



November 18, 2017

City of Detroit Department of Public Works  
City Engineering & Street Maintenance Divisions  
Coleman A. Young Municipal Center  
2 Woodward Avenue, Suite 611  
Detroit, Michigan 48226

Re: Notice of Migration of Contamination  
From 260, 288, and 294 S. Crawford Street, Detroit, MI, Tax ID 18007501-6, 18007507, and 18007508 (MDOT Parcel 5417)  
Potentially toward S Crawford Street right-of-way to the east, S Reid Street right-of-way to the west,  
and/or Hesse Street right-of-way to the northwest  
Notification No. 5417-ROW

To whom it may concern:

The Mannik Smith Group, Inc. ("MSG"), on behalf of the Michigan Department of Transportation ("MDOT"), has directed or conducted underground environmental testing at 260, 288, and 294 S. Crawford Street, Detroit, Michigan ("the Site") in relation to the Gordie Howe International Bridge project underway in the vicinity of the right-of-ways referenced above ("the subject properties").

The Michigan Department of Environmental Quality ("MDEQ") requires distribution of the enclosed a Notice of Migration of Contamination form when there is evidence that environmental contamination at one property has or may have affected nearby properties. Hazardous substance(s) were identified in soil and/or groundwater sample(s) collected at the Site at concentration(s) that exceed Generic Residential Cleanup Criteria and Screening Levels established by the MDEQ.

At this time, it is not known if the subject properties have been affected by the environmental contamination at the Site. Also, the identification of hazardous substance(s) at the Site does not necessarily mean a hazardous situation or immediate danger currently exists. MSG, on behalf of the MDOT, is providing this notice to you as a precautionary measure and for your general awareness of environmental conditions at the Site.

Please review the enclosed document and if you have any questions regarding the Notice of Migration of Contamination please contact Karen Williams of the MDEQ at 586-753-3884. If you have general questions regarding the contents of this letter please contact Walter Bolt of MSG at 734-397-3100, extension 6025 or Jim Woodruff of the MDOT at 517-241-9115.

Sincerely,

Walter J. Bolt, CPG  
Project Manager  
Environmental Owners Representative Consultant  
Gordie Howe International Bridge Project

CC: Jim Woodruff – MDOT  
Karen Williams – MDEQ RRD Project Manager  
Paul Max – General Manager, Environmental Affairs, City of Detroit BSEED  
Anita Harrington – Environmental Specialist II, City of Detroit BSEED



For DEQ Use Only ITS # _____ Site ID # _____ Category Code: _____
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**NOTICE OF MIGRATION OF CONTAMINATION (FORM EQP4482 REV. 4/16)**

(Under the authority of Part 201, Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, (NREPA) and the Rules promulgated thereunder)

An owner or operator of property that is a facility, and/or who is subject to MCL324.20107a, and who has reason to believe that a hazardous substance is emanating from, has emanated from, or is likely to be emanating from the property and migrating beyond the boundaries of the property that he or she owns or operates is required under R 299.51017(1) and MCL 324.20114(1)(b)(ii) & (iii) to notify the Michigan Department of Environmental Quality (DEQ) and affected property owners. Submission of this notice does not fulfill the notification requirements of MCL 324.21309a.

The notice must be provided within 45 days (MCL 324.20107a) or within 30 days (MCL 324.20114) after the owner or operator has reason to believe that hazardous substances have migrated, or are likely to have migrated, to or beyond the boundary of his or her property (see R 299.51017 for exceptions that apply to parties subject to MCL 324.20107a).

Use of this form is mandatory for the notice required by R 299.51017(1) and may also be used by parties subject to MCL 324.20114(1)(b)(ii) & (iii). This form may also be used to provide notice to affected property owners as required by those rules.

If a person holds a permit for an oil and gas well under Part 615, Supervisor of Wells, of the NREPA and there is a release from the oil and gas exploration or production activities, that person shall give notice to the DEQ and to the owner of the surface rights of the property.

If a person holds an easement and there is a release from the easement holder's activities, that person shall provide notice to the DEQ and to the grantor of the easement, or the grantor's successor in interest, if any.

Completing this notice in no way relieves a person who is subject to MCL 324.20114 from the responsibility to undertake required response activities.

This notice must be sent to the DEQ office that serves the county in which the property is located. A list of DEQ offices is available at [www.michigan.gov/deqducare](http://www.michigan.gov/deqducare), or by calling the Remediation and Redevelopment Division's Lansing office at 517-284-5187. The DEQ will not prepare acknowledgement of receipt of these notices. The sender is responsible for sending the report using a method that provides proof of delivery if such proof is desired. Please label the outside of the envelope "Migration Notice." Additional guidelines for the compliance with the requirements of R 299.51017(1) or MCL 324.20114(1)(b)(ii) & (iii) are available at [www.michigan.gov/deqducare](http://www.michigan.gov/deqducare).

THIS NOTICE IS PROVIDED PURSUANT TO: R 299.51017  MCL 324.20114(1)   
(check both, if applicable)

Please provide the following information as completely as possible.

