

Memorandum

TO: City of Auburn Hills Brownfield Redevelopment Authority

FROM: Brian Westhoff, Senior Project Manager - Group Leader, AKT Peerless

DATE: April 13, 2023

SUBJECT: Galloway Creek in Auburn Hills Michigan – 1st Quarter 2023 Results

Galloway Creek Sampling

The City of Auburn Hills retained AKT Peerless to coordinate and conduct sampling of the Galloway Creek from four locations within the city limits. One surface water and one sediment sample were collected from each location (refer to attached Figure).

Sample Locations

- Location A: One surface water and one sediment sample were taken from the Galloway Creek north of 4470 Castlewood Drive.
- Location B: One surface water and one sediment sample were taken from the Galloway Creek along Hole #12 at the Fieldstone Golf Club.
- Location C: One surface water and one sediment sample were taken from the Galloway Creek west of 1361 N Opdyke Road.
- Location D: One surface water and one sediment sample were taken from the Galloway Creek west of 1400 N Squirrel Road.

Analytical Results

On March 28, 2023, four surface water and four sediment samples were collected and submitted to Quantum Laboratories, Inc. for analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), herbicides, pesticides, Michigan 10 Metals, and hexavalent chromium.

Sediment Results:

- Chromium (total) detected at locations A and B was in the trivalent chromium form. Hexavalent chromium was not detected in any of the sediment samples at concentrations exceeding Residential Cleanup Criteria. Therefore, the Chromium (total) is not a concern.
- Arsenic, Barium, Copper, Lead, and Zinc were above method detection limits but below Residential Cleanup Criteria from each of the four sediment samples.
- Dimethyl phthalate, Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene were above method detection limits, but below Residential Cleanup Criteria at Location B.
- Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene and Pyrene were above method detection limits, but below Residential Cleanup Criteria at Location C.
- The four sediment samples were below method detection limits for the remaining VOCs, SVOCs, PCBs, herbicides, pesticides, and Michigan 10 Metals.

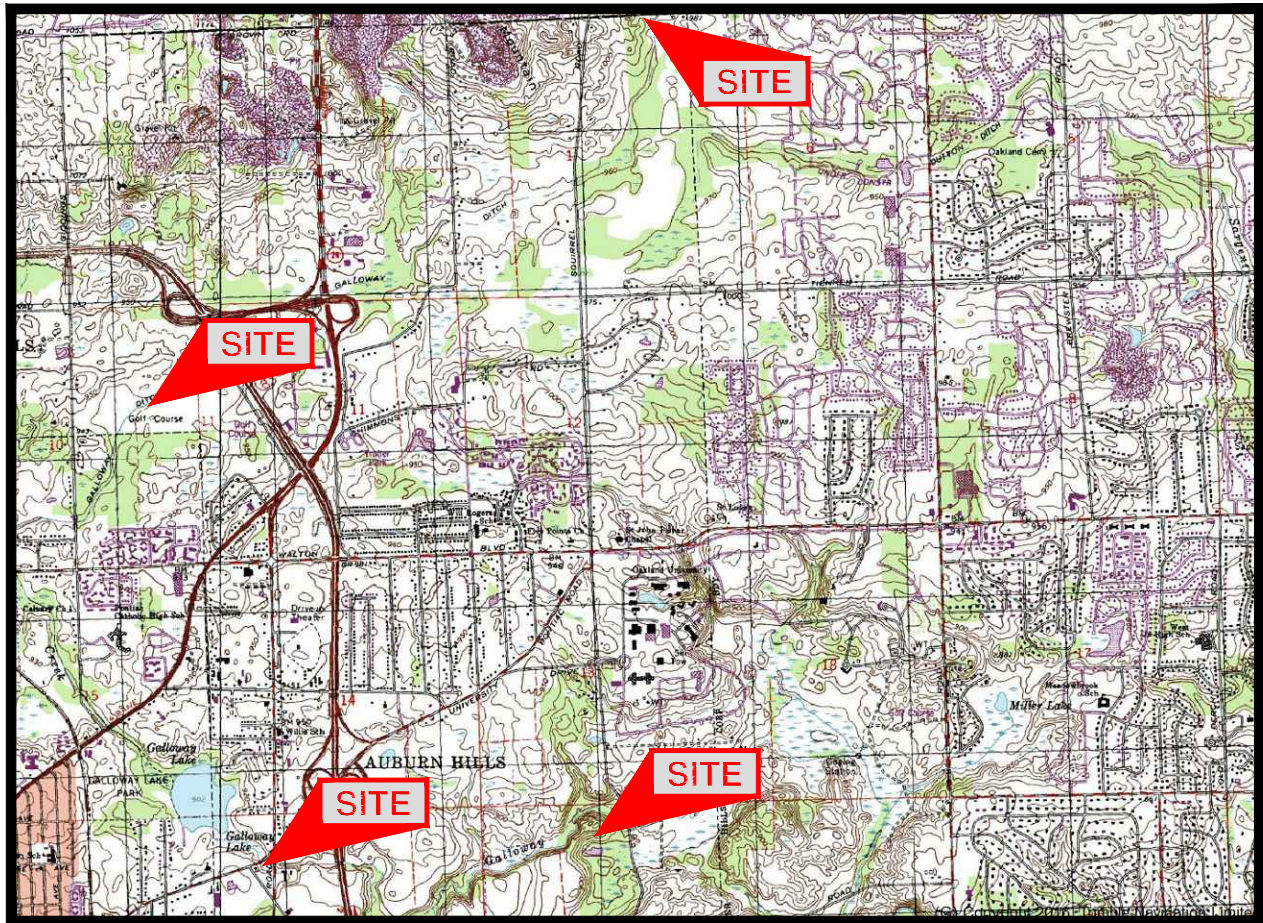
Surface Water Results:

- Barium was above method detection limits but below Residential Cleanup Criteria at all four surface water locations.
- Surface water samples were below method detection limits for the remaining VOCs, SVOCs, PCBs, herbicides, pesticides, Michigan 10 Metals, and hexavalent chromium.

Next Actions:

- Future sampling will be on a quarterly basis for 2023.

ROCHESTER QUADRANGLE
MICHIGAN - OAKLAND COUNTY
7.5 MINUTE SERIES (TOPOGRAPHIC)



T.3 N.-R.10 E.

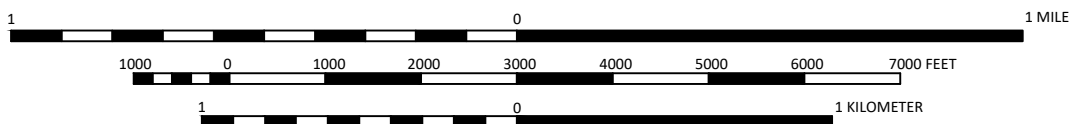


IMAGE TAKEN FROM 1997 U.S.G.S. TOPOGRAPHIC MAP

MICHIGAN
QUADRANGLE LOCATION



AKTPEERLESS

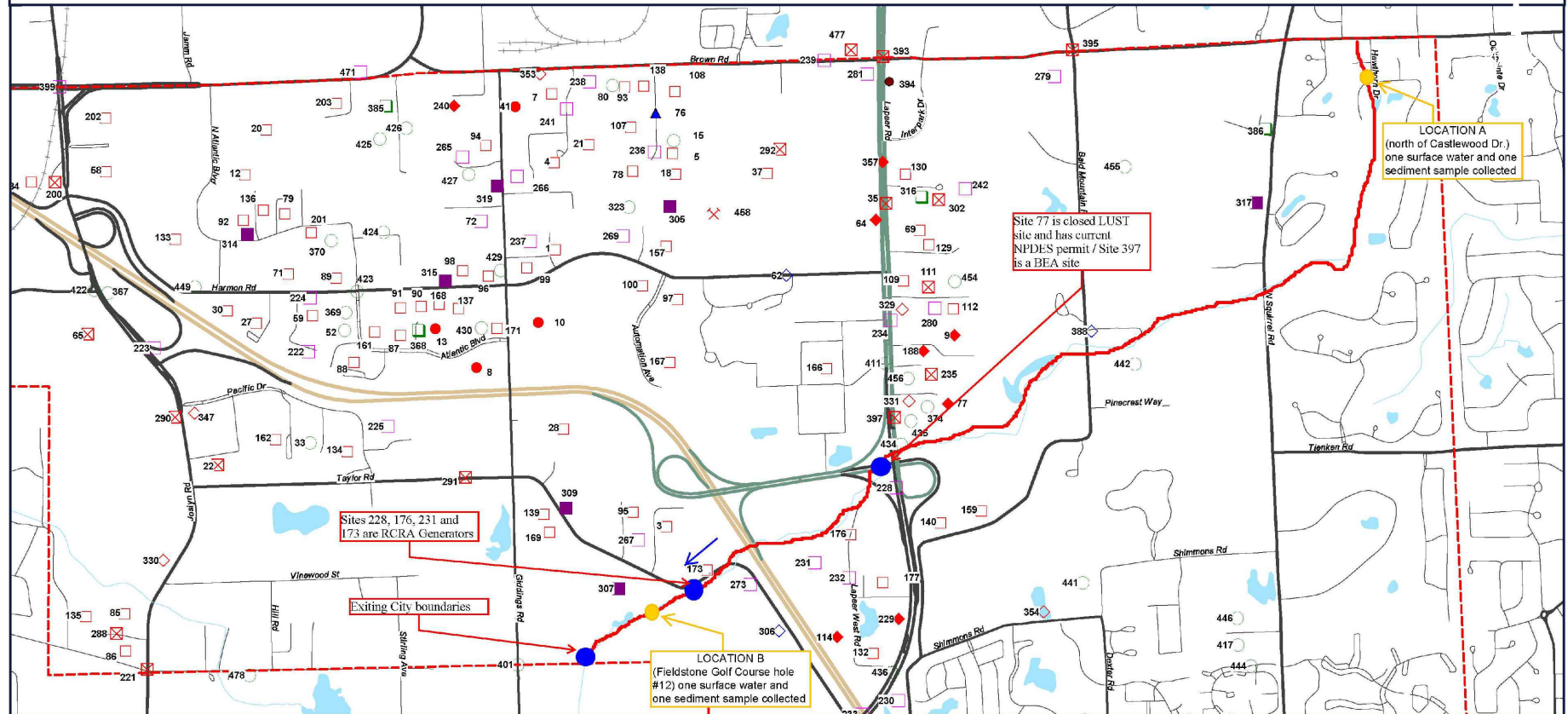
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TOPOGRAPHIC LOCATION MAP
4470 CASTLEWOOD DRIVE, FIELDSTONE GOLF COURSE
HOLE #12, NEAR 1592 NORTH OPDYKE ROAD, AND NEAR
1400 NORTH SQUIRREL ROAD
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: SES
DATE: 04/05/2023

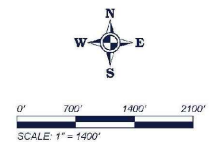
FIGURE 1

RADIUS MAP



- | | | | | | |
|---|--|--|---|--|---|
| <ul style="list-style-type: none"> Target Property (TP) RCRAGR05 PART201 BRG LUST SSTS WDS RCRANGR05 RCRANGR05 | <ul style="list-style-type: none"> PART201 BF RUST LUST FRSMI BEA IF WDS | <ul style="list-style-type: none"> SEMSARCH ECHOR05 BRG FUDS MLTS ICIS RUST | <ul style="list-style-type: none"> RAST BF FRSMI HMIRS05 RCRAGR05 ICEC CLEANERS BEA | <ul style="list-style-type: none"> NPDES ERNSMI NPDES ERNSMI BFR MRDS ECHOR05 ALTFUELS | <ul style="list-style-type: none"> ICIS SAMPLE LOCATIONS DIRECTION OF WATER FLOW |
|---|--|--|---|--|---|

Auburn Hills Michigan
Auburn Hills, Michigan
48326



GeoSearch www.geo-search.com - phone: 866-396-0042 - fax: 512-472-9967

JOB #: 190674 - 8/9/2017

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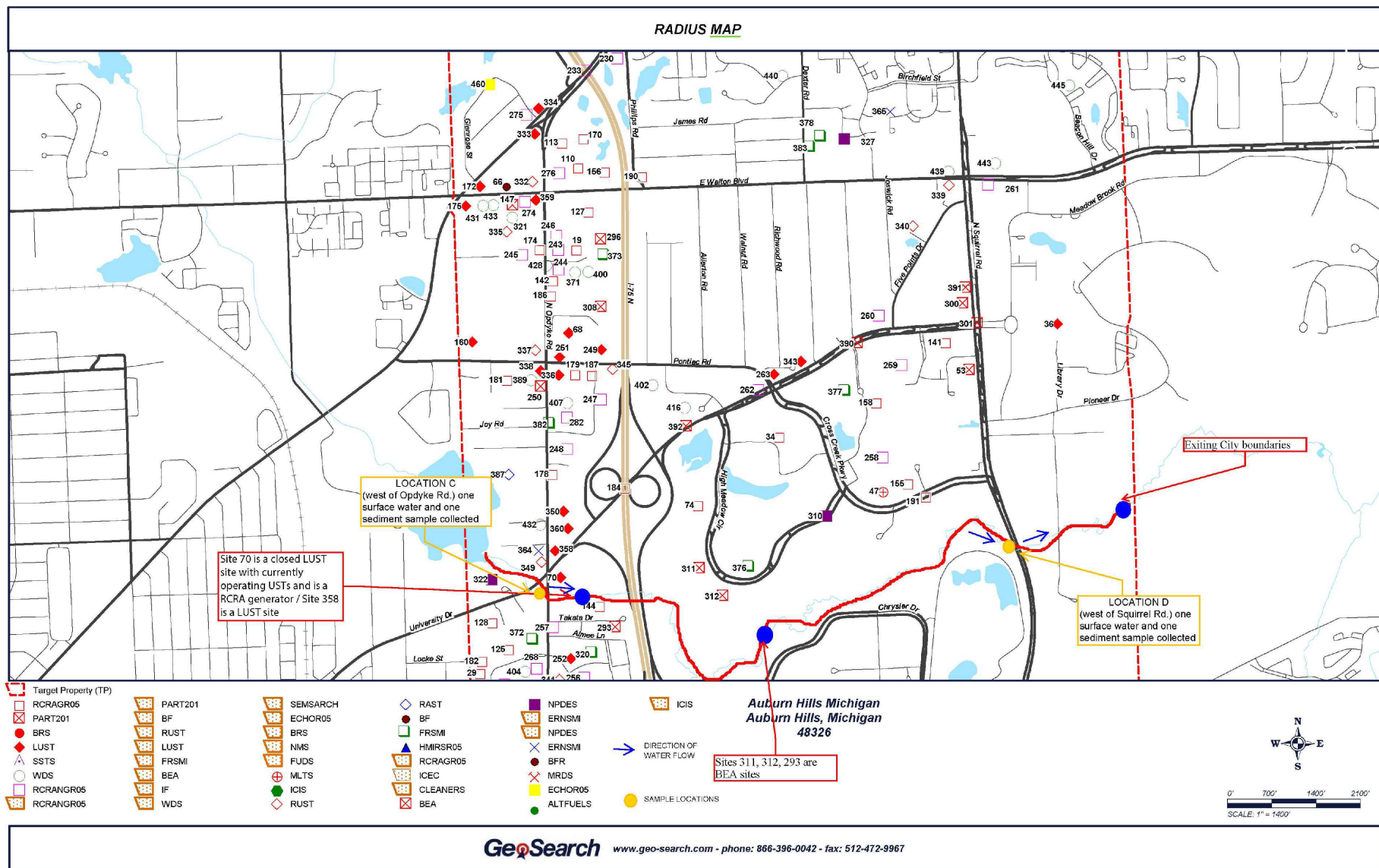
SAMPLE LOCATION MAP

