCL) (a)	Tapwater Criteria (b)
Arsenic (dissolved)	10	0.045
Iron (dissolved)	-	11000
Manganese (dissolved)	-	320
Thallium (dissolved)	2	0.16
1,1-Dichloroethane	-	2.4
1,2,4-Trichlorobenzene	70	0.99
1,2-Dichloroethane	5	0.15
1,2-Dichloropropane	5	0.38
1,4-Dichlorobenzene	75	0.42
Benzene	5	0.39
Chloroform (Trichloromethane)	80	0.19
cis-1,2-Dichloroethene	70	28
Ethylbenzene	700	1.3
Naphthalene	-	0.14
Trichloroethene	5	0.44
Vinyl chloride	2	0.015

figure 4

OU1 PHASE 1A AREAS - GROUNDWATER RESULTS vs USEPA RSLs
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA001 AUG 15/2013

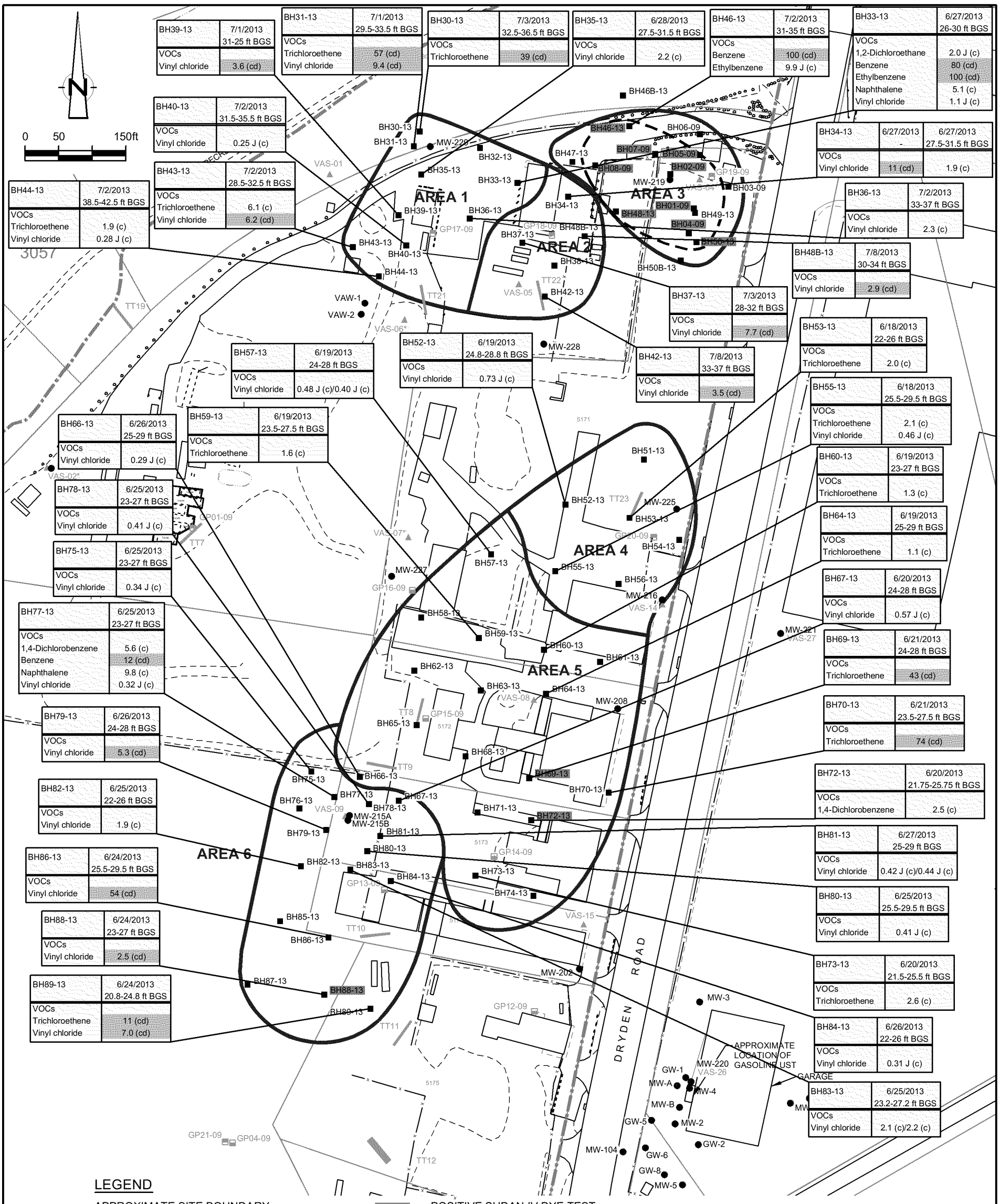


figure 5

OU1 PHASE 1A AREAS - GROUNDWATER RESULTS vs VI SCREENING CRITERIA
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA011 AUG 28/2013

