



Memorandum

July 21, 2017

To: Amanda Armbruster (MDEQ)
Jean Greensley (USEPA)

Ref. No.: 007878

J.E.P.

From: John-eric Pardys/kf/168

CC: Dave Favero (RACER)

Subject: Supplemental Technical Memorandum – Cover Installation

1. Introduction

GHD prepared the following memorandum on behalf of RACER to supplement the PCB Cleanup Completion Summary Report (GHD, March 21, 2017) providing documentation of the cover installation at RACER's Saginaw Malleable Industrial Land (Site) in Saginaw, Michigan. The purpose of the cover is to provide a barrier from contact with the remaining PCBs in the concrete floor slab and to prevent precipitation directly falling on the slab. The cover will also allow a future owner to more readily convert any portion of the slab (currently to be restricted to low occupancy) with PCB impacts less than 10 milligrams per kilogram (mg/kg) to high occupancy use. Figure 1 presents the Site Location and Figure 2 presents the Site Plan.

RACER's contractor, Job Site Services, Inc. (JSS) completed the cover installation and GHD provided oversight of the installation.

2. Site Preparation

2.1 RACER Saginaw Nodular Industrial Land

In accordance with the U.S. EPA/MDEQ approved Risk-Based Disposal Work Plan for PCB Impacted Material (Work Plan) (CRA, May 8, 2015), clay from RACER's Saginaw Nodular Industrial Land was utilized as the cover material at the Site. In order to access the clay pile, a haul road was needed. Construction of the haul road required placement of fill below the 100-year floodplain. As a result, an MDEQ Part 31 Floodplain/Water Resources Protection Permit was obtained (WRP004925 issued on October 27, 2016). JSS completed construction of the haul road on February 3, 2017. Photographs of the haul road are included in Attachment A.

In addition to the MDEQ Part 31 Floodplain/Water Resources Protection Permit, a City of Saginaw Floodplain permit (issued on September 23, 2016) and a County of Saginaw – Soil Erosion and Sedimentation Control (SESC) Permit (issued on September 16, 2016) were obtained.



2.2 RACER Saginaw Malleable Iron Industrial Land

Construction of the cover required placement of fill below the 100-year floodplain as shown on Figure 3. As a result, an MDEQ Part 31 Floodplain/Water Resources Protection Permit was obtained (WRP002925 issued on June 19, 2016). JSS completed construction of the cover on June 9, 2017, which is further discussed in Section 3.0.

In addition to the MDEQ Part 31 Floodplain/Water Resources Protection Permit, a City of Saginaw Floodplain permit (issued on September 23, 2016), a County of Saginaw – Soil Erosion and Sedimentation Control (SESC) Permit (issued on September 16, 2016), and a Notice of Coverage (MIR114474 issued April 13, 2017) were obtained.

2.2.1 Additional Characterization

Following completion of the PCB removal work on the former Malleable floor slab (removal of PCBs in flooring above 10 parts per million [ppm]), three areas were identified to the south and east of the Malleable concrete floor slab with sample results above 1 ppm PCBs but less than 10 ppm PCBs.

To be consistent with the work that has already been completed (removing impacts above 10 ppm PCBs and covering impacts less than 10 ppm PCBs on the concrete floor slab), a proposal was made to MDEQ and U.S. EPA on April 7, 2017 to delineate the three areas that have sample results above 1 ppm PCBs.

With MDEQ and U.S. EPA concurrence, GHD conducted the additional investigation on April 13, 2017.

- Samples were collected from the historical location FLR-CMG-01-095 (located within the former maintenance building) and in 10-ft steps out in each direction and submitted for analysis of PCBs. Samples were also collected at 20-foot step-outs in each direction but placed on hold pending the initial results.
- Samples were collected from two 10-ft step out locations south of historical sample location C00-007 (former Oil House Building slab).
- The concrete in the area of historical sample location FLR-CMG-01-084 was previously removed as part of the plant demolition. This area was the location of a former tunnel that connected the locker rooms to the main plant. During demolition of the plant, the roof of the tunnel was broken apart and the void of the tunnel was backfilled with soil. Therefore, no samples were collected from historical sample location FLR-CMG-01-084.

PCBs were either not detected or total PCB concentrations were less than 1 ppm for all samples collected on April 13, 2017 that were analyzed for PCBs, as presented in Table 1. A copy of the analytical report is provided in Attachment B.1. There was no need to analyze any of the samples that were placed on hold. It was recommended to MDEQ and USEPA that the cover be extended to incorporate the former Oil House Building slab as concrete samples collected on the slab were reported above 1 ppm PCBs but below 10 ppm PCBs. It was also recommended that no further action is necessary at historical sample location FLR-CMG-01-095 since the results of samples taken from the same area on April 13, 2017 were all below 1 ppm PCBs and at historical sample location FLR-CMG-01-84 the sampled concrete is gone. MDEQ and U.S. EPA



approved the recommendations via email on April 26, 2017. A copy of the email approvals are provided in Attachment C.

3. Cover Installation

3.1 Cover Material Characterization

3.1.1 Clay

Clay from a stockpile at RACER's Nodular property was the source of the cover material. With MDEQ concurrence nine discrete samples were collected of the clay and analyzed for Formaldehyde, Aluminum, Arsenic, Iron, Lead, and Vanadium (Method 6020), and PNAs. The results of the clay characterization samples are provided in Attachments B.2. Based on the characterization results, the clay is suitable for use at the Site. Please note that previous geotechnical sampling and results were included with the Work Plan.

3.1.2 Topsoil

JSS identified two sources of topsoil for use at the Site and the Nodular clay pile. With MDEQ concurrence each stockpile of topsoil was characterized by collecting nine discrete samples and analyzing for Pesticides (Method SW 846 8081), Herbicides (Method SW 846 8151), Atrazine and Alachlor (Method: SW 846 8270), and Arsenic and Lead (Method 6020). The results of the characterization of each topsoil stockpile are provided in Attachments B.3 and B.4. Based on the characterization results, the topsoil is suitable for use at the Site and at the Nodular clay pile.

3.1.3 Compensating Cut Material

GHD identified an area of the Site south of the former Malleable Plant and west of the secondary pond as a potential location for a compensating cut to offset the volume of fill placed for the cover below the 100-year floodplain elevation. Samples from the potential location were collected in 2007 and analyzed for Metals, PCBs, SVOCs, and VOCs. The results of the samples were provided to U.S. EPA and MDEQ on April 19, 2017. At the request of MDEQ, the data were screened against the MDEQ – 2016 proposed generic cleanup criteria (residential and nonresidential) as presented in Table 2. U.S. EPA approved the use of the potential compensating cut material via email on April 19, 2017 and MDEQ provided their approval via email on July 7, 2017. See Figure 3 for the approximate placement of the compensating cut material. To be consistent with the Work Plan, which requires a minimum 10-inches of clay and 2-inches of topsoil over the floor slab area, the compensating cut material was not placed over the floor slab area.

3.2 Material Placement

JSS initiated placement of the clay cover in May 2017 and completed the cover on June 9, 2017. GHD developed target top of clay contours using AutoCAD for the cover so that ponding on the cover would be limited. Clay was transported from the Nodular clay pile to the Site in 1717 truckloads (40 yard gravel train trucks). JSS used a bulldozer with a survey grade GPS unit to obtain the target contours. A minimum of 10-inches of clay was placed above the Malleable floor slab. The clay was initially placed, roughly graded and compacted with a sheeps-foot roller. Then the clay was fine graded and compacted with a smooth-drum



roller. At the edges of cover, the cover transitioned to match existing grade at a maximum 3:1 slope. Compaction testing of the clay was performed throughout placement and six permeability samples were collected as further described in Section 3.3. A post-clay placement survey (50-ft grid) was conducted by SPICER Group, Inc. to confirm that a minimum 10-inches of clay was placed. Following confirmation of clay placement, a minimum of 2-inches of topsoil was placed over the entire cover. A post topsoil placement survey (100-ft) grid was conducted by SPICER Group, Inc. In addition, GHD field staff spot-checked the topsoil thickness and confirmed that a minimum of 2-inches of topsoil were placed. The cover was subsequently seeded. Photographs of the cover installation are included in Attachment A.

3.2.1 I27.7 Manhole Area

One of the conditions of U.S. EPA's coordinated approval letter dated July 18, 2016 was a modified cover above the I27.7 Manhole Area from the minimum 10-inches of clay and 2-inches of topsoil over the concrete floor slab. In accordance with U.S. EPA's coordinated approval letter, a demarcation layer of pea gravel was placed above the I27.7 Manhole Area excavation, followed by a minimum 24-inches of clay and 2-inches of topsoil. Figure 5 presents a plan and profile of the I27.7 Manhole Area.

3.3 Inspections/Testing

GHD conducted periodic oversight of cover installation. GHD certifies that the cover was installed in general conformance with the specifications. JSS subcontracted Professional Service Industries, Inc. to conduct compaction testing on the clay. All compaction testing results met the required 95 percent standard proctor as presented in Attachment D.1. In addition, five permeability tests were completed of the clay. The permeability results ranged from 4.1×10^{-6} cm/s to 5.2×10^{-9} cm/s. The results are provided in Attachment D.2.

4. Project Close-Out

Final notification/close-out for the permits were completed on the following dates:

- June 13, 2017 – MDEQ Part 31 Floodplain/Water Resources Protection Permit (WRP002925) - Malleable
- June 19, 2017 – MDEQ Part 31 Floodplain/Water Resources Protection Permit (WRP004925) – Nodular
- As of the date of this memorandum, close-out of the County of Saginaw SESC Permit (3769) for Malleable, County of Saginaw SESC Permit (3770) for Nodular, and MDEQ Notice of Coverage (MIR114474) for Malleable are pending.



Figure 1 – Site Location

Figure 2 – Site Plan

Figure 3 – Soil Cover Details

Figure 4 – Additional Characterization of PCB impacts less than 10 ppm

Figure 5 – Plan and Profile of I27.7 Manhole Area

Table 1 – Analytical Results Summary for Additional Delineation of PCBs

Table 2 – Summary of Results for Compensating Cut Area

Attachment A – Photographic Log of Cover Installation Activities

Attachment B – Analytical Results

Attachment B.1 - Additional Delineation of PCBs Analytical Report

Attachment B.2 - Clay Analytical Results

Attachment B.3 - Topsoil Analytical Results – Source 1

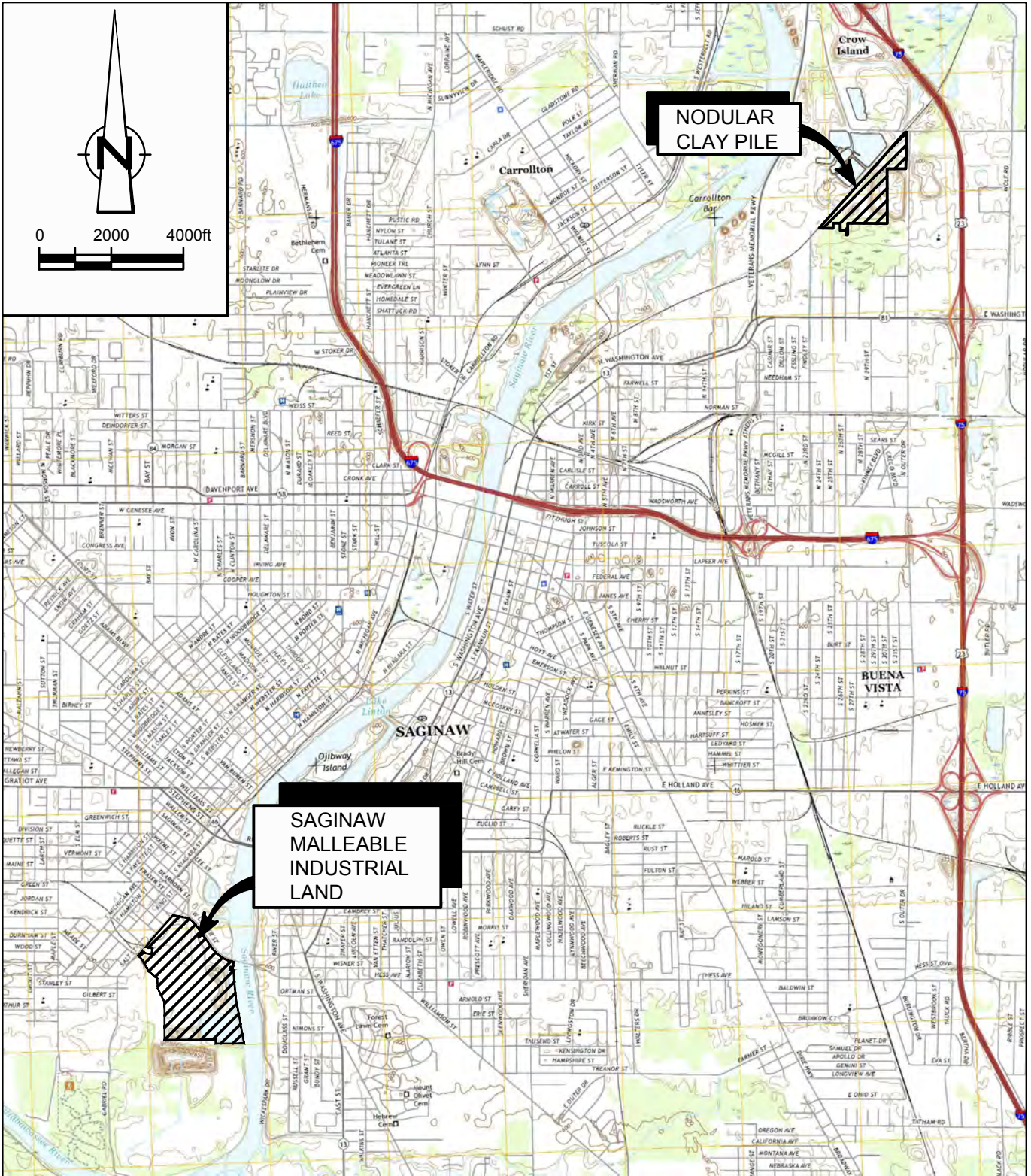
Attachment B.4 - Topsoil Analytical Results – Source 2

Attachment C – Agency Approvals

Attachment D – Cover Testing Results

Attachment D.1 – Compaction Testing Results

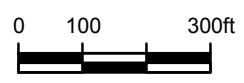
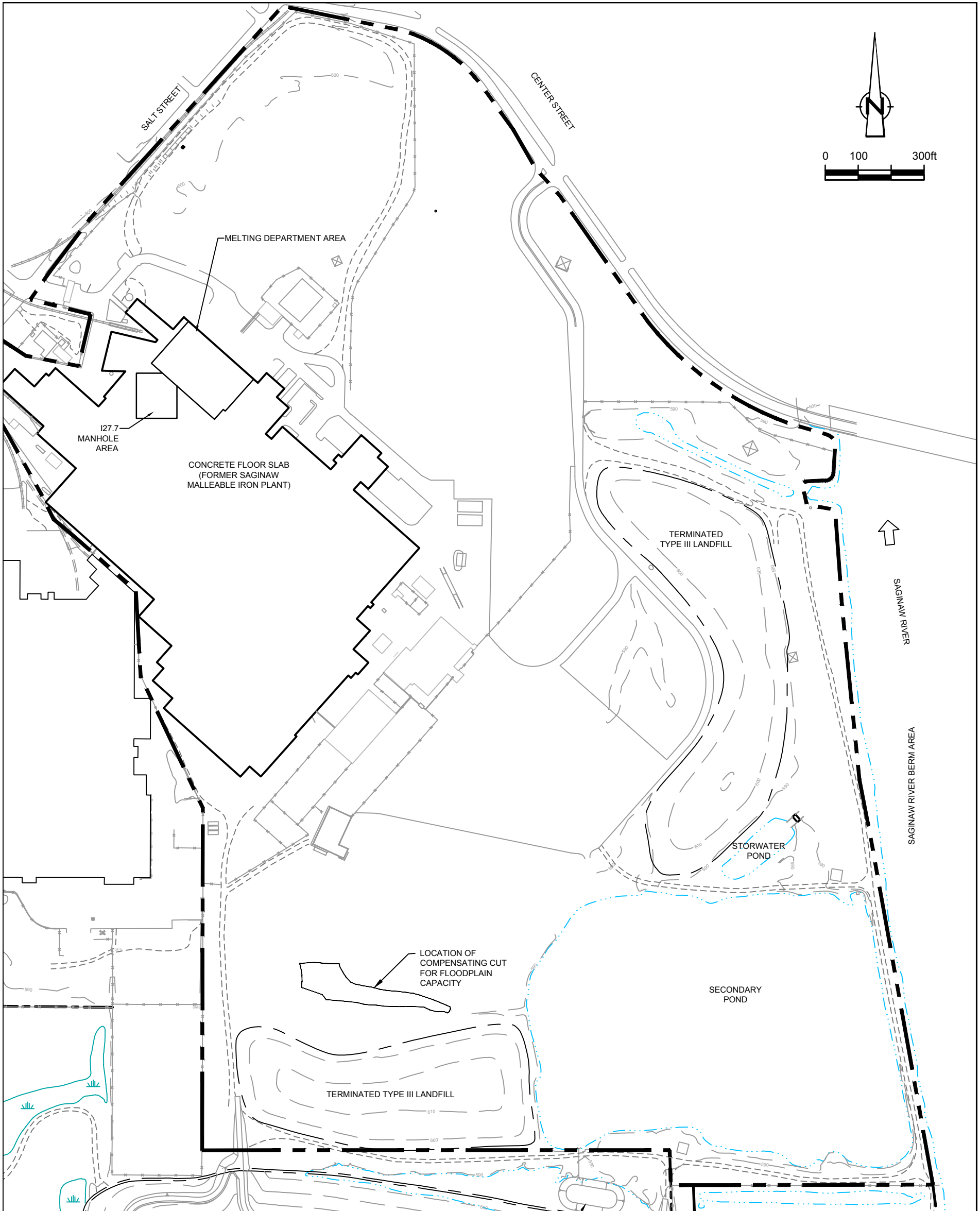
Attachment D.2 – Permeability Testing Results




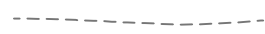


SOURCE: USGS QUADRANGLE MAP; SAGINAW, MICHIGAN 2017

figure 1
 SITE PLAN
 SAGINAW MALLEABLE INDUSTRIAL
 LAND AND NODULAR CLAY PILE
 RACER
Saginaw, Michigan





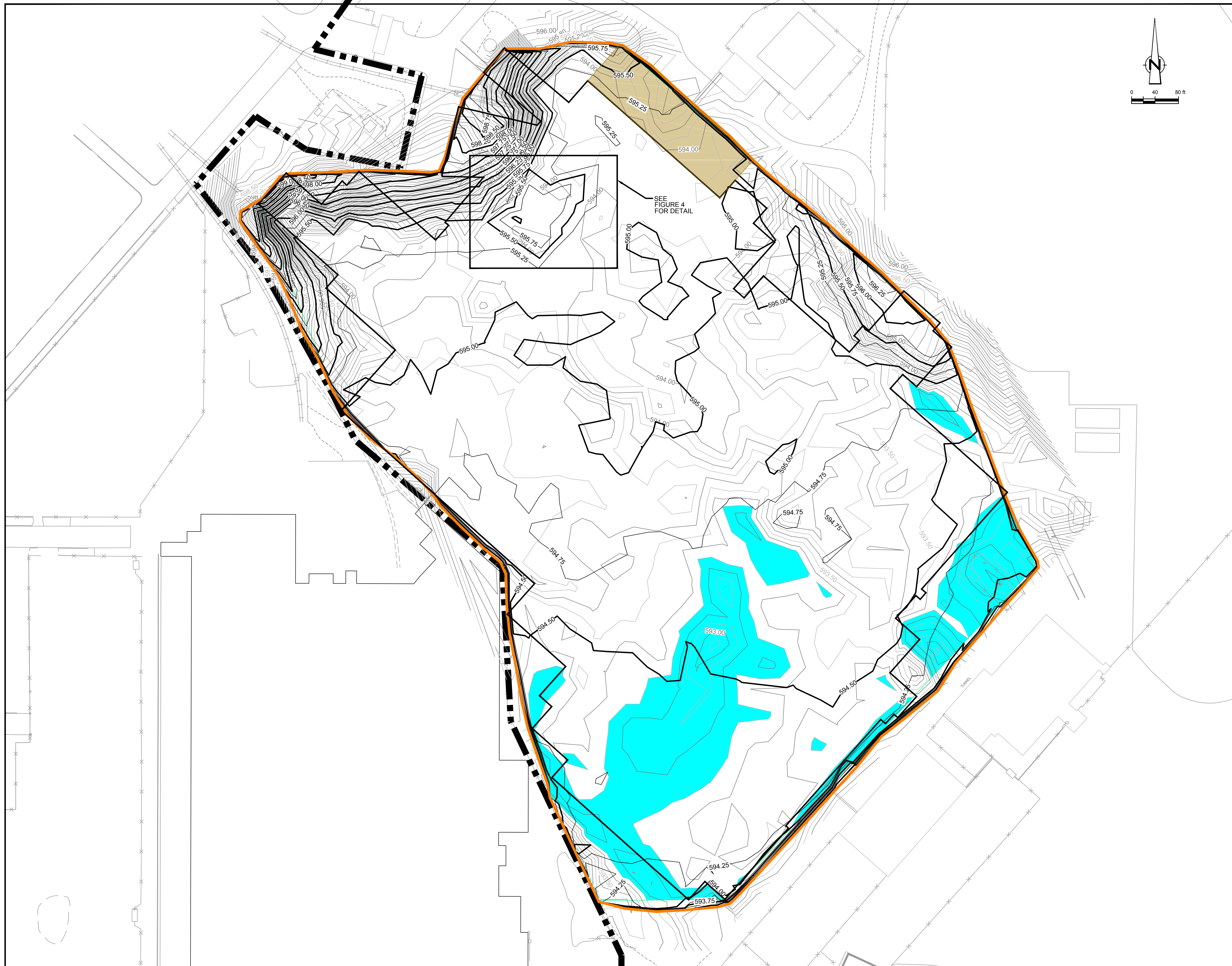
LEGEND

-  RACER MALLEABLE INDUSTRIAL LAND PROPERTY LINE (APPROX.)
-  UNPAVED ROAD
-  GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)
-  FENCE LINE

NOTE:
THIS DRAWING HAS BEEN PREPARED
UTILIZING THE BEST AVAILABLE INFORMATION.

figure 2
SITE PLAN
SAGINAW MALLEABLE INDUSTRIAL LAND
RACER
Saginaw, Michigan





No	Revision	Date	Initial

LEGEND

- FILL PLACED BELOW FLOOD PLAIN (ELEVATION OF 593.3 ft AMSL (NGDV 29))
- EXTENTS OF 1-FT COVER AREA
- RACER MALLEABLE PROPERTY BOUNDARY (APPROX.)
- 594.00 PRE-CONSTRUCTION CONTOURS (SPICER, 2016 SURVEYS DATED: 7/15 & 9/27)
- 595.00 TOP OF CLAY CONTOURS (SPICER 2017 SURVEYS DATED: 5/11, 5/22, 5/24, 6/1, 6/5 & 6/14)
- APPROXIMATE LOCATION OF COMPENSATING CUT MATERIAL

NOTE:
A MINIMUM 10-INCHES OF CLAY AND A MINIMUM COVER THICKNESS OF 1 FOOT WAS PLACED ABOVE THE CONCRETE FLOOR SLAB AND AT THE EDGE OF THE CONCRETE FLOOR SLAB, COVER TRANSITIONED TO MATCH EXISTING GRADES (MAX. 3:1 SLOPE).