NE CORNER OF LAPEER ROAD AND I-75 INTERCHANGE
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: MST
DATE: 04/11/2023

SCALE AS SHOWN

FIGURE 2



JOB # 188674 - 8/9/2017

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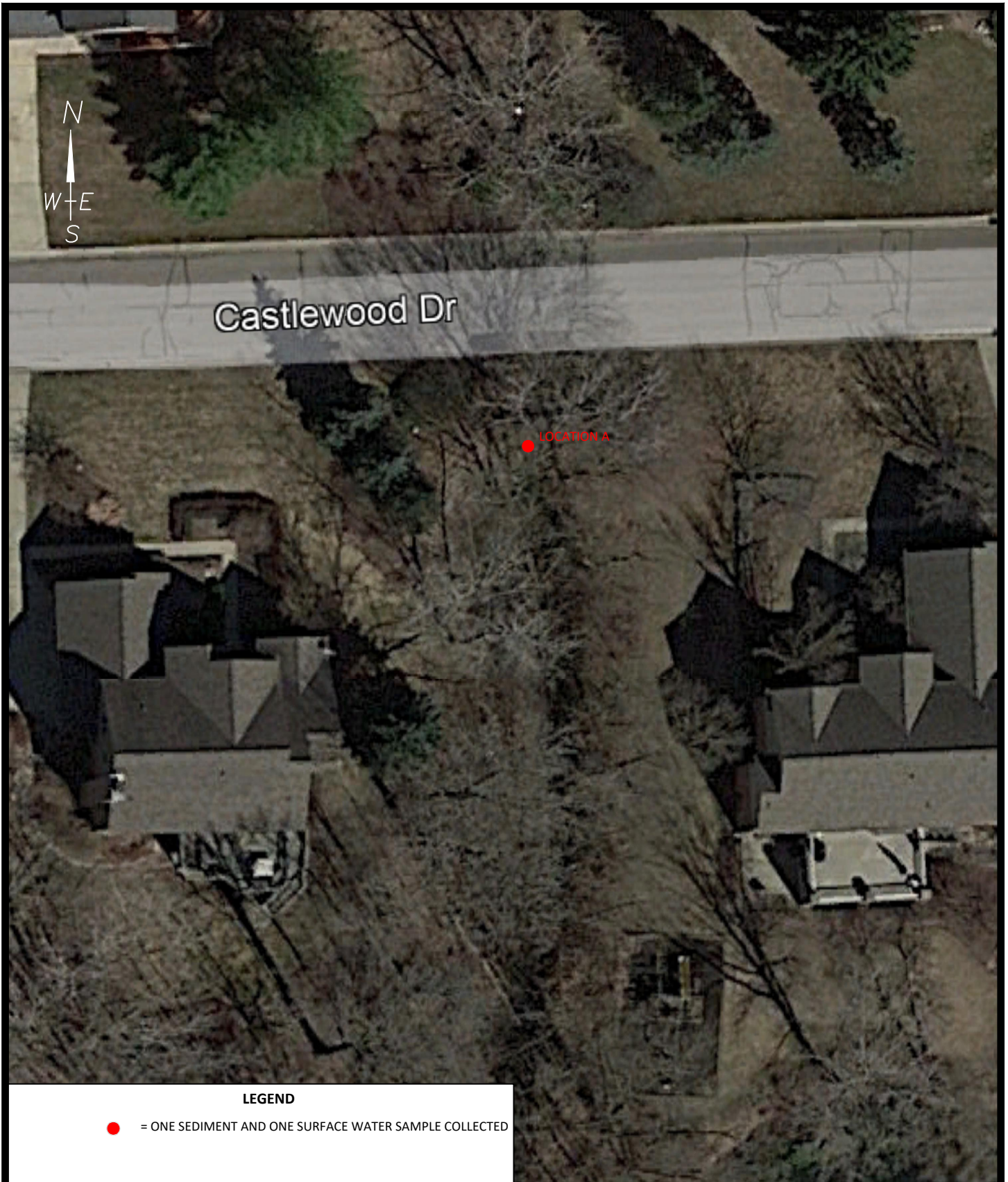
SAMPLE LOCATION MAP

NE CORNER OF LAPEER ROAD AND I-75 INTERCHANGE
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: MST
DATE: 04/11/2023

SCALE AS SHOWN

FIGURE 3



LEGEND

● = ONE SEDIMENT AND ONE SURFACE WATER SAMPLE COLLECTED

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SAMPLE LOCATION MAP A

4470 CASTLEWOOD DRIVE
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: SES
DATE: 04/05/2023

0 15 30
SCALE: 1" = 30'

FIGURE 4



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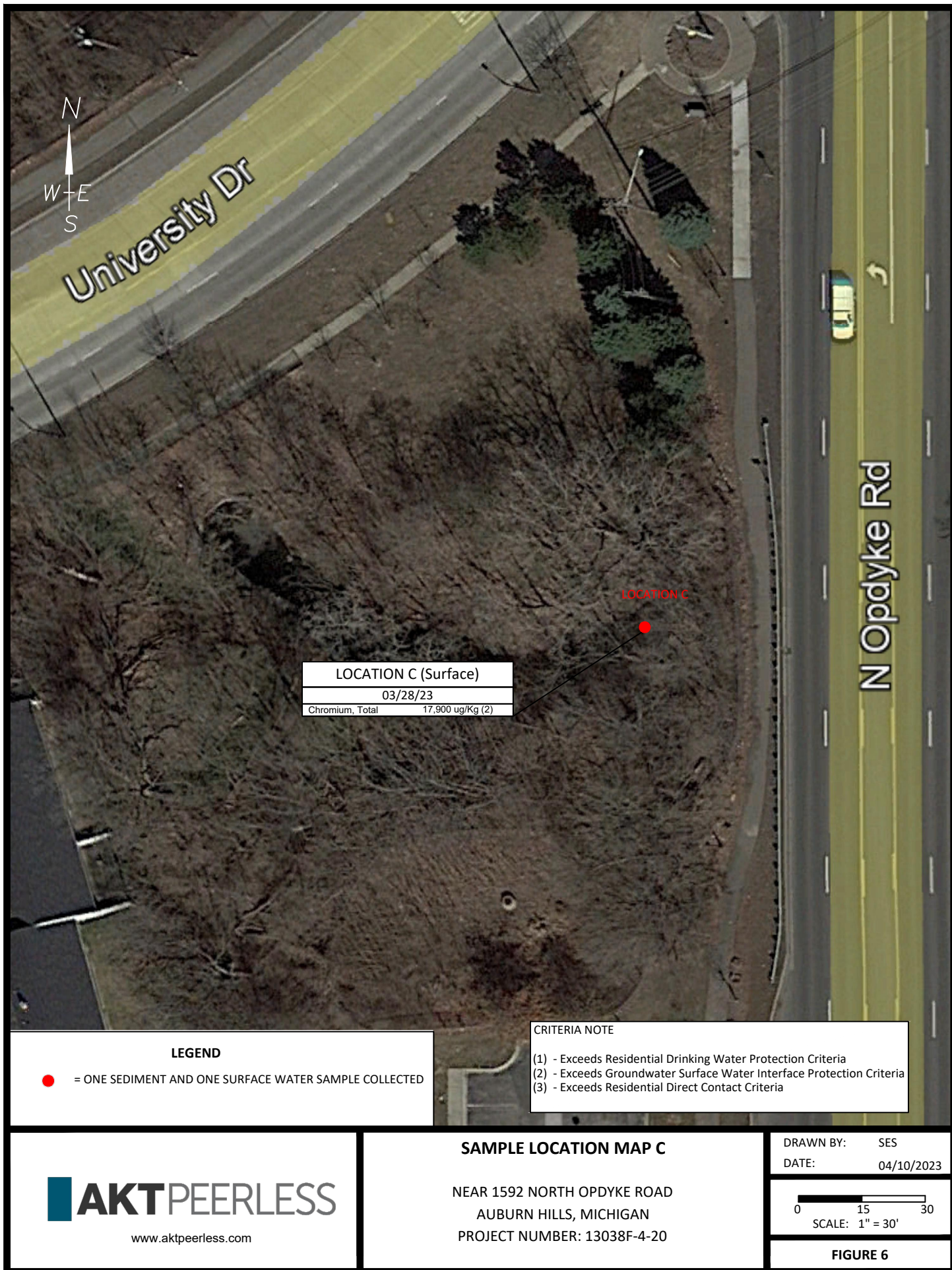
SAMPLE LOCATION MAP B

FIELDSTONE GOLF COURSE HOLE #12
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: SES
DATE: 04/10/2023

0 15 30
SCALE: 1" = 30'

FIGURE 5





LEGEND

● = ONE SEDIMENT AND ONE SURFACE WATER SAMPLE COLLECTED

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SAMPLE LOCATION MAP D

NEAR 1400 NORTH SQUIRREL ROAD
AUBURN HILLS, MICHIGAN
PROJECT NUMBER: 13038F-4-20

DRAWN BY: SES
DATE: 04/10/2023

0 15 30
SCALE: 1" = 30'

FIGURE 7

Table 1 - Summary of Sediment Analytical Results
Galloway Creek
Auburn Hills, Michigan
AKT Peerless Project No. 13038F-4-20

Parameters*	Residential											Sample Location	Location A	Location A	Location A	Location A	Location A	Location B	Location B	Location B	Location B	Location B	Location C	Location C	Location C	Location C	Location C	Location D	Location D	Location D	Location D	Location D
	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels	Collection Date	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23
	*(Refer to detailed laboratory report for method reference data)											Depth	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	
Metals		NA	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Arsenic	7440-38-2	5,800	4,600	4,600	NLV	NLV	NLV	NLV	7.2E+5	7,600	NA		2,700	4,400	2,600	5,800	582	2,900	1,900	2,800	5,700	2,900	5,600	7,900	5,100	4,100	1,390	4,200	3,400	2,800	2,800	1,250
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7	NA		14,000	24,000	13,000	30,000	40,900	19,000	12,000	13,000	25,000	79,100	28,000	29,000	22,000	22,000	69,400	10,000	11,000	6,500	10,000	56,900
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA		51	78	<50	98	<200	100	63	61	62	<200	230	200	100	93	<200	<50	<50	<50	<50	<200
Chromium, Total	7440-47-3	18,000 (total)	30,000	3,300	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA		NS	NS	5,900	5,900	2,070	NS	NS	9,600	9,600	7,100	NS	NS	20,000	20,000	17,900	NS	NS	5,000	5,000	<2,000
Chromium III (B,H)	16065-83-1	18,000 (total)	1.0E+9 (D)	(G,X)	NLV	NLV	NLV	NLV	3.3E+8	7.9E+8	NA		5,800	10,000	5,900	11,000	NS	8,700	16,000	9,600	6,200	NS	23,000	36,000	20,000	19,000	NS	5,900	4,700	5,000	3,700	NS
Chromium VI	18540-29-9	NA	30,000	3,300	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA		<520	1,800	<490	<520	<2,000	570	1,300	<500	<500	<2,000	<510	<500	<540	<520	<2,000	<490	<510	<490	<2,000	
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7	NA		3,900	6,900	3,600	7,300	1,660	6,800	3,300	3,400	4,400	7,520	29,000	41,000	22,000	18,000	23,100	3,900	4,000	3,800	1,700	1,220
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA		3,000	4,500	2,700	5,600	1,250	14,000	2,500	13,000	2,900	10,500	12,000	10,000	7,200	5,900	6,070	3,200	2,300	2,300	1,800	1,580
Mercury, Total	7439-97-6	130	1,700	50 (M); 1.2	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium (B)	7782-49-2	410	4,000	400	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6	NA		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	NLV	NLV	6.7E+6	2.5E+6	NA		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8	NA		18,000	28,000	18,000	35,000	5,400	35,000	20,000	36,000	23,000	35,600	57,000	60,000	51,000	47,000	25,600	25,600	16,000	13,000	13,000	5,000
		NA																														
PCBs ug/Kg		NA																														
PCB, Aroclor 1016	12674-11-2	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1221	11104-28-2	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1232	11141-16-5	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1242	53469-21-9	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1248	12672-29-6	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1254	11097-69-1	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1260	11096-82-5	NA											<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
PCB, Aroclor 1262	37324-23-5	NA											<100	<100	<100	<100	NS	<100	<100	<100	<100	NS	<100	<100	<100	<100	NS	<100	<100	<100	NS	
PCB, Aroclor 1268	11100-14-4	NA											<100	<100	<100	<100	NS	<100	<100	<100	<100	NS	<100	<100	<100	<100	NS	<100	<100	<100	NS	
Polychlorinated biphenyls (PCBs) (J,T)	1336-36-3	NA	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	7.9E+6	5.2E+6	(T)	NA		<100	<100	<100	<100	<700	<100	<100	<100	<100	<700	<100	<100	<100	<100	<700	<100	<100	<100	<700	
Organochlorine Herbicides																																
2,4-DB	94826	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<200	NS	NS	NS	NS	<200	NS	NS	NS	NS	<200	NS	NS	NS	NS	<200
2,4,5-T	93721	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<500	NS	NS	NS	NS	<500	NS	NS	NS	NS	<500	NS	NS	NS	NS	<500
Dalapon	75-99-0	NA	4,000	NA	NLV	NLV	NLV	NLV	ID	1.9E+7	5.9E+7		<100	<100	<100	<100	<500	<100	<100	<100	<100	<500	<100	<100	<100	<100	<500	<100	<100	<100	<500	
Dicamba	1918-00-9	NA	4,400	NA	NA	NLV	NLV	NLV	ID	3.4E+6	NA		<100	<100	<100	<100	<50	<100	<100	<100	<100	<50	<100	<100	<100	<50	<100	<100	<100	<100	<50	
2,4-Dichlorophenoxyacetic acid	94-75-7	NA	1,400	4,400	NLV	NLV	NLV	NLV	6.7E+9	2.5E+6	NA		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	
Dichloroprop	15165670	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<50	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	
Dinoseb	88-85-7	NA	300	200 (M); 43	NLV	NLV	NLV	NLV	2.7E+8	66,000 (DD)	1.4E+5		<100	<100	<100	<100	<200	<100	<100	<100	<100	<200	<100	<100	<100	<100	<200	<100	<100	<100	<200	
2-Methyl-4-chlorophenoxyacetic acid	94-74-6	NA	390	NA	NLV	NLV	NLV	NLV	ID	2.3E+5	NA		NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000
MCPP	7085190	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000	NS	NS	NS	NS	<5,000
Silvex (2,4,5-TP)	93-72-1	NA	3,600	2,200	NLV	NLV	NLV	NLV	ID	1.7E+6	NA		<200	<200	<200	<200	<300	<200	<200	<200	<200	<300	<200	<200	<200	<300	<200	<200	<200	<200	<300	
Organochlorine Pesticides		NA																														
Aldrin	309-00-2	NA	NLL	NLL	1.3E+6	58,000	58,000	58,000	6.4E+5	1,000	NA		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Chlordane (J)	57-74-9	NA	NLL	NLL	1.1E+7	1.2E+6	1.2E+6	1.2E+6	3.1E+7	31,000	NA		<25	<25	<25	<25	<30	<25	<25	<25	<30	<25	<25	<25	<25	<30	<25	<25	<25	<25	<30	
4-4'-DDD	72-54-8	NA	NLL	NLL	NLV	NLV	NLV	NLV	4.4E+7	95,000	NA		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
4-4'-DDE	72-55-9	NA	NLL	NLL	NLV	NLV	NLV	NLV	3.2E+7	45,000	NA		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
4-4'-DDT	50-29-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	3.2E+7	57,000	NA		<																			