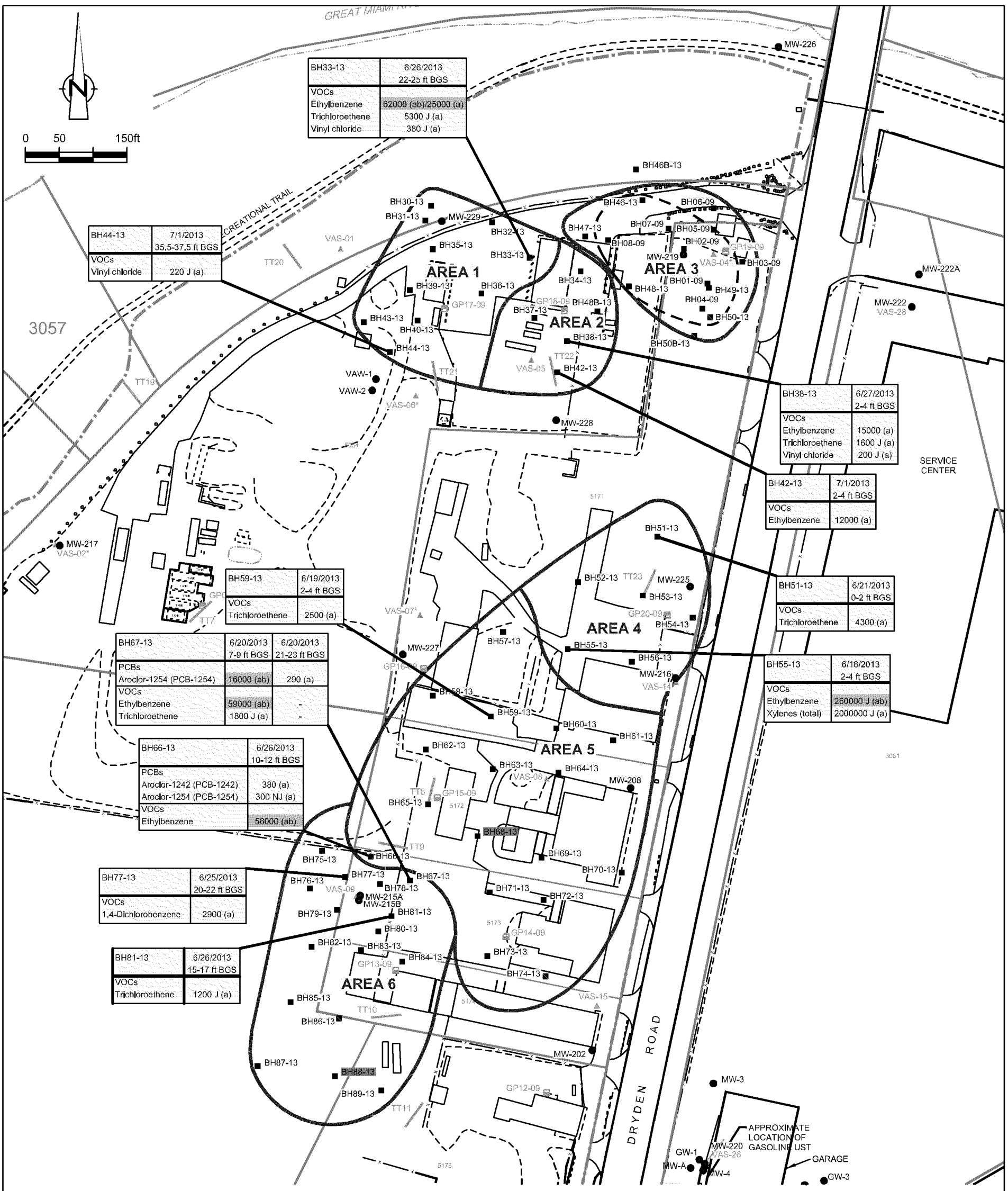