PARAMETER	UNIT	QUANTITY
TOTAL AREA OF 1-FT COVER PLACEMENT	ACRES	25.4
AREA FILLED BELOW FLOODPLAIN	ACRES	3.1
TOTAL VOLUME OF CLAY PLACED	CUBIC YARDS	44967
VOLUME OF FILL PLACED BELOW FLOODPLAIN	CUBIC YARDS	603
TOTAL VOLUME OF COMPENSATING CUT FILL PLACED	CUBIC YARDS	686
TOTAL VOLUME OF TOPSOIL PLACED	CUBIC YARDS	10895

SCALE VERIFICATION
THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved: _____

DRAWING STATUS

Status	Date	Initial

**RACER MALLEABLE IRON
INDUSTRIAL LAND
SAGINAW, MICHIGAN
SOIL COVER DETAILS**



Source Reference: 07878-T01(C3D-PRES016)GN-WA001

Project Manager: MT	Reviewed By: JEP	Date: JULY 2017
Scale: AS SHOWN	Project N ^o : 007878-T02	Report N ^o : MEMO168
		Drawing N ^o : figure 3

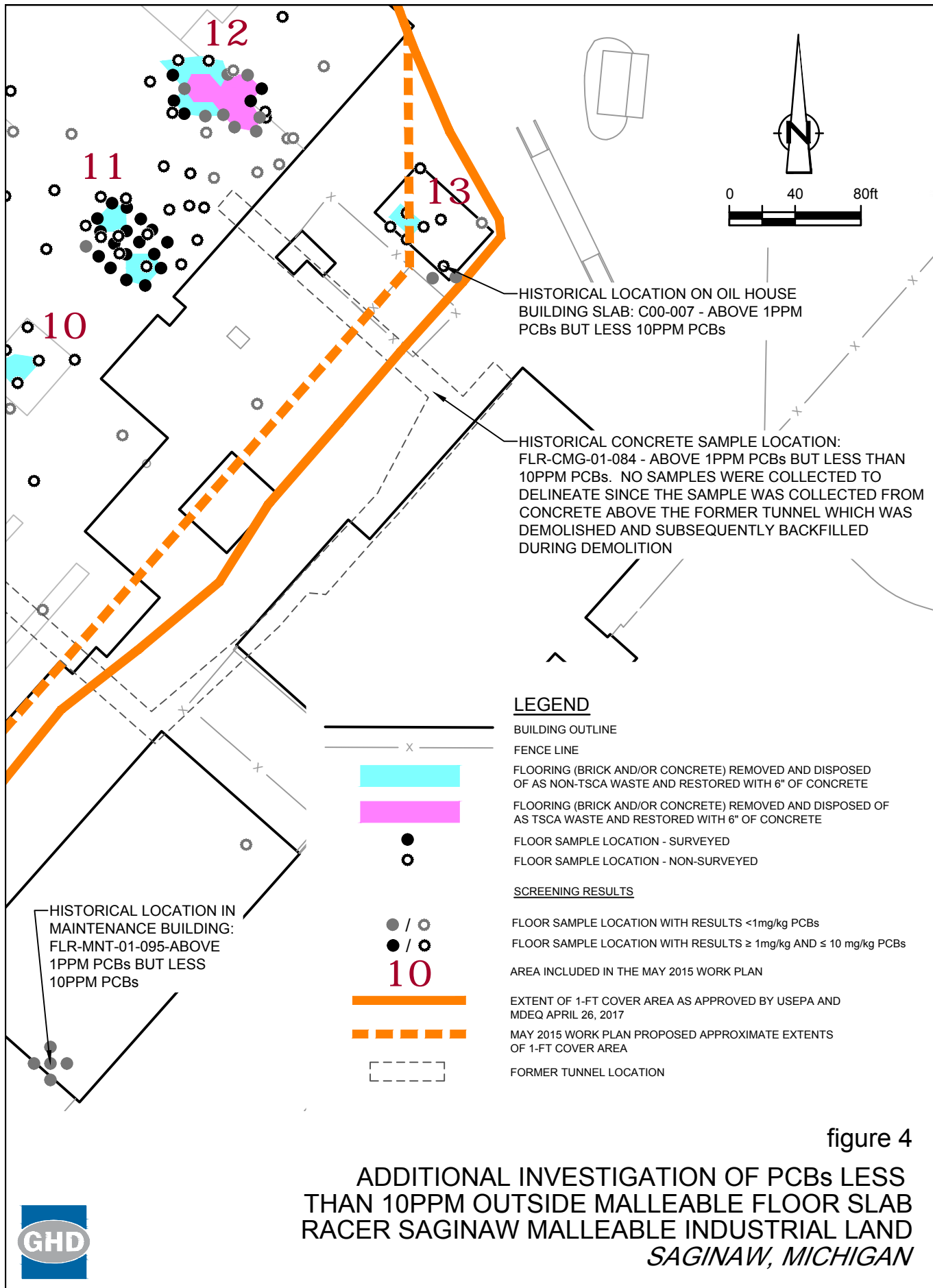


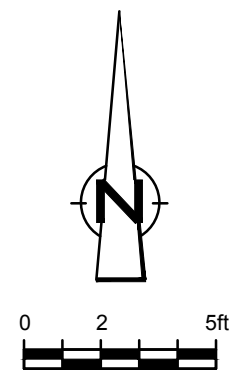
figure 4

ADDITIONAL INVESTIGATION OF PCBs LESS THAN 10PPM OUTSIDE MALLEABLE FLOOR SLAB RACER SAGINAW MALLEABLE INDUSTRIAL LAND SAGINAW, MICHIGAN





KEY MAP



LEGEND

- 594.00 PRE-CONSTRUCTION CONTOURS (SPICER; 2016 SURVEYS DATED: 7/15 & 9/27)
- 595.00 TOP OF CLAY CONTOURS (SPICER 2017 SURVEYS DATED: 5/11, 5/22, 5/24, 6/1, 6/5 & 6/14)
- X 595.94 TOP OF CLAY SPOT ELEVATIONS
- SURVEYED EXCAVATION LIMITS (SPICER 2016 SURVEY DATED: 10/18)
- PEA GRAVEL
- CLAY

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.



REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) SAGINAW MALLEABLE INDUSTRIAL LAND

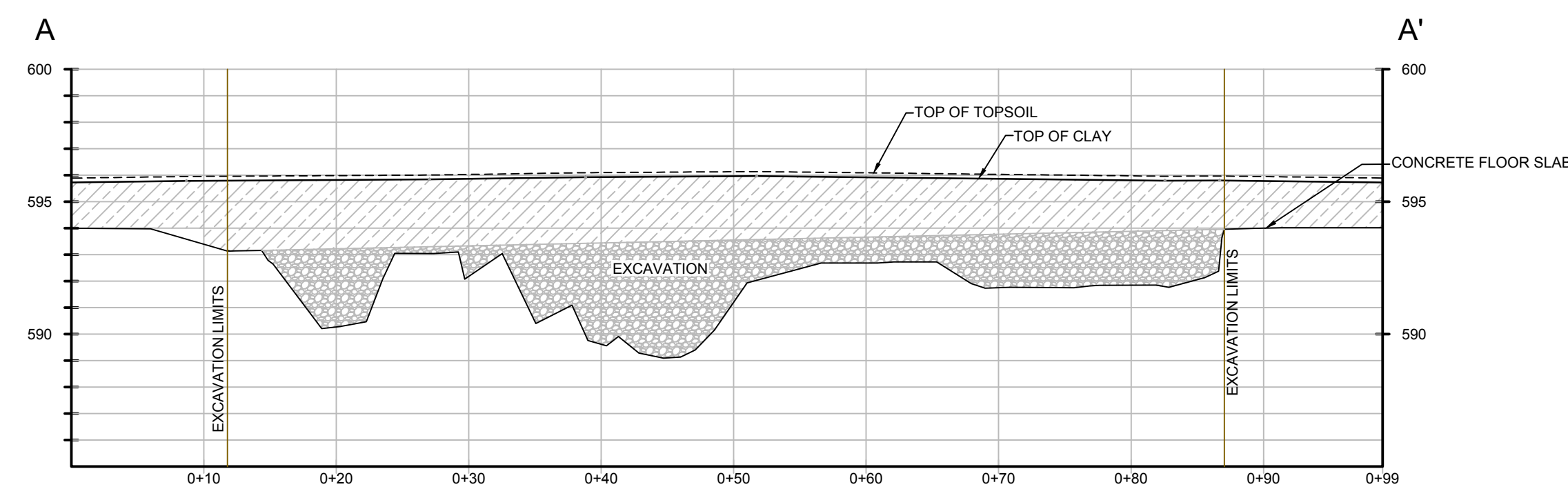
SAGINAW, MICHIGAN

PLAN AND PROFILE OF 127.7 MANHOLE AREA

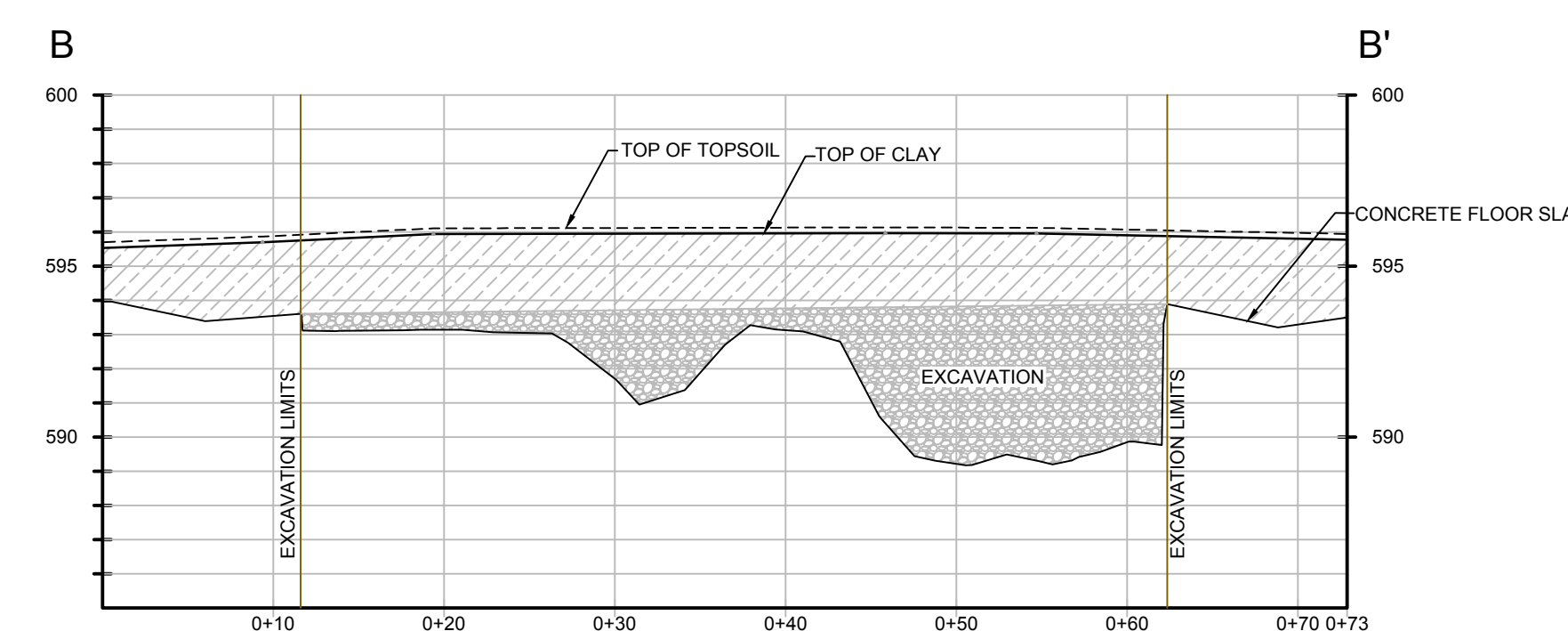


Source Reference:

Project Manager: MRT	Reviewed By: JEP	Date: JULY 2017
Scale: AS SHOWN	Project N ^o : 007878-T02	Report N ^o : MEMO168
		Drawing N ^o : figure 5



SCALES:
1"=10' HORIZONTAL
1"=5' VERTICAL



SCALES:
1"=10' HORIZONTAL
1"=5' VERTICAL

**Analytical Results Summary
for Additional Delineation of PCBS
Saginaw Malleable Industrial Land
Saginaw, Michigan**

Sample Location:	C00-007A	C00-007B	FLR-CMG-01-095R	FLR-CMG-01-095A	FLR-CMG-01-095B	FLR-CMG-01-095C	FLR-CMG-01-095D
Sample ID:	C-7878-041317-SSH-007A	C-7878-041317-SSH-007B	C-7878-041317-SSH-095	C-7878-041317-SSH-095A	C-7878-041317-SSH-095B	C-7878-041317-SSH-095C	C-7878-041317-SSH-095D
Sample Date:	4/13/2017	4/13/2017	4/13/2017	4/13/2017	4/13/2018	4/13/2019	4/13/2020
Sample Depth:	(0-2.5) in BGS	(0-2.5) in BGS	(0-2.5) in BGS	(0-2.5) in BGS	(0-2.5) in BGS	(0-2.5) in BGS	(0-2.5) in BGS
Parameters	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U
Aroclor-1221 (PCB-1221)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U
Aroclor-1232 (PCB-1232)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U
Aroclor-1242 (PCB-1242)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U
Aroclor-1248 (PCB-1248)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U
Aroclor-1254 (PCB-1254)	mg/kg	0.1 U	0.22	0.14	0.18	0.19	0.1 U
Aroclor-1260 (PCB-1260)	mg/kg	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U

Footnotes:

- U Not detected at the associated reporting limit.
- J Estimated concentration.

Table 2
Summary of Results for Compensating Cut Area
Saginaw Malleable Industrial Land
Saginaw, MI

Sample Location: Sample Identification: Sample Date: Sample Type: Sample Depth:	MDEQ- 2016 Proposed Generic Cleanup Criteria: Residential and Nonresidential ⁽¹⁾											
	Statewide Default Background	Drinking Water Protection a	Nonresidential Drinking Water Protection c	Groundwater Surface Water Interface Protection d	Particulate Soil Inhalation e	Nonresidential Soil Inhalation f	Direct Contact g	Nonresidential Direct Contact h	BH7 S-030607-SSH-BS014 3/6/2007 (0-2) ft BGS	BH7 S-030607-SSH-BS015 3/6/2007 (2-4) ft BGS	BH8 S-030607-SSH-BS016 3/6/2007 (0-2) ft BGS	BH8 S-030607-SSH-BS017 3/6/2007 (2-4) ft BGS
Units												
Benzo(a)pyrene	mg/kg	3.8	3.8		0.098	0.096	2.8	41	0.068 J	0.064 J	0.29 U	0.31 U
Benzo(b)fluoranthene	mg/kg								0.065 J	0.052 J	0.019 J	0.026 J
Benzo(g,h,i)perylene	mg/kg	62	62		360000	510000	710	2100	0.029 J	0.35 U	0.29 U	0.31 U
Benzo(k)fluoranthene	mg/kg								0.037 J	0.041 J	0.01 J	0.022 J
Biphenyl (1,1-Biphenyl)	mg/kg								0.29 U	0.12 J	0.055 J	0.11 J
bis(2-Chloroethoxy)methane	mg/kg								0.29 U	0.35 U	0.29 U	0.31 U
bis(2-Chloroethyl)ether	mg/kg	0.1	0.1	0.1	3800	8700	5.5	30	0.089 U	0.11 U	0.087 U	0.095 U
bis(2-Ethylhexyl)phthalate (DE	mg/kg	23	23	54	780000	1800000	690	3400	0.29 U	0.35 U	0.29 U	0.31 U
Butyl benzylphthalate (BBP)	mg/kg	18	76	15	40000000	57000000	1300	9900	0.29 U	0.35 U	0.29 U	0.31 U
Caprolactam	mg/kg	40	190		110000	160000	33000	100000	0.29 U	0.35 U	0.29 U	0.31 U
Carbazole	mg/kg	2.9	11	2.9	450000	1000000	62	340	0.29 U	0.35 U	0.29 U	0.31 U
Chrysene	mg/kg								0.082 J	0.11 J	0.036 J	0.068 J
Dibenz(a,h)anthracene	mg/kg								0.29 U	0.35 U	0.29 U	0.31 U
Dibenzofuran	mg/kg			1.2	200000	290000	250	850	0.041 J	0.24 J	0.09 J	0.16 J
Diethyl phthalate	mg/kg	94	300	2.2	140000000	210000000	100000	100000	0.29 U	0.35 U	0.29 U	0.31 U
Dimethyl phthalate	mg/kg	12	38		2600000	3700000	25000	85000	0.29 U	0.35 U	0.29 U	0.31 U
Di-n-butylphthalate (DBP)	mg/kg	1	4.1	0.36	980000	960000	440	3300	0.29 U	0.35 U	0.29 U	0.025 J
Di-n-octyl phthalate (DnOP)	mg/kg	99	99		24000000	34000000	4800	15000	0.29 U	0.35 U	0.29 U	0.31 U
Fluoranthene	mg/kg	430	460	2.8	7200000	10000000	16000	49000	0.081 J	0.16 J	0.051 J	0.084 J
Fluorene	mg/kg	70	220	3.5	7200000	10000000	10000	34000	0.01 J	0.14 J	0.016 J	0.042 J
Hexachlorobenzene	mg/kg	0.33	0.33	0.33	1800	2600	4	12	0.29 U	0.35 U	0.29 U	0.31 U
Hexachlorobutadiene	mg/kg	0.17	0.54	0.05	57000	130000	78	430	0.044 U	0.054 U	0.043 U	0.048 U
Hexachlorocyclopentadiene	mg/kg	2.4	2.4		10000	15000	2400	7400	0.29 U	0.35 U	0.29 U	0.31 U
Hexachloroethane	mg/kg	0.3	0.3	0.3	120000	290000	150	600	0.29 U	0.35 U	0.29 U	0.31 U
Indeno(1,2,3-cd)pyrene	mg/kg								0.025 J	0.35 U	0.29 U	0.31 U
Isophorone	mg/kg	15	76	26	4600000	11000000	6400	35000	0.29 U	0.56	0.29 U	0.31 U
Naphthalene	mg/kg	29	95	0.55	37000	84000	25000	85000	0.12 J	0.74 ^d	0.24 J	0.45
Nitrobenzene	mg/kg	0.33	0.76	3.6	31000	71000	500	1700	0.29 U	0.35 U	0.29 U	0.31 U
N-Nitrosodi-n-propylamine	mg/kg	0.33	0.33		620	1400	0.87	4.7	0.29 U	0.35 U	0.29 U	0.31 U
N-Nitrosodiphenylamine	mg/kg	13	64				1200	6800	0.29 U	0.35 U	0.29 U	0.31 U
Pentachlorophenol	mg/kg	0.16	0.16		11000	26000	15	65	0.17 U	0.2 U	0.16 U	0.18 U
Phenanthrene	mg/kg	96	300	1.1	5100	7300	7500	26000	0.13 J	0.68	0.2 J	0.33
Phenol	mg/kg	24	110	9	10000000	15000000	20000	100000	0.14 J	0.35 U	0.29 U	0.31 U
Pyrene	mg/kg	240	240		5100000	7300000	12000	37000	0.075 J	0.17 J	0.04 J	0.078 J
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	4	4	1.8	260000000	370000000	100000	100000	0.045 U	0.051 U	0.046 U	0.049 U
1,1,2,2-Tetrachloroethane	mg/kg	0.072	0.36	1.6	22000	49000	30	170	0.045 U	0.051 U	0.046 U	0.049 U
1,1,2-Trichloroethane	mg/kg	0.1	0.1	6.6	10	15	100	340	0.045 U	0.051 U	0.046 U	0.049 U
1,1-Dichloroethane	mg/kg	24	76	15	26000000	37000000	50000	100000	0.045 U	0.051 U	0.046 U	0.049 U
1,1-Dichloroethene	mg/kg	0.14	0.14	2.6	10000000	15000000	12000	43000	0.045 U	0.051 U	0.046 U	0.049 U
1,2,4-Trichlorobenzene	mg/kg	3.1	3.1	4.4	1000000	1500000	210	1100	0.23 UJ	0.25 UJ	0.23 UJ	0.24 UJ
1,2-Dibromo-3-chloropropane	mg/kg	0.01	0.01		91	510	1.4	41	0.23 UJ	0.25 UJ	0.23 UJ	0.24 UJ
1,2-Dibromoethane (Ethylene	mg/kg	0.02	0.02	0.11	2100	4800	3	17	0.23 U	0.25 U	0.23 U	0.24 U
1,2-Dichlorobenzene	mg/kg	12	12	0.26	15000000	22000000	75000	100000	0.09 U	0.1 U	0.092 U	0.097 U
1,2-Dichloroethane	mg/kg	0.1	0.1	7.2	48000	110000	67	360	0.045 U	0.051 U	0.046 U	0.049 U
1,2-Dichloropropane	mg/kg	0.1	0.1	4.6	200000	290000	170	920	0.045 U	0.051 U	0.046 U	0.049 U
1,3-Dichlorobenzene	mg/kg	0.24	0.76	0.56	150000	220000	500	1700	0.09 U	0.1 U	0.092 U	0.097 U
1,4-Dichlorobenzene	mg/kg	1.5	1.5	0.34	2600	6000	470	2600	0.09 U	0.1 U	0.092 U	0.097 U
2-Butanone (Methyl ethyl keto	mg/kg	48	220	44	250000000	240000000	39000	100000	0.68 U	0.76 U	0.69 U	0.73 U
2-Hexanone	mg/kg	2.5	2.5		1500000	2200000	1200	4300	2.3 U	2.5 U	2.3 U	2.4 U
4-Methyl-2-pentanone (Methyl	mg/kg	6	19		150000000	140000000	12000	43000	2.3 U	2.5 U	2.3 U	2.4 U
Acetone	mg/kg	110	340	34	1600000000	2300000000	100000	100000	0.73	0.81	0.8	0.75
Benzene	mg/kg	0.1	0.1	4	160000	370000	110	430	0.045 U	0.051 U	0.046 U	0.029 J
Bromodichloromethane	mg/kg	1.6	1.6		70000	150000	98	530	0.09 U	0.1 U	0.092 U	0.097 U
Bromoform	mg/kg	1.6	1.6		1100000	2600000	770	4200	0.09 U	0.1 U	0.092 U	0.097 U
Bromomethane (Methyl bromi	mg/kg	2.4	7.6	0.2	510000	730000	5000	17000	0.18 U	0.2 U	0.18 U	0.19 U
Carbon disulfide	mg/kg	8.8	36		36000000	51000000	7300	55000	0.23 U	0.25 U	0.23 U	0.24 U
Carbon tetrachloride	mg/kg	0.1	0.1	0.76	220000	510000	93	510	0.045 U	0.051 U	0.046 U	0.049 U
Chlorobenzene	mg/kg	2	2	0.5	2600000	3700000	5000	17000	0.045 U	0.051 U	0.046 U	0.049 U
Chloroethane	mg/kg	4.8	15	22	2000000000	2900000000	3000	17000	0.23 U	0.25 U	0.23 U	0.24 U
Chloroform (Trichloromethane	mg/kg	1.6	1.6	7	54000	120000	2500	8500	0.045 U	0.051 U	0.046 U	0.049 U
Chloromethane (Methyl chloric	mg/kg	4.4	22		4600000	6600000	1800	10000	0.23 U	0.25 U	0.23 U	0.24 U

Table 2
Summary of Results for Compensating Cut Area
Saginaw Malleable Industrial Land
Saginaw, MI