Table 1 - Summary of Sediment Analytical Results
Galloway Creek
Auburn Hills, Michigan
AKT Peerless Project No. 13038F-4-20

Parameters*	Residential												Sample Location	Location A	Location A	Location A	Location A	Location A	Location B	Location B	Location B	Location B	Location B	Location C	Location C	Location C	Location C	Location C	Location D	Location D	Location D	Location D	Location D	
	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels	Collection Date	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23		
	*(Refer to detailed laboratory report for method reference data)											Depth	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface		
Benzyl alcohol	100-51-6	NA	2.0E+5	NA	NLV	NLV	NLV	NLV	3.3E+11	3.2E+8 (C)	5.8E+6		<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300	<4,500	<4,500	<3,300	<3,300	<3,300	<3,300	<3,300	<3,300		
4-Bromophenyl Phenylether	101-55-3												<330	<330	<330	<330	<330	<450	<450	<330	<330	<430	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330		
Butyl benzyl phthalate	85-68-7	NA	2.2E+6 (C)	1.2E+5 (X)	NLV	NLV	NLV	NLV	4.7E+10	3.6E+7 (C)	3.1E+5		<330	<330	<1,000	<1,000	<330	<450	<450	<1,000	<1,000	<330	<430	<430	<430	<4,500	<4,500	<330	<330	<330	<330	<330	<330	
Carbazole	86-74-8	NA	9,400	1,100	NLV	NLV	NLV	NLV	6.2E+7	5.3E+5	NA		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	4,700	<330	<330	<330	<330	<330	<330	<330	<330	
4-Chloroaniline	106-47-8	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<330	NS	NS	NS	NS	<330	NS	NS	NS	NS	NS	<330	NS	NS	NS	NS	<330	<330
4-Chloro-3-methylphenol	59-50-7	NA	5,800	280	NLV	NLV	NLV	NLV	ID	4.5E+6	NA		<280	<280	<1,000	<1,000	<280	<450	<450	<1,000	<1,000	<280	<430	<430	<4,500	<4,500	<280	<280	<280	<280	<280	<280	<280	
Bis(2-chloroethoxy)methane	111-91-1												<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
bis(2-Chloroethyl)ether (I)	111-44-4	NA	100	100 (M); 20	8,300	3,800	3,800	3,800	9.4E+6	13,000	2.2E+6		<100	<100	<200	<200	<100	<450	<450	<210	<210	<100	<430	<430	<430	<900	<900	<100	<100	<100	<100	<100	<100	
Bis(2-chloroisopropyl) Ether	108-60-1												<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
beta-Chloronaphthalene	91-58-7	NA	6.2E+5	NA	ID	ID	ID	ID	ID	5.6E+7	NA		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
2-Chlorophenol	95-57-8	NA	900	360	4.3E+5	9.6E+5	9.6E+5	9.6E+5	1.2E+9	1.4E+6	1.9E+7		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
4-Chlorophenyl Phenylether	7005-72-3												<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Dibenzofuran	132-64-9	NA	ID	1,700	2.0E+6	1.3E+5	1.3E+5	1.3E+5	6.7E+6	ID	NA		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
3,3'-Dichlorobenzidine	91-94-1	NA	2,000 (M); 28	2,000 (M); 7.4	NLV	NLV	NLV	NLV	6.5E+6	6,600	NA		NS	NS	NS	NS	<2,000	NS	NS	NS	NS	<2,000	NS	NS	NS	NS	NS	<2,000	NS	NS	NS	NS	<2,000	
2,4-Dichlorophenol	120-83-2	NA	1,500	330 (M); 220	NLV	NLV	NLV	NLV	5.1E+9	6.6E+5 (DD)	1.8E+6		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Diethyl phthalate	84-66-2	NA	1.1E+5	2,200	NLV	NLV	NLV	NLV	3.3E+9	1.7E+8 (C)	7.4E+5		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
2,4-Dimethylphenol	105-67-9	NA	7,400	7,600	NLV	NLV	NLV	NLV	4.7E+9	1.1E+7	NA		<330	<330	<330	<330	<330	<2,300	<2,300	<330	<330	<330	<2,100	<2,100	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Dimethyl phthalate	131-11-3	NA	1.5E+6 (C)	NA	NLV	NLV	NLV	NLV	3.3E+9	1.0E+9 (C,D)	7.9E+5		<330	<330	<330	<330	<330	<450	<450	<330	<330	1,650	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Di-n-butyl phthalate	84-74-2	NA	9.6E+5 (C)	11,000	NLV	NLV	NLV	NLV	3.3E+9	2.7E+7 (C)	7.6E+5		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
2,4-Dinitrophenol	51-28-5												<870	<870	<4,100	<4,100	<830	<9,100	<9,100	<4,200	<4,200	<830	<8,500	<8,500	<18,000	<18,000	<830	<830	<830	<830	<830	<830	<830	
2,4-Dinitrotoluene	121-14-2	NA	430	NA	NLV	NLV	NLV	NLV	1.6E+7	48,000	NA		<330	<330	<330	<330	<330	<910	<910	<330	<330	<330	<430	<430	<850	<850	<900	<900	<330	<330	<330	<330	<330	
2,6-Dinitrotoluene	606-20-2												<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Di-n-octyl phthalate	117-84-0	NA	1.0E+8	ID	NLV	NLV	NLV	NLV	3.1E+10	6.9E+6	1.4E+8		<330	<330	<330	<330	<330	<2,300	<2,300	<330	<330	<330	<2,100	<2,100	<900	<900	<330	<330	<330	<330	<330	<330	<330	
bis(2-Ethylhexyl)phthalate	117-81-7	NA	NLL	NLL	NLV	NLV	NLV	NLV	7.0E+8	2.8E+6	1.0E+7		<330	<330	<330	<330	<330	<2,300	<2,300	<330	<330	<330	<2,100	<2,100	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Hexachlorobenzene (C-66)	118-74-1	NA	1,800	350	41,000	17,000	17,000	17,000	6.8E+6	8,900	NA		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Hexachlorocyclopentadiene (C-56)	77-47-4	NA	3.2E+5	ID	30,000	50,000	50,000	50,000	1.3E+7	2.3E+6 (C)	7.2E+5		<330	<330	<1,000	<1,000	<330	<2,300	<2,300	<1,000	<1,000	<330	<2,100	<2,100	<4,500	<4,500	<330	<330	<330	<330	<330	<330	<330	
Hexachloroethane	67-72-1	NA	430	1,800 (X)	40,000	5.5E+5	9.3E+5	9.3E+5	2.3E+8	2.3E+5	NA		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Isophorone	78-59-1	NA	15,000	26,000 (X)	NLV	NLV	NLV	NLV	1.2E+10	4.8E+6 (C)	2.4E+6		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
2-Methyl-4,6-dinitrophenol	534-52-1	NA	830 (M); 400	NA	NLV	NLV	NLV	NLV	1.3E+8	79,000	NA		<830	<830	<1,000	<1,000	<830	<4,500	<4,500	<1,000	<1,000	<830	<4,300	<4,300	<4,500	<4,500	<830	<830	<830	<830	<830	<830	<830	
Methylphenol, 2-	95-48-7												<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
Methylphenol, 3- and 4-	MEPH1314												<660	<660	<660	<660	<330	<660	<660	<660	<660	<330	<660	<660	<900	<900	<330	<660	<660	<660	<660	<660	<660	
Methylphenols (J)	1319-77-3	NA	7,400	1,000 (M); 600	NLV	NLV	NLV	NLV	6.7E+9	1.1E+7	NA		NS	NS	NS	NS	<1,000	NS	NS	NS	NS	<1,000	NS	NS	NS	NS	NS	<1,000	NS	NS	NS	NS	<1,000	
2-Nitroaniline	88-74-4												<330	<330	<330	<330	<830	<450	<450	<330	<330	<830	<430	<430	<900	<900	<830	<330	<330	<330	<330	<830		
3-Nitroaniline	99-09-2												<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<900	<900	<830	<830	<830	<830	<830	<830	<830	
4-Nitroaniline	100-01-6												<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<830	<900	<900	<830	<830	<830	<830	<830	<830	<830	
Nitrobenzene (I)	98-95-3	NA	330 (M); 68	3,600 (X)	91,000	54,000	54,000	54,000	4.7E+7	1.0E+5	4.9E+5		<330	<330	<330	<330	<330	<450	<450	<330	<330	<330	<430	<430	<900	<900	<330	<330	<330	<330	<330	<330	<330	
2-Nitrophenol	88-75-5	NA	400	ID	NLV	NLV	NLV	NLV	ID	6.3E+5	NA																							

Table 1 - Summary of Sediment Analytical Results
Galloway Creek
Auburn Hills, Michigan
AKT Peerless Project No. 13038F-4-20

Parameters*	Residential												Sample Location	Location A	Location A	Location A	Location A	Location A	Location B	Location B	Location B	Location B	Location B	Location C	Location C	Location C	Location C	Location C	Location D	Location D	Location D	Location D	Location D
	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels	Collection Date	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	
	<i>*(Refer to detailed laboratory report for method reference data)</i>											Depth	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	
Volatiles																																	
Acetone (I)	67-64-1	NA	15,000	34,000	2.9E+8 (C)	1.3E+8	1.3E+8	1.9E+8	3.9E+11	2.3E+7	1.1E+8		<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	
Acrylonitrile (I)	107-13-1	NA	100 (M); 52	100 (M); 40	6,600	5,000	5,100	10,000	4.6E+7	16,000	8.3E+6		<160	<160	<100	<100	NS	<170	<170	<100	<100	NS	<160	<160	<100	<100	NS	<140	<140	<100	<100	NS	
Benzene (I)	71-43-2	NA	100	4,000 (X)	1,600	13,000	34,000	79,000	3.8E+8	1.8E+5	4.0E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Bromobenzene (I)	108-86-1	NA	550	NA	3.1E+5	4.5E+5	4.5E+5	4.5E+5	5.3E+8	5.4E+5	7.6E+5		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
Bromochloromethane	74-97-5												<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
Bromodichloromethane	75-27-4	NA	1,600 (W)	ID	1,200	9,100	9,700	19,000	8.4E+7	1.1E+5	1.5E+6		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
Bromoform	75-25-2	NA	1,600 (W)	ID	1.5E+5	9.0E+5	9.0E+5	9.0E+5	2.8E+9	8.2E+5	8.7E+5		<160	<160	<100	<100	<100	<170	<170	<100	<100	<160	<160	<100	<100	<100	<100	<140	<140	<100	<100	<100	
Bromomethane	74-83-9	NA	200	100	860	11,000	57,000	1.4E+5	3.3E+8	3.2E+5	2.2E+6		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	
2-Butanone (MEK) (I)	78-93-3	NA	2.6E+5	44,000	5.4E+7 (C)	2.9E+7	2.9E+7	3.5E+7	6.7E+10	1.2E+8 (C,DD)	2.7E+7		<820	<820	<750	<750	<750	<840	<840	<760	<760	<750	<780	<780	<750	<750	<750	<750	<750	<750	<750	<750	
n-Butylbenzene	104-51-8	NA	1,600	ID	ID	ID	ID	ID	2.0E+9	2.5E+6	1.0E+7		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
sec-Butylbenzene	135-98-8	NA	1,600	ID	ID	ID	ID	ID	4.0E+8	2.5E+6	1.0E+7		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
tert-Butylbenzene (I)	98-06-6	NA	1,600	ID	ID	ID	ID	ID	6.7E+8	2.5E+6	1.0E+7		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
Carbon disulfide (I,R)	75-15-0	NA	16,000	ID	76,000	1.3E+6	7.9E+6	1.9E+7	4.7E+10	7.2E+6 (C,DD)	2.8E+5		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	
Carbon tetrachloride	56-23-5	NA	100	760 (X)	190	3,500	12,000	28,000	1.3E+8	96,000	3.9E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Chlorobenzene (I)	108-90-7	NA	2,000	500	1.2E+5	7.7E+5	9.9E+5	2.1E+6	4.7E+9	4.3E+6 (C)	2.6E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Chloroethane	75-00-3	NA	8,600	22,000 (X)	2.9E+6 (C)	3.0E+7	1.2E+8	2.8E+8	6.7E+11	2.6E+6 (C)	9.5E+5		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	
Chloroform	67-66-3	NA	1,600 (W)	7,000	7,200	45,000	1.2E+5	2.7E+5	1.3E+9	1.2E+6	1.5E+6		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Chloromethane (I)	74-87-3	NA	5,200	ID	2,300	40,000	4.1E+5	1.0E+6	4.9E+9	1.6E+6 (C)	1.1E+6		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	
2-Chlorotoluene (I)	95-49-8	NA	3,300	ID	2.7E+5	1.2E+6	2.9E+6	6.3E+6	4.7E+9	4.5E+6 (C)	5.0E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
4-Chlorotoluene (I)	106-43-4	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Dibromochloromethane	124-48-1	NA	1,600 (W)	ID	3,900	24,000	24,000	33,000	1.3E+8	1.1E+5	6.1E+5		<160	<160	<100	<100	<100	<170	<170	<100	<100	<160	<160	<100	<100	<100	<140	<140	<100	<100	<100	<100	
Dibromochloropropane	96-12-8	NA	10 (M); 4.0	ID	220	260	260	260	5.6E+5	4,400 (C)	1,200		<250	<250	<250	<250	<10	<250	<250	<250	<250	<10	<250	<250	<250	<250	<10	<250	<250	<250	<250	<10	
Dibromomethane	74-95-3	NA	1,600	NA	ID	ID	ID	ID	ID	2.5E+6 (C)	2.0E+6		<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	
1,2-Dichlorobenzene	95-50-1	NA	14,000	280	1.1E+7 (C)	3.9E+7	3.9E+7	5.2E+7	1.0E+11	1.9E+7 (C)	2.1E+5		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
1,3-Dichlorobenzene	541-73-1	NA	170	680	26,000	79,000	79,000	1.1E+5	2.0E+8	2.0E+5 (C)	1.7E+5		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
1,4-Dichlorobenzene	106-46-7	NA	1,700	360	19,000	77,000	77,000	1.1E+5	4.5E+8	4.0E+5	NA		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
Dichlorodifluoromethane	75-71-8	NA	95,000	ID	9.0E+5	5.3E+7	5.5E+8	1.4E+9	3.3E+12	5.2E+7 (C)	1.0E+6		<410	<410	<250	<250	<250	<420	<420	<250	<250	<390	<390	<250	<250	<250	<350	<350	<250	<250	<250		
1,1-Dichloroethane	75-34-3	NA	18,000	15,000	2.3E+5	2.1E+6	5.9E+6	1.4E+7	3.3E+10	2.7E+7 (C)	8.9E+5		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
1,2-Dichloroethane (I)	107-06-2	NA	100	7,200 (X)	2,100	6,200	11,000	26,000	1.2E+8	91,000	1.2E+6		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
cis-1,2-Dichloroethylene	156-59-2	NA	1,400	12,000	22,000	1.8E+5	4.2E+5	9.9E+5	2.3E+9	2.5E+6 (C)	6.4E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
trans-1,2-Dichloroethylene	156-60-5	NA	2,000	30,000 (X)	23,000	2.8E+5	8.3E+5	2.0E+6	4.7E+9	3.8E+6 (C)	1.4E+6		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
1,1-Dichloroethylene (I)	75-35-4	NA	140	2,600	62	1,100	5,300	13,000	6.2E+7	2.0E+5	5.7E+5		<50	<50	<50	<50	<50	<50	<76	<76	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
1,2-Dichloropropane (I)	78-87-5	NA	100	4,600 (X)	4,000	25,000	50,000	1.1E+5	2.7E+8	1.4E+5	5.5E+5		<82	<82	<50	<50	<50	<84	<84	<76	<76	<50	<78	<78	<50	<50	<50	<71	<71	<50	<50	<50	
1,3-Dichloroproane													NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	
2,2-Dichloropropane													NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	
1,1-Dichloropropene													NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	NS	NS	NS	NS	<50	
1,3-Dichloropropene	542-75-6	NA	170	180 (X)	1,000	18,000	68,000	1.6E+5	7.8E+8	10,000	6.2E+5		NS	NS	NS	NS																	