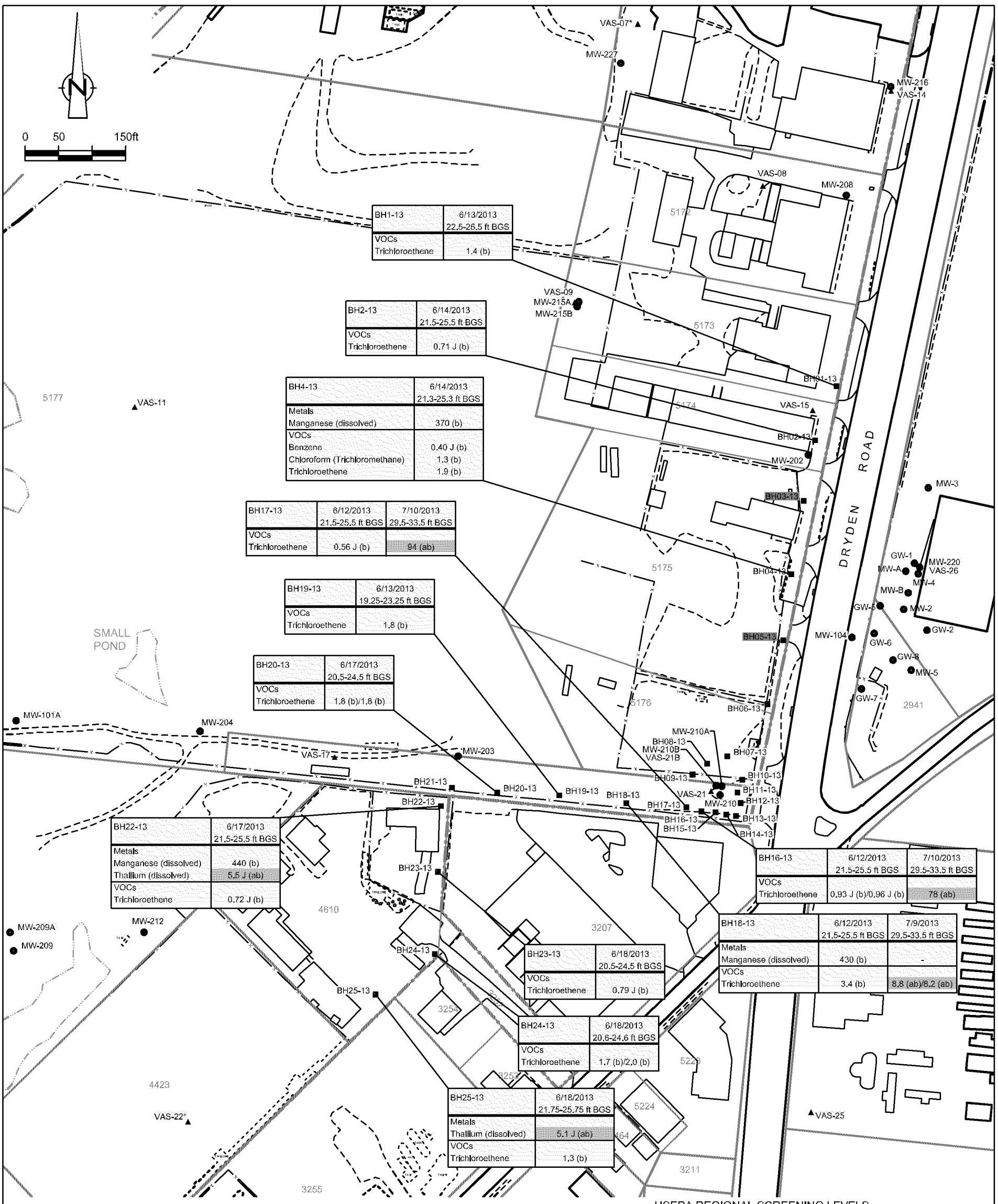


