THE TRAVERSE GROUP

Environmental Engineering & Consulting Services Since 1975

August 27, 2007

Mr. Fred Rindhage, P.E.
ENCORE
Mail Code: 483-520-190
2000 Centerpoint Parkway
Pontiac, Michigan 48341

Subject: Draft Lot 8 Delineation – Summary of Findings
General Motors Parking Lot 8
6241 Cass Avenue
Detroit, Wayne County, Michigan 48202
The Traverse Group Project No. RM073543-001

Dear Mr. Rindhage:

The Traverse Group is please to provide the following Draft Summary of Findings for the delineation soil sampling activities conducted at 6241 Cass Avenue, commonly known as parking lot 8, in the City of Detroit, Wayne County, Michigan (herein referred to as the "subject property"). The purpose of the delineation sampling was to attempt to determine the horizontal and vertical extents of the soil contamination on the subject property identified during the Phase II Environmental Site Assessment (ESA) prepared by The Traverse Group and dated March 17, 2007. A brief site background, investigation activities, laboratory analytical results, and summary of findings are provided in the following sections.

BACKGROUND INFORMATION

The subject property is located at the intersection of Amsterdam Street and Cass Avenue on the northwest corner (refer to Figure 1). The subject property is rectangular in shape consists of a fenced, asphalt-paved parking lot. The subject property is bordered to the north by a railroad with a parking lot beyond, to the northeast, east and south by parking lots, to the southeast by Dagleish Cadillac, to the southwest by a parking garage, and to the west by a display board company.

The results of the December 2006 Phase I ESA Update revealed that the subject property was formerly developed as part of a large industrial parcel occupied by the Detroit Motor Co. and the Fire Engine Co. No. 17 from at least 1897, the date of the earliest source available for review. Operational activities included an electrical department, varnishing/plating, and a lead smelting

operation. The Cadillac Motor Car Co., the Fire Engine Co. No. 17, the Fisher Body Shop, used car sales and service, and most recently a paved parking lot have historically occupied the subject property.

In June 2004, a geophysical survey was conducted on the subject property to determine the presence or absence of former underground storage tanks (USTs) at the subject property. The results of the geophysical survey identified anomalies in several sections of the surveyed area. The anomalies were further investigated during the test pit and soil sampling activities conducted in March 2007. Three test pits were excavated on the subject property in the locations identified in the geophysical survey to potentially contain USTs. The material observed in the pits consisted of soil, building materials (i.e., wood, bricks), concrete, and metal pipe. In addition to the test pits, The Traverse Group advanced five soil borings using a truck-mounted Geoprobe® drill-rig. Borings were advanced to depths ranging from 5 to 15 feet below grade (bg). Groundwater was not encountered during the investigation.

Soil samples were collected from the test pits and at each boring location and were analyzed for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), polychlorinated biphenyls (PCBs), and 13 priority pollutant metals (PPM). Soil analytical results revealed the presence of benzo(a)pyrene, lead, and arsenic above the Michigan Department of Environmental Quality's (MDEQ's) Generic Residential Cleanup Criteria (GRCC). The Traverse Group concluded that the subject property is an environmental "facility" under Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201).

INVESTIGATION ACTIVITIES

In order to delineate the horizontal and vertical extents of contamination identified in the soil on the subject property in the March 2007 Phase II ESA, eleven soil borings (DB-1 through DB-11) were advanced at various strategic locations on the subject property (refer to Figure 2). Borings were advanced by Terra-Probe Environmental of Ottawa Lake, Michigan, using a truck-mounted Geoprobe® drill-rig. Soil samples were collected continuously from grade to the boring terminus at each boring location. Borings were advanced to depths ranging from five to 12 feet bg. Groundwater was not encountered during the investigation. Soil boring logs are included in Attachment 1. The soil conditions encountered at the subject property are characterized as follows:

- The soil conditions at DB-1 below the asphalt surface are characterized as dark brown to gray, dry, loose sand with pebbles and crushed brick to 2 feet bg, underlain by brown and gray mottled clay with crushed brick to the boring terminus of 5 feet bg. Auger refusal was encountered at 5 feet bg. The photoionization detector (PID) reading was 0.2 parts per million (ppm).
- The soil conditions at DB-2 below the asphalt surface are characterized as dark brown to gray, dry to moist, loose sand with pebbles and crushed brick, asphalt, and concrete to 5 feet bg, underlain by brown to gray, mottled clay, medium stiff to stiff, with trace pebbles to the boring terminus of 12 feet bg. The PID readings ranged from 0.2 ppm to 0.3 ppm.