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Table 2: Summary of Surface Water Analytical Results
Galloway Creek
Auburn Hills, Michigan
AKT Peerless Project No. 13038F-4-20

Residential							Sample Location	Location A	Location A	Location A	Location A	Location A	Location B	Location B	Location B	Location B	Location B	Location C	Location C	Location C	Location C	Location C	Location D	Location D	Location D	Location D	Location D
Parameters	Chemical Abstract Service Number	Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level	Collection Date	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23
(Refer to detailed laboratory report for method reference data)							Screen Depth	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Semivolatiles																											
Aniline	62-53-3	53	4.0 (M); 3.0	NLV	3.60E+7	NA		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Azobenzene	103-33-3	23	ID	6,400 (S)	6,400	ID		<5.0	<5.0	<5.0	<5.0	<2.0	<5.0	<5.0	<5.0	<5.0	<2.0	<5.0	<5.0	<5.0	<5.0	<2.0	<5.0	<5.0	<5.0	<2.0	<5.0
Benzidine	92-87-5	0.3 (M); 0.0037	0.3 (M); 0.073	NLV	5.20E+5	ID		NS	NS	NS	NS	<2.0	NS	NS	NS	NS	<2.0	NS	NS	NS	NS	<2.0	NS	NS	NS	<2.0	NS
Benzyl alcohol	100-51-6	10,000	NA	NLV	4.40E+7	ID		<5.0	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<5.0	<5.0	<50	<5.0	<5.0	<5.0	<5.0	<50	<5.0
4-Bromophenyl Phenylether	101-55-3							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	85-68-7	1,200	67 (X)	NLV	2,690	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Carbazole	86-74-8	85	10 (M); 4.0	NLV	7,480	ID		<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<10
4-Chloroaniline	106-47-8	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<10	NS	NS	NS	<10	NS	NS	NS	NS	<10	NS	NS	NS	NS	<10	NS
4-Chloro-3-methylphenol	59-50-7	150	7.4	NLV	3.90E+6	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-chloroethoxy)methane	111-91-1							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
bis(2-Chloroethyl)ether (I)	111-44-4	2.0	1.0 (M); 0.79	38,000	1.72E+7	1.7E+7 (S)		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bis(2-chloroisopropyl) Ether	108-60-1							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
beta-Chloronaphthalene	91-58-7	1,800	NA	ID	6,740	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorophenol	95-57-8	45	18	4.9E+5	2.20E+7	ID		<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<10
4-Chlorophenyl Phenylether	7005-72-3							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibenzofuran	132-64-9	ID	4.0	10,000 (S)	10,000	ID		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
3,3'-Dichlorobenzidine	91-94-1	1.1	0.3 (M); 0.2	NLV	3,110	ID		NS	NS	NS	NS	<2.0	NS	NS	NS	NS	<2.0	NS	NS	NS	NS	<2.0	NS	NS	NS	NS	<2.0
2,4-Dichlorophenol	120-83-2	73	11	NLV	4.50E+6	ID		<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<10	<5.0
Diethyl phthalate	84-66-2	5,500	110	NLV	1.08E+6	NA		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	105-67-9	370	380	NLV	7.87E+6	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	131-11-3	73,000	NA	NLV	4.19E+6	NA		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	84-74-2	880	9.7	NLV	11,200	NA		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol	51-28-5							<20	<20	<20	<20	<25	<20	<20	<20	<25	<20	<20	<20	<20	<20	<25	<20	<20	<20	<20	<25
2,4-Dinitrotoluene	121-14-2	7.7	NA	NLV	2.70E+5	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,6-Dinitrotoluene	606-20-2							<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Di-n-octyl phthalate	117-84-0	130	ID	NLV	3,000	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
bis(2-Ethylhexyl)phthalate	117-81-7	6.0 (A)	14	NLV	340	NA		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Hexachlorobenzene (C-66)	118-74-1	1.0 (A)	0.2 (M); 0.0003	440	6,200	ID		<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0
Hexachlorocyclopentadiene (C-56)	77-47-4	50 (A)	ID	130	1,800	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Hexachloroethane	67-72-1	7.3	6.7 (X)	27,000	50,000	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Isophorone	78-59-1	770	1,300 (X)	NLV	1.20E+7	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methyl-4,6-dinitrophenol	534-52-1	20 (M); 2.6	NA	NLV	2.00E+5	ID		<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methylphenol, 2-	95-48-7		82					<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<10
Methylphenol, 3- and 4-	MEPH1314		25					<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methylphenols (J)	1319-77-3	370	30 (M); 25	NLV	2.80E+7	NA		NS	NS	NS	NS	<30	NS	NS	NS	NS	<30	NS	NS	NS	NS	<30	NS	NS	NS	NS	<30
2-Nitroaniline	88-74-4							<20	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20
3-Nitroaniline	99-09-2							<20	<20	<20	<20	<25	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20
4-Nitroaniline	100-01-6							<20	<20	<20	<20	<25	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20
Nitrobenzene (I)	98-95-3	3.4	180 (X)	2.8E+5	2.09E+6	NA		<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-Nitrophenol	88-75-5	20	ID	NLV	2.50E+6	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	100-02-7							<20	<20	<20	<20	<25	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20	<20	<20	<20	<25	<20
N-Nitrosodimethylamine	62-75-9							<5.0	<5.0	<5.0	<5.0	NS	<5.0	<5.0	<5.0	NS	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0	<5.0	<5.0	<5.0	NS
n-Nitroso-di-n-propylamine	621-64-7	5.0 (M); 0.19	NA	NLV	9.89E+6	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
N-Nitrosodiphenylamine	86-30-6	270	NA	NLV	35,100	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Pentachlorophenol	87-86-5	1.0 (A)</																									

Table 2: Summary of Surface Water Analytical Results
Galloway Creek
Auburn Hills, Michigan
AKT Peerless Project No. 13038F-4-20

Residential							Sample Location	Location A	Location A	Location A	Location A	Location A	Location B	Location B	Location B	Location B	Location B	Location C	Location C	Location C	Location C	Location C	Location D	Location D	Location D	Location D	Location D
Parameters	Chemical Abstract Service Number	Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria	Water Solubility	Flammability and Explosivity Screening Level	Collection Date	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23	03/25/22	06/02/22	08/05/22	11/07/22	03/28/23
(Refer to detailed laboratory report for method reference data)							Screen Depth	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Volatiles																											
Acetone (I)	67-64-1	730	1,700	1.0E+9 (D,S)	1.0E+9	1.5E+7		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Acrylonitrile (I)	107-13-1	2.6	2.0 (M); 1.2	34,000	7.50E+7	6.4E+6		<2.0	<2.0	<2.0	<2.0	NS	<2.0	<2.0	<2.0	NS	<2.0	<2.0	<2.0	<2.0	NS	<2.0	<2.0	<2.0	<2.0	NS	<2.0
Benzene (I)	71-43-2	5.0 (A)	200 (X)	5,600	1.75E+6	68,000		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene (I)	108-86-1	18	NA	1.8E+5	4.13E+5	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromochloromethane	74-97-5							<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	75-27-4	80 (A,W)	ID	4,800	6.74E+6	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	75-25-2	80 (A,W)	ID	4.7E+5	3.10E+6	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	74-83-9	10	5.0 (M); 4.2	4,000	1.45E+7	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Butanone (MEK) (I)	78-93-3	13,000	2,200	2.4E+8 (S)	2.40E+8	ID		<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
n-Butylbenzene	104-51-8	80	ID	ID	NA	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene	135-98-8	80	ID	ID	NA	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-Butylbenzene (I)	98-06-6	80	ID	ID	NA	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon disulfide (I,R)	75-15-0	800	ID	2.5E+5	1.19E+6	13,000		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Carbon tetrachloride	56-23-5	5.0 (A)	38 (X)	370	7.93E+5	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene (I)	108-90-7	100 (A)	25	2.1E+5	4.72E+5	1.6E+5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	75-00-3	430	1,100 (X)	5.7E+6 (S)	5.74E+6	1.1E+5		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	67-66-3	80 (A,W)	350	28,000	7.92E+6	ID		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane (I)	74-87-3	260	ID	8,600	6.34E+6	36,000		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorotoluene (I)	95-49-8	150	ID	2.2E+5	3.73E+5	ID		<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0
4-Chlorotoluene (I)	106-43-4	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<5.0	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	<5.0	NS	NS	NS	NS	<5.0
Dibromochloromethane	124-48-1	80 (A,W)	ID	14,000	2.60E+6	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibromochloropropane	96-12-8	0.2 (A)	ID	220	1,230	NA		<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0
Dibromomethane	74-95-3	80	NA	ID	1.10E+7	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	95-50-1	600 (A)	13	1.6E+5 (S)	1.56E+5	NA		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene	541-73-1	6.6	28	18,000	1.11E+5	ID		<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,4-Dichlorobenzene	106-46-7	75 (A)	17	16,000	73,800	NA		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane	75-71-8	1,700	ID	2.2E+5	3.00E+5	ID		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	75-34-3	880	740	1.0E+6	5.06E+6	3.8E+5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane (I)	107-06-2	5.0 (A)	360 (X)	9,600	8.52E+6	2.5E+6		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene	156-59-2	70 (A)	620	93,000	3.50E+6	5.3E+5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	156-60-5	100 (A)	1,500 (X)	85,000	6.30E+6	2.3E+5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene (I)	75-35-4	7.0 (A)	130	200	2.25E+6	97,000		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane (I)	78-87-5	5.0 (A)	230 (X)	16,000	2.80E+6	5.5E+5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropane	142-28-9	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<1.0	NS	NS	NS	<1.0	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<1.0
2,2-Dichloropropane	594-20-7	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<1.0	NS	NS	NS	<1.0	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<1.0
1,1-Dichloropropene	563-58-6	NLS	NLS	NLS	NLS	NLS		NS	NS	NS	NS	<1.0	NS	NS	NS	<1.0	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<1.0
1,3-Dichloropropene	542-75-6	8.5	9.0 (X)	3,900	2.80E+6	1.3E+5		NS	NS	NS	NS	<1.0	NS	NS	NS	<1.0	NS	NS	NS	NS	<1.0	NS	NS	NS	NS	NS	<1.0
cis-1,3-Dichloropropylene	10061-01-5							<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS
trans-1,3-Dichloropropylene	10061-02-6							<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS	<1.0	<0.50	<0.50	<0.50	NS
Ethylbenzene (I)	100-41-4	74 (E)	18	1.1E+5	1.69E+5	43,000		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylene dibromide	106-93-4	0.05 (A)	5.7 (X)	2,400	4.20E+6	ID		<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0
2-Hexanone	591-78-6	1,000	ID	4.2E+6	1.60E+7	NA		<5.0	<50.0	<50.0	<50.0	<5.0	<50.0	<50.0	<50.0	<50.0	<5.0	<50.0	<50.0	<50.0	<50.0	<5.0	<50.0	<50.0	<50.0	<50.0	<50.0
Isopropyl benzene	98-82-8	800	28	56,000 (S)	56,000	29,000		<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	&												

R 299.49 FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES

Cleanup Criteria Requirements for Response Activity (formerly the Part 201 Generic Cleanup Criteria and Screening Levels)
(as last revised by EGLE on December 21, 2020)