Sample Location: Sample Identification: Sample Date: Sample Type: Sample Depth:	MDEQ- 2016 Proposed Generic Cleanup Criteria: Residential and Nonresidential ⁽¹⁾										BH7	BH7	BH8	BH8		
	Statewide Default	Drinking Water Protection	Nonresidential Drinking Water Protection	Groundwater Surface Water Interface Protection	Particulate Soil Inhalation	Nonresidential Soil Inhalation	Direct Contact	Nonresidential Direct Contact	S-030607-SSH-BS014 3/6/2007	S-030607-SSH-BS015 3/6/2007	S-030607-SSH-BS016 3/6/2007	S-030607-SSH-BS017 3/6/2007	(0-2) ft BGS	(2-4) ft BGS	(0-2) ft BGS	(2-4) ft BGS
Units	a	b	c	d	e	f	g	h								
cis-1,2-Dichloroethene	mg/kg	1.4	1.4	12	410000	590000	500	1700	0.045 U	0.051 U	0.046 U	0.049 U				
cis-1,3-Dichloropropene	mg/kg								0.045 U	0.051 U	0.046 U	0.049 U				
Cyclohexane	mg/kg								0.051 J	0.062 J	0.063 J	0.09 J				
Dibromochloromethane	mg/kg	1.6	1.6		21000	120000	13	390	0.045 U	0.051 U	0.046 U	0.049 U				
Dichlorodifluoromethane (CFC)	mg/kg	0.71	2.2		17000000	24000000	1200	4300	0.09 U	0.1 U	0.092 U	0.097 U				
Ethylbenzene	mg/kg	1.3	1.5	0.36	500000	1100000	550	3000	0.045 U	0.051 U	0.011 J	0.027 J				
Isopropyl benzene	mg/kg	14	45	0.66	120000	270000	25000	85000	0.23 U	0.25 U	0.23 U	0.06 J				
Methyl acetate	mg/kg								1.1 U	1.2 U	1.1 U	1.2 U				
Methyl cyclohexane	mg/kg								0.082 J	0.1 J	0.14 J	0.19 J				
Methyl tert butyl ether (MTBE)	mg/kg	0.8	0.8	140	150000000	220000000	1800	9800	0.23 U	0.25 U	0.23 U	0.24 U				
Methylene chloride	mg/kg	0.1	0.1	30	31000000	44000000	550	5100	0.23 U	0.25 U	0.23 U	0.24 U				
Styrene	mg/kg	2	2	1.6	2200000	5000000	470	2600	0.045 U	0.051 U	0.046 U	0.049 U				
Tetrachloroethene	mg/kg	0.1	0.1	1.2	2000000	2900000	1500	5100	0.045 U	0.051 U	0.046 U	0.049 U				
Toluene	mg/kg	9.4	16	5.4	260000000	370000000	20000	67000	0.016 J	0.025 J	0.043 J	0.088 J				
trans-1,2-Dichloroethene	mg/kg	2	2	30	4100000	5900000	5000	17000	0.045 U	0.051 U	0.046 U	0.049 U				
trans-1,3-Dichloropropene	mg/kg								0.045 U	0.051 U	0.046 U	0.049 U				
Trichloroethene	mg/kg	0.1	0.1	4	98000	96000	33	250	0.045 U	0.051 U	0.046 U	0.049 U				
Trichlorofluoromethane (CFC)	mg/kg	36	110		20000000	29000000	75000	100000	0.09 U	0.1 U	0.092 U	0.097 U				
Trifluorotrchloroethane (CFC)	mg/kg	4300	4600	0.86	970000000	1400000000	100000	100000	0.23 U	0.25 U	0.23 U	0.24 U				
Vinyl chloride	mg/kg	0.04	0.04	0.26	120000	320000	2.3	24	0.036 U	0.04 U	0.037 U	0.039 U				
Xylenes (total)	mg/kg	5.6	5.6	0.82	11000000	16000000	50000	100000	0.065 J	0.088 J	0.12 J	0.21				
General Chemistry																
Total solids	%								90.2	74.4	92.0	84.0				

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

(1) MDEQ 2016 Proposed - Generic cleanup criteria for residential and nonresidential category, administrative rule **R 299.46** and **R 299.48**, respectively

(2) Chromium, total - MDEQ Criteria indicated is Chromium III (Trivalent)

Attachment A

Photographic Log of Cover Installation Activities



Photo 1 – April 17, 2017 – Initiating Placement of Clay Cover



Photo 2 – April 24, 2017 – On-Going Clay Cover Placement



Site Photographs



Photo 3 – May 2, 2017 – Concrete Floor Slab and Compensating Cut Area from Greenpoint Landfill – Clay Placement



Photo 4 – May 24, 2017 – East Edge of Cover



Photo 5 – May 24, 2017 – West Edge of Cover



Photo 6 – May 24, 2017 – West Edge of Cover



Site Photographs



Photo 7 – May 12, 2017 – Clay Cover Placement over I27.7 Manhole Area



Photo 8 – May 31, 2017 – Topsoil Placement Over Clay Cover



Site Photographs



Photo 7 – June 7, 2017 – Seeding of Cover



Photo 8 – June 8, 2017 – Seeding of Cover



Site Photographs



Photo 9 – June 7, 2017 – Compensating Cut Area



Site Photographs



Photo 1 – February 15, 2017 – Setup of Clay Pile (incl. access road)



Photo 2 – May 12, 2017 – Clay Removal for Placement at Malleable



Site Photographs



Photo 3 – June 16, 2016 – Nodular Clay Pile Haul Road



Site Photographs



Photo 4 – June 16, 2016 – Nodular Clay Pile Restoration



Photo 5 – June 16, 2016 – Nodular Clay Pile Restoration



Site Photographs

Attachment B Analytical Results

Attachment B.1 Additional Delineation of PCBs Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-78103-1

Client Project/Site: 7878, RACER SMI

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Ms. Ruth Mickle



Authorized for release by:

4/20/2017 10:19:49 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Job ID: 240-78103-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-78103-1

Comments

No additional comments.

Receipt

The samples were received on 4/14/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

GC Semi VOA

Method(s) 8082: The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: C-7878-041317-SSH-007B (240-78103-2), C-7878-041317-SSH-095 (240-78103-3), C-7878-041317-SSH-095A (240-78103-4), C-7878-041317-SSH-095B (240-78103-5) and C-7878-041317-SSH-095D (240-78103-7). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-78103-1	C-7878-041317-SSH-007A	Solid	04/13/17 10:05	04/14/17 09:20
240-78103-2	C-7878-041317-SSH-007B	Solid	04/13/17 10:10	04/14/17 09:20
240-78103-3	C-7878-041317-SSH-095	Solid	04/13/17 10:20	04/14/17 09:20
240-78103-4	C-7878-041317-SSH-095A	Solid	04/13/17 10:30	04/14/17 09:20
240-78103-5	C-7878-041317-SSH-095B	Solid	04/13/17 10:40	04/14/17 09:20
240-78103-6	C-7878-041317-SSH-095C	Solid	04/13/17 10:50	04/14/17 09:20
240-78103-7	C-7878-041317-SSH-095D	Solid	04/13/17 11:00	04/14/17 09:20

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Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Client Sample ID: C-7878-041317-SSH-007A

Lab Sample ID: 240-78103-1

No Detections.

Client Sample ID: C-7878-041317-SSH-007B

Lab Sample ID: 240-78103-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	220		100	29	ug/Kg	1	☒	8082	Total/NA

Client Sample ID: C-7878-041317-SSH-095

Lab Sample ID: 240-78103-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	140		110	30	ug/Kg	1	☒	8082	Total/NA

Client Sample ID: C-7878-041317-SSH-095A

Lab Sample ID: 240-78103-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	180		100	29	ug/Kg	1	☒	8082	Total/NA

Client Sample ID: C-7878-041317-SSH-095B

Lab Sample ID: 240-78103-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	190		100	29	ug/Kg	1	☒	8082	Total/NA

Client Sample ID: C-7878-041317-SSH-095C

Lab Sample ID: 240-78103-6

No Detections.

Client Sample ID: C-7878-041317-SSH-095D

Lab Sample ID: 240-78103-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	93	J	100	28	ug/Kg	1	☒	8082	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-007A

Date Collected: 04/13/17 10:05

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-1

Matrix: Solid

Percent Solids: 94.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	49	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1221	100	U	100	47	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1232	100	U	100	33	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1242	100	U	100	41	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1248	100	U	100	35	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1254	100	U	100	29	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1
Aroclor-1260	100	U	100	37	ug/Kg	☼	04/17/17 09:11	04/19/17 11:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		14 - 128	04/17/17 09:11	04/19/17 11:13	1
DCB Decachlorobiphenyl	82		10 - 132	04/17/17 09:11	04/19/17 11:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-007B

Date Collected: 04/13/17 10:10

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-2

Matrix: Solid

Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	50	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1221	100	U	100	48	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1232	100	U	100	34	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1242	100	U	100	42	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1248	100	U	100	36	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1254	220		100	29	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Aroclor-1260	100	U	100	38	ug/Kg	☼	04/17/17 09:11	04/19/17 11:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	80		14 - 128				04/17/17 09:11	04/19/17 11:30	1
<i>DCB Decachlorobiphenyl</i>	64		10 - 132				04/17/17 09:11	04/19/17 11:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-095

Date Collected: 04/13/17 10:20

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-3

Matrix: Solid

Percent Solids: 91.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	110	U	110	51	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1221	110	U	110	49	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1232	110	U	110	34	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1242	110	U	110	43	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1248	110	U	110	36	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1254	140		110	30	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Aroclor-1260	110	U	110	39	ug/Kg	☼	04/17/17 09:11	04/19/17 11:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	88		14 - 128				04/17/17 09:11	04/19/17 11:48	1
<i>DCB Decachlorobiphenyl</i>	59		10 - 132				04/17/17 09:11	04/19/17 11:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-095A

Date Collected: 04/13/17 10:30

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-4

Matrix: Solid

Percent Solids: 94.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	50	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1221	100	U	100	48	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1232	100	U	100	33	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1242	100	U	100	42	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1248	100	U	100	36	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1254	180		100	29	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1
Aroclor-1260	100	U	100	38	ug/Kg	☼	04/17/17 09:11	04/19/17 12:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	71		14 - 128	04/17/17 09:11	04/19/17 12:06	1
<i>DCB Decachlorobiphenyl</i>	50		10 - 132	04/17/17 09:11	04/19/17 12:06	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-095B

Date Collected: 04/13/17 10:40

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-5

Matrix: Solid

Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	49	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1221	100	U	100	47	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1232	100	U	100	33	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1242	100	U	100	41	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1248	100	U	100	35	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1254	190		100	29	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Aroclor-1260	100	U	100	37	ug/Kg	☼	04/17/17 09:11	04/19/17 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	74		14 - 128				04/17/17 09:11	04/19/17 12:23	1
<i>DCB Decachlorobiphenyl</i>	48		10 - 132				04/17/17 09:11	04/19/17 12:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-095C

Date Collected: 04/13/17 10:50

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-6

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	48	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1221	100	U	100	46	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1232	100	U	100	32	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1242	100	U	100	40	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1248	100	U	100	34	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1254	100	U	100	28	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1
Aroclor-1260	100	U	100	36	ug/Kg	☼	04/17/17 09:11	04/19/17 13:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	04/17/17 09:11	04/19/17 13:34	1
DCB Decachlorobiphenyl	60		10 - 132	04/17/17 09:11	04/19/17 13:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: C-7878-041317-SSH-095D

Date Collected: 04/13/17 11:00

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-7

Matrix: Solid

Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	48	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1221	100	U	100	46	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1232	100	U	100	32	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1242	100	U	100	40	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1248	100	U	100	34	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1254	93	J	100	28	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1
Aroclor-1260	100	U	100	36	ug/Kg	☼	04/17/17 09:11	04/19/17 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	04/17/17 09:11	04/19/17 13:51	1
DCB Decachlorobiphenyl	61		10 - 132	04/17/17 09:11	04/19/17 13:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-007A

Date Collected: 04/13/17 10:05

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-1

Matrix: Solid

Percent Solids: 94.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.7		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	5.3		0.1	0.1	%			04/14/17 09:31	1

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- 11
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- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-007B

Date Collected: 04/13/17 10:10

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-2

Matrix: Solid

Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.0		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	5.0		0.1	0.1	%			04/14/17 09:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-095

Date Collected: 04/13/17 10:20

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-3

Matrix: Solid

Percent Solids: 91.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.5		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	8.5		0.1	0.1	%			04/14/17 09:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-095A

Date Collected: 04/13/17 10:30

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-4

Matrix: Solid

Percent Solids: 94.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.9		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	5.1		0.1	0.1	%			04/14/17 09:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-095B

Date Collected: 04/13/17 10:40

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-5

Matrix: Solid

Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.4		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	4.6		0.1	0.1	%			04/14/17 09:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-095C

Date Collected: 04/13/17 10:50

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-6

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.9		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	3.1		0.1	0.1	%			04/14/17 09:31	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

General Chemistry

Client Sample ID: C-7878-041317-SSH-095D

Date Collected: 04/13/17 11:00

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-7

Matrix: Solid

Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.8		0.1	0.1	%			04/14/17 09:31	1
Percent Moisture	3.2		0.1	0.1	%			04/14/17 09:31	1

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

GC Semi VOA

Prep Batch: 274935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-78103-1	C-7878-041317-SSH-007A	Total/NA	Solid	3540C	
240-78103-2	C-7878-041317-SSH-007B	Total/NA	Solid	3540C	
240-78103-3	C-7878-041317-SSH-095	Total/NA	Solid	3540C	
240-78103-4	C-7878-041317-SSH-095A	Total/NA	Solid	3540C	
240-78103-5	C-7878-041317-SSH-095B	Total/NA	Solid	3540C	
240-78103-6	C-7878-041317-SSH-095C	Total/NA	Solid	3540C	
240-78103-7	C-7878-041317-SSH-095D	Total/NA	Solid	3540C	
MB 240-274935/11-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-274935/12-A	Lab Control Sample	Total/NA	Solid	3540C	
240-78103-7 MS	C-7878-041317-SSH-095D	Total/NA	Solid	3540C	
240-78103-7 MSD	C-7878-041317-SSH-095D	Total/NA	Solid	3540C	

Analysis Batch: 275253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-78103-1	C-7878-041317-SSH-007A	Total/NA	Solid	8082	274935
240-78103-2	C-7878-041317-SSH-007B	Total/NA	Solid	8082	274935
240-78103-3	C-7878-041317-SSH-095	Total/NA	Solid	8082	274935
240-78103-4	C-7878-041317-SSH-095A	Total/NA	Solid	8082	274935
240-78103-5	C-7878-041317-SSH-095B	Total/NA	Solid	8082	274935
240-78103-6	C-7878-041317-SSH-095C	Total/NA	Solid	8082	274935
240-78103-7	C-7878-041317-SSH-095D	Total/NA	Solid	8082	274935
MB 240-274935/11-A	Method Blank	Total/NA	Solid	8082	274935
LCS 240-274935/12-A	Lab Control Sample	Total/NA	Solid	8082	274935
240-78103-7 MS	C-7878-041317-SSH-095D	Total/NA	Solid	8082	274935
240-78103-7 MSD	C-7878-041317-SSH-095D	Total/NA	Solid	8082	274935

General Chemistry

Analysis Batch: 274751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-78103-1	C-7878-041317-SSH-007A	Total/NA	Solid	Moisture	
240-78103-2	C-7878-041317-SSH-007B	Total/NA	Solid	Moisture	
240-78103-3	C-7878-041317-SSH-095	Total/NA	Solid	Moisture	
240-78103-4	C-7878-041317-SSH-095A	Total/NA	Solid	Moisture	
240-78103-5	C-7878-041317-SSH-095B	Total/NA	Solid	Moisture	
240-78103-6	C-7878-041317-SSH-095C	Total/NA	Solid	Moisture	
240-78103-7	C-7878-041317-SSH-095D	Total/NA	Solid	Moisture	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-274935/11-A
Matrix: Solid
Analysis Batch: 275253

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	100	U	100	48	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1221	100	U	100	46	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1232	100	U	100	32	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1242	100	U	100	40	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1248	100	U	100	34	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1254	100	U	100	28	ug/Kg		04/17/17 09:11	04/19/17 12:41	1
Aroclor-1260	100	U	100	36	ug/Kg		04/17/17 09:11	04/19/17 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	112		14 - 128	04/17/17 09:11	04/19/17 12:41	1
DCB Decachlorobiphenyl	52		10 - 132	04/17/17 09:11	04/19/17 12:41	1

Lab Sample ID: LCS 240-274935/12-A
Matrix: Solid
Analysis Batch: 275253

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	2000	1590		ug/Kg		80	47 - 120
Aroclor-1260	2000	1520		ug/Kg		76	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	92		14 - 128
DCB Decachlorobiphenyl	63		10 - 132

Lab Sample ID: 240-78103-7 MS
Matrix: Solid
Analysis Batch: 275253

Client Sample ID: C-7878-041317-SSH-095D
Prep Type: Total/NA
Prep Batch: 274935

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	100	U	2050	1360		ug/Kg	☼	67	31 - 120
Aroclor-1260	100	U	2050	1300		ug/Kg	☼	64	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	73		14 - 128
DCB Decachlorobiphenyl	55		10 - 132

Lab Sample ID: 240-78103-7 MSD
Matrix: Solid
Analysis Batch: 275253

Client Sample ID: C-7878-041317-SSH-095D
Prep Type: Total/NA
Prep Batch: 274935

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Aroclor-1016	100	U	2030	1460		ug/Kg	☼	72	31 - 120	7	30
Aroclor-1260	100	U	2030	1250		ug/Kg	☼	62	21 - 122	4	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	77		14 - 128
DCB Decachlorobiphenyl	52		10 - 132

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX2 (14-128)	DCB2 (10-132)
240-78103-1	C-7878-041317-SSH-007A	87	82
240-78103-2	C-7878-041317-SSH-007B	80	64
240-78103-3	C-7878-041317-SSH-095	88	59
240-78103-4	C-7878-041317-SSH-095A	71	50
240-78103-5	C-7878-041317-SSH-095B	74	48
240-78103-6	C-7878-041317-SSH-095C	67	60
240-78103-7	C-7878-041317-SSH-095D	80	61
240-78103-7 MS	C-7878-041317-SSH-095D	73	55
240-78103-7 MSD	C-7878-041317-SSH-095D	77	52
LCS 240-274935/12-A	Lab Control Sample	92	63
MB 240-274935/11-A	Method Blank	112	52

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Client Sample ID: C-7878-041317-SSH-007A

Date Collected: 04/13/17 10:05

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-007A

Date Collected: 04/13/17 10:05

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-1

Matrix: Solid

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 11:13	CSC	TAL CAN

Client Sample ID: C-7878-041317-SSH-007B

Date Collected: 04/13/17 10:10

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-007B

Date Collected: 04/13/17 10:10

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-2

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 11:30	CSC	TAL CAN

Client Sample ID: C-7878-041317-SSH-095

Date Collected: 04/13/17 10:20

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-095

Date Collected: 04/13/17 10:20

Date Received: 04/14/17 09:20

Lab Sample ID: 240-78103-3

Matrix: Solid

Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 11:48	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Client Sample ID: C-7878-041317-SSH-095A

Lab Sample ID: 240-78103-4

Date Collected: 04/13/17 10:30

Matrix: Solid

Date Received: 04/14/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-095A

Lab Sample ID: 240-78103-4

Date Collected: 04/13/17 10:30

Matrix: Solid

Date Received: 04/14/17 09:20

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 12:06	CSC	TAL CAN

Client Sample ID: C-7878-041317-SSH-095B

Lab Sample ID: 240-78103-5

Date Collected: 04/13/17 10:40

Matrix: Solid

Date Received: 04/14/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-095B

Lab Sample ID: 240-78103-5

Date Collected: 04/13/17 10:40

Matrix: Solid

Date Received: 04/14/17 09:20

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 12:23	CSC	TAL CAN

Client Sample ID: C-7878-041317-SSH-095C

Lab Sample ID: 240-78103-6

Date Collected: 04/13/17 10:50

Matrix: Solid

Date Received: 04/14/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-095C

Lab Sample ID: 240-78103-6

Date Collected: 04/13/17 10:50

Matrix: Solid

Date Received: 04/14/17 09:20

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 13:34	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Client Sample ID: C-7878-041317-SSH-095D

Lab Sample ID: 240-78103-7

Date Collected: 04/13/17 11:00

Matrix: Solid

Date Received: 04/14/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	274751	04/14/17 09:31	JWW	TAL CAN

Client Sample ID: C-7878-041317-SSH-095D

Lab Sample ID: 240-78103-7

Date Collected: 04/13/17 11:00

Matrix: Solid

Date Received: 04/14/17 09:20

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			274935	04/17/17 09:11	DT	TAL CAN
Total/NA	Analysis	8082		1	275253	04/19/17 13:51	CSC	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-78103-1

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	04-30-17 *
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17 *
Illinois	NELAP	5	200004	07-31-17 *
Kansas	NELAP	7	E-10336	01-31-18
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17 *
Nevada	State Program	9	OH-000482008A	07-31-17 *
New Jersey	NELAP	2	OH001	06-30-17 *
New York	NELAP	2	10975	03-31-18
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Canton

TestAmerica Michigan
 10448 Citation Drive
 Suite 200
 Brighton, MI 48116
 Phone: 310.229.2763 Fax:

MICHIGAN
 190

Chain of Custody Record
 1.8/C1.5

197778

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Company Name: GHD Address: 14496 N. Sheldon Rd Ste 200 City/State/Zip: Plymouth, MI 48170 Phone: 734 453 5123 Fax:		Client Contact Project Name: Raccoon Trust SMI Site: 7878-01 PO# Lab# 24006918		Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		Project Manager: M. Tomka Tell/Fax: 519 884 0516		Site Contact: SE Parlys Lab Contact: D. Hume		Date: 4/13/17 Carrier: FedEx		COC No: 197778 1 of 1 COCs	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day				Filtered Sample (Y/N)		Perform MS/MSD (Y/N)		Sampler: S. Hoenes For Lab Use Only: Walk-In Client: Lab Sampling: Job / SDG No.:		Sample Specific Notes:			
Sample Identification C-7878-041317-SSN-007A -007B -095 -095A -095B -095C -095D -095-1 -095-2 -095-3 C-7878-041317-SSH-095-4		Sample Date 4/13/17 1005 1010 1020 1030 1040 1050 1100 1120 1130 1140		Sample Time 1005 1010 1020 1030 1040 1050 1100 1120 1130 1140		Sample Type (C=Comp, G=Grab)		Matrix		# of Cont.		Sample Specific Notes: Hold Hold per GHD Hold Hold	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other													
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.													
Special Instructions/QC Requirements & Comments: TAT - 1 week Hold samples per GHD project engineer													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Relinquished by: ATLH NAY		Relinquished by: GHD		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	
Custody Seal No.: 827420		Date/Time: 4/13/17 1500		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Company: GHD		Company: GHD		Company:		Company:		Company:		Company:		Company:	
Cooler Temp. (°C):		Obs'd:		Corrd:		Therm ID No.:		Date/Time: 04/14/17 920		Date/Time:		Date/Time:	
<input type="checkbox"/> Return to Client		<input checked="" type="checkbox"/> Disposal by Lab		<input type="checkbox"/> Archive for		<input type="checkbox"/> Months		<input type="checkbox"/> Months		<input type="checkbox"/> Months		<input type="checkbox"/> Months	



1
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Login # : 78103

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Client GHD Site Name Racer Cooler unpacked by: DSD
Cooler Received on 04/14/17 Opened on 04/14/17
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client ~~Cooler~~ Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None
1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. 1.8 °C Corrected Cooler Temp. 1.5 °C
IR GUN #36 (CF +0.8 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC682547
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? Yes No
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES
Samples processed by: _____

15. SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Attachment B.2 Clay Analytical Results



Memorandum

July 21, 2017

To: Amanda Armbruster (MDEQ) Ref. No.: 007878

From: *J.E.P.*
John-eric Pardys/kf/169

cc: Dave Favero (RACER)

Subject: Nodular Clay Characterization

In accordance with the Risk-Based Disposal Work Plan for PCB-Impacted Material (Work Plan) (GHD 2015), which was approved by MDEQ on March 31, 2016 and by USEPA on July 15, 2016, the proposed source of clay for the 1-foot cover over the former plant slab at RACER's Saginaw Malleable Iron Industrial Land (Site) was RACER's Saginaw Nodular Industrial Land property. The source of the clay was from the excavation of native clay to construct the former General Motors Corporation (GMC) and now GM LLC Landfill (immediately north of the clay pile) which was completed in the 1970s. The historical use of the of the GM Landfill area (prior to the construction of the landfill) was a combination of vacant parcels, residential properties, and parts of "right of ways" as identified in the Description of Current Conditions Report (EMCON, 1995) (Attachment A).

There is no information that any activity has taken place on the clay pile since it was placed in the 1970s.