- The soil conditions at DB-3 below the asphalt surface are characterized as medium grained, dark brown sand with crushed concrete and brick to the boring terminus of 5 feet bg. Auger refusal was encountered at 5 feet bg. The PID readings were 0.3 ppm.
- The soil conditions at DB-4 below the asphalt surface are characterized as fine to medium grained, loose sand with pebbles to 2 feet bg, underlain by brown to gray, stiff, mottled clay, underlain by solid gray, moist to dry clay, with silt to the boring terminus of 12 feet bg. The PID readings ranged from 0.2 ppm to 0.3 ppm.
- The soil conditions at DB-5 below the asphalt surface are characterized as loose sand to 3 feet bg, underlain by brown to gray, medium stiff, mottled clay, underlain by solid gray, dry to moist clay, with trace silt to the boring terminus of 12 feet bg. The PID readings ranged from 0.2 ppm to 0.3 ppm.
- The soil conditions at DB-6 below the asphalt surface are characterized as loose sand to 3 feet bg, underlain by brown to gray, medium stiff, mottled clay, underlain by solid gray, dry to moist clay, with trace silt to the boring terminus of 12 feet bg. The PID readings ranged from 0.1 ppm to 0.2 ppm.
- The soil conditions at DB-7 below the asphalt surface are characterized as loose sand to 3 feet bg, underlain by brown to gray, medium stiff, mottled clay, underlain by solid gray, dry to moist clay, with trace silt to the boring terminus of 12 feet bg. The PID readings were 0.1 ppm.
- The soil conditions at DB-8 below the asphalt surface are characterized as loose sand to 3 feet bg, underlain by brown to gray, medium stiff, mottled clay, underlain by solid gray, dry to moist clay, with trace silt to the boring terminus of 12 feet bg. The PID readings were 0.1 ppm.
- The soil conditions at DB-9 below the asphalt surface are characterized as sand with trace clay, crushed concrete and brick to the boring terminus of 5 feet bg. Auger refusal was encountered at 5 feet bg. The PID readings were 0.3 ppm.
- The soil conditions at DB-10 below the asphalt surface are characterized as dense, fine to medium sand to 5 feet bg, underlain by brown to gray, stiff, mottled clay, with crushed brick to the boring terminus of 8 feet bg. Auger refusal was encountered at 8 feet bg. The PID readings were 0.1 ppm.
- The soil conditions at DB-8 below the asphalt surface are characterized as loose sand to 3 feet bg, underlain by brown to gray, medium stiff, mottled clay, underlain by solid gray, dry to moist clay, with trace silt to the boring terminus of 12 feet bg. The PID readings were 0.1 ppm.

LABORATORY ANALYTICAL RESULTS

Based on the limited nature of the investigation, a total of 20 soil samples were collected for laboratory analysis. The soil samples that were collected from the DB-1 through DB-8 soil boring locations were submitted for laboratory analysis of PNAs by United States Environmental Protection Agency (USEPA) Method 8270. The soil samples that were collected form the DB-9

through DB-11 soil boring locations were analyzed for lead and arsenic by USEPA Method 6020.

Laboratory analytical results are presented in Tables 1 and 2 in Attachment 2. Laboratory analytical reports and chain-of-custody documentation are provided in Attachment 3. Soil exceedances of the relevant MDEQ GRCC are depicted on Figure 3. Laboratory analytical results indicated that metals were not detected above the MDEQ GRCC. The results of the comparison of the laboratory analytical results to the relevant MDEQ GRCC revealed the following:

- DB-2 (2 to 4 feet bg): benzo(a)pyrene (6,580 ug/kg) was detected above the MDEQ's Residential Direct Contact (DC) Criteria (2,000 ug/kg).
- DB-3 (2 to 4 feet bg): benzo(a)pyrene (12,400 ug/kg) was detected above the MDEQ's Residential DC Criteria (2,000 ug/kg).

The Traverse Group notes that based on the known site characteristics, the Drinking Water Protection (DWP) Criteria is not a relevant pathway as groundwater in the study area is not used for drinking water purposes based on local and county ordinances. Further, no groundwater was encountered at the subject property and a confining clay layer was observed to be present across the subject property. A review of physical setting information for the study area indicates that the confining clay deposits extend to a depth of approximately 150 feet bg. Based on these observations, it is unlikely that any groundwater that may be encountered at shallow depths on the subject property is part of an aquifer capable of yielding a significant amount of groundwater to wells or springs as defined in Part 201 of Act 451.

It is also noted that the Groundwater/Surface Water Interface Protection (GSIP) Criteria is not a relevant pathway as the subject property is serviced by a combined sewer system which is operated by the Detroit Water and Sewerage Department (DWSD). Based on this consideration, if groundwater at the subject property was to migrate into utility trenches and storm water sewer drains, it would be processed through the DWSD treatment system which would prevent the release of potential contaminants to nearby surface water bodies. Additionally, the nearest surface water, the Detroit River, is located approximately three miles to the south-southeast of the subject property. Based on this information, a lack of groundwater encountered at the subject property, the likelihood of groundwater to travel via preferential pathways, such as utility corridors, and the presence of hydraulic barriers such as building foundations, the probability of groundwater that may be present at the subject property venting to surface waters is unlikely.

SUMMARY OF FINDINGS

Based on the results of the delineation soil sampling activities, the extents of the lead and arsenic contamination in the soil on the southern portion of the subject property has been vertically and horizontally delineated by soil borings DB-9 through DB-1. Furthermore, the vertical and horizontal extent of benzo(a)pyrene on the northeastern portion of the subject property has been delineated by soil borings DB-5 through DB-8. The horizontal extent of benzo(a)pyrene on the northwestern portion has been delineated to the west and south by soil borings DB-1 and DB-4, respectively; however, the northern and eastern horizontal extent of contamination was not fully

delineated by soil borings DB-2 and DB-3, which were determined to contain elevated benzo(a)pyrene concentrations. Refer to Figure 3 for a map depicting the estimated extent of contamination on the subject property.

In conclusion, The Traverse Group estimates that approximately 150 cubic yards of soil contaminated with lead and arsenic are present on the southern portion of the subject property. Additionally, approximately 150 cubic yards of soil contaminated with benzo(a)pyrene are present on the northeastern portion of the subject property. To accurately determine the volume of soil contaminated with benzo(a)pyrene on the northwestern portion of the subject property, additional confirmatory soil sampling would be required upon excavation of contaminated soil.

The Traverse Group appreciates this opportunity to provide you with our services. If you should have any questions regarding the summary of findings, please feel free to contact us at (313) 871-5800.