- (A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
- (B) Background, as defined in R 299.1(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
- (C) The criterion developed under R 299.20 to R 299.26 exceeds the chemical-specific soil saturation screening level (Csat). The person proposing or implementing response activity shall document whether additional response activity is required to control free-phase liquids or NAPL to protect against risks associated with free-phase liquids by using methods appropriate for the free-phase liquids present. Development of a site-specific Csat or methods presented in R 299.22, R 299.24(5), and R 299.26(8) may be conducted for the relevant exposure pathways.
- (D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
- (E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value [as provided in the table in Footnote (E) in R 299.49].
- (F) Criterion is based on adverse impacts to plant life and phytotoxicity.
- (G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO₃/L, use 400 mg CaCO₃/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote [See table in Footnote (G) in R 299.49].
- (H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.
- (I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.
- (K) Hazardous substance may be flammable or explosive, or both.
- (L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(9) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable concentrations of site-specific soil and drinking water concentrations are presented in the [See table in Footnote (L) in R 299.49].
- (M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
- (N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.
- (O) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.
- (P) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.
- (Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
- (R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (S) Criterion defaults to the hazardous substance-specific water solubility limit.
- (T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable. [See table in Footnote (T) in R 299.49].
- (U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (V) Criterion is the aesthetic drinking water value as required by Section 20120(a)(5) of the NREPA. Concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) and 20120b of the NREPA.
- (W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.
- (X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the [table in Footnote (X) in R 299.49], except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in [the table in Footnote (G) in R 299.49]. Soil protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.
- (Y) Source size modifiers shown in the [See table in Footnote (Y) in R 299.49] shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre. The modifier shall be multiplied by the generic soil inhalation criteria shown in the table of generic cleanup criteria to determine the applicable criterion. See Footnote (C) [in R 299.49].
- (Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.
- (AA) Use 10,000 ug/L where groundwater enters a structure through the use of a water well, sump or other device. Use 28,000 ug/L for all other uses.
- (BB) The state drinking water standard for asbestos (fibers greater than 10 micrometers in length) is in units of a million fibers per liter of water (MFL). Soil concentrations of asbestos are determined by polarized light microscopy.
- (CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH₃); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH₃ in the surface water. This percent NH₃ is a function of the pH and temperature of the receiving surface water and can be estimated using the [table in Footnote (CC) in R 299.49], taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975). The generic approach for estimating NH₃ assumes a default pH of 8 and default temperatures of 68 °F and 85 °F for cold water and warm water surface water, respectively. The resulting NH₃ is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH₃-N) concentration in the groundwater and the resulting NH₃ concentration compared to the applicable GSI criterion. As an alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the [table in Footnote (CC) in R 299.49], a lower percent unionized ammonia concentration for comparison to the generic GSI.
Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.
- (DD) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure. Nonresidential direct contact criteria are protective for a pregnant adult receptor.
- (EE) The [values listed in the table in Footnote (EE) in 299.49] are applicable generic GSI criteria as required by Section 20120e of the NREPA.
- (FF) The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.
- (GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or 8.4E+6 ug/m³.
- (HH) The residential criterion for sodium is 230,000 ug/L in accordance with the Sodium Advisory Council recommendation and revised Groundwater Discharge Standards.
- (II) The residential drinking water criterion for 1,4-dioxane is not calculated using the equations of R 299.10 or the toxicological and chemical-physical data as shown in Table 4 of R 299.50. The drinking water criterion is calculated using the United States Environmental Protection Agency's (U.S. EPA) "Toxicological Review of 1,4-Dioxane" EPA/635/R-11/003F, September 2013, and the department's residential exposure algorithms to protect both children and adults from unsafe levels of the chemical.
- ID Insufficient data to develop criterion.
- NA A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
- NLL Hazardous substance is not likely to leach under most soil conditions.
- NLV Hazardous substance is not likely to volatilize under most conditions.
- ug/kg Micrograms per kilogram
- ug/L Micrograms per liter
- NS Not sampled
- BDL Below Laboratory Method Detection Limits
- BOLD** Exceeds highlighted criteria.

ANALYTICAL REPORT

For: AKT Peerless
22725 Orchard Lake Rd
Farmington MI 48336

Report Number: 12856
Report Date: April 6, 2023
Project Name: Galloway Creek
Project Number: 13038f-4-20
Page: 1 of 54
248-615-1333 Fax: 248-615-1334

Attn: Mr. Brian Westhoff
Ms. Rachel Stenzel

Sample Description

Eight (8) samples reported to be Soil (4) and Water (4) and identified as "Galloway Creek", Auburn Hills, MI, 3/28/23, Grab and:

1. Location D, 9:52 (Water)
2. Location D, 9:54 (Soil)
3. Location B, 10:36 (Water)
4. Location B, 10:41 (Soil)
5. Location C, 11:13 (Water)
6. Location C, 11:23 (Soil)
7. Location A, 12:28 (Water)
8. Location A, 12:34 (Soil)

Analysis Requested

Chemical Analysis per SW-846 (SW) for:

1. Volatile Organic Compounds (VOC), Methods 8260B and 5035 (Soil)
2. Semi-Volatile Organic Compounds (SVOC), Method 8270C
3. Polychlorinated Biphenyls (PCB), Method 8082A
4. Pesticides, Method 8081B
5. Herbicides, Method 8151A
6. 10 Michigan Metals
 - a) Arsenic, Method 7010
 - b) Barium, Method 7010
 - c) Cadmium, Method 7010
 - d) Chromium, Method 7010
 - e) Copper, Method 7010
 - f) Lead, Method 7010
 - g) Mercury, Method 7470A (Water) or Method 7471B (Soil)
 - h) Selenium, Method 7010
 - i) Silver, Method 7010
 - j) Zinc, Method 7010
7. Hexavalent Chromium, Methods 7196 and 3060 (Soil)

Analytical Results

Sample Description:		Location D, 9:52, 3/28/23				
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	50	µg/L	03/29/23	BD	
Benzene	Not Detected	1	µg/L	03/29/23	BD	
Bromobenzene	Not Detected	1	µg/L	03/29/23	BD	
Bromochloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromodichloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromoform	Not Detected	1	µg/L	03/29/23	BD	
Bromomethane	Not Detected	5	µg/L	03/29/23	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	03/29/23	BD	
n-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
sec-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
tert-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Carbon disulfide	Not Detected	5	µg/L	03/29/23	BD	
Carbon tetrachloride	Not Detected	1	µg/L	03/29/23	BD	
Chlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Chloroethane	Not Detected	5	µg/L	03/29/23	BD	
Chloroform	Not Detected	1	µg/L	03/29/23	BD	
Chloromethane	Not Detected	5	µg/L	03/29/23	BD	
2-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
4-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
Dibromochloromethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	03/29/23	BD	
Dibromomethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	03/29/23	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
continued						

Sample Description:		Location D, 9:52, 3/28/23				
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	03/29/23	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	03/29/23	BD	
2-Hexanone	Not Detected	50	µg/L	03/29/23	BD	
Isopropyl benzene	Not Detected	5	µg/L	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	03/29/23	BD	
Methylene chloride	Not Detected	5	µg/L	03/29/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	03/29/23	BD	
Naphthalene	Not Detected	5	µg/L	03/29/23	BD	
n-Propyl benzene	Not Detected	1	µg/L	03/29/23	BD	
Styrene	Not Detected	1	µg/L	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
Tetrachloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Tetrahydrofuran	Not Detected	90	µg/L	03/29/23	BD	
Toluene	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
Trichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Vinyl Acetate	Not Detected	100	µg/L	03/29/23	BD	
Vinyl chloride	Not Detected	1	µg/L	03/29/23	BD	
Xylene (Total)	Not Detected	3	µg/L	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	87.3%	-	% Recovery	03/29/23	BD	
Toluene-d8	101%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	100%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:	Location D, 9:52, 3/28/23					
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Semi-Volatile Organic Cmpds			□			
Acenaphthene	Not Detected	5	µg/L	04/03/23	BD	
Acenaphthylene	Not Detected	5	µg/L	04/03/23	BD	
Aniline	Not Detected	4	µg/L	04/03/23	BD	
Anthracene	Not Detected	5	µg/L	04/03/23	BD	
Azobenzene	Not Detected	2	µg/L	04/03/23	BD	
Benzidine	Not Detected	2	µg/L	04/03/23	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/03/23	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Carbazole	Not Detected	10	µg/L	04/03/23	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/03/23	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Chrysene	Not Detected	1	µg/L	04/03/23	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/03/23	BD	
Dibenzofuran	Not Detected	4	µg/L	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/03/23	BD	
Diethylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
continued						

Sample Description:	Location D, 9:52, 3/28/23					
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd			□			
Fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Fluorene	Not Detected	5	µg/L	04/03/23	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/03/23	BD	
Hexachloroethane	Not Detected	5	µg/L	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/03/23	BD	
Isophorone	Not Detected	5	µg/L	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/03/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
4-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/03/23	BD	
Naphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
Nitrobenzene	Not Detected	3	µg/L	04/03/23	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/03/23	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/03/23	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/03/23	BD	
Phenanthrene	Not Detected	2	µg/L	04/03/23	BD	
Phenol	Not Detected	5	µg/L	04/03/23	BD	
Pyrene	Not Detected	5	µg/L	04/03/23	BD	
Pyridine	Not Detected	20	µg/L	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	31.7%	-	% Recovery	04/03/23	BD	
Phenol-d5	24.3%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	48.3%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	44.7%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	38.4%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	50.5%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location D, 9:52, 3/28/23				
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1221	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1232	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1242	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1248	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1254	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1260	Not Detected	0.2	µg/L	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	81.0%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	87.3%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	10	µg/L	03/31/23	DS	
2,4-DB	Not Detected	10	µg/L	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	30	µg/L	03/31/23	DS	
2,4,5-T	Not Detected	10	µg/L	03/31/23	DS	
Dalapon	Not Detected	10	µg/L	03/31/23	DS	
Dicamba	Not Detected	1	µg/L	03/31/23	DS	
Dichloroprop	Not Detected	10	µg/L	03/31/23	DS	
Dinoseb	Not Detected	1	µg/L	03/31/23	DS	
MCPA	Not Detected	100	µg/L	03/31/23	DS	
MCPP	Not Detected	150	µg/L	03/31/23	DS	E, C
Surrogate Standards						
DCPAA	97.8%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location D, 9:52, 3/28/23				
Laboratory ID:	12856-1	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	0.01	µg/L	03/30/23	DS	
Chlordane	Not Detected	0.05	µg/L	03/30/23	DS	
4,4'-DDD	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDE	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDT	Not Detected	0.02	µg/L	03/30/23	DS	
Dieldrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endosulfan-alpha	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan-beta	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan (Total)	Not Detected	0.03	µg/L	03/30/23	DS	
Endosulfan sulfate	Not Detected	0.05	µg/L	03/30/23	DS	
Endrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endrin aldehyde	Not Detected	0.02	µg/L	03/30/23	DS	
Heptachlor	Not Detected	0.01	µg/L	03/30/23	DS	
Heptachlor Epoxide	Not Detected	0.01	µg/L	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	0.05	µg/L	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	0.02	µg/L	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	0.01	µg/L	03/30/23	DS	
Lindane	Not Detected	0.03	µg/L	03/30/23	DS	
Methoxychlor	Not Detected	0.5	µg/L	03/30/23	DS	
Toxaphene	Not Detected	1	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	104%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	113%	-	% Recovery	03/30/23	DS	
Michigan Metals						
Arsenic	Not Detected	5	µg/L	03/30/23	DS	
Barium	541	100	µg/L	03/30/23	DS	
Cadmium	Not Detected	1	µg/L	03/30/23	DS	
Chromium	Not Detected	5	µg/L	03/30/23	DS	
Hexavalent Chromium	Not Detected	10	µg/L	03/28/23	LB	
Copper	9	4	µg/L	03/30/23	DS	
Lead	Not Detected	3	µg/L	03/30/23	DS	
Mercury	Not Detected	0.2	µg/L	03/31/23	DS	
Selenium	Not Detected	5	µg/L	03/30/23	DS	
Silver	Not Detected	0.2	µg/L	03/30/23	DS	
Zinc	Not Detected	50	µg/L	03/30/23	DS	
Analysis Information						
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/28/23	LB	
Pesticide Extraction	Completed	-	-	03/28/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	03/29/23	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	03/29/23	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	03/29/23	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
continued						

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	03/29/23	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	03/29/23	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	103%	-	% Recovery	03/29/23	BD	
Toluene-d8	104%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	112%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Semi-Volatile Organic Cmpds</i>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/03/23	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
continued						

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd						
Fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/03/23	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	38.6%	-	% Recovery	04/03/23	BD	
Phenol-d5	36.0%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	45.2%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	52.7%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	34.6%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	46.4%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	67.4%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	79.8%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4-DB	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	300	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-T	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dalapon	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dicamba	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dichloroprop	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dinoseb	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
MCPA	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
MCPP	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
Surrogate Standards						
DCPAA	87.6%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location D, 9:54, 3/28/23				
Laboratory ID:	12856-2	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Chlordane	Not Detected	30	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDD	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDE	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDT	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Dieldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-alpha	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-beta	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan (Total)	Not Detected	40	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan sulfate	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin aldehyde	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor Epoxide	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	10	µg/Kg, dry wt.	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Lindane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Methoxychlor	Not Detected	50	µg/Kg, dry wt.	03/30/23	DS	
Toxaphene	Not Detected	170	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	90.9%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	102%	-	% Recovery	03/30/23	DS	
Metals						
Arsenic	1,250	100	µg/Kg, dry wt.	03/30/23	DS	
Barium	56,900	1,000	µg/Kg, dry wt.	03/30/23	DS	
Cadmium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Chromium	Not Detected	2,000	µg/Kg, dry wt.	03/30/23	DS	
Hexavalent Chromium	Not Detected	2,000	µg/Kg, dry wt.	03/29/23	LB	
Copper	1,220	1,000	µg/Kg, dry wt.	03/30/23	DS	
Lead	1,580	1,000	µg/Kg, dry wt.	03/30/23	DS	
Mercury	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Zinc	5,000	1,000	µg/Kg, dry wt.	03/30/23	DS	
Analysis Information						
Dry Weight Solids	80.0%	-	% by weight	03/28/23	LB	
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/30/23	LB	
Pesticide Extraction	Completed	-	-	03/30/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits
 S QC spike recovery outside of acceptance limits
 R RPD outside of acceptance limits

E Reporting limit is elevated
 D Result is from a dilution
 J Result should be considered estimated

M Matrix interference observed
 F Matrix Spike four times rule applied
 C See Case Narrative