Due to the proposed use for the Site (recreational), a review of historical information for the clay fill pile was completed and provided to MDEQ on May 3, 2017 to provide background for the acceptability of the clay as cover, which is summarized below.

Review of Historical Information

Samples of the clay fill were collected from one boring/monitoring well location (MW-07245) which was completed during Phase 1 of the RCRA Facility Investigation (RFI) in 1998. Figure 1 presents the location of MW-07245 and a copy of the boring/monitoring well log is provided in Attachment B. Soil samples were collected from MW-07245 at multiple depths and analyzed for VOCs, SVOCs, Metals, PCBs, Cyanide (total), Formaldehyde, Sulfide, Total Kjeldahl Nitrogen, and Total Solids. A summary of the soil sample results are presented in Table 1 which were compared to the DRAFT Michigan Part 201 Generic Soil Residential and Non-Residential Criteria (2016).

The following summarizes parameters that exceeded the criteria:

- Aluminum exceeded Residential and Non-Residential Drinking Water Protection Criteria (1 milligram per kilogram [mg/kg]) in all five clay fill samples at concentrations ranging from 6,030 to 8,270 mg/kg. Please note that the State Default Background concentration for Aluminum is 5,700 mg/kg and the clay



background concentration for Aluminum in the Michigan Background Soil Survey 2005 (Updated 2015) for the Saginaw Glacial Lobe Area is 6,994 mg/kg.

- Iron exceeded Residential and Non-Residential Drinking Water Protection Criteria (6 mg/kg) at two of five clay fill samples at concentrations of 11,400 mg/kg and 11,300 mg/kg. Please note that the State Default Background level for Iron is 11,250 mg/kg and the clay background concentration for Iron in the Michigan Background Soil Survey 2005 (Updated 2015) for the Saginaw Glacial Lobe Area is 11,920 mg/kg.
- Formaldehyde exceeded Groundwater/Surface water Interface Protection Criteria (3.6 mg/kg) in two of four clay fill samples at estimated concentrations of 12 mg/kg and 17 mg/kg.

In November 2013, 6 samples of the clay fill were collected and submitted to a geotechnical laboratory and tested for permeability, sieve, liquid limit, and plasticity index parameters as specified in 40 CFR 761.61(a)(7). The results of the analysis were compared to the required limits specified in 40 CFR 761.75(b)(1)(ii) through (b)(1)(v) and summarized in Attachment C, which indicated that most parameters met the limits. Please note that these results were previously provided with the Work Plan (GHD 2015).

MDEQ completed their review of the information provided on May 9, 2017 and requested that RACER conduct further sampling of the clay fill.

Additional Characterization of Clay Fill

At MDEQ's request, nine unbiased discrete soil samples were collected on May 12, 2017 of the clay source pile (4) and clay already in place on Site (5). Samples were submitted for analysis of formaldehyde, aluminum, arsenic, lead, iron, vanadium, and Polynuclear Aromatics (PNAs). A summary of the soil sample results are presented in Table 1 which were compared to the DRAFT Michigan Part 201 Generic Soil Residential and Non-Residential Criteria (2016). A copy of the analytical report is provided in Attachment D.

The following summarizes parameters that exceeded the criteria:

- Aluminum exceeded Residential and Non-Residential Drinking Water Protection Criteria (1 milligram per kilogram [mg/kg]) in all nine clay fill samples at concentrations ranging from 7,400 to 8,900 mg/kg. Please note that the State Default Background concentration for Aluminum is 5,700 mg/kg and the clay background concentration for Aluminum in the Michigan Background Soil Survey 2005 (Updated 2015) for the Saginaw Glacial Lobe Area is 6,994 mg/kg. The results are similar to the results of the 1998 samples. The Malleable Site will have a deed restriction prohibiting installation of wells or other devices for extracting or using groundwater.
- Iron exceeded Residential and Non-Residential Drinking Water Protection Criteria (6 mg/kg) at all nine clay fill samples at concentrations ranging from 12,000 to 13,000 mg/kg. Please note that the State Default Background level for Iron is 11,250 mg/kg and the clay background concentration for Iron in the Michigan Background Soil Survey 2005 (Updated 2015) for the Saginaw Glacial Lobe Area is 11,920 mg/kg. The results are similar to the results of the 1998 samples. The Malleable Site will have a deed restriction prohibiting installation of wells or other devices for extracting or using groundwater.

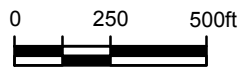


- There were no other exceedances of screening criteria.

Therefore, based on the historical source of the clay (combination of vacant parcels, residential properties, and parts of “right of ways”) and the analytical results of the clay samples, the clay is suitable for use as cover material at the Site.

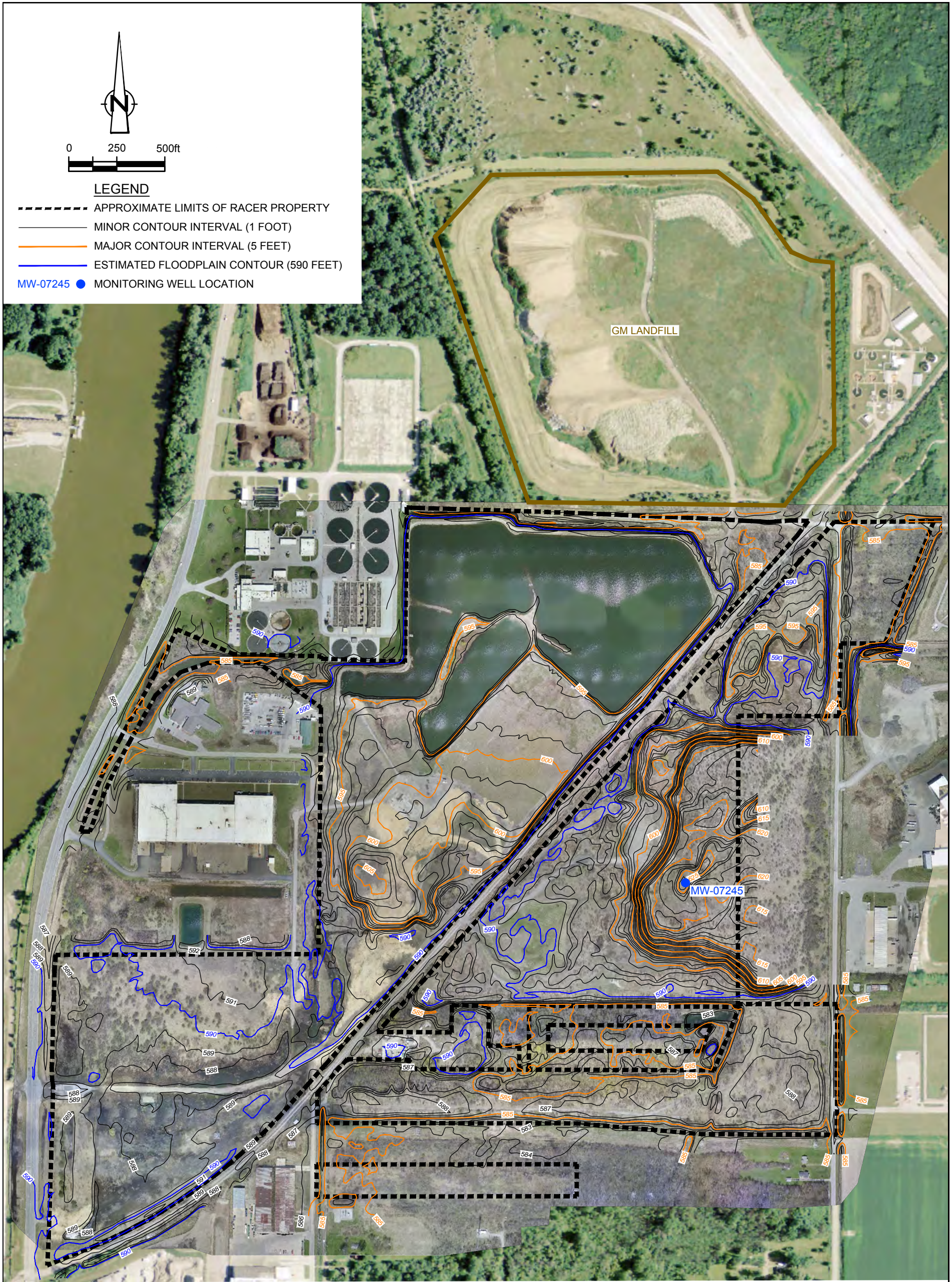
Please let us know if you have any questions.

Enclosures: Figure 1 – Clay Pile Historical Sample Location
Table 1 – Clay Pile Sample Analytical Results Summary
Attachment A – Excerpt from Description of Current Conditions Report
Attachment B – Boring/Monitoring Well Log – MW-07245
Attachment C – Geotechnical Sample Results
Attachment D – Analytical Laboratory Report for Additional Characterization of Clay Fill



LEGEND

- APPROXIMATE LIMITS OF RACER PROPERTY
- MINOR CONTOUR INTERVAL (1 FOOT)
- MAJOR CONTOUR INTERVAL (5 FEET)
- ESTIMATED FLOODPLAIN CONTOUR (590 FEET)
- MW-07245 ● MONITORING WELL LOCATION



- NOTES:
- CONTOURS CREATED USING 2011 SAGINAW BAY LIDAR DATASET AND GHD UAV LIDAR DATASET GENERATED ON MAY 3, 2016.
 - COORDINATE SYSTEM: MICHIGAN SOUTH NAD83 INTERNATIONAL FEET.
 - 2014 SAGINAW COUNTY NAIP PROVIDED BY USDA.

figure 1

CLAY PILE HISTORICAL SOIL SAMPLE LOCATION
REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER)
Saginaw, Michigan



Table 1

Clay Pile Sample Analytical Results Summary
 Racer Saginaw Nodular Industrial Land
 Saginaw, Michigan

Location: Sample ID: Sample Date: Sample Depth: Approximate Elevation (ft AMSL) Description	MDEQ- 2016 Proposed Generic Cleanup Criteria: Residential and Nonresidential ⁽¹⁾									CL01	CL02	CL03	CL04	CL05	CL06	CL07
	Statewide Default Background	Direct Contact	Nonresidential Direct Contact	Particulate Soil Inhalation	Nonresidential Particulate Soil Inhalation	Groundwater Surface Water Interface Protection	Drinking Water Protection	Nonresidential Drinking Water Protection	S-7878-051217-SSH-CL01 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL02 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL03 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL04 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL05 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL06 5/12/2017 (0-6) in BGS - clay fill	S-7878-051217-SSH-CL07 5/12/2017 (0-6) in BGS - clay fill	
Parameters	Units	a (1)	b	c	d	e	f	g	h							
Wet																
Cyanide (total)	mg/kg	-	52	820	41000	59000	0.84	32	32	-	-	-	-	-	-	-
Formaldehyde	mg/kg	-	50000	100000	7800	43000	3.6	24	76	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.1 U	2.2 U
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total solids	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

R Rejected.

sample location not associated with clay fill and therefore not included in review.

(1) For parameters with default background concentrations, data was first compared to the default background concentration, then if the data exceeded the default background concentration, the data was screened against the MDEQ - 2016 Proposed Generic Cleanup Criteria

Table 1
Clay Pile Sample Analytical Results Summary
Racer Saginaw Nodular Industrial Land
Saginaw, Michigan

Location: Sample ID: Sample Date: Sample Depth: Approximate Elevation (ft AMSL) Description	MDEQ- 2016 Proposed Generic Cleanup Criteria: Residential and Nonresidential ⁽¹⁾										CL08	CL09	MW-07245	MW-07245	MW-07245	MW-07245	MW-07245	MW-07245	MW-07245
	Statewide Default Background	Direct Contact	Nonresidential Direct Contact	Particulate Soil Inhalation	Nonresidential Particulate Soil Inhalation	Groundwater Surface Water Interface Protection	Drinking Water Protection	Nonresidential Drinking Water Protection	S-7878-051217-SSH-CL08 5/12/2017 (0-6) in BGS	S-7878-051217-SSH-CL09 5/12/2017 (0-6) in BGS	B10046 9/23/1998 (0-2) ft BGS 628.5 - 626.5 clay fill	B10047 9/23/1998 (4-6) ft BGS 624.4 - 622.4 clay fill	B10048 9/23/1998 (6-12) ft BGS 622.4 - 616.5 clay fill	B10048 9/23/1998 (6-12) ft BGS 622.4 - 616.5 clay fill (other)	B10049 9/23/1998 (26-30) ft BGS 602.5 - 598.5 clay fill	B10049-M 9/23/1998 (26-30) ft BGS 602.5 - 598.5 clay fill (other)	B10050 9/23/1998 (46-48) ft BGS 582.5 - 580.5 silty clay		
Parameters	Units	a (1)	b	c	d	e	f	g	h										
Wet																			
Cyanide (total)	mg/kg	-	52	820	41000	59000	0.84	32	32	-	-	1 U	2 U	2 U	0.55 U	1 U	2 U		
Formaldehyde	mg/kg	-	50000	100000	7800	43000	3.6	24	76	2.2 U	2.0 U	10 UJ	12 J ^f	10 UJ	-	17 J ^f	14 J ^f		
Sulfide	mg/kg	-	-	-	-	-	-	-	-	-	-	0.4 U	1.3	0.4 U	-	0.7 J	4.4		
Total kjeldahl nitrogen (TKN)	mg/kg	-	-	-	-	-	-	-	-	-	-	123 J	138 J	212 J	-	111 J	1200 J		
Total solids	mg/kg	-	-	-	-	-	-	-	-	-	-	962000	913000	895000	909000	893000	902000		

Footnotes:

- U Not detected at the associated reporting limit.
- J Estimated concentration.
- UJ Not detected; associated reporting limit is estimated.
- R Rejected.

sample location not associated with clay fill and therefore not included in review.

(1) For parameters with default background concentrations, data was first compared to the default background concentration, then if the data exceeded the default background concentration, the data was screened against the MDEQ - 2016 Proposed Generic Cleanup Criteria

Attachment A

DESCRIPTION OF CURRENT CONDITIONS

GM Saginaw Casting Complex RFI
Revision: 0
Date: July 1995
Section: 2.0
Page: 6 of 31

Due to the trend towards lighter weight cars and front-wheel drive, fewer iron castings were being used, especially rear drive differential carriers and cases (typically made of nodular iron). GM was unsuccessful in its attempt to find another use for this plant, and it is currently being dismantled. The Michigan Department of Natural Resources (MDNR) is overseeing aspects of dismantling. A facility map of the Former Nodular Iron Plant is provided as **Figure 2.9**.

WASTEWATER TREATMENT SYSTEM AND LANDFILL

In approximately 1965 the portion of the property currently containing the wastewater treatment system, the settling basins, and the on-site landfill was purchased from the City of Saginaw, who had acquired it in several pieces (reportedly over 140 individual parcels) from various property owners. Some of the parcels were vacant, some formerly contained houses, and some were parts of right-of-ways established earlier, but no longer necessary. There was no evidence of any industrial facilities previously located on any of the acquired parcels. The wastewater treatment system and landfill commenced operations circa 1978 and have continued since then. The wastewater treatment plant was renovated and improved in 1988. Historical evidence (the same as listed for the Former Nodular Iron Plant parcel above) indicates that this parcel was primarily comprised of undeveloped land prior to GM's purchase, although some parcels were inhabited.

OTHER AREAS OF THE PROPERTY

The remainder of the property is southeast of the diagonal (southwest/northeast) Chesapeake and Ohio Railroad easement (formerly the Flint, Pere and Marquette Railroad company right-of-way).

A small building was formerly located at the northeast of this triangular parcel identified as the Downes School building. During GM's ownership of this building, it was used exclusively as a warehouse for storage of landscaping and earthmoving equipment. This building was demolished in 1988, and since that time has been a vacant field used for bulk sand and recyclable materials staging.

One final note involves the "Chevrolet Property", an independent parcel acquired by GM in the mid-1960's but never developed or utilized for any industrial purposes. This is a non-contiguous parcel comprised of an open, grassy field, located on the east side of Diekmann Street, southeast of the Former Nodular Iron Plant (see **Figure 2.2**).

2.1.2 Facility and Adjoining Property Ownership

Based on information obtained from the City of Saginaw and Buena Vista Township, detailed maps and information regarding the Facility and the adjoining property owners have been prepared and are included in **Appendix 2.3**, in accordance with Task I.A.1.b of Attachment II of the Order. The property ownership map in **Appendix 2.3** also identifies applicable easements and rights-of-way in accordance with I.A.1.d of Attachment II. The approximate current property boundary of the Facility is also indicated on **Figure 2.2** and subsequent site plans.

Attachment B



Boring/Well No.: MW-07245

Project Name: Phase 1A Investigation	Location: Saginaw Metal Casting Operations-Saginaw, MI
Project Number: 84068-063.009	Ground Elevation: 628.54'
Client: General Motors Corporation	Datum: NAVD '88
Contractor: CET	Easting:
Logged By: CHC	Northing:
Drilled By: CET	Drilling Method: Hollow Stem Auger
Date(s): 09/23/98 - 09/23/98	Total Depth: 48.00'
Depth to First Encountered Groundwater: 40.00'	Borehole Diameter: 8.00in
Well Casing: type: SS dia: 2.00in fm: -2.0' to: 35.98'	Remarks: Top of Casing Elevation: 630.54'
Screens: type: Slotted size: 0.010in dia: 2.00in fm: 35.98' to: 45.74'	

Depth (ft)	Recovery	Sample No.	n-value	Graphic Log	Material Description		Water Level	VOCs ⁽¹⁾	VOC Peak Area (VS) ⁽²⁾	VOC Peaks ⁽²⁾
19		B10046	19		Silty Clay (CL) Fill, brown, trace sand and gravel, slightly moist, very stiff					
27			27					2.5 ppm		
5		B10047	12							
27		B10048	27						5.7 ppm	
10			4						5 ppm	
4			4							
15			10							
			13							
						● 17.5': Limestone fragment				



Boring/Well No.: MW-07245

Project Name: Phase 1A Investigation	Location: Saginaw Metal Casting Operations--Saginaw, MI
Project Number: 84068-063.009	Ground Elevation: 628.54'
Client: General Motors Corporation	Datum: NAVD '88
Contractor: CET	Easting:
Logged By: CHC	Northing:
Drilled By: CET	Drilling Method: Hollow Stem Auger
Date(s): 09/23/98 - 09/23/98	Total Depth: 48.00'
Depth to First Encountered Groundwater: 40.00'	Borehole Diameter: 8.00in
Well Casing: type: SS dia: 2.00in fm: -2.0' to: 35.98'	Remarks: Top of Casing Elevation: 630.54'
Screens: type: Slotted size: 0.010in dia: 2.00in fm: 35.98' to: 45.74'	

Depth (ft)	Recovery	Sample No.	n-value	Graphic Log	Material Description	Water Level	VOCs ⁽¹⁾	VOC Peak Area (VS) ⁽²⁾	VOC Peaks ⁽³⁾
23					Silty Clay (CL) Fill, continued				
5									
7									
25		810049	12						
30			5				4.7 ppm		
35			6						
			5						
			13						
			8						

Attachment C

**TABLE 2.1
SUMMARY OF GEOTECHNICAL LABORATORY TEST RESULTS
FROM SAGINAW NODULAR INDUSTRIAL LAND CLAY PILE
MALLEABLE IRON INDUSTRIAL LANDS
SAGINAW, MICHIGAN**

Sample ID (As Received)	Date Sample Received	Sample Number	Laboratory Number	Particle Size Distribution					As Received Moisture Content (%)	Atterberg Limits (%)			Standard Proctor			Remolded Permeability			
				% Gravel	% Sand	% Silt	% Passing NO. 200 Mesh	% Clay (<0.002 mm)		Liquid Limit (LL)	Plastic Limit (%)	Plasticity Index (%)	Maximum Dry Density (kg/m ³)	Maximum Dry Density (lbs/ft ³)	Optimum Moisture (%)	Maximum Dry Density (lbs/ft ³)	Compaction (%)	Moisture Content (%)	Permeability (cm/sec)
<i>Clay Liner Specifications</i>				-	-	-	>30	-	-	>30	-	>15	-	-	-	-	-	-	1.0E-07
CL1	7-Nov-13	1	WLA 344-1	4	29	38	67	29	12	29	12	17	1914	119	13.2	113	95	14.8	1.4E-08
CL2	7-Nov-13	2	WLA 344-2	2	31	39	67	28	11	28	11	17	1942	121	12.6	115	95	14.6	2.4E-08
CL3	7-Nov-13	3	WLA 344-3	4	37	36	59	23	21	28	12	16	1885	118	13.0	112	95	15.3	2.2E-08
CL4	7-Nov-13	4	WLA 344-4	5	37	35	58	23	11	21	10	11	1919	120	13.1	114	95	15.0	2.6E-08
CL5	7-Nov-13	5	WLA 344-5	4	38	36	58	22	12	21	11	10	1948	122	11.8	116	96	14.2	1.9E-08
CL6	7-Nov-13	6	WLA 344-6	2	29	40	69	29	13	24	12	12	1911	119	13.1	113	95	14.4	2.9E-08
Average Value:				4	34	37	63	26	13	25	11	14	1920	120	12.8	114	95	14.7	2.2E-08

Attachment D

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-79525-1

Client Project/Site: 7878, RACER SMI

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Ms. Ruth Mickle



Authorized for release by:

5/19/2017 4:16:07 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Job ID: 240-79525-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-79525-1

Comments

No additional comments.

Receipt

The samples were received on 5/13/2017 1:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3° C.

GC/MS Semi VOA

Method(s) 8270C: The response for internal standard Naphthalene-d12 was outside of acceptance limits for the following sample: S-7878-051217-SSH-CL09 (240-79525-9). The sample shows evidence of matrix interference.