figure 6

OU1 PHASE 1A AREAS - SOIL RESULTS vs USEPA RSLs
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA005 AUG 15/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- 3696 PARCEL NUMBER
- MW-206 ● UPPER AQUIFER MONITORING WELL LOCATION
- VAS-01 ▲ VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- BH01-13 ■ BOREHOLE LOCATION
- POSITIVE SUDAN IV DYE TEST

BH24-13	6/18/2013 20.6-24.6 ft BGS
VOCs Trichloroethene	1.7 (b)/2.0 (b)

- SAMPLE IDENTIFICATION
- SAMPLE DATE
- SAMPLE DEPTH
- CRITERIA
- CONCENTRATION µg/L
- PARAMETER

J ESTIMATED

EXCEEDS USEPA MCL

USEPA REGIONAL SCREENING LEVELS

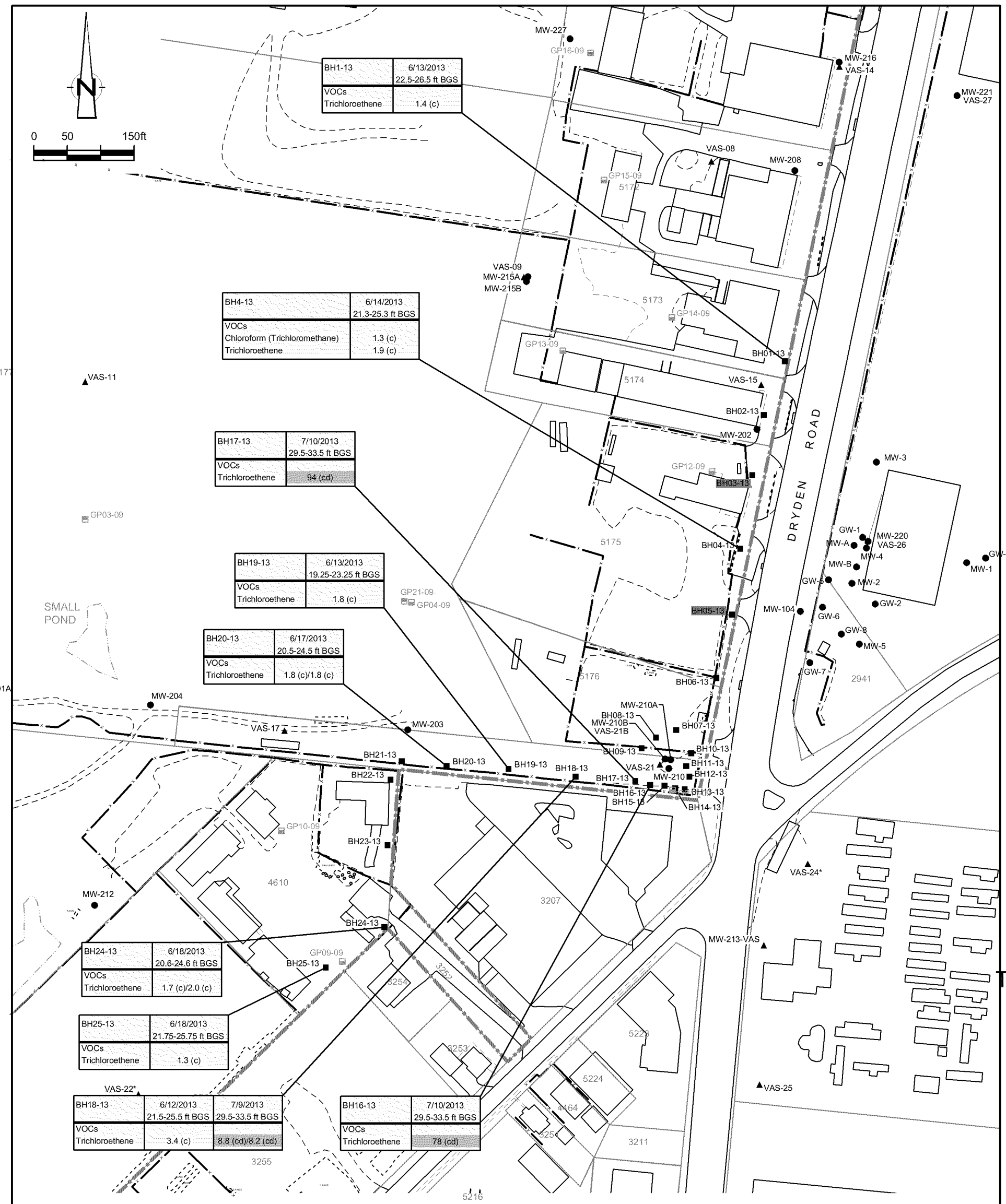
Chemical	Maximum Contaminant Levels (MCL) (a)	Tapwater Criteria (b)
Manganese (dissolved)	-	320
Thallium (dissolved)	2	0.16
Benzene	5	0.39
Chloroform (Trichloromethane)	80	0.19
Trichloroethene	5	0.44

figure 7

MW-210 AREA GROUNDWATER RESULTS vs USEPA RSLs
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA002 AUG 27/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- 3696 PARCEL NUMBER
- MW-206 ● UPPER AQUIFER MONITORING WELL LOCATION
- VAS-01 ▲ VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- GP01-09 SHALLOW LANDFILL GAS PROBE
- GP02-09 DEEP LANDFILL GAS PROBE
- BH01-13 ■ BOREHOLE LOCATION
- POSITIVE SUDAN IV DYE TEST

BH24-13	6/18/2013 20.6-24.6 ft BGS
VOCs Trichloroethene	1.7 (c)/2.0 (c)

SAMPLE IDENTIFICATION
SAMPLE DATE
SAMPLE DEPTH
&21&(175$7,21 ó J ¡ /
PARAMETER
J ESTIMATED
EXCEEDS PROTECTION OF INDUSTRIAL IA (d)