- |   |  |
|---|--|
| 1. Name and location of the property that hazardous substances are emanating from:<br><br>Name: MI Dept of Transportation (MDOT) Parcel 5417<br>Address: 260, 288, and 294 S Crawford<br>Location: Michigan<br>City/County: Detroit/Wayne<br>Property Tax Identification Number, or if applicable, the ward and item number: 18007501-6, 18007507, and 18007508 | 2. Status relative to the property:<br>(Check one or both, as applicable.)<br><br>Owner <input checked="" type="checkbox"/><br>Operator <input type="checkbox"/> |
|---|--|

Latitude (decimal degrees): 42.302203°N Longitude (decimal degrees): 83.102947°W

Reference Point for Latitude and Longitude:  
 Center of Site:  Main/front door:  Front gate/main entrance:  Other:



Collection Method: Survey:  Interpolation:  GPS:

2. Provide any additional ID numbers associated with the property (e.g., EPA ID No., BEA No., Part 213 facility ID No., etc.):  
GHIB MDOT Parcel 5417; Facility ID# 00041614 Leak ID# C-0365-04 MERA Site ID# 82002800; CNTS-RRD-16-001

3. Name, address, and telephone number of the property owner, operator, or other party submitting the notice:  
Name: MDOT Bureau of Development, Environmental Services Section  
Address: 425 W. Ottawa Street, P.O. Box 30050  
City/State: Lansing, MI, 48909  
Telephone Number: 517-241-9115

4. Name, address and telephone number of a contact person familiar with the content of the notice:  
Name: Walter Bolt of The Mannik & Smith Group, Inc. Environmental Owner's Rep Consultant to MDOT  
Address: 2365 Haggerty Road South  
City/State: Canton, MI 48188  
Telephone Number: 734-397-3100 x. 6025

5. If this Notice is provided pursuant to R 299.51017, provide the address and other location information for the adjacent property(s) onto which contamination is migrating, has migrated, or is likely to migrate.

If this Notice is provided pursuant to MCL Section 324.20114(1), provide the address and other location information for each property onto which contamination has migrated. Notice should be sent to the property owner of record. If the impacted property is owned by the State of Michigan, notice should be sent to the department managing the property (e.g., a prison, state park, etc.). Notices to the Michigan Department of Transportation (MDOT) for state owned roadways should be sent to Contaminated Site Specialist, Environmental Services Section, MDOT-Bureau of Development, 425 W. Ottawa Street, P.O. Box 30050, Lansing, MI 48909. If the impacted property is owned by the State of Michigan, notice should be sent to the department managing the property (i.e. a prison, state park, etc.).

Address: 100 S Crawford Street  
City/State: Detroit, MI  
Property Tax ID number: 18007500  
Other: MDOT Parcel 5450  
Notified? No  Yes  Date: 11/18/2017

Address: 501 S Crawford Street  
City/State: Detroit, MI  
Property Tax ID number: 18007344-56  
Other: MDOT Parcel 5451  
Notified? No  Yes  Date: 11/18/2017

Address: 320 S Livernois Avenue  
City/State: Detroit, MI  
Property Tax ID number: 18007214  
Other: MDOT Parcel 5452  
Notified? No  Yes  Date: 11/18/2017

Address: 340 S Livernois Avenue  
City/State: Detroit, MI  
Property Tax ID number: 18007215-8  
Other: MDOT Parcel 5348  
Notified? No  Yes  Date: 11/18/2017

Address: 312 S Crawford Street  
City/State: Detroit, MI  
Property Tax ID number: 18007509  
Other: MDOT Parcel 5347  
Notified? No  Yes  Date: 11/18/2017



Address: 281 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007542  
Other: MDOT Parcel 5344  
Notified? No  Yes  Date: 11/18/2017

Address: 289 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007541  
Other: MDOT Parcel 5344  
Notified? No  Yes  Date: 11/18/2017

Address: 276 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007545  
Other: MDOT Parcel 5449  
Notified? No  Yes  Date: 11/18/2017

Address: 279 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007543-4  
Other: MDOT Parcel 5416  
Notified? No  Yes  Date: 11/18/2017

Address: 282 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007546-58  
Other: MDOT Parcel 5415  
Notified? No  Yes  Date: 11/18/2017

Address: 253 Rademacher  
City/State: Detroit, MI  
Property Tax ID number: 18007620-9  
Other: MDOT Parcel 5415  
Notified? No  Yes  Date: 11/18/2017

Address: 295 Reid  
City/State: Detroit, MI  
Property Tax ID number: 18007540  
Other: MDOT Parcel 5344  
Notified? No  Yes  Date: 11/18/2017

Address: 2 Woodward Avenue, Ste. 611  
City/State: Detroit, MI, 48226  
Property Tax ID number: NA  
Other: City of Detroit (S Crawford Street, S Reid Street, Hesse Street and alley adjacent to [260, 288, and 294 S Crawford /18007501-6, 18007507, and 18007508])  
Notified? No  Yes  Date: 11/18/2017

Address: 735 Randolph  
City/State: Detroit, MI, 48226  
Property Tax ID number: NA  
Other: Detroit Water & Sewerage Department (utility holder)  
Notified? No  Yes  Date: 11/18/2017

Address: One Energy Plaza, Ste. 1935  
City/State: Detroit, MI, 48226  
Property Tax ID number: NA  
Other: Detroit Edison, DTE (utility holder)  
Notified? No  Yes  Date: 11/18/2017



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
REMEDIATION AND REDEVELOPMENT DIVISION

Address: 27175 Energy Way

City/State: Novi, MI, 48377

Property Tax ID number: NA

Other: International Transmission Company (ITC) (utility holder)

Notified? No  Yes  Date: 11/18/2017

Address: 735 Randolph Street, Ste. 1900

City/State: Detroit, MI, 48226

Property Tax ID number: NA

Other: Great Lakes Water Authority (utility holder)

Notified? No  Yes  Date: 11/18/2017

Address: 12775 Lydon Street

City/State: Detroit, MI, 48227

Property Tax ID number: NA

Other: Comcast/Xfinity (utility holder)

Notified? No  Yes  Date: 11/18/2017

Address: 208 S. Akard Street

City/State: Dallas, TX, 75202

Property Tax ID number: NA

Other: AT&T Headquarters (utility holder)

Notified? No  Yes  Date: 11/18/2017

(Attach additional pages as needed) PLEASE SEE ATTACHED MAP OF PROPERTY TAX ID NUMBERS.