Method(s) 8270C: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base surrogate to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: S-7878-051217-SSH-CL09 (240-79525-9). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-79525-1	S-7878-051217-SSH-CL01	Solid	05/12/17 09:45	05/13/17 13:35
240-79525-2	S-7878-051217-SSH-CL02	Solid	05/12/17 09:55	05/13/17 13:35
240-79525-3	S-7878-051217-SSH-CL03	Solid	05/12/17 10:05	05/13/17 13:35
240-79525-4	S-7878-051217-SSH-CL04	Solid	05/12/17 10:15	05/13/17 13:35
240-79525-5	S-7878-051217-SSH-CL05	Solid	05/12/17 11:10	05/13/17 13:35
240-79525-6	S-7878-051217-SSH-CL06	Solid	05/12/17 11:20	05/13/17 13:35
240-79525-7	S-7878-051217-SSH-CL07	Solid	05/12/17 11:30	05/13/17 13:35
240-79525-8	S-7878-051217-SSH-CL08	Solid	05/12/17 11:40	05/13/17 13:35
240-79525-9	S-7878-051217-SSH-CL09	Solid	05/12/17 11:50	05/13/17 13:35

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Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL01

Lab Sample ID: 240-79525-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	8.5		7.3	0.69	ug/Kg	1	☒	8270C	Total/NA
Benzo[a]pyrene	5.8	J	7.3	0.70	ug/Kg	1	☒	8270C	Total/NA
Benzo[b]fluoranthene	9.1		7.3	0.65	ug/Kg	1	☒	8270C	Total/NA
Benzo[g,h,i]perylene	16		7.3	0.38	ug/Kg	1	☒	8270C	Total/NA
Anthracene	5.8	J	7.3	0.86	ug/Kg	1	☒	8270C	Total/NA
Chrysene	26		7.3	1.2	ug/Kg	1	☒	8270C	Total/NA
Fluoranthene	13		7.3	0.60	ug/Kg	1	☒	8270C	Total/NA
Phenanthrene	96		7.3	0.80	ug/Kg	1	☒	8270C	Total/NA
Pyrene	24		7.3	0.48	ug/Kg	1	☒	8270C	Total/NA
Naphthalene	59		7.3	0.90	ug/Kg	1	☒	8270C	Total/NA
2-Methylnaphthalene	210		7.3	0.55	ug/Kg	1	☒	8270C	Total/NA
Formaldehyde	1.2	J B	2.2	0.28	mg/Kg	1	☒	8315A	Total/NA
Aluminum	7900	B	9.1	0.56	mg/Kg	2	☒	6020	Total/NA
Arsenic	3.0		0.91	0.024	mg/Kg	2	☒	6020	Total/NA
Iron	12000	B	18	2.9	mg/Kg	2	☒	6020	Total/NA
Lead	5.1		0.18	0.041	mg/Kg	2	☒	6020	Total/NA
Vanadium	20		0.91	0.034	mg/Kg	2	☒	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL02

Lab Sample ID: 240-79525-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	3.8	J	7.6	0.67	ug/Kg	1	☒	8270C	Total/NA
Benzo[g,h,i]perylene	9.8		7.6	0.40	ug/Kg	1	☒	8270C	Total/NA
Chrysene	9.2		7.6	1.2	ug/Kg	1	☒	8270C	Total/NA
Fluoranthene	4.2	J	7.6	0.62	ug/Kg	1	☒	8270C	Total/NA
Phenanthrene	11		7.6	0.83	ug/Kg	1	☒	8270C	Total/NA
Pyrene	8.5		7.6	0.50	ug/Kg	1	☒	8270C	Total/NA
2-Methylnaphthalene	8.2		7.6	0.57	ug/Kg	1	☒	8270C	Total/NA
Formaldehyde	1.5	J B	2.2	0.28	mg/Kg	1	☒	8315A	Total/NA
Aluminum	8900	B	10	0.62	mg/Kg	2	☒	6020	Total/NA
Arsenic	3.1		1.0	0.026	mg/Kg	2	☒	6020	Total/NA
Iron	13000	B	20	3.2	mg/Kg	2	☒	6020	Total/NA
Lead	5.6		0.20	0.045	mg/Kg	2	☒	6020	Total/NA
Vanadium	22		1.0	0.037	mg/Kg	2	☒	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL03

Lab Sample ID: 240-79525-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	4.5	J	7.3	0.69	ug/Kg	1	☒	8270C	Total/NA
Benzo[b]fluoranthene	6.5	J	7.3	0.65	ug/Kg	1	☒	8270C	Total/NA
Benzo[g,h,i]perylene	12		7.3	0.39	ug/Kg	1	☒	8270C	Total/NA
Chrysene	11		7.3	1.2	ug/Kg	1	☒	8270C	Total/NA
Fluoranthene	4.2	J	7.3	0.61	ug/Kg	1	☒	8270C	Total/NA
Phenanthrene	12		7.3	0.80	ug/Kg	1	☒	8270C	Total/NA
Pyrene	12		7.3	0.48	ug/Kg	1	☒	8270C	Total/NA
Naphthalene	4.8	J	7.3	0.90	ug/Kg	1	☒	8270C	Total/NA
2-Methylnaphthalene	10		7.3	0.55	ug/Kg	1	☒	8270C	Total/NA
Formaldehyde	2.0	J B	2.2	0.28	mg/Kg	1	☒	8315A	Total/NA
Aluminum	8100	B	8.9	0.55	mg/Kg	2	☒	6020	Total/NA
Arsenic	2.8		0.89	0.023	mg/Kg	2	☒	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL03 (Continued)

Lab Sample ID: 240-79525-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	12000	B	18	2.8	mg/Kg	2	☼	6020	Total/NA
Lead	5.1		0.18	0.040	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		0.89	0.033	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL04

Lab Sample ID: 240-79525-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	4.5	J	7.4	0.70	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	2.7	J	7.4	0.71	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	6.0	J	7.4	0.66	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	13		7.4	0.39	ug/Kg	1	☼	8270C	Total/NA
Chrysene	8.0		7.4	1.2	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	4.8	J	7.4	0.61	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	13		7.4	0.81	ug/Kg	1	☼	8270C	Total/NA
Pyrene	9.3		7.4	0.49	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	5.6	J	7.4	0.91	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	9.8		7.4	0.56	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	1.6	J B	2.2	0.28	mg/Kg	1	☼	8315A	Total/NA
Aluminum	7400	B	9.9	0.61	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.5		0.99	0.026	mg/Kg	2	☼	6020	Total/NA
Iron	12000	B	20	3.2	mg/Kg	2	☼	6020	Total/NA
Lead	4.9		0.20	0.044	mg/Kg	2	☼	6020	Total/NA
Vanadium	19		0.99	0.037	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL05

Lab Sample ID: 240-79525-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	3.9	J	7.4	0.70	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	6.6	J	7.4	0.66	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	13		7.4	0.39	ug/Kg	1	☼	8270C	Total/NA
Chrysene	9.7		7.4	1.2	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	4.7	J	7.4	0.61	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	8.0		7.4	0.81	ug/Kg	1	☼	8270C	Total/NA
Pyrene	9.4		7.4	0.49	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	4.0	J	7.4	0.91	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	6.1	J	7.4	0.56	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	1.9	J B	2.2	0.28	mg/Kg	1	☼	8315A	Total/NA
Aluminum	7900	B	9.7	0.60	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.8		0.97	0.025	mg/Kg	2	☼	6020	Total/NA
Iron	13000	B	19	3.1	mg/Kg	2	☼	6020	Total/NA
Lead	5.8		0.19	0.044	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		0.97	0.036	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL06

Lab Sample ID: 240-79525-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	9.0		7.2	0.68	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	8.0		7.2	0.69	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	11		7.2	0.63	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	19		7.2	0.38	ug/Kg	1	☼	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL06 (Continued)

Lab Sample ID: 240-79525-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[k]fluoranthene	6.9	J	7.2	0.73	ug/Kg	1	☼	8270C	Total/NA
Chrysene	15		7.2	1.2	ug/Kg	1	☼	8270C	Total/NA
Dibenz(a,h)anthracene	5.9	J	7.2	0.71	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	9.6		7.2	0.59	ug/Kg	1	☼	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	7.8		7.2	0.38	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	17		7.2	0.78	ug/Kg	1	☼	8270C	Total/NA
Pyrene	14		7.2	0.47	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	6.0	J	7.2	0.88	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	12		7.2	0.54	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	1.7	J B	2.1	0.27	mg/Kg	1	☼	8315A	Total/NA
Aluminum	8000	B	11	0.66	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.9		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Iron	12000	B	21	3.4	mg/Kg	2	☼	6020	Total/NA
Lead	5.5		0.21	0.048	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		1.1	0.039	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL07

Lab Sample ID: 240-79525-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	4.5	J	7.5	0.71	ug/Kg	1	☼	8270C	Total/NA
Benzo[a]pyrene	3.9	J	7.5	0.72	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	6.3	J	7.5	0.66	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	14		7.5	0.39	ug/Kg	1	☼	8270C	Total/NA
Chrysene	8.1		7.5	1.2	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	5.3	J	7.5	0.62	ug/Kg	1	☼	8270C	Total/NA
Fluorene	1.7	J	7.5	0.59	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	9.4		7.5	0.82	ug/Kg	1	☼	8270C	Total/NA
Pyrene	10		7.5	0.49	ug/Kg	1	☼	8270C	Total/NA
Naphthalene	4.3	J	7.5	0.92	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	7.9		7.5	0.56	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	2.0	J B	2.2	0.28	mg/Kg	1	☼	8315A	Total/NA
Aluminum	8100	B	9.9	0.61	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.8		0.99	0.026	mg/Kg	2	☼	6020	Total/NA
Iron	12000	B	20	3.2	mg/Kg	2	☼	6020	Total/NA
Lead	5.1		0.20	0.044	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		0.99	0.037	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL08

Lab Sample ID: 240-79525-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	4.0	J	7.2	0.64	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	9.7		7.2	0.38	ug/Kg	1	☼	8270C	Total/NA
Chrysene	5.3	J	7.2	1.2	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	5.5	J	7.2	0.79	ug/Kg	1	☼	8270C	Total/NA
Pyrene	6.6	J	7.2	0.48	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	3.9	J	7.2	0.54	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	1.6	J B	2.2	0.27	mg/Kg	1	☼	8315A	Total/NA
Aluminum	8000	B	11	0.66	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.5		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Iron	12000	B	21	3.4	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL08 (Continued)

Lab Sample ID: 240-79525-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	5.1		0.21	0.048	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		1.1	0.039	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-051217-SSH-CL09

Lab Sample ID: 240-79525-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	4.9	J	6.9	0.61	ug/Kg	1	☼	8270C	Total/NA
Benzo[g,h,i]perylene	11		6.9	0.36	ug/Kg	1	☼	8270C	Total/NA
Chrysene	5.1	J	6.9	1.1	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	4.7	J	6.9	0.57	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	7.0		6.9	0.75	ug/Kg	1	☼	8270C	Total/NA
Pyrene	7.6		6.9	0.45	ug/Kg	1	☼	8270C	Total/NA
2-Methylnaphthalene	16	*	6.9	0.51	ug/Kg	1	☼	8270C	Total/NA
Formaldehyde	1.9	J B	2.0	0.26	mg/Kg	1	☼	8315A	Total/NA
Aluminum	8000	B	9.6	0.59	mg/Kg	2	☼	6020	Total/NA
Arsenic	2.9		0.96	0.025	mg/Kg	2	☼	6020	Total/NA
Iron	12000	B	19	3.1	mg/Kg	2	☼	6020	Total/NA
Lead	5.6		0.19	0.043	mg/Kg	2	☼	6020	Total/NA
Vanadium	20		0.96	0.035	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
8315A	Carbonyl Compounds by HPLC	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL01

Date Collected: 05/12/17 09:45

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-1

Matrix: Solid

Percent Solids: 89.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	8.5		7.3	0.69	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Benzo[a]pyrene	5.8	J	7.3	0.70	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Benzo[b]fluoranthene	9.1		7.3	0.65	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Benzo[g,h,i]perylene	16		7.3	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Benzo[k]fluoranthene	7.3	U	7.3	0.75	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Anthracene	5.8	J	7.3	0.86	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Chrysene	26		7.3	1.2	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Dibenz(a,h)anthracene	7.3	U	7.3	0.73	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Fluoranthene	13		7.3	0.60	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Fluorene	7.3	U	7.3	0.58	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Indeno[1,2,3-cd]pyrene	7.3	U	7.3	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Phenanthrene	96		7.3	0.80	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Pyrene	24		7.3	0.48	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Acenaphthene	7.3	U	7.3	0.84	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Acenaphthylene	7.3	U	7.3	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Naphthalene	59		7.3	0.90	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
2-Methylnaphthalene	210		7.3	0.55	ug/Kg	☼	05/15/17 09:36	05/19/17 09:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		39 - 120				05/15/17 09:36	05/19/17 09:36	1
2-Fluorophenol (Surr)	76		33 - 120				05/15/17 09:36	05/19/17 09:36	1
2,4,6-Tribromophenol (Surr)	68		10 - 120				05/15/17 09:36	05/19/17 09:36	1
Nitrobenzene-d5 (Surr)	75		32 - 120				05/15/17 09:36	05/19/17 09:36	1
Phenol-d5 (Surr)	77		32 - 120				05/15/17 09:36	05/19/17 09:36	1
Terphenyl-d14 (Surr)	96		47 - 120				05/15/17 09:36	05/19/17 09:36	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL02

Date Collected: 05/12/17 09:55

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-2

Matrix: Solid

Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	7.6	U	7.6	0.71	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Benzo[a]pyrene	7.6	U	7.6	0.73	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Benzo[b]fluoranthene	3.8	J	7.6	0.67	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Benzo[g,h,i]perylene	9.8		7.6	0.40	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Benzo[k]fluoranthene	7.6	U	7.6	0.77	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Anthracene	7.6	U	7.6	0.88	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Chrysene	9.2		7.6	1.2	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Dibenz(a,h)anthracene	7.6	U	7.6	0.75	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Fluoranthene	4.2	J	7.6	0.62	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Fluorene	7.6	U	7.6	0.60	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Indeno[1,2,3-cd]pyrene	7.6	U	7.6	0.40	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Phenanthrene	11		7.6	0.83	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Pyrene	8.5		7.6	0.50	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Acenaphthene	7.6	U	7.6	0.86	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Acenaphthylene	7.6	U	7.6	0.40	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
Naphthalene	7.6	U	7.6	0.93	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1
2-Methylnaphthalene	8.2		7.6	0.57	ug/Kg	☼	05/15/17 09:36	05/18/17 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72		39 - 120	05/15/17 09:36	05/18/17 17:53	1
2-Fluorophenol (Surr)	77		33 - 120	05/15/17 09:36	05/18/17 17:53	1
2,4,6-Tribromophenol (Surr)	46		10 - 120	05/15/17 09:36	05/18/17 17:53	1
Nitrobenzene-d5 (Surr)	70		32 - 120	05/15/17 09:36	05/18/17 17:53	1
Phenol-d5 (Surr)	76		32 - 120	05/15/17 09:36	05/18/17 17:53	1
Terphenyl-d14 (Surr)	87		47 - 120	05/15/17 09:36	05/18/17 17:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL03

Date Collected: 05/12/17 10:05

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-3

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	4.5	J	7.3	0.69	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Benzo[a]pyrene	7.3	U	7.3	0.71	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Benzo[b]fluoranthene	6.5	J	7.3	0.65	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Benzo[g,h,i]perylene	12		7.3	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Benzo[k]fluoranthene	7.3	U	7.3	0.75	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Anthracene	7.3	U	7.3	0.86	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Chrysene	11		7.3	1.2	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Dibenz(a,h)anthracene	7.3	U	7.3	0.73	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Fluoranthene	4.2	J	7.3	0.61	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Fluorene	7.3	U	7.3	0.58	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Indeno[1,2,3-cd]pyrene	7.3	U	7.3	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Phenanthrene	12		7.3	0.80	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Pyrene	12		7.3	0.48	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Acenaphthene	7.3	U	7.3	0.84	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Acenaphthylene	7.3	U	7.3	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
Naphthalene	4.8	J	7.3	0.90	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1
2-Methylnaphthalene	10		7.3	0.55	ug/Kg	☼	05/15/17 09:36	05/19/17 10:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		39 - 120	05/15/17 09:36	05/19/17 10:01	1
2-Fluorophenol (Surr)	83		33 - 120	05/15/17 09:36	05/19/17 10:01	1
2,4,6-Tribromophenol (Surr)	50		10 - 120	05/15/17 09:36	05/19/17 10:01	1
Nitrobenzene-d5 (Surr)	75		32 - 120	05/15/17 09:36	05/19/17 10:01	1
Phenol-d5 (Surr)	83		32 - 120	05/15/17 09:36	05/19/17 10:01	1
Terphenyl-d14 (Surr)	95		47 - 120	05/15/17 09:36	05/19/17 10:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL04

Date Collected: 05/12/17 10:15

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-4

Matrix: Solid

Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	4.5	J	7.4	0.70	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Benzo[a]pyrene	2.7	J	7.4	0.71	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Benzo[b]fluoranthene	6.0	J	7.4	0.66	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Benzo[g,h,i]perylene	13		7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Benzo[k]fluoranthene	7.4	U	7.4	0.76	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Anthracene	7.4	U	7.4	0.87	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Chrysene	8.0		7.4	1.2	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Dibenz(a,h)anthracene	7.4	U	7.4	0.74	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Fluoranthene	4.8	J	7.4	0.61	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Fluorene	7.4	U	7.4	0.59	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Indeno[1,2,3-cd]pyrene	7.4	U	7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Phenanthrene	13		7.4	0.81	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Pyrene	9.3		7.4	0.49	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Acenaphthene	7.4	U	7.4	0.85	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Acenaphthylene	7.4	U	7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
Naphthalene	5.6	J	7.4	0.91	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1
2-Methylnaphthalene	9.8		7.4	0.56	ug/Kg	☼	05/15/17 09:36	05/18/17 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		39 - 120	05/15/17 09:36	05/18/17 18:18	1
2-Fluorophenol (Surr)	74		33 - 120	05/15/17 09:36	05/18/17 18:18	1
2,4,6-Tribromophenol (Surr)	39		10 - 120	05/15/17 09:36	05/18/17 18:18	1
Nitrobenzene-d5 (Surr)	66		32 - 120	05/15/17 09:36	05/18/17 18:18	1
Phenol-d5 (Surr)	74		32 - 120	05/15/17 09:36	05/18/17 18:18	1
Terphenyl-d14 (Surr)	85		47 - 120	05/15/17 09:36	05/18/17 18:18	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL05

Date Collected: 05/12/17 11:10

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-5

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	3.9	J	7.4	0.70	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Benzo[a]pyrene	7.4	U	7.4	0.71	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Benzo[b]fluoranthene	6.6	J	7.4	0.66	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Benzo[g,h,i]perylene	13		7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Benzo[k]fluoranthene	7.4	U	7.4	0.76	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Anthracene	7.4	U	7.4	0.87	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Chrysene	9.7		7.4	1.2	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Dibenz(a,h)anthracene	7.4	U	7.4	0.73	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Fluoranthene	4.7	J	7.4	0.61	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Fluorene	7.4	U	7.4	0.59	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Indeno[1,2,3-cd]pyrene	7.4	U	7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Phenanthrene	8.0		7.4	0.81	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Pyrene	9.4		7.4	0.49	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Acenaphthene	7.4	U	7.4	0.84	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Acenaphthylene	7.4	U	7.4	0.39	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
Naphthalene	4.0	J	7.4	0.91	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1
2-Methylnaphthalene	6.1	J	7.4	0.56	ug/Kg	☼	05/15/17 09:36	05/18/17 18:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		39 - 120	05/15/17 09:36	05/18/17 18:44	1
2-Fluorophenol (Surr)	78		33 - 120	05/15/17 09:36	05/18/17 18:44	1
2,4,6-Tribromophenol (Surr)	40		10 - 120	05/15/17 09:36	05/18/17 18:44	1
Nitrobenzene-d5 (Surr)	70		32 - 120	05/15/17 09:36	05/18/17 18:44	1
Phenol-d5 (Surr)	78		32 - 120	05/15/17 09:36	05/18/17 18:44	1
Terphenyl-d14 (Surr)	89		47 - 120	05/15/17 09:36	05/18/17 18:44	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL06

Date Collected: 05/12/17 11:20

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-6

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	9.0		7.2	0.68	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Benzo[a]pyrene	8.0		7.2	0.69	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Benzo[b]fluoranthene	11		7.2	0.63	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Benzo[g,h,i]perylene	19		7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Benzo[k]fluoranthene	6.9	J	7.2	0.73	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Anthracene	7.2	U	7.2	0.84	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Chrysene	15		7.2	1.2	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Dibenz(a,h)anthracene	5.9	J	7.2	0.71	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Fluoranthene	9.6		7.2	0.59	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Fluorene	7.2	U	7.2	0.57	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Indeno[1,2,3-cd]pyrene	7.8		7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Phenanthrene	17		7.2	0.78	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Pyrene	14		7.2	0.47	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Acenaphthene	7.2	U	7.2	0.82	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Acenaphthylene	7.2	U	7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
Naphthalene	6.0	J	7.2	0.88	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1
2-Methylnaphthalene	12		7.2	0.54	ug/Kg	☼	05/15/17 09:36	05/19/17 11:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		39 - 120	05/15/17 09:36	05/19/17 11:41	1
2-Fluorophenol (Surr)	81		33 - 120	05/15/17 09:36	05/19/17 11:41	1
2,4,6-Tribromophenol (Surr)	65		10 - 120	05/15/17 09:36	05/19/17 11:41	1
Nitrobenzene-d5 (Surr)	72		32 - 120	05/15/17 09:36	05/19/17 11:41	1
Phenol-d5 (Surr)	81		32 - 120	05/15/17 09:36	05/19/17 11:41	1
Terphenyl-d14 (Surr)	96		47 - 120	05/15/17 09:36	05/19/17 11:41	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL07

Date Collected: 05/12/17 11:30

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-7

Matrix: Solid

Percent Solids: 90.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	4.5	J	7.5	0.71	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Benzo[a]pyrene	3.9	J	7.5	0.72	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Benzo[b]fluoranthene	6.3	J	7.5	0.66	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Benzo[g,h,i]perylene	14		7.5	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Benzo[k]fluoranthene	7.5	U	7.5	0.76	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Anthracene	7.5	U	7.5	0.87	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Chrysene	8.1		7.5	1.2	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Dibenz(a,h)anthracene	7.5	U	7.5	0.74	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Fluoranthene	5.3	J	7.5	0.62	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Fluorene	1.7	J	7.5	0.59	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Indeno[1,2,3-cd]pyrene	7.5	U	7.5	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Phenanthrene	9.4		7.5	0.82	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Pyrene	10		7.5	0.49	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Acenaphthene	7.5	U	7.5	0.85	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Acenaphthylene	7.5	U	7.5	0.39	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
Naphthalene	4.3	J	7.5	0.92	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1
2-Methylnaphthalene	7.9		7.5	0.56	ug/Kg	☼	05/15/17 09:36	05/19/17 10:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		39 - 120	05/15/17 09:36	05/19/17 10:26	1
2-Fluorophenol (Surr)	72		33 - 120	05/15/17 09:36	05/19/17 10:26	1
2,4,6-Tribromophenol (Surr)	46		10 - 120	05/15/17 09:36	05/19/17 10:26	1
Nitrobenzene-d5 (Surr)	65		32 - 120	05/15/17 09:36	05/19/17 10:26	1
Phenol-d5 (Surr)	71		32 - 120	05/15/17 09:36	05/19/17 10:26	1
Terphenyl-d14 (Surr)	89		47 - 120	05/15/17 09:36	05/19/17 10:26	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL08

Date Collected: 05/12/17 11:40

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-8

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	7.2	U	7.2	0.68	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Benzo[a]pyrene	7.2	U	7.2	0.70	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Benzo[b]fluoranthene	4.0	J	7.2	0.64	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Benzo[g,h,i]perylene	9.7		7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Benzo[k]fluoranthene	7.2	U	7.2	0.74	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Anthracene	7.2	U	7.2	0.85	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Chrysene	5.3	J	7.2	1.2	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Dibenz(a,h)anthracene	7.2	U	7.2	0.72	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Fluoranthene	7.2	U	7.2	0.60	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Fluorene	7.2	U	7.2	0.58	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Indeno[1,2,3-cd]pyrene	7.2	U	7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Phenanthrene	5.5	J	7.2	0.79	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Pyrene	6.6	J	7.2	0.48	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Acenaphthene	7.2	U	7.2	0.83	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Acenaphthylene	7.2	U	7.2	0.38	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
Naphthalene	7.2	U	7.2	0.89	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1
2-Methylnaphthalene	3.9	J	7.2	0.54	ug/Kg	☼	05/15/17 09:36	05/19/17 10:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		39 - 120	05/15/17 09:36	05/19/17 10:51	1
2-Fluorophenol (Surr)	75		33 - 120	05/15/17 09:36	05/19/17 10:51	1
2,4,6-Tribromophenol (Surr)	39		10 - 120	05/15/17 09:36	05/19/17 10:51	1
Nitrobenzene-d5 (Surr)	66		32 - 120	05/15/17 09:36	05/19/17 10:51	1
Phenol-d5 (Surr)	76		32 - 120	05/15/17 09:36	05/19/17 10:51	1
Terphenyl-d14 (Surr)	89		47 - 120	05/15/17 09:36	05/19/17 10:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-051217-SSH-CL09