USEPA REGIONAL SCREENING LEVELS

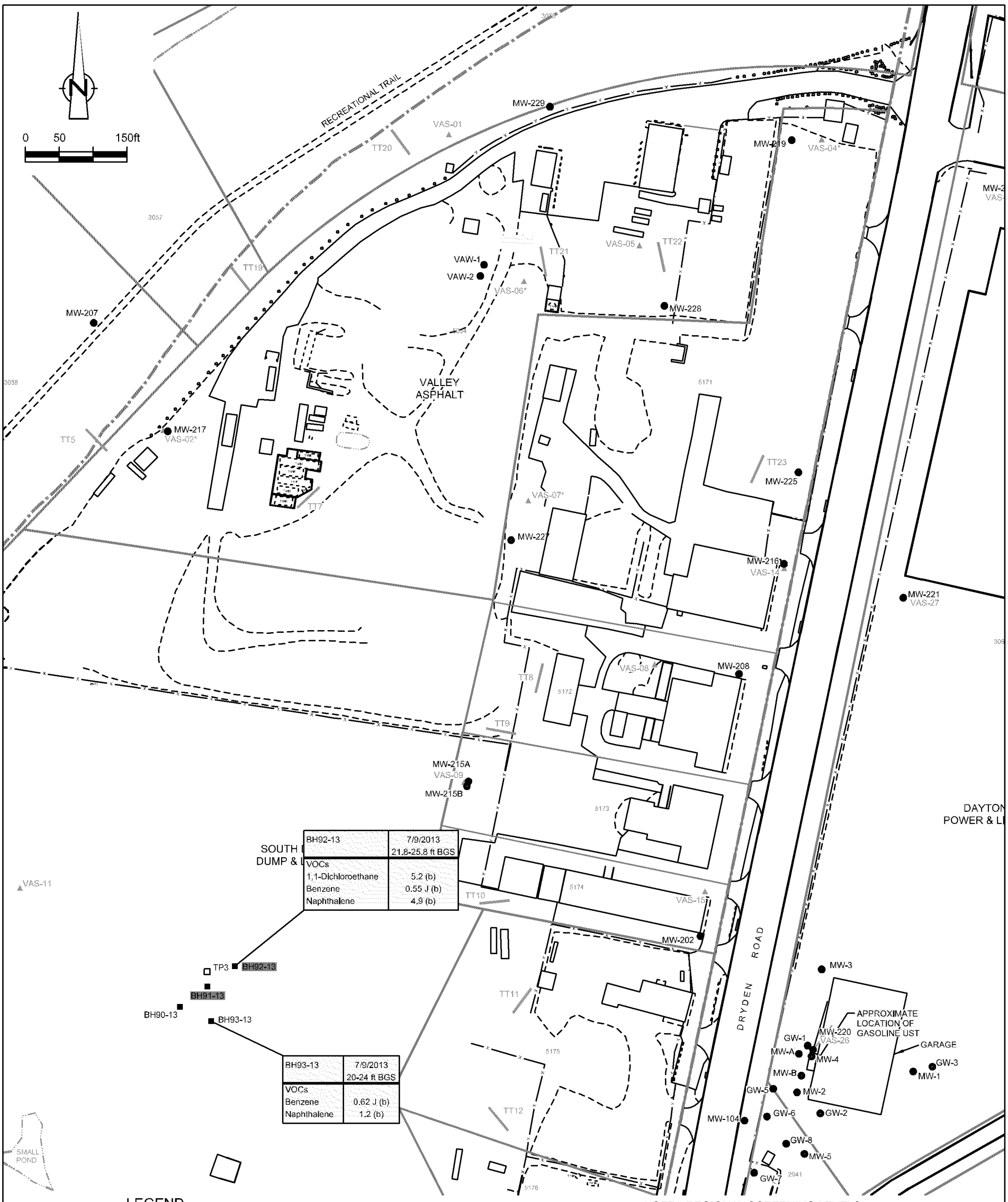
Chemical	Protection of Residential IA (c)	Protection of Industrial IA (d)
Chloroform (Trichloromethane)	0.73	3.53
Trichloroethene	1.07	7.45

figure 8

MW-210 AREA GROUNDWATER RESULTS vs VI SCREENING CRITERIA
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA010 AUG 28/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- MW-206 MONITORING WELL LOCATION
- TT1 TEST TRENCH LOCATION
- VAS01 VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- TP3 TEST PIT LOCATION
- BH01-13 BOREHOLE LOCATION
- POSITIVE SUDAN IV DYE TEST

BH93-13 | 7/9/2013 | 20-24 ft BGS
VOCs
Benzene 0.62 J (b)
Naphthalene 1.2 (b)

- SAMPLE IDENTIFICATION
- SAMPLE DATE
- SAMPLE DEPTH
- CRITERIA
- CONCENTRATION µg/L
- PARAMETER
- J ESTIMATED
- EXCEEDS USEPA MCL

