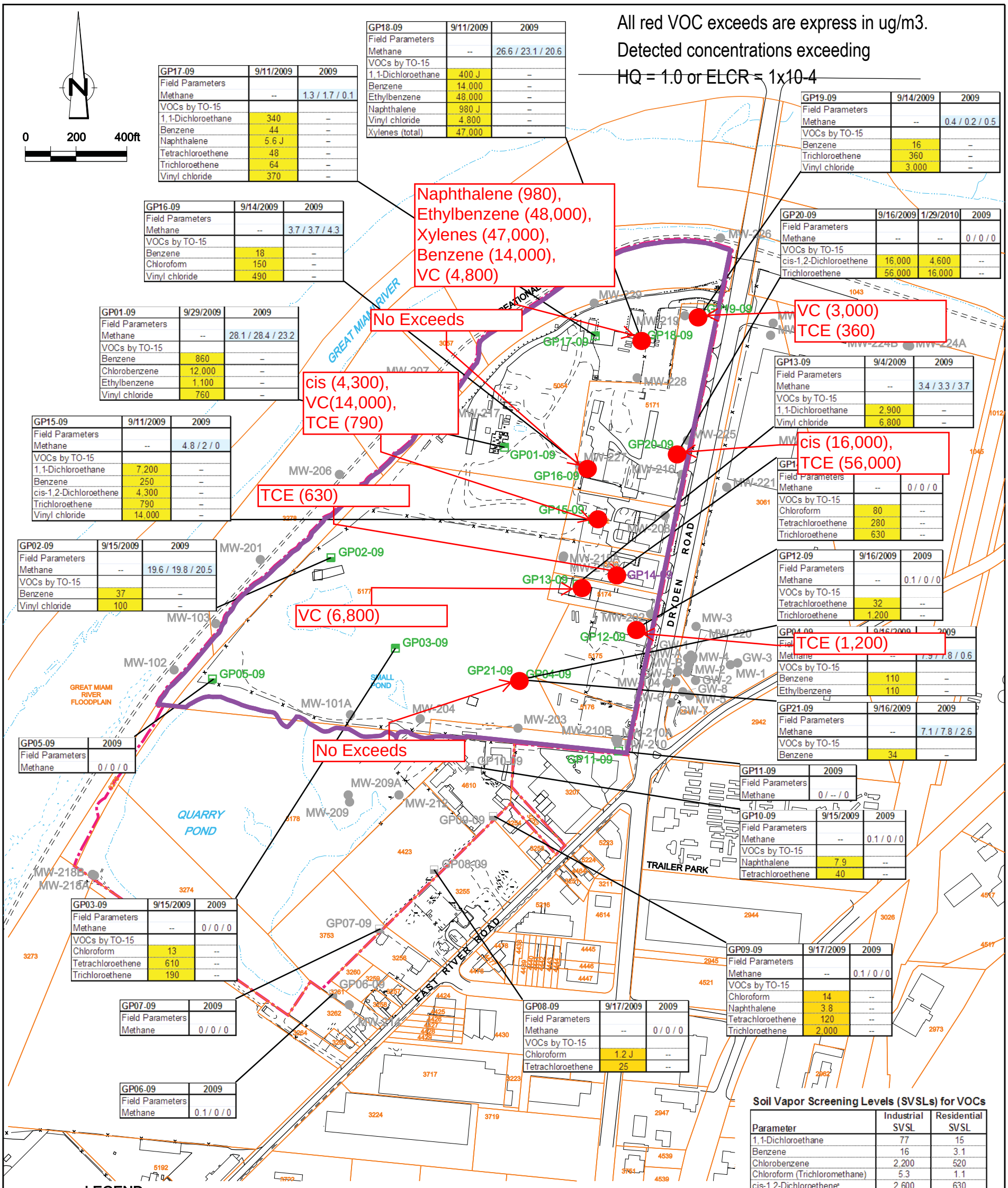
All red VOC exceeds are express in ug/m3.
Detected concentrations exceeding
HQ = 1.0 or ELCR = 1x10-4



GP17-09	9/11/2009	2009
Field Parameters		
Methane	--	1.3 / 1.7 / 0.1
VOCs by TO-15		
1,1-Dichloroethane	340	–
Benzene	44	–
Naphthalene	5.6 J	–
Tetrachloroethene	48	–
Trichloroethene	64	–
Vinyl chloride	370	–

GP18-09	9/11/2009	2009
Field Parameters		
Methane	--	26.6 / 23.1 / 20.6
VOCs by TO-15		
1,1-Dichloroethane	400 J	–
Benzene	14,000	–
Ethylbenzene	48,000	–
Naphthalene	980 J	–
Vinyl chloride	4,800	–
Xylenes (total)	47,000	–

GP19-09	9/14/2009	2009
Field Parameters		
Methane	--	0.4 / 0.2 / 0.5
VOCs by TO-15		
Benzene	16	–
Trichloroethene	360	–
Vinyl chloride	3,000	–

GP16-09	9/14/2009	2009
Field Parameters		
Methane	--	3.7 / 3.7 / 4.3
VOCs by TO-15		
Benzene	18	–
Chloroform	150	–
Vinyl chloride	490	–

GP20-09	9/16/2009	1/29/2010	2009
Field Parameters			
Methane	--	--	0 / 0 / 0
VOCs by TO-15			
cis-1,2-Dichloroethene	16,000	4,600	--
Trichloroethene	56,000	16,000	--

GP01-09	9/29/2009	2009
Field Parameters		
Methane	--	28.1 / 28.4 / 23.2
VOCs by TO-15		
Benzene	860	–
Chlorobenzene	12,000	–
Ethylbenzene	1,100	–
Vinyl chloride	760	–