Sincerely,

DRAFT
Julie S. Barton
Environmental Scientist

DRAFT
Deanna L. Hutsell
Project Manager

Enclosures

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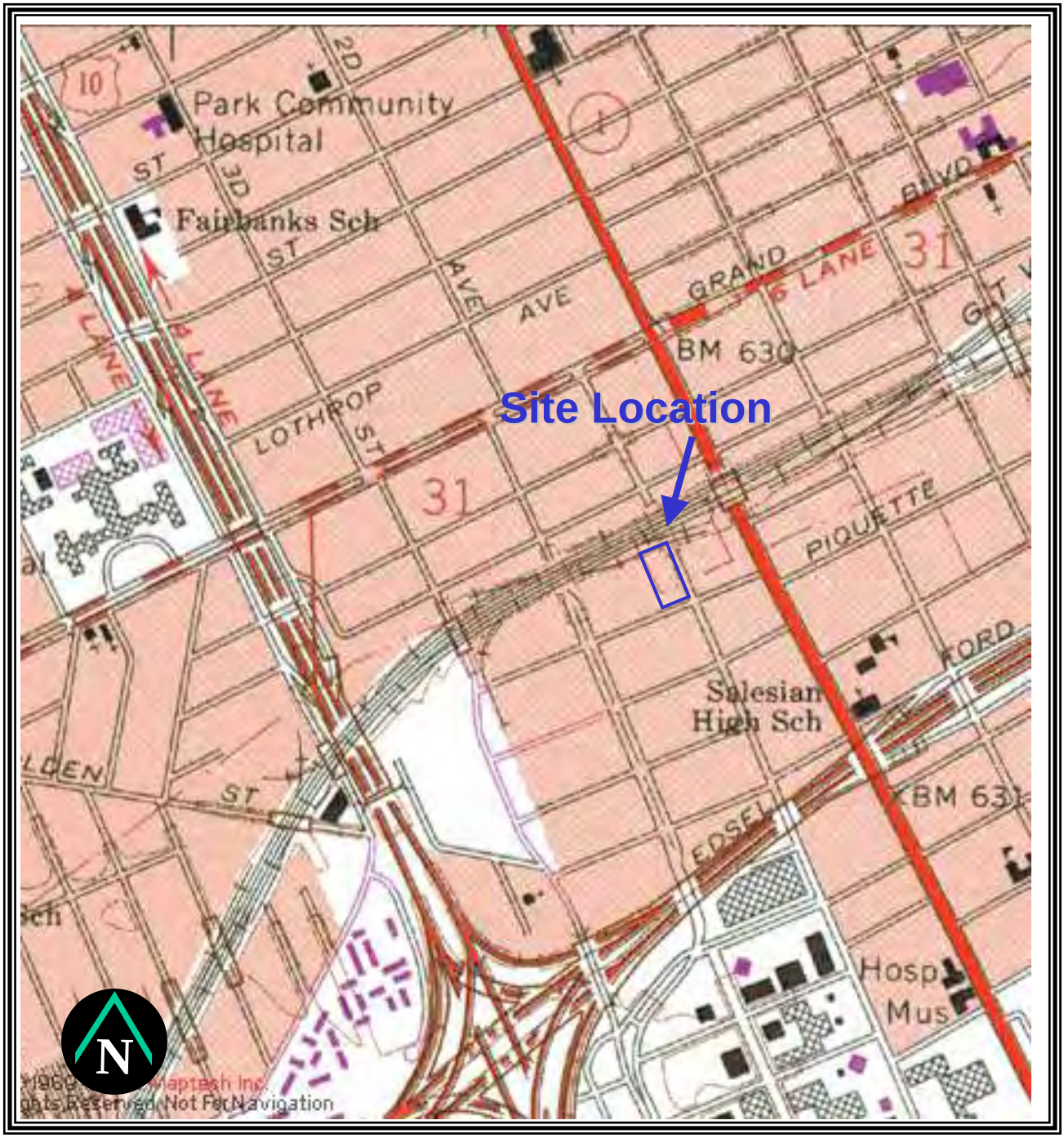
FIGURES



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Taken from the 1968, Detroit, Michigan 7.5 Series U.S.G.S. Topographic Quadrangle, photorevised 1973 and 1980

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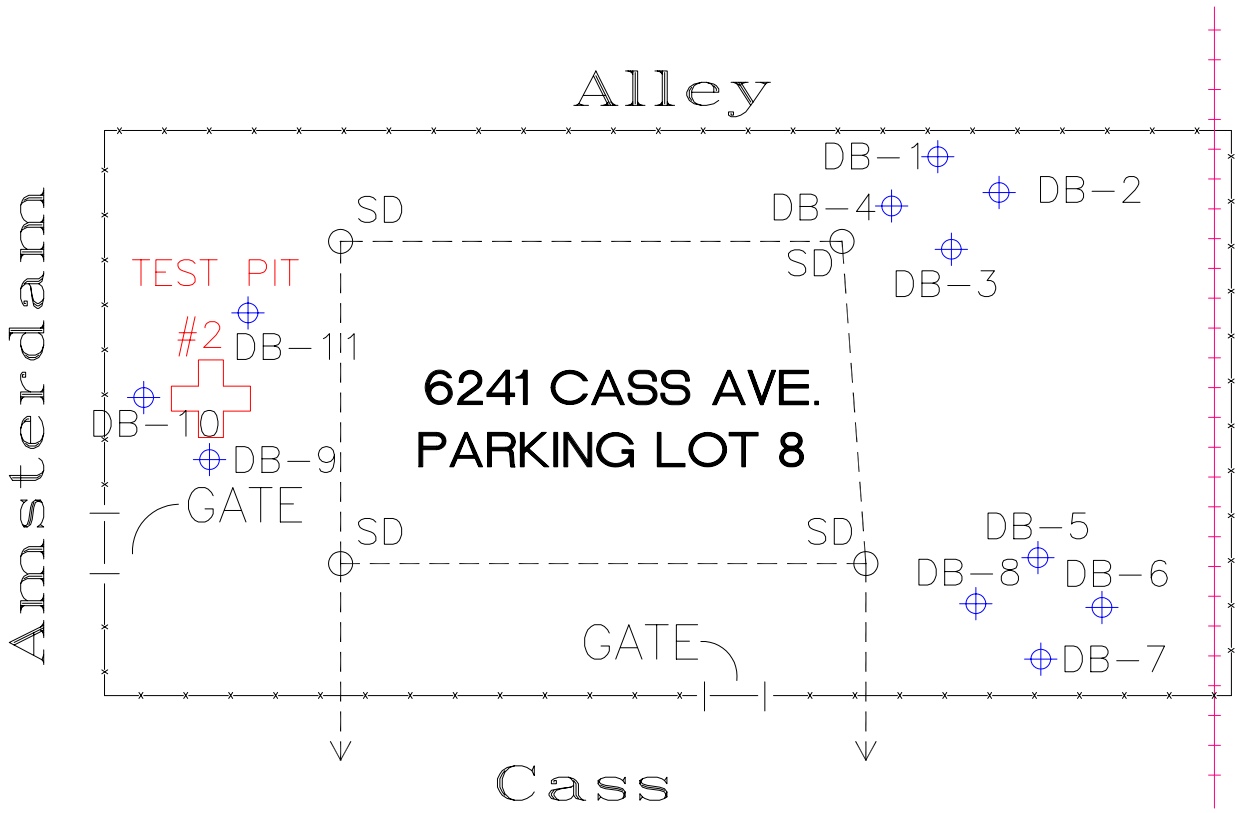
FIGURE 1
SITE LOCATION AND TOPOGRAPHIC MAP
PARKING LOT 8
6241 CASS AVENUE
DETROIT, MICHIGAN