USEPA REGIONAL SCREENING LEVELS

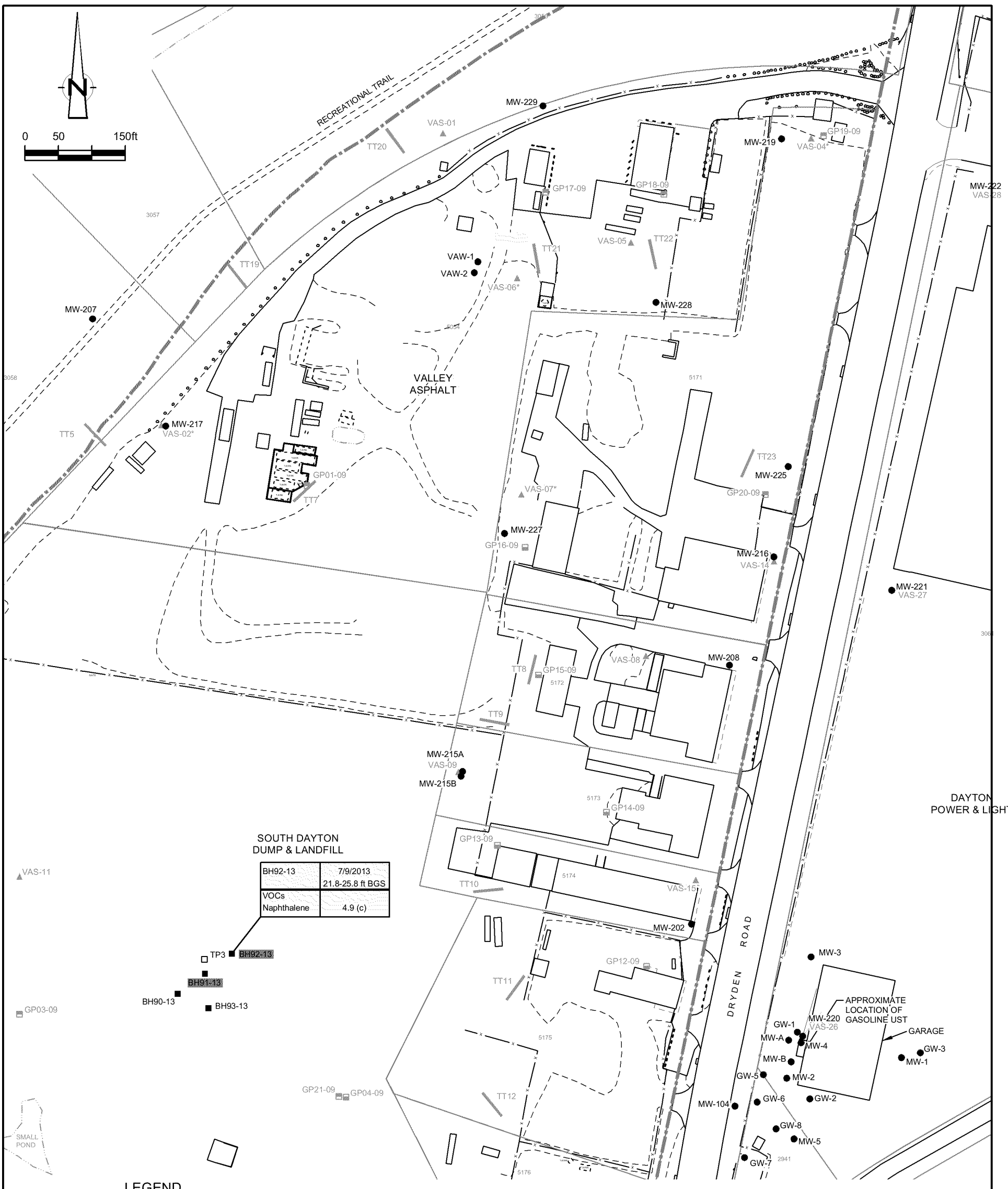
Chemical	Maximum Contaminant Levels (MCL) (a)	Tapwater Criteria (b)
1,1-Dichloroethane	-	2.4
Benzene	5	0.39
Naphthalene	-	0.14

figure 9

PHASE 1A TEST TRENCH GROUNDWATER RESULTS vs USEPA RSLs
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA012 AUG 27/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- MW-206 ● MONITORING WELL LOCATION
- TT1 TEST TRENCH LOCATION
- VAS01 VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- TP3 □ TEST PIT LOCATION
- GP01-09 SHALLOW LANDFILL GAS PROBE
- GP02-09 DEEP LANDFILL GAS PROBE
- BH01-13 ■ BOREHOLE LOCATION

POSITIVE SUDAN IV DYE TEST

BH92-13	7/9/2013 21.8-25.8 ft BGS
VOCs Naphthalene	4.9 (c)