Date Collected: 05/12/17 11:50

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-9

Matrix: Solid

Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	6.9	U	6.9	0.65	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Benzo[a]pyrene	6.9	U	6.9	0.66	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Benzo[b]fluoranthene	4.9	J	6.9	0.61	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Benzo[g,h,i]perylene	11		6.9	0.36	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Benzo[k]fluoranthene	6.9	U	6.9	0.70	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Anthracene	6.9	U	6.9	0.80	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Chrysene	5.1	J	6.9	1.1	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Dibenz(a,h)anthracene	6.9	U	6.9	0.68	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Fluoranthene	4.7	J	6.9	0.57	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Fluorene	6.9	U	6.9	0.55	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Indeno[1,2,3-cd]pyrene	6.9	U	6.9	0.36	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Phenanthrene	7.0		6.9	0.75	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Pyrene	7.6		6.9	0.45	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Acenaphthene	6.9	U	6.9	0.78	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Acenaphthylene	6.9	U	6.9	0.36	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
Naphthalene	6.9	U *	6.9	0.84	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1
2-Methylnaphthalene	16	*	6.9	0.51	ug/Kg	☼	05/15/17 09:36	05/19/17 11:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	61		39 - 120	05/15/17 09:36	05/19/17 11:16	1
2-Fluorophenol (Surr)	51		33 - 120	05/15/17 09:36	05/19/17 11:16	1
2,4,6-Tribromophenol (Surr)	58		10 - 120	05/15/17 09:36	05/19/17 11:16	1
Nitrobenzene-d5 (Surr)	31	X *	32 - 120	05/15/17 09:36	05/19/17 11:16	1
Phenol-d5 (Surr)	81		32 - 120	05/15/17 09:36	05/19/17 11:16	1
Terphenyl-d14 (Surr)	85		47 - 120	05/15/17 09:36	05/19/17 11:16	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL01

Date Collected: 05/12/17 09:45

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-1

Matrix: Solid

Percent Solids: 89.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.2	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 16:22	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL02

Date Collected: 05/12/17 09:55

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-2

Matrix: Solid

Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.5	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 16:31	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL03

Date Collected: 05/12/17 10:05

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-3

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	2.0	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 16:39	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL04

Date Collected: 05/12/17 10:15

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-4

Matrix: Solid

Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.6	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 16:47	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL05

Date Collected: 05/12/17 11:10

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-5

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.9	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 16:55	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL06

Date Collected: 05/12/17 11:20

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-6

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.7	J B	2.1	0.27	mg/Kg	☼	05/17/17 10:49	05/18/17 17:03	1

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL07

Date Collected: 05/12/17 11:30

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-7

Matrix: Solid

Percent Solids: 90.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	2.0	J B	2.2	0.28	mg/Kg	☼	05/17/17 10:49	05/18/17 17:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL08

Date Collected: 05/12/17 11:40

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-8

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.6	J B	2.2	0.27	mg/Kg	☼	05/17/17 10:49	05/18/17 17:19	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8315A - Carbonyl Compounds by HPLC

Client Sample ID: S-7878-051217-SSH-CL09

Date Collected: 05/12/17 11:50

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-9

Matrix: Solid

Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formaldehyde	1.9	J B	2.0	0.26	mg/Kg	☼	05/17/17 10:49	05/18/17 17:36	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL01

Date Collected: 05/12/17 09:45

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-1

Matrix: Solid

Percent Solids: 89.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7900	B	9.1	0.56	mg/Kg	☼	05/15/17 13:24	05/18/17 11:51	2
Arsenic	3.0		0.91	0.024	mg/Kg	☼	05/15/17 13:24	05/18/17 11:51	2
Iron	12000	B	18	2.9	mg/Kg	☼	05/15/17 13:24	05/18/17 11:51	2
Lead	5.1		0.18	0.041	mg/Kg	☼	05/15/17 13:24	05/18/17 11:51	2
Vanadium	20		0.91	0.034	mg/Kg	☼	05/15/17 13:24	05/18/17 11:51	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL02

Date Collected: 05/12/17 09:55

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-2

Matrix: Solid

Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8900	B	10	0.62	mg/Kg	☼	05/15/17 13:24	05/18/17 12:20	2
Arsenic	3.1		1.0	0.026	mg/Kg	☼	05/15/17 13:24	05/18/17 12:20	2
Iron	13000	B	20	3.2	mg/Kg	☼	05/15/17 13:24	05/18/17 12:20	2
Lead	5.6		0.20	0.045	mg/Kg	☼	05/15/17 13:24	05/18/17 12:20	2
Vanadium	22		1.0	0.037	mg/Kg	☼	05/15/17 13:24	05/18/17 12:20	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL03

Date Collected: 05/12/17 10:05

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-3

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8100	B	8.9	0.55	mg/Kg	☼	05/15/17 13:24	05/18/17 12:24	2
Arsenic	2.8		0.89	0.023	mg/Kg	☼	05/15/17 13:24	05/18/17 12:24	2
Iron	12000	B	18	2.8	mg/Kg	☼	05/15/17 13:24	05/18/17 12:24	2
Lead	5.1		0.18	0.040	mg/Kg	☼	05/15/17 13:24	05/18/17 12:24	2
Vanadium	20		0.89	0.033	mg/Kg	☼	05/15/17 13:24	05/18/17 12:24	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL04

Date Collected: 05/12/17 10:15

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-4

Matrix: Solid

Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7400	B	9.9	0.61	mg/Kg	☼	05/15/17 13:24	05/18/17 12:28	2
Arsenic	2.5		0.99	0.026	mg/Kg	☼	05/15/17 13:24	05/18/17 12:28	2
Iron	12000	B	20	3.2	mg/Kg	☼	05/15/17 13:24	05/18/17 12:28	2
Lead	4.9		0.20	0.044	mg/Kg	☼	05/15/17 13:24	05/18/17 12:28	2
Vanadium	19		0.99	0.037	mg/Kg	☼	05/15/17 13:24	05/18/17 12:28	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL05

Date Collected: 05/12/17 11:10

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-5

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7900	B	9.7	0.60	mg/Kg	☼	05/15/17 13:24	05/18/17 12:32	2
Arsenic	2.8		0.97	0.025	mg/Kg	☼	05/15/17 13:24	05/18/17 12:32	2
Iron	13000	B	19	3.1	mg/Kg	☼	05/15/17 13:24	05/18/17 12:32	2
Lead	5.8		0.19	0.044	mg/Kg	☼	05/15/17 13:24	05/18/17 12:32	2
Vanadium	20		0.97	0.036	mg/Kg	☼	05/15/17 13:24	05/18/17 12:32	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL06

Date Collected: 05/12/17 11:20

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-6

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8000	B	11	0.66	mg/Kg	☼	05/15/17 13:24	05/18/17 12:37	2
Arsenic	2.9		1.1	0.028	mg/Kg	☼	05/15/17 13:24	05/18/17 12:37	2
Iron	12000	B	21	3.4	mg/Kg	☼	05/15/17 13:24	05/18/17 12:37	2
Lead	5.5		0.21	0.048	mg/Kg	☼	05/15/17 13:24	05/18/17 12:37	2
Vanadium	20		1.1	0.039	mg/Kg	☼	05/15/17 13:24	05/18/17 12:37	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL07

Date Collected: 05/12/17 11:30

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-7

Matrix: Solid

Percent Solids: 90.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8100	B	9.9	0.61	mg/Kg	☼	05/15/17 13:24	05/18/17 12:41	2
Arsenic	2.8		0.99	0.026	mg/Kg	☼	05/15/17 13:24	05/18/17 12:41	2
Iron	12000	B	20	3.2	mg/Kg	☼	05/15/17 13:24	05/18/17 12:41	2
Lead	5.1		0.20	0.044	mg/Kg	☼	05/15/17 13:24	05/18/17 12:41	2
Vanadium	20		0.99	0.037	mg/Kg	☼	05/15/17 13:24	05/18/17 12:41	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL08

Date Collected: 05/12/17 11:40

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-8

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8000	B	11	0.66	mg/Kg	☼	05/15/17 13:24	05/18/17 12:45	2
Arsenic	2.5		1.1	0.028	mg/Kg	☼	05/15/17 13:24	05/18/17 12:45	2
Iron	12000	B	21	3.4	mg/Kg	☼	05/15/17 13:24	05/18/17 12:45	2
Lead	5.1		0.21	0.048	mg/Kg	☼	05/15/17 13:24	05/18/17 12:45	2
Vanadium	20		1.1	0.039	mg/Kg	☼	05/15/17 13:24	05/18/17 12:45	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-051217-SSH-CL09

Date Collected: 05/12/17 11:50

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-9

Matrix: Solid

Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8000	B	9.6	0.59	mg/Kg	☼	05/16/17 11:40	05/18/17 15:49	2
Arsenic	2.9		0.96	0.025	mg/Kg	☼	05/16/17 11:40	05/18/17 15:49	2
Iron	12000	B	19	3.1	mg/Kg	☼	05/16/17 11:40	05/18/17 15:49	2
Lead	5.6		0.19	0.043	mg/Kg	☼	05/16/17 11:40	05/18/17 15:49	2
Vanadium	20		0.96	0.035	mg/Kg	☼	05/16/17 11:40	05/18/17 15:49	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL01

Date Collected: 05/12/17 09:45

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-1

Matrix: Solid

Percent Solids: 89.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.7		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	10.3		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL02

Date Collected: 05/12/17 09:55

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-2

Matrix: Solid

Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.2		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	10.8		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL03

Date Collected: 05/12/17 10:05

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-3

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.7		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	9.3		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL04

Date Collected: 05/12/17 10:15

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-4

Matrix: Solid

Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.4		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	9.6		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL05

Date Collected: 05/12/17 11:10

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-5

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.7		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	9.3		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL06

Date Collected: 05/12/17 11:20

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-6

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.5		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	6.5		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL07

Date Collected: 05/12/17 11:30

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-7

Matrix: Solid

Percent Solids: 90.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.3		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	9.7		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL08

Date Collected: 05/12/17 11:40

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-8

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.2		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	8.8		0.1	0.1	%			05/15/17 10:00	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

General Chemistry

Client Sample ID: S-7878-051217-SSH-CL09

Date Collected: 05/12/17 11:50

Date Received: 05/13/17 13:35

Lab Sample ID: 240-79525-9

Matrix: Solid

Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97.4		0.1	0.1	%			05/15/17 10:00	1
Percent Moisture	2.6		0.1	0.1	%			05/15/17 10:00	1

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

GC/MS Semi VOA

Prep Batch: 278923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	3540C	
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	3540C	
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	3540C	
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	3540C	
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	3540C	
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	3540C	
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	3540C	
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	3540C	
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	3540C	
MB 240-278923/20-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-278923/21-A	Lab Control Sample	Total/NA	Solid	3540C	

Analysis Batch: 279213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-278923/20-A	Method Blank	Total/NA	Solid	8270C	278923
LCS 240-278923/21-A	Lab Control Sample	Total/NA	Solid	8270C	278923

Analysis Batch: 279411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	8270C	278923
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	8270C	278923
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	8270C	278923

Analysis Batch: 279597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	8270C	278923
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	8270C	278923
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	8270C	278923
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	8270C	278923
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	8270C	278923
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	8270C	278923

HPLC/IC

Leach Batch: 279110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	8315A	
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	8315A	
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	8315A	
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	8315A	
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	8315A	
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	8315A	
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	8315A	
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	8315A	
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	
MB 240-279110/1-B	Method Blank	Total/NA	Solid	8315A	
LCS 240-279110/2-B	Lab Control Sample	Total/NA	Solid	8315A	
240-79525-9 MS	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	
240-79525-9 MSD	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

HPLC/IC (Continued)

Prep Batch: 279281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	8315A_W_Prep	279110
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	8315A_W_Prep	279110
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	8315A_W_Prep	279110
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	8315A_W_Prep	279110
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	8315A_W_Prep	279110
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	8315A_W_Prep	279110
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	8315A_W_Prep	279110
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	8315A_W_Prep	279110
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A_W_Prep	279110
MB 240-279110/1-B	Method Blank	Total/NA	Solid	8315A_W_Prep	279110
LCS 240-279110/2-B	Lab Control Sample	Total/NA	Solid	8315A_W_Prep	279110
240-79525-9 MS	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A_W_Prep	279110
240-79525-9 MSD	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A_W_Prep	279110

Analysis Batch: 279550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	8315A	279281
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	8315A	279281
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	8315A	279281
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	8315A	279281
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	8315A	279281
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	8315A	279281
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	8315A	279281
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	8315A	279281
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	279281
MB 240-279110/1-B	Method Blank	Total/NA	Solid	8315A	279281
LCS 240-279110/2-B	Lab Control Sample	Total/NA	Solid	8315A	279281
240-79525-9 MS	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	279281
240-79525-9 MSD	S-7878-051217-SSH-CL09	Total/NA	Solid	8315A	279281

Metals

Prep Batch: 278985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	3050B	
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	3050B	
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	3050B	
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	3050B	
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	3050B	
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	3050B	
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	3050B	
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	3050B	
MB 240-278985/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-278985/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
240-79525-1 MS	S-7878-051217-SSH-CL01	Total/NA	Solid	3050B	
240-79525-1 MSD	S-7878-051217-SSH-CL01	Total/NA	Solid	3050B	

Prep Batch: 279117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	3050B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Metals (Continued)

Prep Batch: 279117 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-279117/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-279117/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 279520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	6020	278985
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	6020	278985
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	6020	278985
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	6020	278985
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	6020	278985
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	6020	278985
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	6020	278985
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	6020	278985
MB 240-278985/1-A ^2	Method Blank	Total/NA	Solid	6020	278985
LCS 240-278985/2-A ^2	Lab Control Sample	Total/NA	Solid	6020	278985
240-79525-1 MS	S-7878-051217-SSH-CL01	Total/NA	Solid	6020	278985
240-79525-1 MSD	S-7878-051217-SSH-CL01	Total/NA	Solid	6020	278985

Analysis Batch: 279619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	6020	279117
MB 240-279117/1-A ^2	Method Blank	Total/NA	Solid	6020	279117
LCS 240-279117/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	279117

General Chemistry

Analysis Batch: 278930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-79525-1	S-7878-051217-SSH-CL01	Total/NA	Solid	Moisture	
240-79525-2	S-7878-051217-SSH-CL02	Total/NA	Solid	Moisture	
240-79525-3	S-7878-051217-SSH-CL03	Total/NA	Solid	Moisture	
240-79525-4	S-7878-051217-SSH-CL04	Total/NA	Solid	Moisture	
240-79525-5	S-7878-051217-SSH-CL05	Total/NA	Solid	Moisture	
240-79525-6	S-7878-051217-SSH-CL06	Total/NA	Solid	Moisture	
240-79525-7	S-7878-051217-SSH-CL07	Total/NA	Solid	Moisture	
240-79525-8	S-7878-051217-SSH-CL08	Total/NA	Solid	Moisture	
240-79525-9	S-7878-051217-SSH-CL09	Total/NA	Solid	Moisture	
240-79525-1 DU	S-7878-051217-SSH-CL01	Total/NA	Solid	Moisture	
240-79525-8 DU	S-7878-051217-SSH-CL08	Total/NA	Solid	Moisture	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-278923/20-A

Matrix: Solid

Analysis Batch: 279213

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 278923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	6.7	U	6.7	0.63	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Benzo[a]pyrene	6.7	U	6.7	0.64	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Benzo[b]fluoranthene	6.7	U	6.7	0.59	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Benzo[g,h,i]perylene	6.7	U	6.7	0.35	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Benzo[k]fluoranthene	6.7	U	6.7	0.68	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Anthracene	6.7	U	6.7	0.78	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Chrysene	6.7	U	6.7	1.1	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Dibenz(a,h)anthracene	6.7	U	6.7	0.66	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Fluoranthene	6.7	U	6.7	0.55	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Fluorene	6.7	U	6.7	0.53	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Indeno[1,2,3-cd]pyrene	6.7	U	6.7	0.35	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Phenanthrene	6.7	U	6.7	0.73	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Pyrene	6.7	U	6.7	0.44	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Acenaphthene	6.7	U	6.7	0.76	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Acenaphthylene	6.7	U	6.7	0.35	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
Naphthalene	6.7	U	6.7	0.82	ug/Kg		05/15/17 09:36	05/17/17 11:46	1
2-Methylnaphthalene	6.7	U	6.7	0.50	ug/Kg		05/15/17 09:36	05/17/17 11:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	82		39 - 120	05/15/17 09:36	05/17/17 11:46	1
2-Fluorophenol (Surr)	83		33 - 120	05/15/17 09:36	05/17/17 11:46	1
2,4,6-Tribromophenol (Surr)	58		10 - 120	05/15/17 09:36	05/17/17 11:46	1
Nitrobenzene-d5 (Surr)	81		32 - 120	05/15/17 09:36	05/17/17 11:46	1
Phenol-d5 (Surr)	84		32 - 120	05/15/17 09:36	05/17/17 11:46	1
Terphenyl-d14 (Surr)	101		47 - 120	05/15/17 09:36	05/17/17 11:46	1

Lab Sample ID: LCS 240-278923/21-A

Matrix: Solid

Analysis Batch: 279213

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 278923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene	667	539		ug/Kg		81	60 - 120
Benzo[a]pyrene	667	559		ug/Kg		84	61 - 120
Benzo[b]fluoranthene	667	556		ug/Kg		83	60 - 120
Benzo[g,h,i]perylene	667	659		ug/Kg		99	60 - 120
Benzo[k]fluoranthene	667	580		ug/Kg		87	61 - 120
Anthracene	667	537		ug/Kg		81	59 - 120
Chrysene	667	552		ug/Kg		83	62 - 120
Dibenz(a,h)anthracene	667	634		ug/Kg		95	59 - 120
Fluoranthene	667	565		ug/Kg		85	57 - 120
Fluorene	667	521		ug/Kg		78	56 - 120
Indeno[1,2,3-cd]pyrene	667	641		ug/Kg		96	62 - 120
Phenanthrene	667	517		ug/Kg		78	58 - 120
Pyrene	667	581		ug/Kg		87	57 - 120
Acenaphthene	667	509		ug/Kg		76	55 - 120
Acenaphthylene	667	472		ug/Kg		71	54 - 120
Naphthalene	667	494		ug/Kg		74	53 - 120
2-Methylnaphthalene	667	499		ug/Kg		75	53 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	79		39 - 120
2-Fluorophenol (Surr)	81		33 - 120
2,4,6-Tribromophenol (Surr)	83		10 - 120
Nitrobenzene-d5 (Surr)	84		32 - 120
Phenol-d5 (Surr)	81		32 - 120
Terphenyl-d14 (Surr)	95		47 - 120

Method: 8315A - Carbonyl Compounds by HPLC

Lab Sample ID: MB 240-279110/1-B
Matrix: Solid
Analysis Batch: 279550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 279281

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Formaldehyde	0.558	J	2.0	0.25	mg/Kg		05/17/17 10:49	05/18/17 16:06	1

Lab Sample ID: LCS 240-279110/2-B
Matrix: Solid
Analysis Batch: 279550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 279281

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits

Lab Sample ID: 240-79525-9 MS
Matrix: Solid
Analysis Batch: 279550

Client Sample ID: S-7878-051217-SSH-CL09
Prep Type: Total/NA
Prep Batch: 279281

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits

Lab Sample ID: 240-79525-9 MSD
Matrix: Solid
Analysis Batch: 279550

Client Sample ID: S-7878-051217-SSH-CL09
Prep Type: Total/NA
Prep Batch: 279281

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-278985/1-A ^2
Matrix: Solid
Analysis Batch: 279520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 278985

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	2.45	J	10	0.62	mg/Kg		05/15/17 13:24	05/18/17 11:42	2
Arsenic	1.0	U	1.0	0.026	mg/Kg		05/15/17 13:24	05/18/17 11:42	2
Iron	3.53	J	20	3.2	mg/Kg		05/15/17 13:24	05/18/17 11:42	2
Lead	0.20	U	0.20	0.045	mg/Kg		05/15/17 13:24	05/18/17 11:42	2
Vanadium	1.0	U	1.0	0.037	mg/Kg		05/15/17 13:24	05/18/17 11:42	2

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-278985/2-A ^2
Matrix: Solid
Analysis Batch: 279520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 278985
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	1000	974		mg/Kg		97	80 - 120
Arsenic	100	88.0		mg/Kg		88	80 - 120
Iron	1000	1030		mg/Kg		103	80 - 120
Lead	100	106		mg/Kg		106	80 - 120
Vanadium	100	96.9		mg/Kg		97	80 - 120

Lab Sample ID: 240-79525-1 MS
Matrix: Solid
Analysis Batch: 279520

Client Sample ID: S-7878-051217-SSH-CL01
Prep Type: Total/NA
Prep Batch: 278985
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aluminum	7900	B	1080	11000	4	mg/Kg	☼	284	75 - 125
Arsenic	3.0		108	98.3		mg/Kg	☼	88	75 - 125
Iron	12000	B	1080	14400	4	mg/Kg	☼	208	75 - 125
Lead	5.1		108	117		mg/Kg	☼	103	75 - 125
Vanadium	20		108	128		mg/Kg	☼	100	75 - 125

Lab Sample ID: 240-79525-1 MSD
Matrix: Solid
Analysis Batch: 279520

Client Sample ID: S-7878-051217-SSH-CL01
Prep Type: Total/NA
Prep Batch: 278985
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	7900	B	1080	10300	4	mg/Kg	☼	224	75 - 125	6	20
Arsenic	3.0		108	98.3		mg/Kg	☼	88	75 - 125	0	20
Iron	12000	B	1080	14300	4	mg/Kg	☼	201	75 - 125	1	20
Lead	5.1		108	119		mg/Kg	☼	106	75 - 125	2	20
Vanadium	20		108	131		mg/Kg	☼	103	75 - 125	2	20

Lab Sample ID: MB 240-279117/1-A ^2
Matrix: Solid
Analysis Batch: 279619

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 279117

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.62	J	10	0.62	mg/Kg		05/16/17 11:40	05/18/17 15:40	2
Arsenic	1.0	U	1.0	0.026	mg/Kg		05/16/17 11:40	05/18/17 15:40	2
Iron	3.20	J	20	3.2	mg/Kg		05/16/17 11:40	05/18/17 15:40	2
Lead	0.20	U	0.20	0.045	mg/Kg		05/16/17 11:40	05/18/17 15:40	2
Vanadium	1.0	U	1.0	0.037	mg/Kg		05/16/17 11:40	05/18/17 15:40	2

Lab Sample ID: LCS 240-279117/3-A ^2
Matrix: Solid
Analysis Batch: 279619

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 279117
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	1000	953		mg/Kg		95	80 - 120
Arsenic	100	86.6		mg/Kg		87	80 - 120
Iron	1000	993		mg/Kg		99	80 - 120
Lead	100	106		mg/Kg		106	80 - 120
Vanadium	100	94.6		mg/Kg		95	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: Moisture - Percent Moisture

Lab Sample ID: 240-79525-1 DU
Matrix: Solid
Analysis Batch: 278930

Client Sample ID: S-7878-051217-SSH-CL01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	89.7		89.1		%		0.7	20
Percent Moisture	10.3		10.9		%		6	20

Lab Sample ID: 240-79525-8 DU
Matrix: Solid
Analysis Batch: 278930

Client Sample ID: S-7878-051217-SSH-CL08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	91.2		90.8		%		0.4	20
Percent Moisture	8.8		9.2		%		4	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (39-120)	2FP (33-120)	TBP (10-120)	NBZ (32-120)	PHL (32-120)	TPH (47-120)
240-79525-1	S-7878-051217-SSH-CL01	73	76	68	75	77	96
240-79525-2	S-7878-051217-SSH-CL02	72	77	46	70	76	87
240-79525-3	S-7878-051217-SSH-CL03	78	83	50	75	83	95
240-79525-4	S-7878-051217-SSH-CL04	68	74	39	66	74	85
240-79525-5	S-7878-051217-SSH-CL05	75	78	40	70	78	89
240-79525-6	S-7878-051217-SSH-CL06	75	81	65	72	81	96
240-79525-7	S-7878-051217-SSH-CL07	66	72	46	65	71	89
240-79525-8	S-7878-051217-SSH-CL08	70	75	39	66	76	89
240-79525-9	S-7878-051217-SSH-CL09	61	51	58	31 X *	81	85
LCS 240-278923/21-A	Lab Control Sample	79	81	83	84	81	95
MB 240-278923/20-A	Method Blank	82	83	58	81	84	101

Surrogate Legend

- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPH = Terphenyl-d14 (Surr)

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL01

Lab Sample ID: 240-79525-1

Date Collected: 05/12/17 09:45

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL01

Lab Sample ID: 240-79525-1

Date Collected: 05/12/17 09:45

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 09:36	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 16:22	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 11:51	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL02