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	50	µg/L	03/29/23	BD	
Benzene	Not Detected	1	µg/L	03/29/23	BD	
Bromobenzene	Not Detected	1	µg/L	03/29/23	BD	
Bromochloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromodichloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromoform	Not Detected	1	µg/L	03/29/23	BD	
Bromomethane	Not Detected	5	µg/L	03/29/23	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	03/29/23	BD	
n-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
sec-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
tert-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Carbon disulfide	Not Detected	5	µg/L	03/29/23	BD	
Carbon tetrachloride	Not Detected	1	µg/L	03/29/23	BD	
Chlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Chloroethane	Not Detected	5	µg/L	03/29/23	BD	
Chloroform	Not Detected	1	µg/L	03/29/23	BD	
Chloromethane	Not Detected	5	µg/L	03/29/23	BD	
2-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
4-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
Dibromochloromethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	03/29/23	BD	
Dibromomethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	03/29/23	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
continued						

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	03/29/23	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	03/29/23	BD	
2-Hexanone	Not Detected	50	µg/L	03/29/23	BD	
Isopropyl benzene	Not Detected	5	µg/L	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	03/29/23	BD	
Methylene chloride	Not Detected	5	µg/L	03/29/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	03/29/23	BD	
Naphthalene	Not Detected	5	µg/L	03/29/23	BD	
n-Propyl benzene	Not Detected	1	µg/L	03/29/23	BD	
Styrene	Not Detected	1	µg/L	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
Tetrachloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Tetrahydrofuran	Not Detected	90	µg/L	03/29/23	BD	
Toluene	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
Trichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Vinyl Acetate	Not Detected	100	µg/L	03/29/23	BD	
Vinyl chloride	Not Detected	1	µg/L	03/29/23	BD	
Xylene (Total)	Not Detected	3	µg/L	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	86.1%	-	% Recovery	03/29/23	BD	
Toluene-d8	100%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	102%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Semi-Volatile Organic Cmpds			□			
Acenaphthene	Not Detected	5	µg/L	04/03/23	BD	
Acenaphthylene	Not Detected	5	µg/L	04/03/23	BD	
Aniline	Not Detected	4	µg/L	04/03/23	BD	
Anthracene	Not Detected	5	µg/L	04/03/23	BD	
Azobenzene	Not Detected	2	µg/L	04/03/23	BD	
Benzidine	Not Detected	2	µg/L	04/03/23	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/03/23	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Carbazole	Not Detected	10	µg/L	04/03/23	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/03/23	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Chrysene	Not Detected	1	µg/L	04/03/23	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/03/23	BD	
Dibenzofuran	Not Detected	4	µg/L	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/03/23	BD	
Diethylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
continued						

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd			□			
Fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Fluorene	Not Detected	5	µg/L	04/03/23	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/03/23	BD	
Hexachloroethane	Not Detected	5	µg/L	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/03/23	BD	
Isophorone	Not Detected	5	µg/L	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/03/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
4-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/03/23	BD	
Naphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
Nitrobenzene	Not Detected	3	µg/L	04/03/23	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/03/23	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/03/23	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/03/23	BD	
Phenanthrene	Not Detected	2	µg/L	04/03/23	BD	
Phenol	Not Detected	5	µg/L	04/03/23	BD	
Pyrene	Not Detected	5	µg/L	04/03/23	BD	
Pyridine	Not Detected	20	µg/L	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	29.0%	-	% Recovery	04/03/23	BD	
Phenol-d5	22.6%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	45.3%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	46.7%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	39.2%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	48.3%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1221	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1232	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1242	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1248	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1254	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1260	Not Detected	0.2	µg/L	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	75.7%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	85.4%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	10	µg/L	03/31/23	DS	
2,4-DB	Not Detected	10	µg/L	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	30	µg/L	03/31/23	DS	
2,4,5-T	Not Detected	10	µg/L	03/31/23	DS	
Dalapon	Not Detected	10	µg/L	03/31/23	DS	
Dicamba	Not Detected	1	µg/L	03/31/23	DS	
Dichloroprop	Not Detected	10	µg/L	03/31/23	DS	
Dinoseb	Not Detected	1	µg/L	03/31/23	DS	
MCPA	Not Detected	100	µg/L	03/31/23	DS	
MCPP	Not Detected	150	µg/L	03/31/23	DS	E, C
Surrogate Standards						
DCPAA	89.8%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location B, 10:36, 3/28/23				
Laboratory ID:	12856-3	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	0.01	µg/L	03/30/23	DS	
Chlordane	Not Detected	0.05	µg/L	03/30/23	DS	
4,4'-DDD	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDE	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDT	Not Detected	0.02	µg/L	03/30/23	DS	
Dieldrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endosulfan-alpha	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan-beta	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan (Total)	Not Detected	0.03	µg/L	03/30/23	DS	
Endosulfan sulfate	Not Detected	0.05	µg/L	03/30/23	DS	
Endrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endrin aldehyde	Not Detected	0.02	µg/L	03/30/23	DS	
Heptachlor	Not Detected	0.01	µg/L	03/30/23	DS	
Heptachlor Epoxide	Not Detected	0.01	µg/L	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	0.05	µg/L	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	0.02	µg/L	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	0.01	µg/L	03/30/23	DS	
Lindane	Not Detected	0.03	µg/L	03/30/23	DS	
Methoxychlor	Not Detected	0.5	µg/L	03/30/23	DS	
Toxaphene	Not Detected	1	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	102%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	113%	-	% Recovery	03/30/23	DS	
Michigan Metals						
Arsenic	Not Detected	5	µg/L	03/30/23	DS	
Barium	452	100	µg/L	03/30/23	DS	
Cadmium	Not Detected	1	µg/L	03/30/23	DS	
Chromium	Not Detected	5	µg/L	03/30/23	DS	
Hexavalent Chromium	Not Detected	10	µg/L	03/28/23	LB	
Copper	Not Detected	4	µg/L	03/30/23	DS	
Lead	Not Detected	3	µg/L	03/30/23	DS	
Mercury	Not Detected	0.2	µg/L	03/31/23	DS	
Selenium	Not Detected	5	µg/L	03/30/23	DS	
Silver	Not Detected	0.2	µg/L	03/30/23	DS	
Zinc	Not Detected	50	µg/L	03/30/23	DS	
Analysis Information						
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/28/23	LB	
Pesticide Extraction	Completed	-	-	03/28/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	03/29/23	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	03/29/23	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	03/29/23	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
continued						

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	03/29/23	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	03/29/23	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	104%	-	% Recovery	03/29/23	BD	
Toluene-d8	101%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	108%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Semi-Volatile Organic Cmpds</i>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/03/23	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzo(a,h)anthracene	362	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dimethyl phthalate	1,650	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
continued						

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd						
Fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	374	330	µg/Kg, dry wt.	04/03/23	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/03/23	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	43.1%	-	% Recovery	04/03/23	BD	
Phenol-d5	40.9%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	51.4%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	58.4%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	40.1%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	46.9%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	59.7%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	80.6%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4-DB	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	300	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-T	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dalapon	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dicamba	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dichloroprop	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dinoseb	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
MCPA	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
MCPP	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
Surrogate Standards						
DCPAA	133%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location B, 10:41, 3/28/23				
Laboratory ID:	12856-4	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Chlordane	Not Detected	30	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDD	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDE	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDT	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Dieldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-alpha	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-beta	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan (Total)	Not Detected	40	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan sulfate	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin aldehyde	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor Epoxide	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	10	µg/Kg, dry wt.	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Lindane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Methoxychlor	Not Detected	50	µg/Kg, dry wt.	03/30/23	DS	
Toxaphene	Not Detected	170	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	80.2%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	109%	-	% Recovery	03/30/23	DS	
Metals						
Arsenic	2,900	100	µg/Kg, dry wt.	03/30/23	DS	
Barium	79,100	1,000	µg/Kg, dry wt.	03/30/23	DS	
Cadmium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Chromium	7,100	2,000	µg/Kg, dry wt.	03/30/23	DS	
Hexavalent Chromium	Not Detected	2,000	µg/Kg, dry wt.	03/29/23	LB	
Copper	7,520	1,000	µg/Kg, dry wt.	03/30/23	DS	
Lead	10,500	1,000	µg/Kg, dry wt.	03/30/23	DS	
Mercury	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Zinc	35,600	1,000	µg/Kg, dry wt.	03/30/23	DS	
Analysis Information						
Dry Weight Solids	61.1%	-	% by weight	03/28/23	LB	
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/30/23	LB	
Pesticide Extraction	Completed	-	-	03/30/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location C, 11:13, 3/28/23				
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	50	µg/L	03/29/23	BD	
Benzene	Not Detected	1	µg/L	03/29/23	BD	
Bromobenzene	Not Detected	1	µg/L	03/29/23	BD	
Bromochloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromodichloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromoform	Not Detected	1	µg/L	03/29/23	BD	
Bromomethane	Not Detected	5	µg/L	03/29/23	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	03/29/23	BD	
n-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
sec-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
tert-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Carbon disulfide	Not Detected	5	µg/L	03/29/23	BD	
Carbon tetrachloride	Not Detected	1	µg/L	03/29/23	BD	
Chlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Chloroethane	Not Detected	5	µg/L	03/29/23	BD	
Chloroform	Not Detected	1	µg/L	03/29/23	BD	
Chloromethane	Not Detected	5	µg/L	03/29/23	BD	
2-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
4-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
Dibromochloromethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	03/29/23	BD	
Dibromomethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	03/29/23	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
continued						

Sample Description:		Location C, 11:13, 3/28/23				
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	03/29/23	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	03/29/23	BD	
2-Hexanone	Not Detected	50	µg/L	03/29/23	BD	
Isopropyl benzene	Not Detected	5	µg/L	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	03/29/23	BD	
Methylene chloride	Not Detected	5	µg/L	03/29/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	03/29/23	BD	
Naphthalene	Not Detected	5	µg/L	03/29/23	BD	
n-Propyl benzene	Not Detected	1	µg/L	03/29/23	BD	
Styrene	Not Detected	1	µg/L	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
Tetrachloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Tetrahydrofuran	Not Detected	90	µg/L	03/29/23	BD	
Toluene	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
Trichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Vinyl Acetate	Not Detected	100	µg/L	03/29/23	BD	
Vinyl chloride	Not Detected	1	µg/L	03/29/23	BD	
Xylene (Total)	Not Detected	3	µg/L	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	87.1%	-	% Recovery	03/29/23	BD	
Toluene-d8	99.3%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	106%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location C, 11:13, 3/28/23				
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Semi-Volatile Organic Cmpds			□			
Acenaphthene	Not Detected	5	µg/L	04/03/23	BD	
Acenaphthylene	Not Detected	5	µg/L	04/03/23	BD	
Aniline	Not Detected	4	µg/L	04/03/23	BD	
Anthracene	Not Detected	5	µg/L	04/03/23	BD	
Azobenzene	Not Detected	2	µg/L	04/03/23	BD	
Benzidine	Not Detected	2	µg/L	04/03/23	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/03/23	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Carbazole	Not Detected	10	µg/L	04/03/23	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/03/23	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Chrysene	Not Detected	1	µg/L	04/03/23	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/03/23	BD	
Dibenzofuran	Not Detected	4	µg/L	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/03/23	BD	
Diethylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
continued						

Sample Description:		Location C, 11:13, 3/28/23				
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd			□			
Fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Fluorene	Not Detected	5	µg/L	04/03/23	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/03/23	BD	
Hexachloroethane	Not Detected	5	µg/L	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/03/23	BD	
Isophorone	Not Detected	5	µg/L	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/03/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
4-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/03/23	BD	
Naphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
Nitrobenzene	Not Detected	3	µg/L	04/03/23	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/03/23	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/03/23	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/03/23	BD	
Phenanthrene	Not Detected	2	µg/L	04/03/23	BD	
Phenol	Not Detected	5	µg/L	04/03/23	BD	
Pyrene	Not Detected	5	µg/L	04/03/23	BD	
Pyridine	Not Detected	20	µg/L	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	25.3%	-	% Recovery	04/03/23	BD	
Phenol-d5	19.7%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	39.9%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	49.1%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	34.2%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	42.7%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location C, 11:13, 3/28/23				
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1221	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1232	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1242	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1248	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1254	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1260	Not Detected	0.2	µg/L	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	91.1%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	98.5%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	10	µg/L	03/31/23	DS	
2,4-DB	Not Detected	10	µg/L	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	30	µg/L	03/31/23	DS	
2,4,5-T	Not Detected	10	µg/L	03/31/23	DS	
Dalapon	Not Detected	10	µg/L	03/31/23	DS	
Dicamba	Not Detected	1	µg/L	03/31/23	DS	
Dichloroprop	Not Detected	10	µg/L	03/31/23	DS	
Dinoseb	Not Detected	1	µg/L	03/31/23	DS	
MCPA	Not Detected	100	µg/L	03/31/23	DS	
MCPP	Not Detected	150	µg/L	03/31/23	DS	E, C
Surrogate Standards						
DCPAA	88.4%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:	Location C, 11:13, 3/28/23					
Laboratory ID:	12856-5	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	0.01	µg/L	03/30/23	DS	
Chlordane	Not Detected	0.05	µg/L	03/30/23	DS	
4,4'-DDD	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDE	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDT	Not Detected	0.02	µg/L	03/30/23	DS	
Dieldrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endosulfan-alpha	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan-beta	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan (Total)	Not Detected	0.03	µg/L	03/30/23	DS	
Endosulfan sulfate	Not Detected	0.05	µg/L	03/30/23	DS	
Endrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endrin aldehyde	Not Detected	0.02	µg/L	03/30/23	DS	
Heptachlor	Not Detected	0.01	µg/L	03/30/23	DS	
Heptachlor Epoxide	Not Detected	0.01	µg/L	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	0.05	µg/L	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	0.02	µg/L	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	0.01	µg/L	03/30/23	DS	
Lindane	Not Detected	0.03	µg/L	03/30/23	DS	
Methoxychlor	Not Detected	0.5	µg/L	03/30/23	DS	
Toxaphene	Not Detected	1	µg/L	03/30/23	DS	
Surrogate Standards			□			
Tetrachloro-m-xylene	119%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	126%	-	% Recovery	03/30/23	DS	
Michigan Metals						
Arsenic	Not Detected	5	µg/L	03/30/23	DS	
Barium	445	100	µg/L	03/30/23	DS	
Cadmium	Not Detected	1	µg/L	03/30/23	DS	
Chromium	Not Detected	5	µg/L	03/30/23	DS	
Hexavalent Chromium	Not Detected	10	µg/L	03/28/23	LB	
Copper	Not Detected	4	µg/L	03/30/23	DS	
Lead	Not Detected	3	µg/L	03/30/23	DS	
Mercury	Not Detected	0.2	µg/L	03/31/23	DS	
Selenium	Not Detected	5	µg/L	03/30/23	DS	
Silver	Not Detected	0.2	µg/L	03/30/23	DS	
Zinc	Not Detected	50	µg/L	03/30/23	DS	
Analysis Information						
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/28/23	LB	
Pesticide Extraction	Completed	-	-	03/28/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	03/29/23	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	03/29/23	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	03/29/23	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
continued						