# MAP OF PROPERTY TAX ID NUMBERS

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

\* All locations approximate. Not a legal survey.



	ADDRESS	TAX ID	MDOT PARCEL #
A	100 S CRAWFORD	18007500	5450
B	501 S CRAWFORD	18007344-56	5451
C	320 S LIVERNOIS	18007214	5452
D	253 S RADEMACHER	18007620-9	5415
E	276 REID	18007545	5449
F	279 REID	18007543-4	5416
G	260 S CRAWFORD	18007501-6	5417
H	340 S LIVERNOIS	18007215-8	5348
I	282 REID	18007546-58	5415
J	281 REID	18007542	5344
K	289 REID	18007541	5344
L	295 REID	18007540	5344
M	288 S CRAWFORD	18007507	5417
N	294 S CRAWFORD	18007508	5417
O	312 S CRAWFORD	18007509	5347

Coordinate System: UTM Zone 17 N IntFt  
 Projection: Transverse Mercator  
 Datum: NAD 1983 CORS96



**FIGURE 1**  
 PROPERTY TAX ID NUMBERS  
 ADJACENT TO MDOT 5417  
 Gordie Howe International Bridge  
 Detroit, Michigan

DATE 11/13/2017	DRAWN BY AMK	DESIGNED BY LHK	PROJECT NO. MDOT0070
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Date Saved: 11/13/2017 3:32:51 PM  
 Path: S:\Projects\Project K-OMDOT0070\ENGAPP\GIS\Map\_Files\Notification Maps\5417\_TaxID\_Landscape.mxd

- 5417
- ADJACENT MDOT PARCELS
- MDOT PARCELS
- PARCEL BOUNDARIES



6. Complete the Table on Page 6 of this Form for each hazardous substance which has migrated, or is likely to have migrated, beyond the property boundary at a concentration that exceeds a Generic Residential Cleanup Criterion developed by the DEQ pursuant to MCL 324.20120a(1). Complete and attach additional copies of Page 6, if necessary, to list all hazardous substances that must be reported. Include a scaled map or drawing that shows the location of sampling points identified on the Table on Page 6, the property boundaries, and the adjacent property owners if providing notice pursuant to R 299.1017(1) or all impacted property owners if providing notice pursuant to MCL 324.20114(1).
7. Provide a summary of the information which shows that contamination is emanating from, or has emanated from, and is present beyond the boundary of the source property at a concentration which exceeds the generic residential criteria developed by the DEQ pursuant to MCL 324.20120a(1)(a). This summary shall identify the environmental media affected, specific hazardous substances, and the concentrations of those hazardous substances in all affected environmental media at the property boundary and in any sample locations beyond the property boundary. The summary shall also describe the basis for the conclusion that the contamination is emanating, has emanated, or is present beyond the boundary of the source property, including whether the conclusion is based on groundwater analytical data or fate and transport modeling, both, or neither.
8. If the person making this notice has reason to believe that a migrating hazardous substance has affected, or is likely to affect, a private or public water supply, then that water supply must be identified here:

NA

YES NO

9. Is this notice being submitted within the timeframes established under R 299.51017 and/or MCL 324.20114(1), as applicable?
10. Is this notice in addition to a notice that was submitted prior to *December 21, 2002*? (R 299.51017(4)(c))
11. Is this notice related to an oil and gas well permit (R 299.51017(2))? Permit #:
12. Is this notice related to an easement (R 299.51017(3))? (NOTE: All easement grantors *must* receive this notice.)
13. Has surface water been affected (R 299.51017(1))? (If yes, please identify the affected surface water body.)

**CERTIFICATION:**

With my signature below, I certify that I am the owner of the facility or that I am legally authorized to execute this notice on behalf of the owner or operator named on this form, and that to the best of my knowledge and belief the above representations are complete and accurate. I understand that intentionally submitting false information to the DEQ is a felony and may result in fines up to \$25,000 for each violation.

Signature Walter J. Bolt Date 11/15/2017  
(Owner or person legally authorized to bind the person making this report)

Name (Typed or Printed) Walter J. Bolt

Title (Typed or Printed) Project Manager, Environmental Owners Representative Consultant, Gordie Howe International Bridge Project



See Item 6 on Page 5 of this Form for instructions to be used in completing this table. Attach additional pages if necessary. The information to be included in each column of the table is:

- Column A Name of hazardous substance.
- Column B Chemical Abstract Service (CAS) Number for the hazardous substance.
- Column C Maximum hazardous substance concentration measured on the property, expressed in parts per billion (e.g., ug/L or ug/Kg). Report maximum concentration separately for each environmental medium.
- Column D Sample location for Column C (relate to label on map).
- Column E Environmental medium in which concentration reported in Column C was measured (e.g., soil or groundwater).
- Column F Distance from point of maximum measured concentration (Column D) to property boundary, in direction of contaminant migration, if direction is known or can reasonably be inferred. If direction is unknown, list distance to nearest property boundary.
- Column G Direction of contaminant migration, if known.
- Column H Concentration closest to property boundary, if known. If a concentration lower than the maximum concentration reported in Column C has been measured at a point closer to the property boundary in the direction of contaminant migration, use Column H to list the concentration that was measured closest to the property boundary in the direction of contaminant migration.
- Column I Sample location for Column H (relate to label on map).
- Column J Environmental medium for measurement reported in Column H, if applicable.