Lab Sample ID: 240-79525-2

Date Collected: 05/12/17 09:55

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL02

Lab Sample ID: 240-79525-2

Date Collected: 05/12/17 09:55

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279411	05/18/17 17:53	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 16:31	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:20	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL03

Lab Sample ID: 240-79525-3

Date Collected: 05/12/17 10:05

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL03

Lab Sample ID: 240-79525-3

Date Collected: 05/12/17 10:05

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 10:01	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 16:39	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:24	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL04

Lab Sample ID: 240-79525-4

Date Collected: 05/12/17 10:15

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL04

Lab Sample ID: 240-79525-4

Date Collected: 05/12/17 10:15

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279411	05/18/17 18:18	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 16:47	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:28	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL05

Lab Sample ID: 240-79525-5

Date Collected: 05/12/17 11:10

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL05

Lab Sample ID: 240-79525-5

Date Collected: 05/12/17 11:10

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279411	05/18/17 18:44	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL05

Lab Sample ID: 240-79525-5

Date Collected: 05/12/17 11:10

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 16:55	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:32	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL06

Lab Sample ID: 240-79525-6

Date Collected: 05/12/17 11:20

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL06

Lab Sample ID: 240-79525-6

Date Collected: 05/12/17 11:20

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 11:41	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 17:03	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:37	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL07

Lab Sample ID: 240-79525-7

Date Collected: 05/12/17 11:30

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL07

Lab Sample ID: 240-79525-7

Date Collected: 05/12/17 11:30

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 10:26	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 17:11	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Client Sample ID: S-7878-051217-SSH-CL07

Lab Sample ID: 240-79525-7

Date Collected: 05/12/17 11:30

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020		2	279520	05/18/17 12:41	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL08

Lab Sample ID: 240-79525-8

Date Collected: 05/12/17 11:40

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL08

Lab Sample ID: 240-79525-8

Date Collected: 05/12/17 11:40

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 10:51	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 17:19	KMG	TAL CAN
Total/NA	Prep	3050B			278985	05/15/17 13:24	DEE	TAL CAN
Total/NA	Analysis	6020		2	279520	05/18/17 12:45	AS1	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL09

Lab Sample ID: 240-79525-9

Date Collected: 05/12/17 11:50

Matrix: Solid

Date Received: 05/13/17 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	278930	05/15/17 10:00	LKG	TAL CAN

Client Sample ID: S-7878-051217-SSH-CL09

Lab Sample ID: 240-79525-9

Date Collected: 05/12/17 11:50

Matrix: Solid

Date Received: 05/13/17 13:35

Percent Solids: 97.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			278923	05/15/17 09:36	JT	TAL CAN
Total/NA	Analysis	8270C		1	279597	05/19/17 11:16	MRU	TAL CAN
Total/NA	Leach	8315A			279110	05/16/17 15:00	DRJ	TAL CAN
Total/NA	Prep	8315A_W_Prep			279281	05/17/17 10:49	CS	TAL CAN
Total/NA	Analysis	8315A		1	279550	05/18/17 17:36	KMG	TAL CAN
Total/NA	Prep	3050B			279117	05/16/17 11:40	DEE	TAL CAN
Total/NA	Analysis	6020		2	279619	05/18/17 15:49	AS1	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-79525-1

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-18
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17 *
Illinois	NELAP	5	200004	07-31-17 *
Kansas	NELAP	7	E-10336	01-31-18
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17 *
Nevada	State Program	9	OH-000482008A	07-31-17 *
New Jersey	NELAP	2	OH001	06-30-17 *
New York	NELAP	2	10975	03-31-18
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-17 *
Texas	NELAP	6	T104704517-15-5	08-31-17 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-17
Wisconsin	State Program	5	999518190	08-31-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Michigan
 10448 Citation Drive
 Suite 200
 Brighton, MI 48116
 Phone: 810.229.2763 Fax:

MICHIGAN
 190

Chain of Custody Record

248786

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact		Project Manager: M. Tomka		Site Contact: JE Parady		Date: 5/12/17	
Company Name: GHD		Tel/Fax: 519 884 0510		Lab Contact: O Heckler		Carrier: PULTEX	
Address: 14996 N. Sheldon Rd Skokholm		Analysis Turnaround Time		Perform MS / MSD (Y / N)		COC No: 248786	
City/State/Zip: Plymouth MI 48170		<input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		Filtered Sample (Y / N)		1 of 1 COCs	
Phone: 734 451 5123		TAT if different from Below		Lead		For Lab Use Only:	
Fax:		<input type="checkbox"/> 2 weeks		Asbestos		Walk-in Client:	
Project Name: Raw Transit SMI Rev 1		<input checked="" type="checkbox"/> 1 week		Iron		Lab Sampling:	
Site: S500 7878-01		<input type="checkbox"/> 2-days		Manganese		Job / SDG No.:	
P O #		<input type="checkbox"/> 1 day		Cadmium		Sample Specific Notes:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.		
S-7878-05127-SS4-CL01	5/12/17	0945	G	SO	2	Asbestos	
-CL02		0955	G	SO	2	Iron	
-CL03		1005	G	SO	2	Manganese	
-CL04		1015	G	SO	2	Cadmium	
-CL05		1110	G	SO	2	Asbestos	
-CL06		1120	G	SO	2	Iron	
-CL07		1130	G	SO	2	Manganese	
-CL08		1140	G	SO	2	Cadmium	
S-7878-05127-SS4-CL09		1150	G	SO	2	Asbestos	
.DMT							
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							
Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Unknown							
Special Instructions/QC Requirements & Comments: TAT - 1 week							
Custody Seal No.: 827373				Cooler Temp. (°C): Obs'd: _____			
Relinquished by: M.A. Dan		Date/Time: 5/12/17 1430		Received by: PDP		Date/Time: 5-13-17 1130	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received in Laboratory by:		Date/Time:	



TestAmerica Canton Sample Receipt Form/Narrative

Login #: 79525

Canton Facility

Client GHD

Site Name

Cooler unpacked by:

Cooler Received on 5-13-17

Opened on 5-13-17

POP

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. 2.6 °C Corrected Cooler Temp. 2.3 °C
IR GUN #36 (CF +0.8 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity (Yes No

-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA

14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes No

15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Blank lines for Chain of Custody and Sample Discrepancies.

17. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

Attachment B.3
Topsoil Analytical Results Source 1



Memorandum

February 1, 2017

To: Dave Favero (RACER)

Ref. No.: 007878

From: *J.E.P.*
John-eric Pardys/wg/163

Subject: Topsoil Characterization

JSS identified a potential source of topsoil to be used at RACER's Saginaw Malleable Industrial Land (Site), in Saginaw, Michigan. The potential topsoil source is located at 8273 West Freeland Road, Freeland, Michigan as shown in Figure 1. JSS's topsoil subcontractor provided a letter indicating that this land has been virgin farmland for the past 50 years and that historical records do not identify and other land uses (Attachment A). In addition, JSS's subcontractor provided additional documentation from the Tittabawassee Township that supports the excavation and transportation of topsoil from 8273 West Freeland Road, Freeland, Michigan (Attachment B).

On, January 12, 2017, GHD reached out to MDEQ to obtain concurrence on an acceptable approach to characterizing the topsoil. On, January 13, 2017, MDEQ provided their concurrence on the approach to characterizing the topsoil which included: collecting 9 discrete samples of the topsoil and analyzing for Pesticides (Method SW 846 8081), Herbicides (Method SW 846 8151), Atrazine and Alachlor (Method SW 846 8270), and Arsenic and Lead (Method 6020).

On January 16, 2017, GHD conducted a Site visit to inspect the topsoil pile and collect the 9 discrete samples. Photos of the stockpile are included in Attachment C. The topsoil stockpile was approximately 500' x 50' x 6-10'. An excavator was used to dig through the surficial frozen soil, approximately 1-2 feet, at nine locations spread evenly around the stockpile. Field staff dug another 6-inches into the pile before collecting the samples. The approximate locations of the samples collected are identified on Figure 1. Samples were submitted to the laboratory on a 1-week turn.

There were no detections reported for pesticides or herbicides. The only detections were for arsenic ranging between 1.7 to 2.1 mg/kg, which is below the statewide default background level (5.8 mg/kg) and lead ranging between 7.8 to 8.9 mg/kg, which is below the statewide default background level (21 mg/kg). A copy of the analytical report is provided in Attachment D.

Therefore, based on the characterization results, the topsoil is suitable for use at the Site.



Source: Image © 2016 Google



LEGEND
 - - - - - APPROXIMATE PROPERTY BOUNDARY
 X TOPSOIL DISCRETE SAMPLE LOCATION

figure 1
 TOPSOIL SOURCE
 8273 WEST FREELAND ROAD, FREELAND, MICHIGAN
Racer Saginaw Malleable Industrial Land

Attachment A

EGGERS EXCAVATING, LLC
PO Box 5908
Saginaw, MI 48603
(989) 695-5205

July 27, 2016

RE: Letter of Virgin Source

To Whom It May Concern:

Eggers Excavating, LLC recently purchased a piece of property located at 8723 West Freeland Road, Freeland, Michigan to develop as commercial property. Part of the development process is to remove the upper portion of the site soil which is topsoil. This site has been virgin farmland for the past 50 years.

Historical records indicate that the land has never been utilized for any other purpose.

If you should have any further questions please feel free to call me at (989) 220-1514.

Respectfully Submitted,

EGGERS EXCAVATING LLC

Bill Slaughter
VP of Operations

Attachment B

**MINUTES OF TITTABAWASSEE TOWNSHIP
PLANNING COMMISSION
SAGINAW COUNTY, STATE OF MICHIGAN
TOWNSHIP OFFICE 145 S. SECOND STREET
FREELAND, MICHIGAN 48623
SEPTEMBER 19TH, 2016**

1. CALL TO ORDER

The Chairperson Dennis Argyle called the meeting to order at 5:33 P.M.

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

MEMBERS PRESENT

Carl Neuenfeldt
Ron Schauman
Dennis Argyle
Roger Hupfer
Paul Garstecki
Robert Hensler

MEMBERS ABSENT

Jim Heffel

STAFF PRESENT

Mark McGill
Grant Murschel
Mike Rybicki

4. APPROVAL OF AGENDA

Moved by Ron Schauman, supported by Carl Neuenfeldt to approve the agenda as presented with the following change: to move item B (Z-16-05) before item A (Z-16-03). There was no further discussion.

Vote: 6- Yeas 0-Nays 1- Absent 0- Abstain Motion Carried

5. APPROVAL OF MINUTES FOR THE JULY 18TH, 2016 MEETING

Motion by Robert Hensler, support from Ron Schauman to approve the minutes as presented, with no discussion.

Vote: 6- Yeas 0- Nays 1- Absent 0- Abstain Motion Carried

6. PUBLIC COMMENT

The Chairperson Dennis Argyle opened public comment at 5:35 P.M.

Ruth Averill was present to announce her candidacy

For Saginaw County Commissioner. Public comment was closed at 5:39 P.M.

7. BUSINESS

A. ITEM Z-16-05

Consider a request from Eggers Development, LLC to rezone Parcel# 29-13-3-23-2002-009 located on Freeland Road from A-1 (Agricultural) to C-3 (Regional Business). Russ & Chad Eggers the applicants were both present at the meeting. Russ proceeded to update the Commission on the layout of the property, and their intended use(s) in the future.

The Chairperson Dennis Argyle opened the public hearing at 5:42 P.M. Mr. Mark Wenz of Zentx Media Group voiced his concerns as to why there was work being done at the site, and that an access road had been put in next to his property before the site plan had been approved. He also stated that he was in favor of the rezoning of the property.

The public hearing was closed at 5:44 P.M.

Moved by Ron Schauman, supported by Carl Neuenfeldt to recommend approval of the rezone to the Township Board.

Vote: 6- Yeas 0- Nays 1- Absent 0- Abstain Motion Carried.

B. ITEM Z-16-03

Consider a request by Eggers Development, LLC for a site plan approval for A proposed commercial building on Parcel # 29-13-3-23-2002-009. Mike Rybicki of MLR Engineering gave the Commission an overview of the site Plan. Russ Eggers briefed the Commission as to what had been done at the Site, and he also outlined where they would like to locate the proposed cold storage building. After some discussion and questions a motion was made by Robert Hensler, supported by Roger Hupfer to approve the site plan with the Contingencies:

1. Approval of Zoning Petition number Z-16-05 from (AG) Agriculture to (RB) Regional Business to permit the warehouse/storage use by the Township Board.
2. All site development shall be in accordance with the approved site plan.
3. Conformance to the zoning ordinance standards regarding access, and driveway paving shall be required.
4. Approval of this site plan does not include the approval for soil mining, or other earth removal on site outside of the necessary grading to facilitate construction of the cold storage building and access driveway. The

existing stockpile of dirt is exempt, but needs to be removed from the site by January 31st, 2017. This needs to be done via a new driveway, and replaced by new fill dirt.

5. The existing temporary gravel driveway on the western portion of the site needs to be removed.

Vote: 6- Yeas 0- Nays 1- Absent 10- Abstain Motion Carried.

C. ITEM S-16-04

Consider a request from Tri-State Development, Inc. for a site plan approval for a proposed driveway extension on Hercules Drive on Parcel# 29-13-3-21-4011-003, and Parcel# 29-13-3-21-4011-004.

Scott Lenhart of D&M Site outlined the site plan for the Commission. After some discussion it was moved by Ron Schauman, supported by Roger Hupfer to approve the site plan with the following stipulations:

1. Information must be provided to warrant the requested amount of parking spaces.
2. The sanitary sewer connection must be designed to address the comment of the Township Department of Public Works, and approved by the Director of Public Works.

Vote: 6- Yeas 0- Nays 1- Absent 0- Abstain Motion Carried.

D. ITEM S-16-05

Consider a request from Murray Painting for a site plan approval for a proposed commercial building on Parcel# 29-13-3-25-3002-005.

Greg Turner of Pumford Construction was representing the applicant. He proceeded to outline the proposed project for the Commission. After some discussion, a motion was made by Ron Schauman, supported by Carl Neuenfeldt to approve the site plan contingent on staff approval of the following:

1. This plan calls for a new septic system, a review from the Saginaw County Health Department must be provided.
2. A storm water management plan from the applicants engineer must be provided.
3. The expanded gravel surface area on the east side of the property is not allowed in this zoning district.

Vote: 6- Yeas 0- Nays 1- Absent 0- Abstain Motion Carried.

8. ADJOURNMENT

The meeting was adjourned at 6:32 P.M.



ROGER HUPFER- SECRETARY

Attachment C



Photo 1 Topsoil Stockpile. Date – 1/16/2017



Site Photographs



Photo 2 Topsoil Stockpile. Date – 1/16/2017



Site Photographs



Photo 3 Topsoil Stockpile. Date – 1/16/2017



Site Photographs



Photo 4 Topsoil Stockpile. Date – 1/16/2016



Site Photographs

Attachment D

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-74450-1

Client Project/Site: 7878, RACER SMI

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

1/24/2017 4:10:33 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Job ID: 240-74450-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-74450-1

Comments

No additional comments.

Receipt

The samples were received on 1/17/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2° C.

GC/MS Semi VOA

Method(s) 8270D: The following sample was diluted due to appearance and viscosity: S-7878-011617-SSH-0717 (240-74450-7). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The initial calibration curve analyzed in batch 480-340993 was outside method criteria for the following analyte: Alachlor. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: S-7878-011617-SSH-0117 (240-74450-1) and S-7878-011617-SSH-0917 (240-74450-9). 2881013 2596993, 2719940.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 3550C: Due to the matrix, the following samples could not be concentrated to the final method required volume: S-7878-011617-SSH-0117 (240-74450-1), S-7878-011617-SSH-0217 (240-74450-2), S-7878-011617-SSH-0317 (240-74450-3), S-7878-011617-SSH-0417 (240-74450-4), S-7878-011617-SSH-0517 (240-74450-5), S-7878-011617-SSH-0617 (240-74450-6), S-7878-011617-SSH-0717 (240-74450-7), S-7878-011617-SSH-0817 (240-74450-8), S-7878-011617-SSH-0917 (240-74450-9), (240-74450-C-1 MS) and (240-74450-C-1 MSD). The reporting limits (RLs) are elevated proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-74450-1	S-7878-011617-SSH-0117	Solid	01/16/17 10:30	01/17/17 09:30
240-74450-2	S-7878-011617-SSH-0217	Solid	01/16/17 10:35	01/17/17 09:30
240-74450-3	S-7878-011617-SSH-0317	Solid	01/16/17 10:40	01/17/17 09:30
240-74450-4	S-7878-011617-SSH-0417	Solid	01/16/17 10:45	01/17/17 09:30
240-74450-5	S-7878-011617-SSH-0517	Solid	01/16/17 10:50	01/17/17 09:30
240-74450-6	S-7878-011617-SSH-0617	Solid	01/16/17 10:55	01/17/17 09:30
240-74450-7	S-7878-011617-SSH-0717	Solid	01/16/17 11:00	01/17/17 09:30
240-74450-8	S-7878-011617-SSH-0817	Solid	01/16/17 11:05	01/17/17 09:30
240-74450-9	S-7878-011617-SSH-0917	Solid	01/16/17 11:10	01/17/17 09:30

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Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0117

Lab Sample ID: 240-74450-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		1.1	0.029	mg/Kg	2	☼	6020	Total/NA
Lead	7.8		0.23	0.051	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0217

Lab Sample ID: 240-74450-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		0.97	0.025	mg/Kg	2	☼	6020	Total/NA
Lead	8.2		0.19	0.044	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0317

Lab Sample ID: 240-74450-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Lead	8.7		0.21	0.048	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0417

Lab Sample ID: 240-74450-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.7		1.0	0.026	mg/Kg	2	☼	6020	Total/NA
Lead	8.1		0.20	0.045	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0517

Lab Sample ID: 240-74450-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.9		0.94	0.025	mg/Kg	2	☼	6020	Total/NA
Lead	8.8		0.19	0.042	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0617

Lab Sample ID: 240-74450-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		1.0	0.026	mg/Kg	2	☼	6020	Total/NA
Lead	8.0		0.20	0.046	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0717

Lab Sample ID: 240-74450-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.9		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Lead	8.9		0.22	0.049	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0817

Lab Sample ID: 240-74450-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1		0.99	0.026	mg/Kg	2	☼	6020	Total/NA
Lead	8.6		0.20	0.044	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-011617-SSH-0917