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	03/29/23	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	03/29/23	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	101%	-	% Recovery	03/29/23	BD	
Toluene-d8	101%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	107%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Semi-Volatile Organic Cmpds</i>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/03/23	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(k)fluoranthene	638	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(g,h,i)perylene	448	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)pyrene	382	330	µg/Kg, dry wt.	04/03/23	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Chrysene	508	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
continued						

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd						
Fluoranthene	1,170	330	µg/Kg, dry wt.	04/03/23	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	407	330	µg/Kg, dry wt.	04/03/23	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/03/23	BD	
Phenanthrene	492	330	µg/Kg, dry wt.	04/03/23	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyrene	922	330	µg/Kg, dry wt.	04/03/23	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	40.3%	-	% Recovery	04/03/23	BD	
Phenol-d5	37.9%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	47.8%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	52.7%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	39.0%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	48.4%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	69.9%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	107%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4-DB	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	300	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-T	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dalapon	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dicamba	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dichloroprop	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dinoseb	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
MCPA	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
MCPP	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
Surrogate Standards						
DCPAA	87.4%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location C, 11:23, 3/28/23				
Laboratory ID:	12856-6	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Chlordane	Not Detected	30	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDD	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDE	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDT	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Dieldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-alpha	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-beta	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan (Total)	Not Detected	40	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan sulfate	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin aldehyde	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor Epoxide	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	10	µg/Kg, dry wt.	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Lindane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Methoxychlor	Not Detected	50	µg/Kg, dry wt.	03/30/23	DS	
Toxaphene	Not Detected	170	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	99.0%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	137%	-	% Recovery	03/30/23	DS	
Metals						
Arsenic	1,390	100	µg/Kg, dry wt.	03/30/23	DS	
Barium	69,400	1,000	µg/Kg, dry wt.	03/30/23	DS	
Cadmium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Chromium	17,900	2,000	µg/Kg, dry wt.	03/30/23	DS	
Hexavalent Chromium	Not Detected	2,000	µg/Kg, dry wt.	03/29/23	LB	
Copper	23,100	1,000	µg/Kg, dry wt.	03/30/23	DS	
Lead	6,070	1,000	µg/Kg, dry wt.	03/30/23	DS	
Mercury	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Zinc	25,600	1,000	µg/Kg, dry wt.	03/30/23	DS	
Analysis Information						
Dry Weight Solids	79.5%	-	% by weight	03/28/23	LB	
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/30/23	LB	
Pesticide Extraction	Completed	-	-	03/30/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location A, 12:28, 3/28/23				
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	50	µg/L	03/29/23	BD	
Benzene	Not Detected	1	µg/L	03/29/23	BD	
Bromobenzene	Not Detected	1	µg/L	03/29/23	BD	
Bromochloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromodichloromethane	Not Detected	1	µg/L	03/29/23	BD	
Bromoform	Not Detected	1	µg/L	03/29/23	BD	
Bromomethane	Not Detected	5	µg/L	03/29/23	BD	
2-Butanone (MEK)	Not Detected	25	µg/L	03/29/23	BD	
n-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
sec-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
tert-Butylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Carbon disulfide	Not Detected	5	µg/L	03/29/23	BD	
Carbon tetrachloride	Not Detected	1	µg/L	03/29/23	BD	
Chlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Chloroethane	Not Detected	5	µg/L	03/29/23	BD	
Chloroform	Not Detected	1	µg/L	03/29/23	BD	
Chloromethane	Not Detected	5	µg/L	03/29/23	BD	
2-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
4-Chlorotoluene	Not Detected	5	µg/L	03/29/23	BD	
Dibromochloromethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	0.2	µg/L	03/29/23	BD	
Dibromomethane	Not Detected	5	µg/L	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	1	µg/L	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	5	µg/L	03/29/23	BD	
1,1-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
1,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
2,2-Dichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,1-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
1,3-Dichloropropene	Not Detected	1	µg/L	03/29/23	BD	
continued						

Sample Description:		Location A, 12:28, 3/28/23				
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	0.2	µg/L	03/29/23	BD	
Hexachlorobutadiene	Not Detected	0.2	µg/L	03/29/23	BD	
2-Hexanone	Not Detected	50	µg/L	03/29/23	BD	
Isopropyl benzene	Not Detected	5	µg/L	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	50	µg/L	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	5	µg/L	03/29/23	BD	
Methylene chloride	Not Detected	5	µg/L	03/29/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	03/29/23	BD	
Naphthalene	Not Detected	5	µg/L	03/29/23	BD	
n-Propyl benzene	Not Detected	1	µg/L	03/29/23	BD	
Styrene	Not Detected	1	µg/L	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	1	µg/L	03/29/23	BD	
Tetrachloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Tetrahydrofuran	Not Detected	90	µg/L	03/29/23	BD	
Toluene	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	5	µg/L	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	1	µg/L	03/29/23	BD	
Trichloroethylene	Not Detected	1	µg/L	03/29/23	BD	
Trichlorofluoromethane	Not Detected	1	µg/L	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	1	µg/L	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	1	µg/L	03/29/23	BD	
Vinyl Acetate	Not Detected	100	µg/L	03/29/23	BD	
Vinyl chloride	Not Detected	1	µg/L	03/29/23	BD	
Xylene (Total)	Not Detected	3	µg/L	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	89.5%	-	% Recovery	03/29/23	BD	
Toluene-d8	101%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	102%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location A, 12:28, 3/28/23				
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Semi-Volatile Organic Cmpds			□			
Acenaphthene	Not Detected	5	µg/L	04/03/23	BD	
Acenaphthylene	Not Detected	5	µg/L	04/03/23	BD	
Aniline	Not Detected	4	µg/L	04/03/23	BD	
Anthracene	Not Detected	5	µg/L	04/03/23	BD	
Azobenzene	Not Detected	2	µg/L	04/03/23	BD	
Benzidine	Not Detected	2	µg/L	04/03/23	BD	
Benzo(a)anthracene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	1	µg/L	04/03/23	BD	
Benzo(a)pyrene	Not Detected	1	µg/L	04/03/23	BD	
Benzyl alcohol	Not Detected	50	µg/L	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	1	µg/L	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	5	µg/L	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	5	µg/L	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Carbazole	Not Detected	10	µg/L	04/03/23	BD	
4-Chloroaniline	Not Detected	10	µg/L	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	5	µg/L	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	5	µg/L	04/03/23	BD	
2-Chlorophenol	Not Detected	10	µg/L	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	5	µg/L	04/03/23	BD	
Chrysene	Not Detected	1	µg/L	04/03/23	BD	
Di-n-butylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	2	µg/L	04/03/23	BD	
Dibenzofuran	Not Detected	4	µg/L	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2	µg/L	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	10	µg/L	04/03/23	BD	
Diethylphthalate	Not Detected	5	µg/L	04/03/23	BD	
Dimethyl phthalate	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	5	µg/L	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	25	µg/L	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	5	µg/L	04/03/23	BD	
continued						

Sample Description:	Location A, 12:28, 3/28/23					
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd			□			
Fluoranthene	Not Detected	1	µg/L	04/03/23	BD	
Fluorene	Not Detected	5	µg/L	04/03/23	BD	
Hexachlorobenzene	Not Detected	1	µg/L	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	5	µg/L	04/03/23	BD	
Hexachloroethane	Not Detected	5	µg/L	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	2	µg/L	04/03/23	BD	
Isophorone	Not Detected	5	µg/L	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	20	µg/L	04/03/23	BD	
2-Methylnaphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
4-Methylphenol	Not Detected	10	µg/L	04/03/23	BD	
Methylphenols (total)	Not Detected	30	µg/L	04/03/23	BD	
Naphthalene	Not Detected	5	µg/L	04/03/23	BD	
2-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
3-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
4-Nitroaniline	Not Detected	25	µg/L	04/03/23	BD	
Nitrobenzene	Not Detected	3	µg/L	04/03/23	BD	
2-Nitrophenol	Not Detected	5	µg/L	04/03/23	BD	
4-Nitrophenol	Not Detected	25	µg/L	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	5	µg/L	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	5	µg/L	04/03/23	BD	
Pentachlorophenol	Not Detected	1	µg/L	04/03/23	BD	
Phenanthrene	Not Detected	2	µg/L	04/03/23	BD	
Phenol	Not Detected	5	µg/L	04/03/23	BD	
Pyrene	Not Detected	5	µg/L	04/03/23	BD	
Pyridine	Not Detected	20	µg/L	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	5	µg/L	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	4	µg/L	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	25.5%	-	% Recovery	04/03/23	BD	
Phenol-d5	19.6%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	38.6%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	44.2%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	36.1%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	43.4%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location A, 12:28, 3/28/23				
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1221	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1232	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1242	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1248	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1254	Not Detected	0.2	µg/L	03/30/23	DS	
Aroclor 1260	Not Detected	0.2	µg/L	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	2	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	84.0%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	90.1%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	10	µg/L	03/31/23	DS	
2,4-DB	Not Detected	10	µg/L	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	30	µg/L	03/31/23	DS	
2,4,5-T	Not Detected	10	µg/L	03/31/23	DS	
Dalapon	Not Detected	10	µg/L	03/31/23	DS	
Dicamba	Not Detected	1	µg/L	03/31/23	DS	
Dichloroprop	Not Detected	10	µg/L	03/31/23	DS	
Dinoseb	Not Detected	1	µg/L	03/31/23	DS	
MCPA	Not Detected	100	µg/L	03/31/23	DS	
MCPP	Not Detected	150	µg/L	03/31/23	DS	E, C
Surrogate Standards						
DCPAA	92.8%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:	Location A, 12:28, 3/28/23					
Laboratory ID:	12856-7	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	0.01	µg/L	03/30/23	DS	
Chlordane	Not Detected	0.05	µg/L	03/30/23	DS	
4,4'-DDD	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDE	Not Detected	0.1	µg/L	03/30/23	DS	
4,4'-DDT	Not Detected	0.02	µg/L	03/30/23	DS	
Dieldrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endosulfan-alpha	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan-beta	Not Detected	0.015	µg/L	03/30/23	DS	
Endosulfan (Total)	Not Detected	0.03	µg/L	03/30/23	DS	
Endosulfan sulfate	Not Detected	0.05	µg/L	03/30/23	DS	
Endrin	Not Detected	0.02	µg/L	03/30/23	DS	
Endrin aldehyde	Not Detected	0.02	µg/L	03/30/23	DS	
Heptachlor	Not Detected	0.01	µg/L	03/30/23	DS	
Heptachlor Epoxide	Not Detected	0.01	µg/L	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	0.05	µg/L	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	0.02	µg/L	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	0.01	µg/L	03/30/23	DS	
Lindane	Not Detected	0.03	µg/L	03/30/23	DS	
Methoxychlor	Not Detected	0.5	µg/L	03/30/23	DS	
Toxaphene	Not Detected	1	µg/L	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	112%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	120%	-	% Recovery	03/30/23	DS	
Michigan Metals						
Arsenic	Not Detected	5	µg/L	03/30/23	DS	
Barium	207	100	µg/L	03/30/23	DS	
Cadmium	Not Detected	1	µg/L	03/30/23	DS	
Chromium	Not Detected	5	µg/L	03/30/23	DS	
Hexavalent Chromium	Not Detected	10	µg/L	03/28/23	LB	
Copper	Not Detected	4	µg/L	03/30/23	DS	
Lead	Not Detected	3	µg/L	03/30/23	DS	
Mercury	Not Detected	0.2	µg/L	03/31/23	DS	
Selenium	Not Detected	5	µg/L	03/30/23	DS	
Silver	Not Detected	0.2	µg/L	03/30/23	DS	
Zinc	Not Detected	50	µg/L	03/30/23	DS	
Analysis Information						
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/28/23	LB	
Pesticide Extraction	Completed	-	-	03/28/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Volatile Organic Compounds</i>						
Acetone	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Benzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Bromobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromodichloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromoform	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Bromomethane	Not Detected	200	µg/Kg, dry wt.	03/29/23	BD	
2-Butanone (MEK)	Not Detected	750	µg/Kg, dry wt.	03/29/23	BD	
n-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
sec-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
tert-Butylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Carbon disulfide	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Carbon tetrachloride	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chlorobenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloroethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Chloroform	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Chloromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
4-Chlorotoluene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Dibromochloromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dibromo-3-chloropropane	Not Detected	10	µg/Kg, dry wt.	03/29/23	BD	
Dibromomethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,4-Dichlorobenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Dichlorodifluoromethane	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
cis-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
trans-1,2-Dichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2,2-Dichloropropane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,3-Dichloropropene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
continued						

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
VOC's, Cont'd						
Ethylbenzene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Ethylene Dibromide (1,2-Dibromoethane)	Not Detected	20	µg/Kg, dry wt.	03/29/23	BD	
Hexachlorobutadiene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
2-Hexanone	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Isopropyl benzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
4-Methyl-2-pentanone (MIBK)	Not Detected	2,500	µg/Kg, dry wt.	03/29/23	BD	
Methyl-t-butyl ether (MTBE)	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Methylene chloride	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
2-Methylnaphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
Naphthalene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
n-Propylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Styrene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,1,2-Tetrachloroethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,1,2,2-Tetrachloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrachloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Tetrahydrofuran	Not Detected	1,000	µg/Kg, dry wt.	03/29/23	BD	
Toluene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trichlorobenzene	Not Detected	250	µg/Kg, dry wt.	03/29/23	BD	
1,1,1-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
1,1,2-Trichloroethane	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichloroethylene	Not Detected	50	µg/Kg, dry wt.	03/29/23	BD	
Trichlorofluoromethane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,3-Trichloropropane	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,2,4-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
1,3,5-Trimethylbenzene	Not Detected	100	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Acetate	Not Detected	5,000	µg/Kg, dry wt.	03/29/23	BD	
Vinyl Chloride	Not Detected	40	µg/Kg, dry wt.	03/29/23	BD	
Xylene (Total)	Not Detected	150	µg/Kg, dry wt.	03/29/23	BD	
Surrogate Standards						
1,2-Dichloroethane-d4	89.0%	-	% Recovery	03/29/23	BD	
Toluene-d8	92.1%	-	% Recovery	03/29/23	BD	
4-Bromofluorobenzene	109%	-	% Recovery	03/29/23	BD	
continued						