**PLEASE SEE ATTACHED TABLE 1**

A Hazardous Substance	B CAS Number	C Maximum Concentration	D Sample Location for "C"	E Environmental Medium for "C"	F Distance to Property Boundary	G* Direction of Migration	H Boundary Concentration	I Sample Location for "H"	J Environmental Medium for "H"

Total Number Samples Collected: \_\_\_\_\_

Footnotes: \* *Unknown*

Total Number of Samples Exceeding Criteria: \_\_\_\_\_

**A scaled map or drawing showing these locations and the property boundaries must be submitted with this Notice PLEASE SEE ATTACHED FIGURES 2, 3, & 4**



TABLE 1

## DEQ NOTICE OF MIGRATION ATTACHMENT

A	B	C	D	E	F	G	H	I	J
Hazardous Substance	CAS Number	Maximum Concentration	Sample Location for "C"	Environmental Medium for "C"	Distance to Property Boundary (feet)	Direction of Migration	Boundary Concentration	Sample Location for "H"	Environmental Medium for "H"
Tetrachloroethylene	127-18-4	770	5417_SB_15_6-8_S_PM_20170819	Soil	6	Unknown	-	-	-
2-Methylnaphthalene	91-57-6	14,000	5417_SB-04_3.5-5.5_S_PM_20170819_DUP	Soil	8	Unknown	-	-	-
Phenanthrene	85-01-8	3,000	5417_SB-13_12-14_S_PM_20170819	Soil	8	Unknown	-	-	-
Arsenic	7440-38-2	24	5417_SB-11_5-10_GW_PM_20170819	Groundwater	42	Unknown	-	-	-
Cadmium	7440-43-9	14,000	5417_SB-08_0-2_S_PM_20170819	Soil	56	Unknown	-	-	-
Chromium (Total)	7440-47-3	60,000	5417_SB-06_0-2_S_PM-20170819	Soil	12	Unknown	-	-	-
Copper	7440-50-8	8,600,000	5417_SB-12_0-2_S_PM_20170819	Soil	8	Unknown	-	-	-
Lead - Fine Fraction	7439-92-1	470,000	5417_SB-05_0-2_S_PM_20170819	Soil	20	Unknown	-	-	-
Lead - Coarse Fraction	7439-92-1	550,000	5417_SB-12_0-2_S_PM_20170819	Soil	8	Unknown	-	-	-
Nickel	7440-02-0	89	5417_SB-17_7.5-12.5_GW_PM_20170819	Groundwater	8	Unknown	-	-	-
Selenium	7782-49-2	3,400	5417_SB-06_0-2_S_PM-20170819	Soil	12	Unknown	-	-	-
Silver	7440-22-4	2,400	5417_SB-12_0-2_S_PM_20170819	Soil	8	Unknown	-	-	-
Zinc	7440-66-6	930,000	5417_SB-12_0-2_S_PM_20170819	Soil	8	Unknown	-	-	-

Total Number of Samples Collected: 56 soil/4 groundwater

Total Number of Samples Exceeding Criteria: 56 soil/2 groundwater

Footnotes:

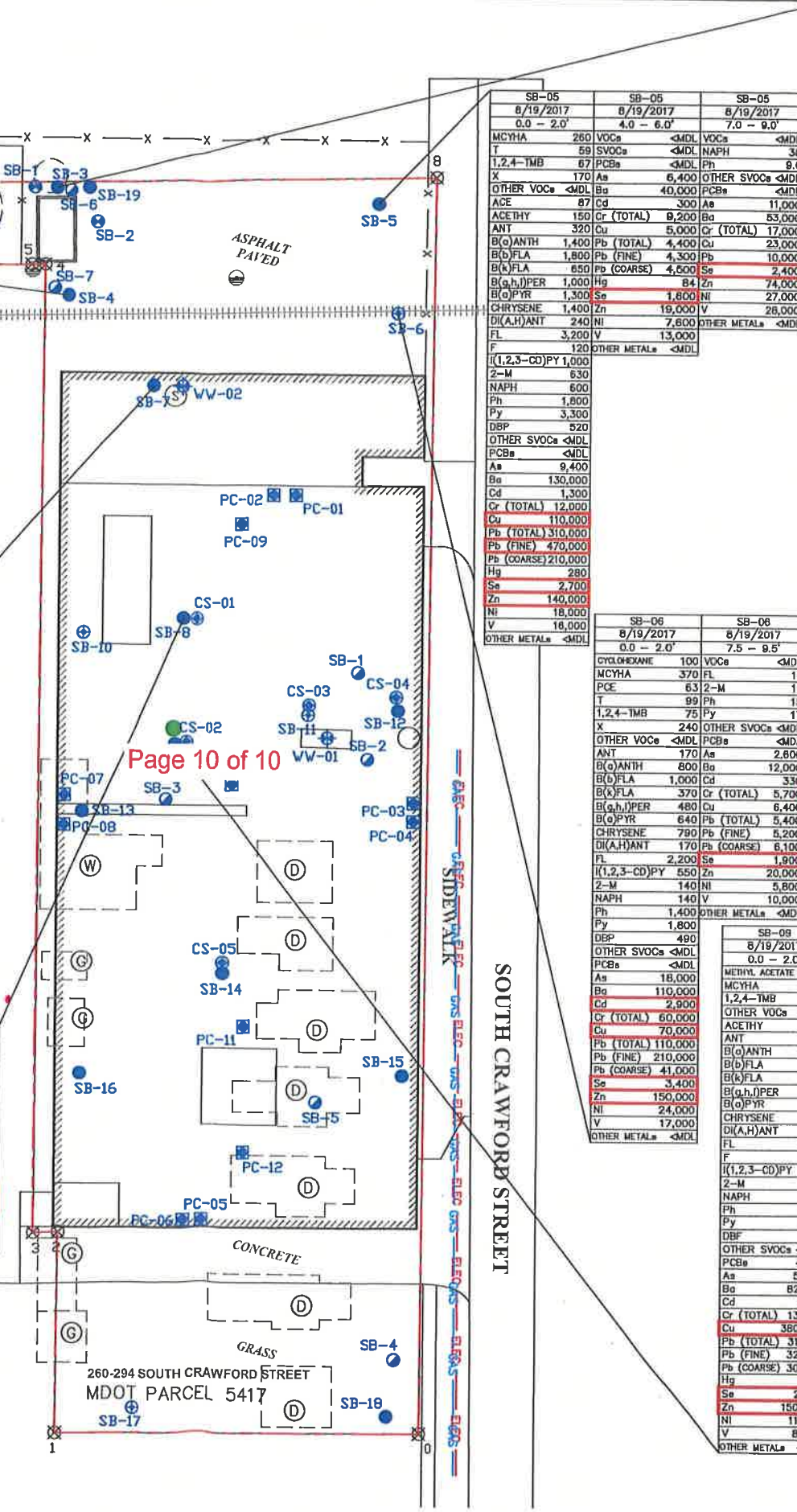
SB-01	SB-01	DUP-01	SB-01
8/19/2017	8/19/2017	8/19/2017	8/19/2017
0.0 - 2.0'	3.0 - 5.0'	3.0 - 5.0'	7.0 - 9.0'
VOCs <MDL	1,2,4-TMB 75	VOCs <MDL	VOCs <MDL
GRO <MDL	OTHER VOCs <MDL	SVOCs <MDL	GRO <MDL
DRO 13,000	DRO <MDL	PCBs <MDL	DRO 4,100
ORO 25,000	ORO 9,100	As 2,700	ORO <MDL
ACETHY 8.2	ORO <MDL	46,000	SVOCs <MDL
ANT 18	Cr (TOTAL) 7,100	PCBs <MDL	
B(o)ANTH 82	ANT 32	4,800	As 11,000
B(b)FLA 99	B(o)ANTH 58	Pb (TOTAL) 4,800	Ba 92,000
B(k)FLA 40	B(b)FLA 62	Pb (FINE) 4,500	Cr (TOTAL) 19,000
B(g,h,i)PER 82	B(o)PYR 29	Pb (COARSE) 4,800	Cu 22,000
B(o)PYR 89	B(g,h,i)PER 38	Hg 30	Pb 11,000
CHRYSENE 67	B(o)PYR 53	Se 1,500	Hg 140
FL 110	CHRYSENE 47	Zn 19,000	Se 2,300
I(1,2,3-CD)PY 45	F 120	Ni 4,700	Zn 73,000
2-M 45	F 13	V 12,000	Ni 27,000
NAPH 28	I(1,2,3-CD)PY 42	OTHER METALS <MDL	V 30,000
Ph 72	2-M 16	OTHER METALS <MDL	
Py 65	NAPH 11		

SB-02	SB-02	SB-02
8/19/2017	8/19/2017	8/19/2017
0.0 - 2.0'	5.0 - 7.0'	7.0 - 9.0'
VOCs <MDL	VOCs <MDL	VOCs <MDL
GRO <MDL	GRO <MDL	GRO <MDL
DRO 5,500	DRO 16,000	DRO 9,500
ORO 13,000	ORO 12,000	ORO <MDL
ACE 8.4	ACE 6.3	FL 8.7
ACETHY 40	ANT 47	Py 11
ANT 13	OTHER SVOCs <MDL	
B(o)ANTH 370	F 78	PCBs <MDL
B(b)FLA 400	2-M 25	As 7,600
B(k)FLA 170	NAPH 22	Ba 71,000
B(g,h,i)PER 350	Ph 380	Cr (TOTAL) 19,000
B(o)PYR 350	Py 52	Cu 24,000
CHRYSENE 340	DBF 56	Pb 10,000
DI(A,H)ANT 69	OTHER SVOCs <MDL	Hg 190
FL 780	PCBs <MDL	Se 2,200
F 58	As 3,900	Zn 79,000
I(1,2,3-CD)PY 270	Ba 12,000	Ni 29,000
2-M 16	Cr (TOTAL) 7,200	V 28,000
NAPH 15	Cu 6,400	OTHER METALS <MDL
Ph 550	Pb (TOTAL) 4,600	
Py 650	Pb (FINE) 3,700	
OTHER SVOCs <MDL	Pb (COARSE) 5,500	
PCBs <MDL	Hg 150	
As 4,000	Se 1,300	
Ba 15,000	Zn 28,000	
Cd 310	Ni 5,800	
Cr (TOTAL) 4,400	V 13,000	
Cu 6,300	OTHER METALS <MDL	
Pb (TOTAL) 28,000		
Pb (FINE) 22,000		
Pb (COARSE) 35,000		
Hg 150		
Se 1,100		
Zn 19,000		
Ni 4,500		
V 7,500		
OTHER METALS <MDL		