NOTE: THIS DRAWING IS FOR REFERENCE ONLY AND IS NEITHER COMPLETE NOR TO EXACTING SCALE

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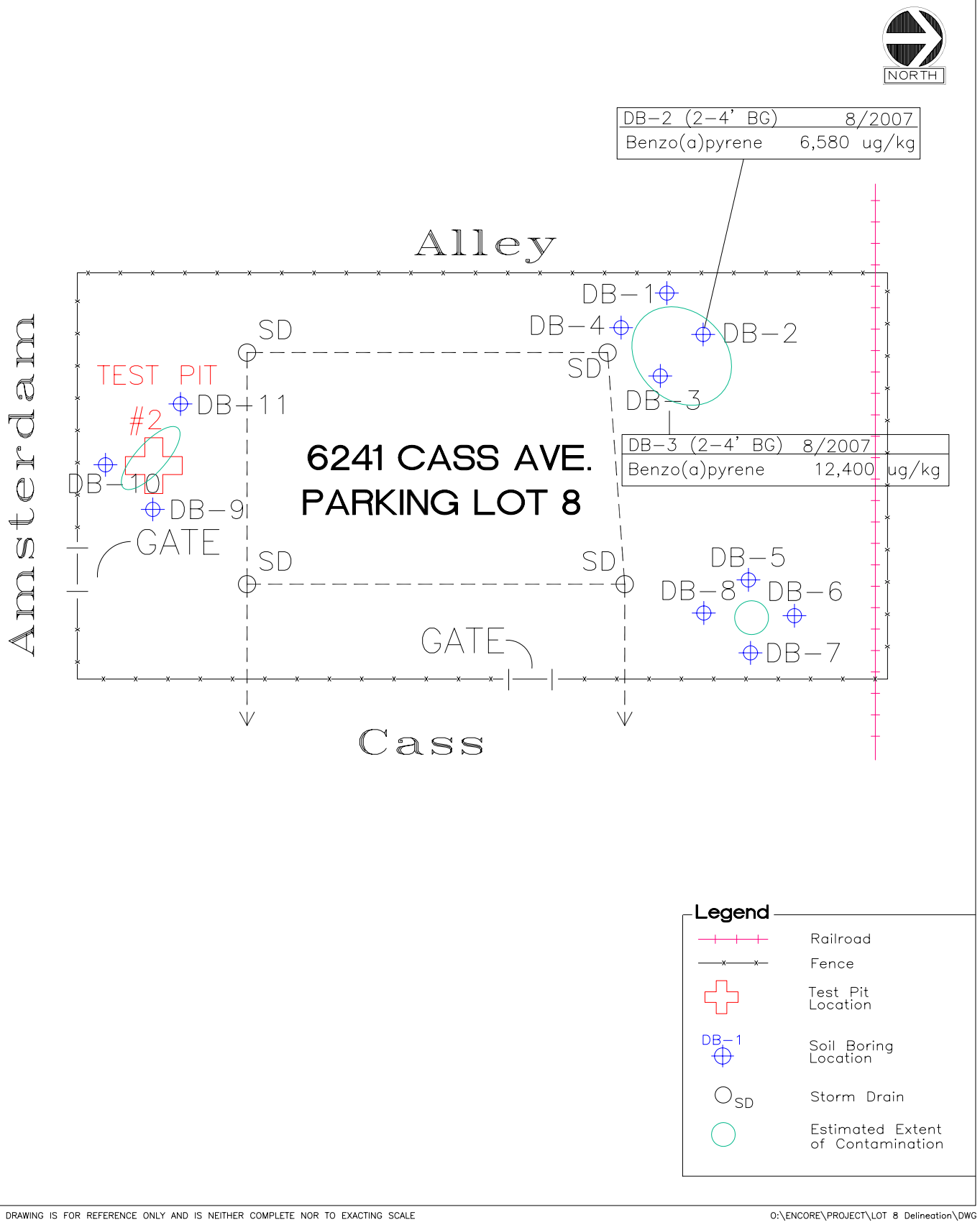
FIGURE 2
SOIL BORING AND SOIL SAMPLING LOCATIONS
PARKING LOT 8 - 6241 CASS AVENUE
DETROIT, MICHIGAN