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
<i>Semi-Volatile Organic Cmpds</i>						
Acenaphthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Acenaphthylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Aniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Azobenzene	Not Detected	200	µg/Kg, dry wt.	04/03/23	BD	
Benzydine	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(b)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(k)fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(g,h,i)perylene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzo(a)pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Benzyl alcohol	Not Detected	3,300	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethyl)ether	Not Detected	100	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroisopropyl)ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-chloroethoxy)methane	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Bis(2-ethylhexyl)phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Bromophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Butyl benzyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Carbazole	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloroaniline	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chloro-3-methylphenol	Not Detected	280	µg/Kg, dry wt.	04/03/23	BD	
2-Chloronaphthalene (beta)	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Chlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Chlorophenyl phenyl ether	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Chrysene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-butylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Di-n-octyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzo(a,h)anthracene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dibenzofuran	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
3,3'-Dichlorobenzidine	Not Detected	2,000	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Diethylphthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Dimethyl phthalate	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dimethylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2,4-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,6-Dinitrotoluene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
continued						

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
SVOC's, Cont'd						
Fluoranthene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Fluorene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachlorocyclopentadiene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Hexachloroethane	Not Detected	300	µg/Kg, dry wt.	04/03/23	BD	
Indeno(1,2,3-cd)pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Isophorone	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methyl-4,6-Dinitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
2-Methylnaphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Methylphenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Methylphenols (total)	Not Detected	1,000	µg/Kg, dry wt.	04/03/23	BD	
Naphthalene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
3-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
4-Nitroaniline	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
Nitrobenzene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2-Nitrophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
4-Nitrophenol	Not Detected	830	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodi-n-propylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
N-Nitrosodiphenylamine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pentachlorophenol	Not Detected	20	µg/Kg, dry wt.	04/03/23	BD	
Phenanthrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Phenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyrene	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Pyridine	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,5-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
2,4,6-Trichlorophenol	Not Detected	330	µg/Kg, dry wt.	04/03/23	BD	
Surrogate Standards						
2-Fluorophenol	38.9%	-	% Recovery	04/03/23	BD	
Phenol-d5	36.4%	-	% Recovery	04/03/23	BD	
Nitrobenzene-d5	46.0%	-	% Recovery	04/03/23	BD	
2-Fluorobiphenyl	50.5%	-	% Recovery	04/03/23	BD	
2,4,6-Tribromophenol	34.5%	-	% Recovery	04/03/23	BD	
Terphenyl-d14	48.4%	-	% Recovery	04/03/23	BD	
continued						

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
PCBs						
Aroclor 1016	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1221	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1232	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1242	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1248	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1254	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Aroclor 1260	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Polychlorinated biphenyls (Total)	Not Detected	700	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	63.0%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	86.0%	-	% Recovery	03/30/23	DS	
Herbicides						
2,4-D	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4-DB	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-TP (Silvex)	Not Detected	300	µg/Kg, dry wt.	03/31/23	DS	
2,4,5-T	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dalapon	Not Detected	500	µg/Kg, dry wt.	03/31/23	DS	
Dicamba	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dichloroprop	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Dinoseb	Not Detected	200	µg/Kg, dry wt.	03/31/23	DS	
MCPA	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
MCPP	Not Detected	5,000	µg/Kg, dry wt.	03/31/23	DS	
Surrogate Standards						
DCPAA	92.2%	-	% Recovery	03/31/23	DS	
continued						

Sample Description:		Location A, 12:34, 3/28/23				
Laboratory ID:	12856-8	Reporting Limit	Units of Measure	Date of Analysis	Analyst	Data Qualifiers
Pesticides						
Aldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Chlordane	Not Detected	30	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDD	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDE	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
4,4'-DDT	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Dieldrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-alpha	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan-beta	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan (Total)	Not Detected	40	µg/Kg, dry wt.	03/30/23	DS	
Endosulfan sulfate	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Endrin aldehyde	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Heptachlor Epoxide	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
alpha-Hexachlorocyclohexane	Not Detected	10	µg/Kg, dry wt.	03/30/23	DS	
beta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
delta-Hexachlorocyclohexane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Lindane	Not Detected	20	µg/Kg, dry wt.	03/30/23	DS	
Methoxychlor	Not Detected	50	µg/Kg, dry wt.	03/30/23	DS	
Toxaphene	Not Detected	170	µg/Kg, dry wt.	03/30/23	DS	
Surrogate Standards						
Tetrachloro-m-xylene	86.8%	-	% Recovery	03/30/23	DS	
Decachlorobiphenyl	114%	-	% Recovery	03/30/23	DS	
Metals						
Arsenic	582	100	µg/Kg, dry wt.	03/30/23	DS	
Barium	40,900	1,000	µg/Kg, dry wt.	03/30/23	DS	
Cadmium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Chromium	2,070	2,000	µg/Kg, dry wt.	03/30/23	DS	
Hexavalent Chromium	Not Detected	2,000	µg/Kg, dry wt.	03/29/23	LB	
Copper	1,660	1,000	µg/Kg, dry wt.	03/30/23	DS	
Lead	1,250	1,000	µg/Kg, dry wt.	03/30/23	DS	
Mercury	Not Detected	50	µg/Kg, dry wt.	03/31/23	DS	
Selenium	Not Detected	200	µg/Kg, dry wt.	03/30/23	DS	
Silver	Not Detected	100	µg/Kg, dry wt.	03/30/23	DS	
Zinc	5,400	1,000	µg/Kg, dry wt.	03/30/23	DS	
Analysis Information						
Dry Weight Solids	76.7%	-	% by weight	03/28/23	LB	
SVOC Extraction	Completed	-	-	04/03/23	LB	
PCB Extraction	Completed	-	-	03/30/23	LB	
Pesticide Extraction	Completed	-	-	03/30/23	LB	
Mercury Digestion	Completed	-	-	03/31/23	LB	
Metals Digestion	Completed	-	-	03/30/23	LB	

Data Qualifiers: I Internal Standard results outside of acceptance limits
 S QC spike recovery outside of acceptance limits
 R RPD outside of acceptance limits

E Reporting limit is elevated
 D Result is from a dilution
 J Result should be considered estimated

M Matrix interference observed
 F Matrix Spike four times rule applied
 C See Case Narrative

Quality Control

VOC Matrix Spike Data

Spiked Sample: 12851-1		Matrix: Soil		Units: ppb in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
1,1-Dichloroethene	0.0	25	30	26	120	104	14.3	
Benzene	0.0	25	19	19	76	76	0.0	
Trichloroethene	0.0	25	21	22	84	88	4.7	
Toluene	0.0	25	19	20	76	80	5.1	
Chlorobenzene	0.0	25	21	23	84	92	9.1	

Spiked Sample: 12856 LCS		Matrix: Water		Units: ppb in solution				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
1,1-Dichloroethene	0.0	25	29	29	116	116	0.0	
Benzene	0.0	25	18	21	72	84	15.4	
Trichloroethene	0.0	25	19	23	76	92	19.0	
Toluene	0.0	25	17	20	68	80	16.2	
Chlorobenzene	0.0	25	18	22	72	88	20.0	

SVOC Matrix Spike Data

Spiked Sample: 12856-8		Matrix: Soil		Units: ppm in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
2-Chlorophenol	0.0	100	50	51	50	51	2.0	
1,4-Dichlorobenzene	0.0	50	23	24	46	48	4.3	
1,2,4-Trichlorobenzene	0.0	50	21	22	42	44	4.7	
4-Chloro-3-methylphenol	0.0	100	50	52	50	52	3.9	
Acenaphthene	0.0	50	23	23	46	46	0.0	
Pentachlorophenol	0.0	100	54	56	54	56	3.6	

Spiked Sample: 12856 LCS		Matrix: Water		Units: ppm in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
2-Chlorophenol	0.0	100	48	52	48	52	8.0	
1,4-Dichlorobenzene	0.0	50	23	24	46	48	4.3	
1,2,4-Trichlorobenzene	0.0	50	21	22	42	44	4.7	
4-Chloro-3-methylphenol	0.0	100	55	50	55	50	9.5	
Acenaphthene	0.0	50	23	24	46	48	4.3	
Pentachlorophenol	0.0	100	57	62	57	62	8.4	

Quality Control, Cont'd

Metals Matrix Spike Data

Spiked Sample: 12856-8 (12856-2 Hex Cr)				Matrix: Soil			Units: ppb in solution	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Arsenic	2.9	12.5	12.0	14.8	72	95	20.9	R, M
Barium	204	100	185	303	—	99	48.6	S, R, M
Cadmium	0.0	1.3	1.3	1.3	105	105	0.0	
Chromium	10.3	10	18.7	19.5	83	91	4.1	
Cr, Hexavalent	0	500	380	370	76	74	2.7	
Copper	8.3	25	30.9	31.5	90	93	1.9	
Lead	6.3	25	28.3	28.6	88	89	1.0	
Mercury	0.0	5.0	4.2	4.0	83	80	3.2	
Selenium	0.0	25	10.7	10.0	43	40	6.8	
Silver	0.0	5.0	3.9	4.0	77	79	2.3	
Zinc	27	500	428	392	80	73	8.8	

Spiked Sample: 12856-1 (12856-7 Hex Cr, LCS for Hg)				Matrix: Water			Units: ppb in solution	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Arsenic	0.8	12.5	11.3	10.9	84	81	2.8	F
Barium	541	100	475	422	NC	NC	11.8	
Cadmium	0.0	1.3	1.1	1.1	88	90	2.4	
Chromium	0.0	10	9.7	10.5	97	105	8.4	
Cr, Hexavalent	0	500	540	530	108	106	1.9	
Copper	9.2	25	29.5	29.4	81	81	0.3	
Lead	2.1	25	19.7	19.7	71	71	0.0	
Mercury	0.0	5.0	4.0	3.8	79	75	4.7	
Selenium	0.0	25	7.9	7.9	32	32	0.3	
Silver	0.0	5.0	2.8	2.8	56	56	1.1	
Zinc	0	500	284	301	57	60	5.8	

PCB Matrix Spike Data

Spiked Sample: 12856-8				Matrix: Soil			Units: ppm in extract	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Aroclor 1260	0.000	0.200	0.233	0.221	116	110	5.3	

Spiked Sample: 12856 LCS				Matrix: Water			Units: ppm in extract	
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
Aroclor 1260	0.000	0.200	0.197	0.228	98	114	14.5	

Quality Control, Cont'd

Pesticides Matrix Spike Data

Spiked Sample: 12856-8		Matrix: Soil		Units: ppb in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
BHC-alpha	0.0	50	42.2	48.9	84	98	14.7	
BHC-beta	0.0	50	42.9	49.3	86	99	13.9	
Dieldrin	0.0	50	47.3	55.1	95	110	15.2	
Endosulfan I	0.0	50	46.7	54.2	93	108	14.9	
4,4'-DDD	0.0	50	45.5	53.9	91	108	16.9	

Spiked Sample: 12848 LCS		Matrix: Water		Units: ppb in extract				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
BHC-alpha	0.0	50	53.1	57.9	106	116	8.6	
BHC-beta	0.0	50	53.2	56.4	106	113	5.8	
Dieldrin	0.0	50	56.1	60.6	112	121	7.7	
Endosulfan I	0.0	50	56.1	59.9	112	120	6.6	
4,4'-DDD	0.0	50	54.4	58.1	109	116	6.6	

Herbicides Matrix Spike Data

Spiked Sample: 12856-8		Matrix: Soil		Units: ppb in solution				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
2,4-D	0.0	250	237	240	95	96	1.5	
Dicamba	1.8	25	24.1	24.6	89	91	2.1	
Silvex	0.0	25	24.3	24.9	97	100	2.4	

Spiked Sample: 12856 LCS		Matrix: Water		Units: ppb in solution				
Parameter	Sample Result	Spike Added	MS Result	MSD Result	MS % Rec.	MSD % Rec.	RPD	Data Qualifiers
2,4-D	0.0	250	214	190	86	76	11.7	
Dicamba	0.0	25	19.1	18.3	76	73	4.3	
Silvex	0.0	25	21.3	19.1	85	76	10.9	

Case Narrative

The reporting limit for MCP in Water was elevated due to the presence of the analyte in the associated method blank.

Samples 12856-1, 3, 5 and 7 were filtered with a 0.45µm filter prior to digestion and analysis of metals per client's request.

All method protocols and quality control requirements were satisfied for all samples.

Notes

- (1) Quality Control Limits available upon request.
- (2) Results are applicable only to the sample tested.
- (3) All samples will be discarded after 30 days unless the laboratory receives other instructions.
- (4) Chain of Custody document attached.

QUANTUM LABORATORIES, INC.



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Analytical Chemistry Manager

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248-348-TEST or 248-348-8378

Women's Business Enterprise
National Council



Cert. No. 2005111505



CHAIN OF CUSTODY RECORD

CLIENT INFO	
COMPANY	AKT Peertess
ADDRESS	
CITY, STATE, ZIP	
TELEPHONE	
FAX	
CONTACT	Brian Westhoff
ADDITIONAL PHONE	westhoffb@aktpeertess.com
EMAIL ADDRESS	

* SAMPLE TYPE: S=Soil, W=Water, D=Drinking Water, O=Oil/Organic, M=Mixed, V=Vapor, A=Air
U=Unknown or Other

** GRAB/COMP: G=Grab Sample, C=Composite Sample

PROJECT INFO	
REPORT NO. (LAB USE)	12856
P.O. NUMBER	
PROJECT NUMBER	13038f-4-20
PROJECT NAME	Galloway Creek
SAMPLING LOCATION	Auburn Hills, MI
SAMPLES COLLECTED BY	Hunter Petz / Rachel Stenzel
TURN AROUND TIME	☒ Standard ☐ Rush ☐ By Date:
SPECIAL INSTRUCTIONS	

LINE NO.	LAB USE	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	TIME SAMPLED	DATE SAMPLED	SAMPLE TYPE *	GRAB / COMP **	ANALYSIS REQUESTED	REMARKS / PRESERVATIVES
1		Location D	5	9:52	3/28/23	W	G	VOCS	
2		Location D	2	9:54	3/28/23	S	G	SVOCs	
3		Location B	5	10:36	3/28/23	W	G	PCBs	
4		Location B	2	10:41	3/28/23	S	G	Herbicides	
5		Location C	5	11:13	3/28/23	W	G	Pesticides	
6		Location C	2	11:23	3/28/23	S	G	Hex Chlorom	
7		Location A	5	12:28	3/28/23	W	G		
8		Location A	2	12:34	3/28/23	S	G		
9									
10									

XFER	1	Hunter Petz	1:45	3/28/23	ACCEPTED BY	SAMPLE RECEIVED ☐ Wet Ice ☐ Blue Ice
	2					
	3					

Distribution: White - Lab Copy Yellow - Client Report Pink - Sampler