SAMPLE IDENTIFICATION
SAMPLE DATE
SAMPLE DEPTH
CRITERIA
&21&(175$7,21 ó J] /
PARAMETER

J ESTIMATED

USEPA REGIONAL SCREENING LEVELS

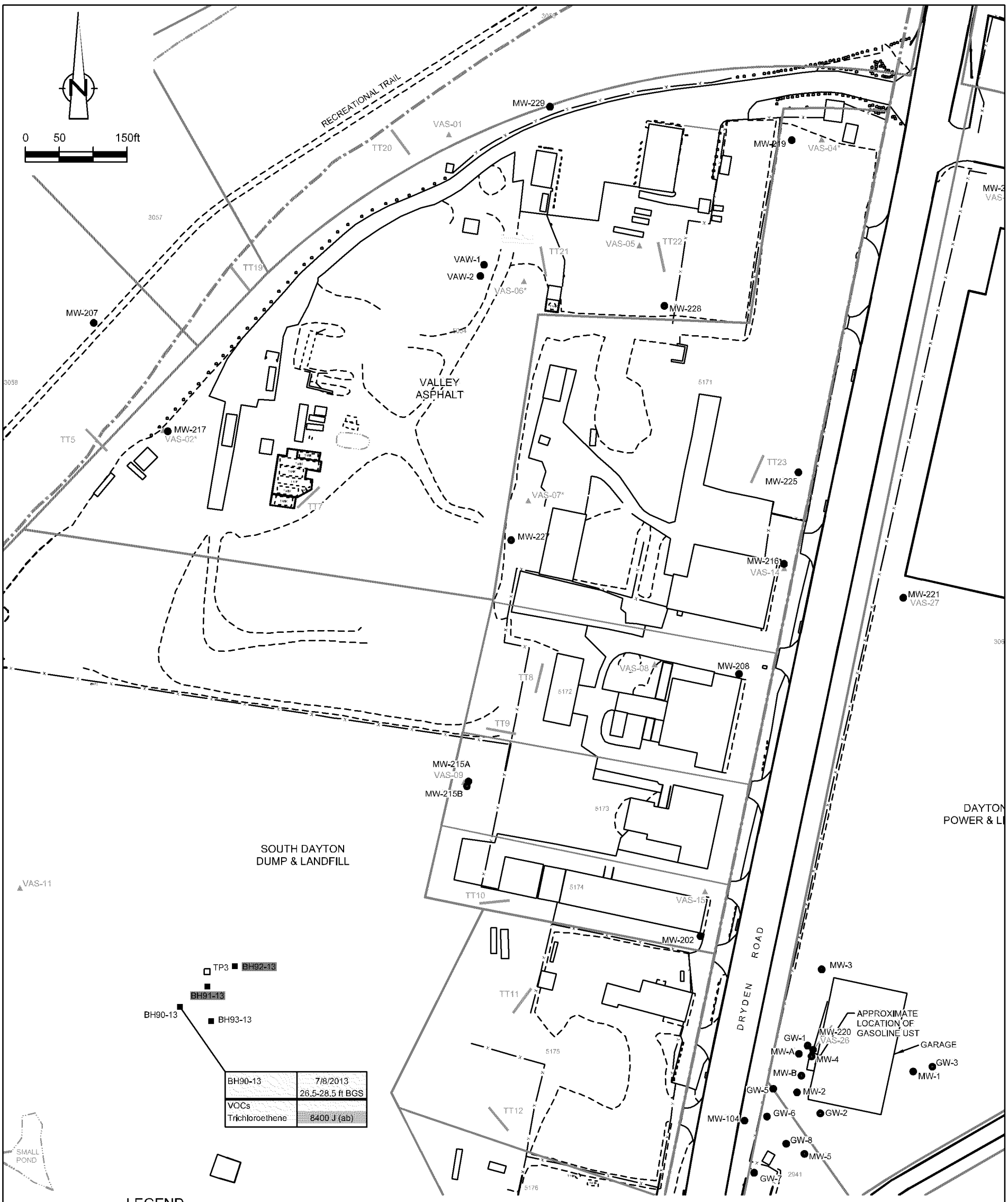
Chemical	Protection of Residential IA (c)	Protection of Industrial IA (d)
Naphthalene	4	20.01

figure 10

PHASE 1A TEST TRENCH GROUNDWATER RESULTS vs VI SCREENING CRITERIA
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA013 AUG 28/2013



LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- MW-206 ● MONITORING WELL LOCATION
- TT1 TEST TRENCH LOCATION
- VAS01 VERTICAL AQUIFER SAMPLING LOCATION
- * VAS LOCATION COMPLETED TO 70 FEET BELOW GROUND SURFACE OR LESS
- TP3 TEST PIT LOCATION
- BH01-13 BOREHOLE LOCATION