SB-04	SB-04	DUP-02	SB-04
8/19/2017	8/19/2017	8/19/2017	8/19/2017
0.0 - 2.0'	3.5 - 5.5'	3.5 - 5.5'	13.0 - 15.0'
MCYHA 130	CYCLOHEXANE 150	CYCLOHEXANE 120	VOCs <MDL
1,2,4-TMB 150	ISOP 2,300	ISOP 1,400	GRO <MDL
1,3,5-TMB 52	MCYHA 2,400	MCYHA 2,000	DRO 19,000
OTHER VOCs <MDL	OTHER VOCs <MDL	1,2,4-TMB 240	FL 9.9
GRO <MDL	GRO 570,000	OTHER VOCs <MDL	2-M 22
DRO 15,000	DRO 910,000	OTHER SVOCs <MDL	
ORO 60,000	ORO 9,400	2-M 240	FL 22
ANT 10	F 200	Ph 220	As 9,600
B(o)ANTH 57	2-M 3,600	OTHER SVOCs <MDL	Ba 3,800
B(b)FLA 84	NAPH 560	PCBs <MDL	Cr (TOTAL) 15,000
B(k)FLA 29	Ph 52	As 3,300	Cu 23,000
B(g,h,i)PER 54	1,1-BIPHENYL 840	Ba 19,000	Pb 11,000
B(o)PYR 61	DBF 190	Cr (TOTAL) 6,400	Hg 170
CHRYSENE 48	OTHER SVOCs <MDL	Cu 4,500	Se 2,400
DI(A,H)ANT 18	PCBs <MDL	Pb (TOTAL) 4,000	Zn 66,000
FL 94	As 3,100	Pb (FINE) 3,500	Ni 25,000
I(1,2,3-CD)PY 49	Ba 12,000	Pb (COARSE) 6,000	V 28,000
2-M 31	Cd 290	Se 1,400	OTHER METALS <MDL
NAPH 20	Cr (TOTAL) 5,300	Zn 17,000	
Ph 58	Cu 5,800	Ni 4,700	
Py 86	Pb (TOTAL) 3,500	V 9,700	
OTHER SVOCs <MDL	Pb (FINE) 3,500	OTHER METALS <MDL	
PCBs <MDL	Pb (COARSE) 3,600		
As 6,000	Hg 170		
Ba 46,000	Se 1,700		
Cr (TOTAL) 54,000	Zn 17,000		
Cu 5,100	Ni 5,100		
Pb (TOTAL) 100,000	V 9,400		
Pb (FINE) 150,000	OTHER METALS <MDL		
Pb (COARSE) 63,000			
Hg 210			
Se 1,700			
Zn 110,000			
Ni 15,000			
V 8,000			
OTHER METALS <MDL			

SB-07	SB-07	SB-07
8/19/2017	8/19/2017	8/19/2017
0.0 - 2.0'	4.0 - 6.0'	10.0 - 12.0'
VOCs <MDL	VOCs <MDL	VOCs <MDL
ACE 25	FL 9.4	SVOCs <MDL
ACETHY 25	Ph 8.6	PCBs <MDL
ANT 74	Py 13	As 8,700
B(o)ANTH 320	OTHER SVOCs <MDL	Ba 81,000
B(b)FLA 510	PCBs <MDL	Cr (TOTAL) 16,000
B(k)FLA 180	As 5,900	Cu 22,000
B(g,h,i)PER 340	Ba 61,000	Pb 10,000
B(o)PYR 370	Cd 410	Se 2,200
CHRYSENE 370	Cr (TOTAL) 15,000	Zn 66,000
DI(A,H)ANT 68	Cu 18,000	Ni 24,000
FL 620	Pb (TOTAL) 7,400	V 26,000
F 25	Pb (FINE) 7,300	OTHER METALS <MDL
I(1,2,3-CD)PY 380	Pb (COARSE) 7,500	
2-M 36	Hg 35	
NAPH 27	Se 2,100	
Ph 360	Zn 61,000	
Py 830	Ni 7,200	
DBF 180	V 16,000	
OTHER SVOCs <MDL	OTHER METALS <MDL	
PCBs <MDL		
As 14,000		
Ba 89,000		
Cd 1,200		
Cr (TOTAL) 11,000		
Cu 180,000		
Pb (TOTAL) 140,000		
Pb (FINE) 73,000		
Pb (COARSE) 200,000		
Hg 83		
Se 2,600		
Zn 270,000		
Ni 6,500		
V 15,000		
OTHER METALS <MDL		