NOTE: THIS DRAWING IS FOR REFERENCE ONLY AND IS NEITHER COMPLETE NOR TO EXACTING SCALE

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FIGURE 3
SOIL SAMPLING LOCATIONS
WITH CONCENTRATIONS EXCEEDING CRITERIA
PARKING LOT 8 - 6241 CASS AVENUE
DETROIT, MICHIGAN

ATTACHMENT 1

BORING LOGS

LOG OF BORING DB-1

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Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Dark brown to gray, SAND, loose, dry, some pebbles	95	0.2	Soil Samples: Collected soil sample DB-1 from 2-4' bg. Auger refusal encountered at 5' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2	CL		Brown to gray, CLAY, mottled, trace pebbles and crushed brick, brittle, medium-stiff			
4				0		
			EOB @ 5' bg.			
6						

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LOG OF BORING DB-2

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown to dark gray, SAND, dry to moist, loose, some pebbles, crushed brick, concrete, and asphalt	75	0.3	Soil Samples: Collected soil samples DB-2 from 2-4' and 8-10' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
4						
	CL		Brown and gray, CLAY, mottled, brittle, medium-stiff to stiff, trace silt and pebbles	100	0.2	
8						
	CL		Brown to gray, CLAY, medium-stiff to stiff, trace silt	100	0.2	
12			EOB @ 12' bg.			
14						

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LOG OF BORING DB-3

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Dark brown, SAND, medium grained, with pebbles, crushed concrete, and brick	80	0.3	Soil Samples: Collected soil sample DB-3 from 2-4' bg. Auger refusal encountered at 5' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered
2						
4						
6			EOB @ 5' bg.			

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THE TRAVERSE GROUP

LOG OF BORING DB-4

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled	: August 2, 2007	Logged By	: JL
Driller	: Terra-Probe		
Drilling Method	: Geoprobe		
Sampling Method	: Macrocore		
TGI Representative	: JL		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, SAND, medium to fine grained, loose, some pebbles	100	0.3	Soil Samples: Collected soil samples DB-4 from 2-4' and 10-12' bg. Duplicate soil sample collected. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4	CL		Brown and gray, CLAY, mottled, stiff, moist, trace silt			
				100	0.2	
6	CL		Brown and gray, CLAY, slightly mottled, dry, trace silt			
8						
				100	0.2	
10						
12			EOB @ 12' bg.			
14						

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LOG OF BORING DB-5

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, SAND, loose	80	0.3	Soil Samples: Collected soil samples DB-5 from 2-4' and 10-12' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
4	CL		Brown and gray, CLAY, mottled, medium-stiff, trace silt, moist	100	0.3	
6	CL		Brown to gray, CLAY, less mottled, dry	100	0.2	
12			EOB @ 12' bg.			
14						

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LOG OF BORING DB-6

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled	: August 2, 2007	Logged By	: JL
Driller	: Terra-Probe		
Drilling Method	: Geoprobe		
Sampling Method	: Macrocore		
TGI Representative	: JL		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, SAND, loose	80	0.2	Soil Samples: Collected soil samples DB-6 from 2-4' and 10-12' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4	CL		Brown and gray, CLAY, mottled, medium-stiff, trace silt, moist to dry	100	0.1	
6						
8	CL		Brown to gray, CLAY, less mottled, dry	100	0.1	
10						
12			EOB @ 12' bg.			
14						

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LOG OF BORING DB-7

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled	August 2, 2007	Logged By	JL
Driller	Terra-Probe		
Drilling Method	Geoprobe		
Sampling Method	Macrocore		
TGI Representative	JL		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, SAND, loose	100	0.1	Soil Samples: Collected soil samples DB-7 from 2-4' and 10-12' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4	CL		Brown and gray, CLAY, mottled, medium-stiff, trace silt, moist	100	0.1	
6						
8	CL		Brown to gray, CLAY, less mottled, dry	100	0.2	
10						
12			EOB @ 12' bg.			
14						

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LOG OF BORING DB-8

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, SAND, loose	100	0.1	Soil Samples: Collected soil samples DB-8 from 2-4' and 10-12' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2	CL		Brown and gray, CLAY, mottled, medium-stiff, trace silt, moist			
4				100	0.1	
6			Brown to gray, CLAY, less mottled, dry			
8	CL					
				100		
10						
12			EOB @ 12' bg.			
14						

LOG OF BORING DB-9

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled	: August 2, 2007	Logged By	: JL
Driller	: Terra-Probe		
Drilling Method	: Geoprobe		
Sampling Method	: Macrocore		
TGI Representative	: JL		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Dark brown, SAND, with crushed brick, trace clay	75	0.3	Soil Samples: Collected soil sample DB-9 from 3-5' bg. Auger refusal encountered at 5' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4						
			EOB @ 5' bg.			
6						

THE TRAVERSE GROUP

LOG OF BORING DB-10

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled : August 2, 2007
Driller : Terra-Probe
Drilling Method : Geoprobe
Sampling Method : Macrocore
TGI Representative : JL

Logged By : JL

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, fine to medium, SAND, dense	100	0.1	Soil Samples: Collected soil samples DB-10 from 2-4' and 6-8' bg. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4						
	CL		Brown to gray, CLAY, mottled, stiff, with crushed brick	100	0.1	
6						
8			EOB @ 8' bg.			
10						

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LOG OF BORING DB-11

THE TRAVERSE GROUP

Parking Lot No. 8
6241 Cass Avenue
Detroit, Michigan

Date Drilled	: August 2, 2007	Logged By	: JL
Driller	: Terra-Probe		
Drilling Method	: Geoprobe		
Sampling Method	: Macrocore		
TGI Representative	: JL		