GP13-09	9/4/2009	2009
Field Parameters		
Methane	--	3.4 / 3.3 / 3.7
VOCs by TO-15		
1,1-Dichloroethane	2,900	–
Vinyl chloride	6,800	–

GP15-09	9/11/2009	2009
Field Parameters		
Methane	--	4.8 / 2 / 0
VOCs by TO-15		
1,1-Dichloroethane	7,200	–
Benzene	250	–
cis-1,2-Dichloroethene	4,300	–
Trichloroethene	790	–
Vinyl chloride	14,000	–

GP1		
Field Parameters		
Methane	--	0 / 0 / 0
VOCs by TO-15		
Chloroform	80	--
Tetrachloroethene	280	--
Trichloroethene	630	--

GP02-09	9/15/2009	2009
Field Parameters		
Methane	--	19.6 / 19.8 / 20.5
VOCs by TO-15		
Benzene	37	–
Vinyl chloride	100	–

GP12-09	9/16/2009	2009
Field Parameters		
Methane	--	0.1 / 0 / 0
VOCs by TO-15		
Tetrachloroethene	32	--
Trichloroethene	1,200	--

GP04-09	9/16/2009	2009
Field Parameters		
Methane	--	7.9 / 7.8 / 0.6
VOCs by TO-15		
Benzene	110	–
Ethylbenzene	110	–

GP21-09	9/16/2009	2009
Field Parameters		
Methane	--	7.1 / 7.8 / 2.6
VOCs by TO-15		
Benzene	34	–

GP05-09	2009
Field Parameters	
Methane	0 / 0 / 0

GP11-09	2009
Field Parameters	
Methane	0 / -- / 0

GP10-09	9/15/2009	2009
Field Parameters		
Methane	--	0.1 / 0 / 0
VOCs by TO-15		
Naphthalene	7.9	--
Tetrachloroethene	40	--

GP03-09	9/15/2009	2009
Field Parameters		
Methane	--	0 / 0 / 0
VOCs by TO-15		
Chloroform	13	--
Tetrachloroethene	610	--
Trichloroethene	190	--

GP09-09	9/17/2009	2009
Field Parameters		
Methane	--	0.1 / 0 / 0
VOCs by TO-15		
Chloroform	14	--
Naphthalene	3.8	--
Tetrachloroethene	120	--
Trichloroethene	2,000	--

GP07-09	2009
Field Parameters	
Methane	0 / 0 / 0

GP08-09	9/17/2009	2009
Field Parameters		
Methane	--	0 / 0 / 0
VOCs by TO-15		
Chloroform	1.2 J	--
Tetrachloroethene	25	--

GP06-09	2009
Field Parameters	
Methane	0.1 / 0 / 0

Soil Vapor Screening Levels (SVSLs) for VOCs

Parameter	Industrial SVSL	Residential SVSL
1,1-Dichloroethane	77	15
Benzene	16	3.1
Chlorobenzene	2,200	520
Chloroform (Trichloromethane)	5.3	1.1
cis-1,2-Dichloroethene[a]	2,600	630
Ethylbenzene	49	9.7
Naphthalene	3.6	0.72
Tetrachloroethene	21	4.1
Trichloroethene[b]	61	12
Vinyl chloride	28	1.6
Xylenes (total)	4,400	1,000

NOTE:
1. The SVSLs are based on the USEPA 2011 Regional Screening Levels (June 2011) for Industrial and Residential Air.
2. The SVSLs were derived from the USEPA (Jun 2011) RSLs by applying the USEPA Region 5 Vapor Intrusion Guidebook (Oct 2010) default soil-vapor-to-indoor-air attenuation factor of 0.1.
3. a = An RSL is not available for cis-1,2-dichloroethene; the RSL for trans-1,2-dichloroethene was considered an evaluation surrogate for cis-1,2-dichloroethene.
4. b = The IRIS toxicity value for TCE was updated in September 2011. The SVSL in this table was not updated; it is based on the June 2011 RSL. However, the screening levels for the Work Plan (Tables 5 - 7) are based on the updated TCE toxicity value.

LEGEND

- APPROXIMATE SITE BOUNDARY
- EDGE OF WATER
- PARCEL BOUNDARY
- MW-206 MONITORING WELL LOCATION
- GP01-09 LANDFILL GAS PROBE
- PRESUMPTIVE REMEDY AREA

GP05-09	2009
Field Parameters	
Methane	0/0/0

- SAMPLE IDENTIFICATION
- SAMPLE DATE
- CONCENTRATION-METHANE (%) AND VOCs (µg/m³)
- PARAMETER

J — ESTIMATED

19.6/19.8/20.5 — METHANE READINGS MEASURED ON SEPT. 18, 2009 / OCT. 14, 2009 / DEC. 9-10, 2009

- EXCEEDS INDUSTRIAL SVSL
- EXCEEDS RESIDENTIAL SVSL
- EXCEEDS METHANE SVSL

SVSLs for Methane

UEL (%)	LEL (%)	10% LEL (%)
15	5	0.5

NOTE:
1. UEL = UPPER EXPLOSIVE LEVEL
2. LEL = LOWER EXPLOSIVE LEVEL

NOTE:
1. METHANE CONCENTRATION SHOWN IN UNITS OF %.
2. ONLY GP06-09 TO GP09-09 SOIL VAPOR VOC RESULTS WERE COMPARED TO RESIDENTIAL SVSLS BECAUSE THOSE PROBES ARE LOCATED ON RESIDENTIAL PARCELS.

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

figure 3

2009 AND 2010 SOIL VAPOR SAMPLING RESULTS THAT EXCEED USEPA SCREENING LEVELS SOUTH DAYTON DUMP AND LANDFILL SITE

Moraine, Ohio

38443-88(012)GN-WA022 JUN 09/2011