SB-08	SB-08	SB-08
8/19/2017	8/19/2017	8/19/2017
0.0 - 2.0'	4.5 - 6.5'	12.0 - 14.0'
VOCs <MDL	VOCs <MDL	VOCs <MDL
ACE 10	CAPROLACTAM 110	SVOCs <MDL
ACETHY 8.2	OTHER SVOCs <MDL	PCBs <MDL
ANT 42	PCBs <MDL	As 6,200
B(o)ANTH 170	As 2,100	Ba 74,000
B(b)FLA 230	Ba 25,000	Cd 2,500
B(k)FLA 90	Cd 190	Cr (TOTAL) 16,000
B(g,h,i)PER 120	Cr (TOTAL) 5,500	Cu 23,000
B(o)PYR 180	Cu 8,000	Pb 11,000
CHRYSENE 190	Pb (TOTAL) 2,500	Se 2,700
DI(A,H)ANT 31	Pb (FINE) 2,500	Zn 280,000
FL 380	Ph (COARSE) 3,900	Ni 25,000
F 15	Se 1,100	V 28,000
I(1,2,3-CD)PY 150	Zn 11,000	OTHER METALS <MDL
2-M 27	Ni 3,400	
NAPH 20	V 6,900	
Ph 210	OTHER METALS <MDL	
Py 380		
OTHER SVOCs <MDL		
PCBs <MDL		
As 3,500		
Ba 49,000		
Cd 14,000		
Cr (TOTAL) 5,500		
Cu 370,000		
Pb (TOTAL) 170,000		
Pb (FINE) 84,000		
Pb (COARSE) 360,000		
Hg 26		
Se 1,700		
Zn 770,000		
Ni 24,000		
V 8,900		
OTHER METALS <MDL		



SB-03	SB-03
8/19/2017	8/19/2017
0.0 - 2.0'	10.0 - 12.0'
METHYL ACETATE 5,500	1,2,4-TMB 260
OTHER VOCs <MDL	1,3,5-TMB 110
DRO 70,000	OTHER VOCs <MDL
ORO 240,000	DRO 92,000
B(o)ANTH 410	ORO 32,000
B(b)FLA 640	ACE 72
B(k)FLA 280	ANT 33
B(g,h,i)PER 440	B(o)ANTH 65
CHRYSENE 400	B(b)FLA 76
DI(A,H)ANT 140	B(k)FLA 28
B(o)PYR 800	B(g,h,i)PER 45
I(1,2,3-CD)PY 430	CHRYSENE 56
2-M 300	DI(A,H)ANT 18
NAPH 640	FL 100
Py 840	OTHER SVOCs <MDL
DBF 450	PCBs <MDL
OTHER SVOCs <MDL	I(1,2,3-CD)PY 44
As 2,000	2-M 450
Ba 58,000	NAPH 92
Cd 450	Ph 280
Cr (TOTAL) 11,000	Py 110
Cu 11,000	1,1-BIPHENYL 66
Pb (TOTAL) 6,400	DBF 59
Pb (FINE) 8,200	2,4-DMP 87
Pb (COARSE) 4,500	OTHER SVOCs <MDL
Hg 170	PCBs <MDL
Se 1,500	As 8,100
Zn 48,000	Ba 81,000
Ni 5,800	Cr (TOTAL) 10,000
V 8,100	Cu 21,000
OTHER METALS <MDL	Pb 20,000
	Hg 200
	Se 2,100
	Zn 58,000
	Ni 10,000
	V 16,000
	OTHER METALS <MDL

**LEGEND:**

- X SUBJECT PROPERTY
- FENCE
- RAIL ROAD TRACKS
- FORMER RAIL ROAD SPUR
- ⊗ PARCEL CORNER
- FLOOR DRAIN
- ⊙ SUMP
- ⊕ FORMER DWELLING
- ⊖ FORMER GARAGE
- ⊗ FORMER WAREHOUSE
- ⊙ SOIL BORING (PM 2017)
- ⊕ PAINT CHIP SAMPLE (PM 2017)
- ⊖ SOIL BORING / TEMPORARY MONITORING WELL
- ⊗ PREVIOUS CONSULTANT BORING (SUPERIOR 2000)
- ⊙ PREVIOUS CONSULTANT BORING (CLAYTON 2004)
- ⊕ WASTE WATER SAMPLE
- As ARSENIC
- Ba BARIUM
- Cd CADMIUM
- Cr CHROMIUM
- Pb LEAD
- Cu COPPER
- Hg MERCURY
- Ni NICKEL
- Se SELENIUM
- Zn ZINC
- V VANADIUM
- T TOLUENE
- X XYLENES
- 1,2,4-TMB 1,2,4-TRIMETHYLBENZENE
- 1,3,5-TMB 1,3,5-TRIMETHYLBENZENE
- ISOP ISOPROPYLBENZENE
- MCYHA METHYLCYCLOHEXANE
- PCE TETRACHLOROETHENE
- ACE ACENAPHTHENE
- ACETHY ACENAPHTHYLENE
- ANT ANTHRACENE
- B(o)ANTH BENZO(a)ANTHRACENE
- B(o)PYR BENZO(a)PYRENE
- B(b)FLA BENZO(b)FLUORANTHENE
- B(g,h,i)PER BENZO(g,h,i)PERYLENE
- B(k)FLA BENZO(k)FLUORANTHENE
- F FLUORENE
- FL FLUORANTHENE
- I(1,2,3-CD)PY INDENO(1,2,3-CD)PYRENE
- 2-M 2-METHYLNAPHTHALENE
- NAPH NAPHTHALENE
- Ph PHENANTHRENE
- Py PYRENE
- DI(A,H)ANT DIBENZO(a,h)ANTHRACENE
- DBF DIBENZOFURAN
- DBP DI-N-BUTYL PHTHALATE
- 2,4-DNP 2,4-DINITROPHENOL
- GRO GASOLINE RANGE ORGANICS
- DRO DIESEL RANGE ORGANICS
- ORO OIL RANGE ORGANICS
- VOCs VOLATILE ORGANIC COMPOUNDS
- SVOCs SEMI VOLATILE ORGANIC COMPOUNDS
- PCBs POLYCHLORINATED BIPHENYLS
- MDL METHOD DETECTION LIMIT
- UNITS μg/Kg (UNLESS NOTED)
- VALUE EXCEEDS PART 201 GCC