Depth in Feet	USCS	GRAPHIC	DESCRIPTION	% Recovery	PID (ppmv)	REMARKS
0	FL		Asphalt			
	SW		Brown, fine to medium, SAND, dense	100	0.1	Soil Samples: Collected soil samples DB-11 from 2-4' and 10-12' bg. Duplicate soil sample collected. Boring abandoned with bentonite and patched with asphalt to grade. No groundwater encountered.
2						
4						
6	CL		Brown to gray, CLAY, mottled, stiff, with crushed brick	100	0.1	
8						
10				100		
12			EOB @ 12' bg.			
14						

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ATTACHMENT 2

TABLES

Table 1
Summary of Delineation Soil Sample Analysis - PNAs
6241 Cass Avenue
Detroit, Michigan

			Residential and Commercial I Criteria																	
Chemical	**Chemical Abstract Service (CAS) Number**	**Statewide Default Background Levels (µg/kg)**	**Groundwater Contact Protection Criteria (µg/kg)**	**Soil Volatilization to Indoor Air Inhalation Criteria (µg/kg)**	**Infinite Source Volatile Soil Inhalation Criteria (VSIC) (µg/kg)**	**Particulate Soil Inhalation Criteria (µg/kg)**	**Direct Contact Criteria (µg/kg)**	**Soil Saturation Concentration Screening Levels (µg/kg)**	**Most Stringent Criteria (µg/kg)**	**DB-1 (2-4)**	**DB-2 (2-4)**	**DB-2 (10-12)**	**DB-3 (2-4)**	**DB-4 (2-4)**	**DB-4 (10-12)**	**DB-5 (2-4)**	**DB-5 (10-12)**	**DB-6 (2-4)**	**DB-6 (10-12)**	**DB-7 (10-12)**
Date Collected										**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**
PID Reading (ppmv)										**0.2**	**0.3**	**0.2**	**0.3**	**0.3**	**0.2**	**0.3**	**0.2**	**0.2**	**0.1**	**0.2**
PNAs (EPA Method 8310)																				
Acenaphthene	83329	NA	970,000	190,000,000	81,000,000	14,000,000,000	41,000,000	NA	970,000	ND	320	ND	555	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	208968	NA	440,000	1,600,000	2,200,000	2,300,000,000	1,600,000	NA	440,000	ND	776	ND	2,170	ND	ND	ND	ND	ND	ND	ND
Anthracene	120127	NA	41,000	1,000,000,000(D)	1,400,000,000	67,000,000,000	230,000,000	NA	41,000	ND	1,410	ND	2,250	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene(Q)	56553	NA	NLL	NLV	NLV	ID	20,000	NA	20,000	131	ND	ND	13,700	ND	ND	62	ND	ND	ND	ND
Benzo(b)fluoranthene(Q)	205992	NA	NLL	ID	ID	ID	20,000	NA	20,000	121	ND	ND	14,400	ND	ND	74	ND	ND	ND	ND
Benzo(g,h,i)perylene	191242	NA	NLL	NLV	NLV	800,000,000	2,500,000	NA	2,500,000	ND	1,400	ND	2,350	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene(Q)	207089	NA	NLL	NLV	NLV	ID	200,000	NA	200,000	ND	3,220	ND	8,410	ND	ND	77	ND	ND	ND	ND
Benzo(a)pyrene(Q)	50328	NA	NLL	NLV	NLV	1,500,000	2,000	NA	2,000	108	**6,580**	ND	**12,400**	ND	ND	44	ND	ND	ND	ND
Chrysene (Q)	218019	NA	NLL	ID	ID	ID	2,000,000	NA	2,000,000	104	ND	ND	ND	ND	ND	47	ND	ND	ND	ND
Dibenzo(a,h)anthracene(Q)	53703	NA	NLL	NLV	NLV	ID	2,000	NA	2,000	ND	641	ND	1,100	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	206440	NA	730,000	1,000,000,000(D)	740,000,000	9,300,000,000	46,000,000	NA	730,000	249	ND	ND	ND	ND	ND	104	ND	ND	ND	ND
Fluorene	86737	NA	890,000	580,000,000	130,000,000	9,300,000,000	27,000,000	NA	890,000	ND	407	ND	720	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene(Q)	193395	NA	NLL	NLV	NLV	ID	20,000	NA	20,000	ND	1,620	ND	2,780	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	91576	NA	5,500,000	ID	ID	ID	8,100,000	NA	5,500,000	ND	230	ND	338	ND	ND	ND	ND	ND	ND	ND
Naphthalene	91203	NA	2,100,000	250,000	300,000	200,000,000	16,000,000	NA	250,000	ND	352	ND	500	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	85018	NA	1,100,000	2,800,000	160,000	6,700,000	1,600,000	NA	160,000	230	4,120	ND	14,100	ND	ND	58	ND	ND	ND	ND
Pyrene	129000	NA	480,000	1,000,000,000(D)	650,000,000	6,700,000,000	29,000,000	NA	480,000	185	ND	ND	ND	ND	ND	101	ND	ND	ND	ND

B=Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. D=Calculated criterion exceeds 100%; hence, it is reduced to 100% (i.e., 1.0E+9 ppb). G=GSI criterion is pH or water hardness dependent. H=Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria. If analytical data are provided for "total" chromium only, then values for Cr VI must be applied as the cleanup criteria. ID=Inadequate date to develop criterion. J=Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria. M=Calculated criterion is below the analytical target detection limit (TDL), therefore, the criterion defaults to the TDL. "-" =Criterion or value is not available or, as is the case for Csat, not applicable. "-" =Analyte not detected above method detection limits. NLL=Hazardous substance is not likely to leach under most soil conditions. NLV=Hazardous substance is not likely to volatilize under most conditions. NR=Analysis of the sample for this parameter was not requested. Q=Criteria for carcinogenic polycyclic aromatic hydrocarbons (PNAs) were developed using "relative potential potencies" (RPPs) to benzo(a)pyrene.
T=Refer to the Toxic Substances Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended to determine the applicability of TSCA cleanup standards. Use Part 201 soil direct contact criteria where TSCA standards are not applicable. X=The GSI criterion shown is not protective for surface water that is used as a drinking water source. Where two numbers are present in a cell, the first number is the Target Detection Limit (TDL) and the second number is the risk-based value. Highlighted and shaded values exceed one or more listed Cleanup Criteria. NA = No laboratory analysis. ND = No laboratory detection.