POSITIVE SUDAN IV DYE TEST

BH90-13	7/8/2013 26.5-28.5 ft BGS
VOCs Trichloroethene	8400 J (ab)

- SAMPLE IDENTIFICATION
- SAMPLE DATE
- SAMPLE DEPTH
- CRITERIA
- CONCENTRATION µg/kg
- PARAMETER
- J ESTIMATED
- EXCEEDS USEPA INDUSTRIAL SOIL RSL

USEPA REGIONAL SCREENING LEVELS

Chemical	Residential Soil (a)	Industrial Soil (b)
Trichloroethene	910	6400

figure 11

PHASE 1A TEST TRENCH SOIL RESULTS vs USEPA RSLs
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA014 AUG 27/2013

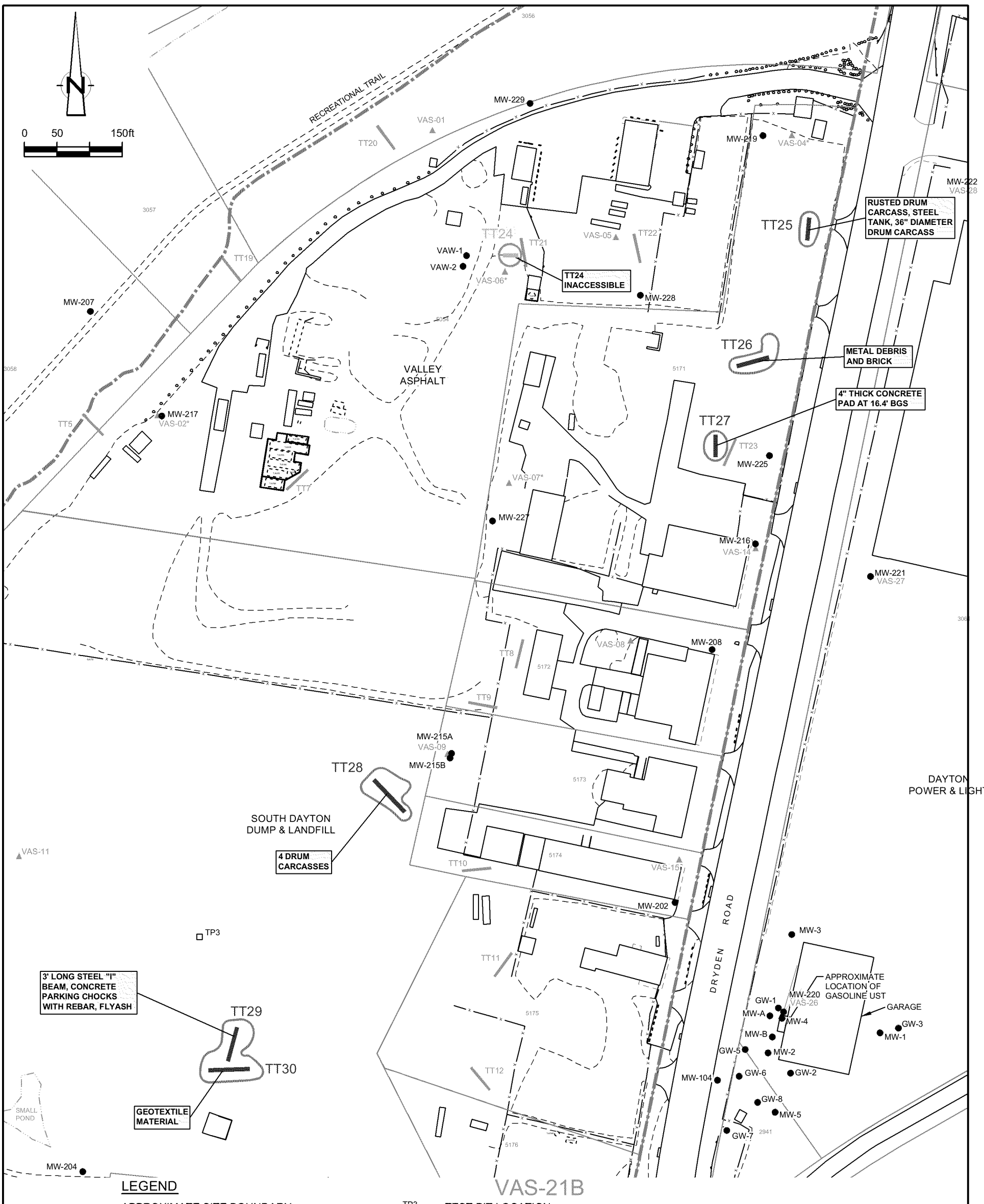


figure 12

PHASE 1A TEST TRENCH INVESTIGATION FINDINGS
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-74(PATT009)GN-WA004 AUG 28/2013