NOTES:  
REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED

**PM ENVIRONMENTAL** | Environmental & Engineering Services

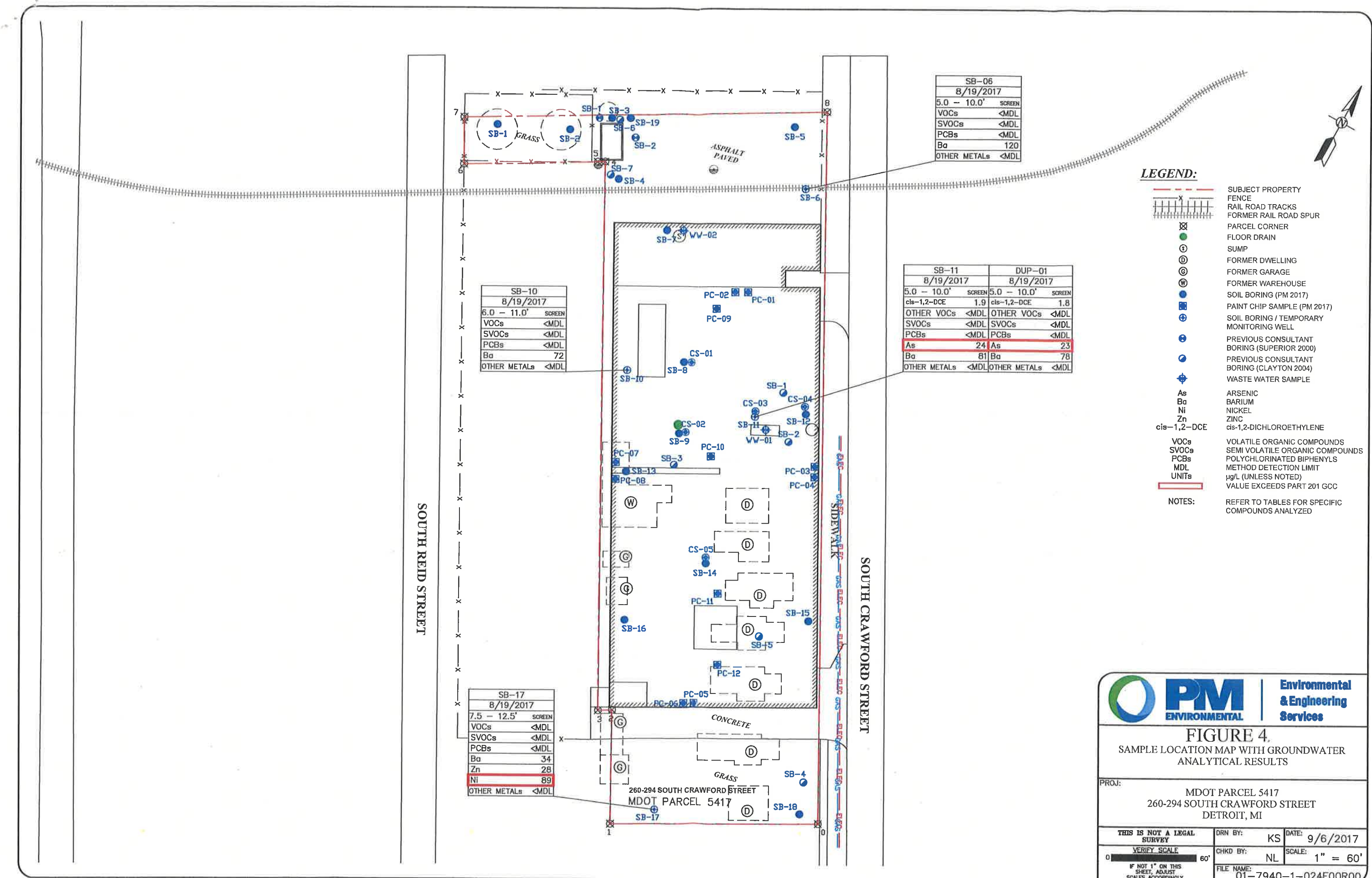
**FIGURE 2**  
SAMPLE LOCATION MAP WITH SOIL ANALYTICAL RESULTS (SB-1 THROUGH SB-9)

PROJ: MDOT PARCEL 5417  
260-294 SOUTH CRAWFORD STREET  
DETROIT, MI

THIS IS NOT A LEGAL SURVEY  
VERIFY SCALE 60'

DRN BY: KS DATE: 9/6/2017  
CHKD BY: NL SCALE: 1" = 60'  
FILE NAME: 01-7940-1-024F00R00





**FIGURE 4.**  
SAMPLE LOCATION MAP WITH GROUNDWATER ANALYTICAL RESULTS

PROJ: MDOT PARCEL 5417  
260-294 SOUTH CRAWFORD STREET  
DETROIT, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: KS	DATE: 9/6/2017
VERIFY SCALE	CHKD BY: NL	SCALE: 1" = 60'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.		
FILE NAME: 01-7940-1-024F00R00		