Table 1
Summary of Delineation Soil Sample Analysis - PNAs
6241 Cass Avenue
Detroit, Michigan

			Residential and Commercial I Criteria																	
Chemical	**Chemical Abstract Service (CAS) Number**	**Statewide Default Background Levels (µg/kg)**	**Groundwater Contact Protection Criteria (µg/kg)**	**Soil Volatilization to Indoor Air Inhalation Criteria (µg/kg)**	**Infinite Source Volatile Soil Inhalation Criteria (VSIC) (µg/kg)**	**Particulate Soil Inhalation Criteria (µg/kg)**	**Direct Contact Criteria (µg/kg)**	**Soil Saturation Concentration Screening Levels (µg/kg)**	**Most Stringent Criteria (µg/kg)**	**DB-7 (2-4)**	**DB-8 (2-4)**	**DB-8 (10-12)**	**DB-9 (3-5)**	**DB-10 (2-4)**	**DB-10 (6-8)**	**DB-11 (2-4)**	**DB-11 (10-12)**	**Dup 1 DP-4 (10-12)**	**Dup 2 DP-11 (10-12)**	**MDL (µg/kg)**
Date Collected										**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	
PID Reading (ppmv)										**0.2**	**0.1**	**0.1**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**(PID)**	**0.1**	
PNAs (EPA Method 8310)																				
Acenaphthene	83329	NA	970,000	190,000,000	81,000,000	14,000,000,000	41,000,000	NA	970,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Acenaphthylene	208968	NA	440,000	1,600,000	2,200,000	2,300,000,000	1,600,000	NA	440,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Anthracene	120127	NA	41,000	1,000,000,000(D)	1,400,000,000	67,000,000,000	230,000,000	NA	41,000	ND	ND	ND	NA	NA	NA	NA	NA	60	NA	330
Benzo(a)anthracene(Q)	56553	NA	NLL	NLV	NLV	ID	20,000	NA	20,000	103	ND	ND	NA	NA	NA	NA	NA	99	NA	330
Benzo(b)fluoranthene(Q)	205992	NA	NLL	ID	ID	ID	20,000	NA	20,000	106	ND	ND	NA	NA	NA	NA	NA	89	NA	330
Benzo(g,h,i)perylene	191242	NA	NLL	NLV	NLV	800,000,000	2,500,000	NA	2,500,000	ND	ND	ND	NA	NA	NA	NA	NA	47	NA	330
Benzo(k)fluoranthene(Q)	207089	NA	NLL	NLV	NLV	ID	200,000	NA	200,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Benzo(a)pyrene(Q)	50328	NA	NLL	NLV	NLV	1,500,000	2,000	NA	2,000	100	ND	ND	NA	NA	NA	NA	NA	71	NA	330
Chrysene (Q)	218019	NA	NLL	ID	ID	ID	2,000,000	NA	2,000,000	84	ND	ND	NA	NA	NA	NA	NA	71	NA	330
Dibenzo(a,h)anthracene(Q)	53703	NA	NLL	NLV	NLV	ID	2,000	NA	2,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Fluoranthene	206440	NA	730,000	1,000,000,000(D)	740,000,000	9,300,000,000	46,000,000	NA	730,000	149	ND	ND	NA	NA	NA	NA	NA	228	NA	330
Fluorene	86737	NA	890,000	580,000,000	130,000,000	9,300,000,000	27,000,000	NA	890,000	ND	ND	ND	NA	NA	NA	NA	NA	35	NA	330
Indeno(1,2,3-cd)pyrene(Q)	193395	NA	NLL	NLV	NLV	ID	20,000	NA	20,000	ND	ND	ND	NA	NA	NA	NA	NA	34	NA	330
2-Methylnaphthalene	91576	NA	5,500,000	ID	ID	ID	8,100,000	NA	5,500,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Naphthalene	91203	NA	2,100,000	250,000	300,000	200,000,000	16,000,000	NA	250,000	ND	ND	ND	NA	NA	NA	NA	NA	ND	NA	330
Phenanthrene	85018	NA	1,100,000	2,800,000	160,000	6,700,000	1,600,000	NA	160,000	82	ND	ND	NA	NA	NA	NA	NA	257	NA	330
Pyrene	129000	NA	480,000	1,000,000,000(D)	650,000,000	6,700,000,000	29,000,000	NA	480,000	141	ND	ND	NA	NA	NA	NA	NA	208	NA	330

B=Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. D=Calculated criterion exceeds 100%; hence, it is reduced to 100% (i.e., 1.0E+9 ppb). G=GSI criterion is pH or water hardness dependent. H=Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria. If analytical data are provided for "total" chromium only, then values for Cr VI must be applied as the cleanup criteria. ID=Inadequate date to develop criterion. J=Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria. M=Calculated criterion is below the analytical target detection limit (TDL), therefore, the criterion defaults to the TDL. "-" =Criterion or value is not available or, as is the case for Csat, not applicable. "-" =Analyte not detected above method detection limits. NLL=Hazardous substance is not likely to leach under most soil conditions. NLV=Hazardous substance is not likely to volatilize under most conditions. NR=Analysis of the sample for this parameter was not requested. Q=Criteria for carcinogenic polycyclic aromatic hydrocarbons (PNAs) were developed using "relative potential potencies" (RPPs) to benzo(a)pyrene.
T=Refer to the Toxic Substances Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended to determine the applicability of TSCA cleanup standards. Use Part 201 soil direct contact criteria where TSCA standards are not applicable. X=The GSI criterion shown is not protective for surface water that is used as a drinking water source. Where two numbers are present in a cell, the first number is the Target Detection Limit (TDL) and the second number is the risk-based value. Highlighted and shaded values exceed one or more listed Cleanup Criteria. NA = No laboratory analysis. ND = No laboratory detection.

Table 2
Summary of Delineation Soil Sample Analysis - Metals
6241 Cass Avenue
Detroit, Michgigan

			Residential and Commercial I Criteria																	
Chemical	**Chemical Abstract Service (CAS) Number**	**Statewide Default Background Levels (µg/kg)**	**Groundwater Contact Protection Criteria (µg/kg)**	**Soil Volatilization to Indoor Air Inhalation Criteria (µg/kg)**	**Infinite Source Volatile Soil Inhalation Criteria (VSIC) (µg/kg)**	**Particulate Soil Inhalation Criteria (µg/kg)**	**Direct Contact Criteria (µg/kg)**	**Soil Saturation Concentration Screening Levels (µg/kg)**	**Most Stringent Criteria (µg/kg)**	**DB-1 (2-4)**	**DB-2 (2-4)**	**DB-2 (10-12)**	**DB-3 (2-4)**	**DB-4 (2-4)**	**DB-4 (10-12)**	**DB-5 (2-4)**	**DB-5 (10-12)**	**DB-6 (2-4)**	**DB-6 (10-12)**	**DB-7 (2-4)**
Date Collected										**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**
PID Reading (ppmv)										**0.2**	**0.3**	**0.2**	**0.3**	**0.3**	**0.2**	**0.3**	**0.2**	**0.2**	**0.1**	**0.2**
METALS (EPA Method 6020)																				
Arsenic	7440382	5,800	2,000,000	NLV	NLV	720,000	7,600	-	7,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (B) total	7439921	30,341	ID	NLV	NLV	100,000,000	400,000	-	400,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

B=Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. D=Calculated criterion exceeds 100%; hence, it is reduced to 100% (i.e., 1.0E+9 ppb). G=GSI criterion is pH or water hardness dependent. H=Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria. If analytical data are provided for "total" chromium only, then values for Cr VI must be applied as the cleanup criteria. ID=Inadequate date to develop criterion. J=Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria. M=Calculated criterion is below the analytical target detection limit (TDL), therefore, the criterion defaults to the TDL. "-" =Criterion or value is not available or, as is the case for Csat, not applicable. "-" =Analyte not detected above method detection limits. NLL=Hazardous substance is not likely to leach under most soil conditions. NLV=Hazardous substance is not likely to volatilize under most conditions. NR=Analysis of the sample for this parameter was not requested. Q=Criteria for carcinogenic polycyclic aromatic hydrocarbons (PNAs) were developed using "relative potential potencies" (RPPs) to benzo(a)pyrene.
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Table 2
Summary of Delineation Soil Sample Analysis - Metals
6241 Cass Avenue
Detroit, Michgigan

			Residential and Commercial I Criteria																	
Chemical	**Chemical Abstract Service (CAS) Number**	**Statewide Default Background Levels (µg/kg)**	**Groundwater Contact Protection Criteria (µg/kg)**	**Soil Volatilization to Indoor Air Inhalation Criteria (µg/kg)**	**Infinite Source Volatile Soil Inhalation Criteria (VSIC) (µg/kg)**	**Particulate Soil Inhalation Criteria (µg/kg)**	**Direct Contact Criteria (µg/kg)**	**Soil Saturation Concentration Screening Levels (µg/kg)**	**Most Stringent Criteria (µg/kg)**	**DB-7 (10-12)**	**DB-8 (2-4)**	**DB-8 (10-12)**	**DB-9 (3-5)**	**DB-10 (2-4)**	**DB-10 (6-8)**	**DB-11 (2-4)**	**DB-11 (10-12)**	**Dup 1**	**Dup 2**	**MDL (µg/kg)**
Date Collected										**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	**8/2/2007**	
PID Reading (ppmv)										**0.2**	**0.1**	**0.1**	**(PID)**	**(PID)**	**(PID)**	**(PID)**	**(PID)**	**(PID)**	**(PID)**	
METALS (EPA Method 6020)																				
Arsenic	7440382	5,800	2,000,000	NLV	NLV	720,000	7,600	-	7,600	NA	NA	NA	1,470	2,470	6,600	5,580	5,110	NA	5,950	100
Lead (B) total	7439921	30,341	ID	NLV	NLV	100,000,000	400,000	-	400,000	NA	NA	NA	2,450	2,350	1,360	31,000	7,980	NA	47,000	1,000

B=Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. D=Calculated criterion exceeds 100%; hence, it is reduced to 100% (i.e., 1.0E+9 ppb). G=GSI criterion is pH d
hardness dependent. H=Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria. If analytical data are provided for "total" chromium only, then values for Cr
must be applied as the cleanup criteria. ID=Inadequate date to develop criterion. J=Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to
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the second number is the risk-based value. Highlighted and shaded values exceed one or more listed Cleanup Criteria. NA = No laboratory analysis. ND = No laboratory detection.

ATTACHMENT 3

ANALYTICAL RESULTS