Lab Sample ID: 240-74450-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		1.0	0.027	mg/Kg	2	☼	6020	Total/NA
Lead	7.9		0.21	0.047	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8081A	Organochlorine Pesticides (GC)	SW846	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
8151A	Herbicides (GC)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	98	ug/Kg	☼	01/20/17 07:44	01/23/17 15:14	1
Atrazine	200	U	200	68	ug/Kg	☼	01/20/17 07:44	01/23/17 15:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		54 - 120				01/20/17 07:44	01/23/17 15:14	1
2-Fluorobiphenyl	75		60 - 120				01/20/17 07:44	01/23/17 15:14	1
2-Fluorophenol (Surr)	73		52 - 120				01/20/17 07:44	01/23/17 15:14	1
Nitrobenzene-d5 (Surr)	69		53 - 120				01/20/17 07:44	01/23/17 15:14	1
p-Terphenyl-d14 (Surr)	87		65 - 121				01/20/17 07:44	01/23/17 15:14	1
Phenol-d5 (Surr)	73		54 - 120				01/20/17 07:44	01/23/17 15:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	99	ug/Kg	☼	01/20/17 07:44	01/23/17 15:40	1
Atrazine	200	U	200	69	ug/Kg	☼	01/20/17 07:44	01/23/17 15:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		54 - 120	01/20/17 07:44	01/23/17 15:40	1
2-Fluorobiphenyl	67		60 - 120	01/20/17 07:44	01/23/17 15:40	1
2-Fluorophenol (Surr)	73		52 - 120	01/20/17 07:44	01/23/17 15:40	1
Nitrobenzene-d5 (Surr)	67		53 - 120	01/20/17 07:44	01/23/17 15:40	1
p-Terphenyl-d14 (Surr)	79		65 - 121	01/20/17 07:44	01/23/17 15:40	1
Phenol-d5 (Surr)	74		54 - 120	01/20/17 07:44	01/23/17 15:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	99	ug/Kg	☼	01/20/17 07:44	01/23/17 16:06	1
Atrazine	200	U	200	69	ug/Kg	☼	01/20/17 07:44	01/23/17 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		54 - 120	01/20/17 07:44	01/23/17 16:06	1
2-Fluorobiphenyl	74		60 - 120	01/20/17 07:44	01/23/17 16:06	1
2-Fluorophenol (Surr)	75		52 - 120	01/20/17 07:44	01/23/17 16:06	1
Nitrobenzene-d5 (Surr)	70		53 - 120	01/20/17 07:44	01/23/17 16:06	1
p-Terphenyl-d14 (Surr)	85		65 - 121	01/20/17 07:44	01/23/17 16:06	1
Phenol-d5 (Surr)	76		54 - 120	01/20/17 07:44	01/23/17 16:06	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	99	ug/Kg	☼	01/20/17 07:44	01/23/17 16:32	1
Atrazine	200	U	200	69	ug/Kg	☼	01/20/17 07:44	01/23/17 16:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		54 - 120				01/20/17 07:44	01/23/17 16:32	1
2-Fluorobiphenyl	68		60 - 120				01/20/17 07:44	01/23/17 16:32	1
2-Fluorophenol (Surr)	70		52 - 120				01/20/17 07:44	01/23/17 16:32	1
Nitrobenzene-d5 (Surr)	67		53 - 120				01/20/17 07:44	01/23/17 16:32	1
p-Terphenyl-d14 (Surr)	76		65 - 121				01/20/17 07:44	01/23/17 16:32	1
Phenol-d5 (Surr)	72		54 - 120				01/20/17 07:44	01/23/17 16:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	99	ug/Kg	☼	01/20/17 07:44	01/23/17 16:58	1
Atrazine	200	U	200	68	ug/Kg	☼	01/20/17 07:44	01/23/17 16:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		54 - 120	01/20/17 07:44	01/23/17 16:58	1
2-Fluorobiphenyl	70		60 - 120	01/20/17 07:44	01/23/17 16:58	1
2-Fluorophenol (Surr)	70		52 - 120	01/20/17 07:44	01/23/17 16:58	1
Nitrobenzene-d5 (Surr)	68		53 - 120	01/20/17 07:44	01/23/17 16:58	1
p-Terphenyl-d14 (Surr)	76		65 - 121	01/20/17 07:44	01/23/17 16:58	1
Phenol-d5 (Surr)	71		54 - 120	01/20/17 07:44	01/23/17 16:58	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	99	ug/Kg	☼	01/20/17 07:44	01/23/17 17:24	1
Atrazine	200	U	200	69	ug/Kg	☼	01/20/17 07:44	01/23/17 17:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		54 - 120	01/20/17 07:44	01/23/17 17:24	1
2-Fluorobiphenyl	73		60 - 120	01/20/17 07:44	01/23/17 17:24	1
2-Fluorophenol (Surr)	69		52 - 120	01/20/17 07:44	01/23/17 17:24	1
Nitrobenzene-d5 (Surr)	69		53 - 120	01/20/17 07:44	01/23/17 17:24	1
p-Terphenyl-d14 (Surr)	88		65 - 121	01/20/17 07:44	01/23/17 17:24	1
Phenol-d5 (Surr)	71		54 - 120	01/20/17 07:44	01/23/17 17:24	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	1900	U	1900	490	ug/Kg	☼	01/20/17 07:44	01/23/17 17:50	5
Atrazine	980	U	980	340	ug/Kg	☼	01/20/17 07:44	01/23/17 17:50	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		54 - 120	01/20/17 07:44	01/23/17 17:50	5
2-Fluorobiphenyl	80		60 - 120	01/20/17 07:44	01/23/17 17:50	5
2-Fluorophenol (Surr)	74		52 - 120	01/20/17 07:44	01/23/17 17:50	5
Nitrobenzene-d5 (Surr)	67		53 - 120	01/20/17 07:44	01/23/17 17:50	5
p-Terphenyl-d14 (Surr)	86		65 - 121	01/20/17 07:44	01/23/17 17:50	5
Phenol-d5 (Surr)	75		54 - 120	01/20/17 07:44	01/23/17 17:50	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	390	U	390	100	ug/Kg	☼	01/20/17 07:44	01/23/17 18:17	1
Atrazine	200	U	200	69	ug/Kg	☼	01/20/17 07:44	01/23/17 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		54 - 120				01/20/17 07:44	01/23/17 18:17	1
2-Fluorobiphenyl	75		60 - 120				01/20/17 07:44	01/23/17 18:17	1
2-Fluorophenol (Surr)	69		52 - 120				01/20/17 07:44	01/23/17 18:17	1
Nitrobenzene-d5 (Surr)	69		53 - 120				01/20/17 07:44	01/23/17 18:17	1
p-Terphenyl-d14 (Surr)	90		65 - 121				01/20/17 07:44	01/23/17 18:17	1
Phenol-d5 (Surr)	71		54 - 120				01/20/17 07:44	01/23/17 18:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	01/20/17 07:44	01/23/17 18:43	1
Atrazine	200	U	200	71	ug/Kg	☼	01/20/17 07:44	01/23/17 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		54 - 120	01/20/17 07:44	01/23/17 18:43	1
2-Fluorobiphenyl	68		60 - 120	01/20/17 07:44	01/23/17 18:43	1
2-Fluorophenol (Surr)	70		52 - 120	01/20/17 07:44	01/23/17 18:43	1
Nitrobenzene-d5 (Surr)	66		53 - 120	01/20/17 07:44	01/23/17 18:43	1
p-Terphenyl-d14 (Surr)	84		65 - 121	01/20/17 07:44	01/23/17 18:43	1
Phenol-d5 (Surr)	70		54 - 120	01/20/17 07:44	01/23/17 18:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U F1 F2	5.9	3.8	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
4,4'-DDE	5.9	U	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
4,4'-DDT	5.9	U	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Aldrin	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
alpha-BHC	5.9	U	5.9	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
alpha-Chlordane	5.9	U	5.9	4.4	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
beta-BHC	5.9	U	5.9	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
delta-BHC	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Dieldrin	5.9	U	5.9	1.0	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endosulfan I	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endosulfan II	5.9	U F2	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endosulfan sulfate	5.9	U F1 F2	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endrin	5.9	U F2	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endrin aldehyde	5.9	U F2	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Endrin ketone	5.9	U F1 F2	5.9	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
gamma-BHC (Lindane)	5.9	U	5.9	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
gamma-Chlordane	5.9	U	5.9	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Heptachlor	5.9	U	5.9	0.91	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Heptachlor epoxide	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Methoxychlor	12	U F1 F2	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Toxaphene	120	U	120	43	ug/Kg	☼	01/18/17 09:28	01/20/17 12:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	61		13 - 135				01/18/17 09:28	01/20/17 12:37	1
<i>Tetrachloro-m-xylene</i>	82		30 - 120				01/18/17 09:28	01/20/17 12:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	3.8	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
4,4'-DDE	5.9	U	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
4,4'-DDT	5.9	U	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Aldrin	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
alpha-BHC	5.9	U	5.9	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
alpha-Chlordane	5.9	U	5.9	4.4	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
beta-BHC	5.9	U	5.9	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
delta-BHC	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Dieldrin	5.9	U	5.9	1.0	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endosulfan I	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endosulfan II	5.9	U	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endosulfan sulfate	5.9	U	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endrin	5.9	U	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endrin aldehyde	5.9	U	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Endrin ketone	5.9	U	5.9	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
gamma-BHC (Lindane)	5.9	U	5.9	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
gamma-Chlordane	5.9	U	5.9	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Heptachlor	5.9	U	5.9	0.90	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Heptachlor epoxide	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Methoxychlor	11	U	11	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1
Toxaphene	120	U	120	43	ug/Kg	☼	01/18/17 09:28	01/20/17 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	52		13 - 135	01/18/17 09:28	01/20/17 13:50	1
Tetrachloro-m-xylene	81		30 - 120	01/18/17 09:28	01/20/17 13:50	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.0	U	6.0	3.9	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
4,4'-DDE	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
4,4'-DDT	6.0	U	6.0	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Aldrin	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
alpha-BHC	6.0	U	6.0	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
alpha-Chlordane	6.0	U	6.0	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
beta-BHC	6.0	U	6.0	4.6	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
delta-BHC	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Dieldrin	6.0	U	6.0	1.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endosulfan I	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endosulfan II	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endosulfan sulfate	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endrin	6.0	U	6.0	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endrin aldehyde	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Endrin ketone	6.0	U	6.0	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
gamma-BHC (Lindane)	6.0	U	6.0	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
gamma-Chlordane	6.0	U	6.0	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Heptachlor	6.0	U	6.0	0.93	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Heptachlor epoxide	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1
Toxaphene	120	U	120	44	ug/Kg	☼	01/18/17 09:28	01/20/17 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	58		13 - 135	01/18/17 09:28	01/20/17 14:14	1
Tetrachloro-m-xylene	63		30 - 120	01/18/17 09:28	01/20/17 14:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.0	U	6.0	3.9	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
4,4'-DDE	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
4,4'-DDT	6.0	U	6.0	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Aldrin	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
alpha-BHC	6.0	U	6.0	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
alpha-Chlordane	6.0	U	6.0	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
beta-BHC	6.0	U	6.0	4.6	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
delta-BHC	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Dieldrin	6.0	U	6.0	1.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endosulfan I	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endosulfan II	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endosulfan sulfate	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endrin	6.0	U	6.0	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endrin aldehyde	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Endrin ketone	6.0	U	6.0	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
gamma-BHC (Lindane)	6.0	U	6.0	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
gamma-Chlordane	6.0	U	6.0	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Heptachlor	6.0	U	6.0	0.91	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Heptachlor epoxide	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Toxaphene	120	U	120	43	ug/Kg	☼	01/18/17 09:28	01/20/17 14:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	68		13 - 135				01/18/17 09:28	01/20/17 14:40	1
<i>Tetrachloro-m-xylene</i>	100		30 - 120				01/18/17 09:28	01/20/17 14:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.0	U	6.0	3.9	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
4,4'-DDE	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
4,4'-DDT	6.0	U	6.0	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Aldrin	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
alpha-BHC	6.0	U	6.0	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
alpha-Chlordane	6.0	U	6.0	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
beta-BHC	6.0	U	6.0	4.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
delta-BHC	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Dieldrin	6.0	U	6.0	1.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endosulfan I	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endosulfan II	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endosulfan sulfate	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endrin	6.0	U	6.0	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endrin aldehyde	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Endrin ketone	6.0	U	6.0	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
gamma-BHC (Lindane)	6.0	U	6.0	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
gamma-Chlordane	6.0	U	6.0	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Heptachlor	6.0	U	6.0	0.92	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Heptachlor epoxide	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1
Toxaphene	120	U	120	44	ug/Kg	☼	01/18/17 09:28	01/20/17 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	66		13 - 135	01/18/17 09:28	01/20/17 15:04	1
Tetrachloro-m-xylene	67		30 - 120	01/18/17 09:28	01/20/17 15:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	3.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
4,4'-DDE	5.9	U	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
4,4'-DDT	5.9	U	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Aldrin	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
alpha-BHC	5.9	U	5.9	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
alpha-Chlordane	5.9	U	5.9	4.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
beta-BHC	5.9	U	5.9	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
delta-BHC	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Dieldrin	5.9	U	5.9	1.0	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endosulfan I	5.9	U	5.9	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endosulfan II	5.9	U	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endosulfan sulfate	5.9	U	5.9	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endrin	5.9	U	5.9	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endrin aldehyde	5.9	U	5.9	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Endrin ketone	5.9	U	5.9	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
gamma-BHC (Lindane)	5.9	U	5.9	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
gamma-Chlordane	5.9	U	5.9	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Heptachlor	5.9	U	5.9	0.91	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Heptachlor epoxide	5.9	U	5.9	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1
Toxaphene	120	U	120	43	ug/Kg	☼	01/18/17 09:28	01/20/17 15:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	63		13 - 135	01/18/17 09:28	01/20/17 15:29	1
Tetrachloro-m-xylene	87		30 - 120	01/18/17 09:28	01/20/17 15:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.8	U	5.8	3.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
4,4'-DDE	5.8	U	5.8	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
4,4'-DDT	5.8	U	5.8	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Aldrin	5.8	U	5.8	2.7	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
alpha-BHC	5.8	U	5.8	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
alpha-Chlordane	5.8	U	5.8	4.3	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
beta-BHC	5.8	U	5.8	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
delta-BHC	5.8	U	5.8	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Dieldrin	5.8	U	5.8	1.0	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endosulfan I	5.8	U	5.8	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endosulfan II	5.8	U	5.8	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endosulfan sulfate	5.8	U	5.8	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endrin	5.8	U	5.8	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endrin aldehyde	5.8	U	5.8	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Endrin ketone	5.8	U	5.8	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
gamma-BHC (Lindane)	5.8	U	5.8	3.3	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
gamma-Chlordane	5.8	U	5.8	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Heptachlor	5.8	U	5.8	0.89	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Heptachlor epoxide	5.8	U	5.8	2.7	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Methoxychlor	11	U	11	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Toxaphene	110	U	110	42	ug/Kg	☼	01/18/17 09:28	01/20/17 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	50		13 - 135				01/18/17 09:28	01/20/17 15:53	1
<i>Tetrachloro-m-xylene</i>	67		30 - 120				01/18/17 09:28	01/20/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.0	U	6.0	3.9	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
4,4'-DDE	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
4,4'-DDT	6.0	U	6.0	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Aldrin	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
alpha-BHC	6.0	U	6.0	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
alpha-Chlordane	6.0	U	6.0	4.5	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
beta-BHC	6.0	U	6.0	4.6	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
delta-BHC	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Dieldrin	6.0	U	6.0	1.1	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endosulfan I	6.0	U	6.0	1.5	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endosulfan II	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endosulfan sulfate	6.0	U	6.0	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endrin	6.0	U	6.0	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endrin aldehyde	6.0	U	6.0	2.1	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Endrin ketone	6.0	U	6.0	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
gamma-BHC (Lindane)	6.0	U	6.0	3.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
gamma-Chlordane	6.0	U	6.0	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Heptachlor	6.0	U	6.0	0.92	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Heptachlor epoxide	6.0	U	6.0	2.8	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1
Toxaphene	120	U	120	44	ug/Kg	☼	01/18/17 09:28	01/20/17 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		13 - 135	01/18/17 09:28	01/20/17 16:17	1
Tetrachloro-m-xylene	90		30 - 120	01/18/17 09:28	01/20/17 16:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.1	U	6.1	4.0	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
4,4'-DDE	6.1	U	6.1	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
4,4'-DDT	6.1	U	6.1	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Aldrin	6.1	U	6.1	2.9	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
alpha-BHC	6.1	U	6.1	1.9	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
alpha-Chlordane	6.1	U	6.1	4.6	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
beta-BHC	6.1	U	6.1	4.7	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
delta-BHC	6.1	U	6.1	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Dieldrin	6.1	U	6.1	1.1	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endosulfan I	6.1	U	6.1	1.6	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endosulfan II	6.1	U	6.1	2.2	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endosulfan sulfate	6.1	U	6.1	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endrin	6.1	U	6.1	1.7	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endrin aldehyde	6.1	U	6.1	2.2	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Endrin ketone	6.1	U	6.1	1.3	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
gamma-BHC (Lindane)	6.1	U	6.1	3.5	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
gamma-Chlordane	6.1	U	6.1	1.8	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Heptachlor	6.1	U	6.1	0.94	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Heptachlor epoxide	6.1	U	6.1	2.9	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Toxaphene	120	U	120	44	ug/Kg	☼	01/18/17 09:28	01/20/17 16:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	56		13 - 135				01/18/17 09:28	01/20/17 16:42	1
Tetrachloro-m-xylene	77		30 - 120				01/18/17 09:28	01/20/17 16:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58	U	58	28	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1221	58	U	58	27	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1232	58	U	58	19	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1242	58	U	58	23	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1248	58	U	58	20	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1254	58	U	58	16	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1
Aroclor-1260	58	U	58	21	ug/Kg	☼	01/18/17 08:47	01/20/17 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	109		14 - 128	01/18/17 08:47	01/20/17 10:53	1
DCB Decachlorobiphenyl	89		10 - 132	01/18/17 08:47	01/20/17 10:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58	U	58	28	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1221	58	U	58	27	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1232	58	U	58	19	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1242	58	U	58	23	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1248	58	U	58	20	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1254	58	U	58	16	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Aroclor-1260	58	U	58	21	ug/Kg	☼	01/18/17 08:47	01/20/17 11:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		14 - 128				01/18/17 08:47	01/20/17 11:11	1
DCB Decachlorobiphenyl	82		10 - 132				01/18/17 08:47	01/20/17 11:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	28	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1221	59	U	59	27	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1232	59	U	59	19	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1242	59	U	59	24	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1248	59	U	59	20	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1254	59	U	59	17	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1
Aroclor-1260	59	U	59	21	ug/Kg	☼	01/18/17 08:47	01/20/17 11:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	01/18/17 08:47	01/20/17 11:30	1
DCB Decachlorobiphenyl	85		10 - 132	01/18/17 08:47	01/20/17 11:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	28	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1221	59	U	59	27	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1232	59	U	59	19	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1242	59	U	59	23	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1248	59	U	59	20	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1254	59	U	59	16	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1
Aroclor-1260	59	U	59	21	ug/Kg	☼	01/18/17 08:47	01/20/17 11:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	01/18/17 08:47	01/20/17 11:48	1
DCB Decachlorobiphenyl	76		10 - 132	01/18/17 08:47	01/20/17 11:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	28	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1221	59	U	59	27	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1232	59	U	59	19	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1242	59	U	59	24	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1248	59	U	59	20	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1254	59	U	59	16	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1
Aroclor-1260	59	U	59	21	ug/Kg	☼	01/18/17 08:47	01/20/17 12:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		14 - 128	01/18/17 08:47	01/20/17 12:07	1
DCB Decachlorobiphenyl	96		10 - 132	01/18/17 08:47	01/20/17 12:07	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58	U	58	28	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1221	58	U	58	27	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1232	58	U	58	19	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1242	58	U	58	23	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1248	58	U	58	20	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1254	58	U	58	16	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1
Aroclor-1260	58	U	58	21	ug/Kg	☼	01/18/17 08:47	01/20/17 12:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		14 - 128	01/18/17 08:47	01/20/17 12:25	1
DCB Decachlorobiphenyl	90		10 - 132	01/18/17 08:47	01/20/17 12:25	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	57	U	57	27	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1221	57	U	57	26	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1232	57	U	57	18	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1242	57	U	57	23	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1248	57	U	57	19	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1254	57	U	57	16	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Aroclor-1260	57	U	57	21	ug/Kg	☼	01/18/17 08:47	01/20/17 12:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128				01/18/17 08:47	01/20/17 12:43	1
DCB Decachlorobiphenyl	81		10 - 132				01/18/17 08:47	01/20/17 12:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	28	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1221	59	U	59	27	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1232	59	U	59	19	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1242	59	U	59	24	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1248	59	U	59	20	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1254	59	U	59	17	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1
Aroclor-1260	59	U	59	21	ug/Kg	☼	01/18/17 08:47	01/20/17 13:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		14 - 128	01/18/17 08:47	01/20/17 13:02	1
DCB Decachlorobiphenyl	90		10 - 132	01/18/17 08:47	01/20/17 13:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	60	U	60	29	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1221	60	U	60	28	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1232	60	U	60	19	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1242	60	U	60	24	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1248	60	U	60	20	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1254	60	U	60	17	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Aroclor-1260	60	U	60	22	ug/Kg	☼	01/18/17 08:47	01/20/17 13:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	91		14 - 128				01/18/17 08:47	01/20/17 13:20	1
<i>DCB Decachlorobiphenyl</i>	75		10 - 132				01/18/17 08:47	01/20/17 13:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	69	U	69	8.1	ug/Kg	☼	01/18/17 08:01	01/23/17 12:31	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 12:31	1
Silvex (2,4,5-TP)	69	U	69	6.9	ug/Kg	☼	01/18/17 08:01	01/23/17 12:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	60		19 - 120				01/18/17 08:01	01/23/17 12:31	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	70	U	70	8.2	ug/Kg	☼	01/18/17 08:01	01/23/17 12:55	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 12:55	1
Silvex (2,4,5-TP)	70	U	70	7.0	ug/Kg	☼	01/18/17 08:01	01/23/17 12:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	64		19 - 120				01/18/17 08:01	01/23/17 12:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	71	U	71	8.2	ug/Kg	☼	01/18/17 08:01	01/23/17 13:19	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 13:19	1
Silvex (2,4,5-TP)	71	U	71	7.1	ug/Kg	☼	01/18/17 08:01	01/23/17 13:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	61		19 - 120				01/18/17 08:01	01/23/17 13:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	71	U	71	8.2	ug/Kg	☼	01/18/17 08:01	01/23/17 13:43	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 13:43	1
Silvex (2,4,5-TP)	71	U	71	7.1	ug/Kg	☼	01/18/17 08:01	01/23/17 13:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	72		19 - 120				01/18/17 08:01	01/23/17 13:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	71	U	71	8.3	ug/Kg	☼	01/18/17 08:01	01/23/17 14:32	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 14:32	1
Silvex (2,4,5-TP)	71	U	71	7.1	ug/Kg	☼	01/18/17 08:01	01/23/17 14:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	64		19 - 120				01/18/17 08:01	01/23/17 14:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	70	U	70	8.1	ug/Kg	☼	01/18/17 08:01	01/23/17 14:56	1
2,4-D	280	U	280	35	ug/Kg	☼	01/18/17 08:01	01/23/17 14:56	1
Silvex (2,4,5-TP)	70	U	70	7.0	ug/Kg	☼	01/18/17 08:01	01/23/17 14:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	74		19 - 120				01/18/17 08:01	01/23/17 14:56	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	68	U	68	8.0	ug/Kg	☼	01/18/17 08:01	01/23/17 15:20	1
2,4-D	270	U	270	34	ug/Kg	☼	01/18/17 08:01	01/23/17 15:20	1
Silvex (2,4,5-TP)	68	U	68	6.8	ug/Kg	☼	01/18/17 08:01	01/23/17 15:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	64		19 - 120				01/18/17 08:01	01/23/17 15:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	72	U	72	8.4	ug/Kg	☼	01/18/17 08:01	01/23/17 15:44	1
2,4-D	290	U	290	36	ug/Kg	☼	01/18/17 08:01	01/23/17 15:44	1
Silvex (2,4,5-TP)	72	U	72	7.2	ug/Kg	☼	01/18/17 08:01	01/23/17 15:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	69		19 - 120				01/18/17 08:01	01/23/17 15:44	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	71	U	71	8.3	ug/Kg	☼	01/18/17 08:01	01/23/17 16:09	1
2,4-D	280	U	280	36	ug/Kg	☼	01/18/17 08:01	01/23/17 16:09	1
Silvex (2,4,5-TP)	71	U	71	7.1	ug/Kg	☼	01/18/17 08:01	01/23/17 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		19 - 120				01/18/17 08:01	01/23/17 16:09	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		1.1	0.029	mg/Kg	☼	01/18/17 11:01	01/20/17 17:28	2
Lead	7.8		0.23	0.051	mg/Kg	☼	01/18/17 11:01	01/20/17 17:28	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.97	0.025	mg/Kg	☼	01/18/17 11:01	01/20/17 17:32	2
Lead	8.2		0.19	0.044	mg/Kg	☼	01/18/17 11:01	01/20/17 17:32	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		1.1	0.028	mg/Kg	☼	01/18/17 11:01	01/20/17 17:36	2
Lead	8.7		0.21	0.048	mg/Kg	☼	01/18/17 11:01	01/20/17 17:36	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		1.0	0.026	mg/Kg	☼	01/18/17 11:01	01/20/17 17:40	2
Lead	8.1		0.20	0.045	mg/Kg	☼	01/18/17 11:01	01/20/17 17:40	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.94	0.025	mg/Kg	☼	01/18/17 11:01	01/20/17 17:45	2
Lead	8.8		0.19	0.042	mg/Kg	☼	01/18/17 11:01	01/20/17 17:45	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		1.0	0.026	mg/Kg	☼	01/18/17 11:01	01/20/17 17:49	2
Lead	8.0		0.20	0.046	mg/Kg	☼	01/18/17 11:01	01/20/17 17:49	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		1.1	0.028	mg/Kg	☼	01/18/17 11:01	01/20/17 17:53	2
Lead	8.9		0.22	0.049	mg/Kg	☼	01/18/17 11:01	01/20/17 17:53	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.99	0.026	mg/Kg	☼	01/18/17 11:01	01/20/17 17:57	2
Lead	8.6		0.20	0.044	mg/Kg	☼	01/18/17 11:01	01/20/17 17:57	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		1.0	0.027	mg/Kg	☼	01/18/17 11:01	01/20/17 18:02	2
Lead	7.9		0.21	0.047	mg/Kg	☼	01/18/17 11:01	01/20/17 18:02	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.9		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	15.1		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	14.9		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0317

Date Collected: 01/16/17 10:40

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-3

Matrix: Solid

Percent Solids: 83.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	16.4		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0417

Date Collected: 01/16/17 10:45

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-4

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.3		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	15.7		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0517

Date Collected: 01/16/17 10:50

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-5

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.2		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	15.8		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0617

Date Collected: 01/16/17 10:55

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-6

Matrix: Solid

Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.9		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	14.1		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0717

Date Collected: 01/16/17 11:00

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-7

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.4		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	13.6		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0817

Date Collected: 01/16/17 11:05

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-8

Matrix: Solid

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.1		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	16.9		0.1	0.1	%			01/18/17 10:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Client Sample ID: S-7878-011617-SSH-0917

Date Collected: 01/16/17 11:10

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-9

Matrix: Solid

Percent Solids: 82.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.7		0.1	0.1	%			01/18/17 10:15	1
Percent Moisture	17.3		0.1	0.1	%			01/18/17 10:15	1

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

GC/MS Semi VOA

Prep Batch: 340763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	3550C	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	3550C	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	3550C	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	3550C	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	3550C	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	3550C	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	3550C	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	3550C	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	3550C	
MB 480-340763/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-340763/2-A	Lab Control Sample	Total/NA	Solid	3550C	
240-74450-1 MS	S-7878-011617-SSH-0117	Total/NA	Solid	3550C	
240-74450-1 MSD	S-7878-011617-SSH-0117	Total/NA	Solid	3550C	

Analysis Batch: 340993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	8270D	340763
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	8270D	340763
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	8270D	340763
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	8270D	340763
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	8270D	340763
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	8270D	340763
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	8270D	340763
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	8270D	340763
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	8270D	340763
MB 480-340763/1-A	Method Blank	Total/NA	Solid	8270D	340763
LCS 480-340763/2-A	Lab Control Sample	Total/NA	Solid	8270D	340763
240-74450-1 MS	S-7878-011617-SSH-0117	Total/NA	Solid	8270D	340763
240-74450-1 MSD	S-7878-011617-SSH-0117	Total/NA	Solid	8270D	340763

GC Semi VOA

Prep Batch: 263236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	3546	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	3546	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	3546	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	3546	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	3546	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	3546	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	3546	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	3546	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	3546	
MB 240-263236/12-A	Method Blank	Total/NA	Solid	3546	
LCS 240-263236/13-A	Lab Control Sample	Total/NA	Solid	3546	
240-74450-9 MS	S-7878-011617-SSH-0917	Total/NA	Solid	3546	
240-74450-9 MSD	S-7878-011617-SSH-0917	Total/NA	Solid	3546	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

GC Semi VOA (Continued)

Prep Batch: 263254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	3540C	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	3540C	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	3540C	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	3540C	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	3540C	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	3540C	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	3540C	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	3540C	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	3540C	
MB 240-263254/20-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-263254/21-A	Lab Control Sample	Total/NA	Solid	3540C	

Prep Batch: 263257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	3540C	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	3540C	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	3540C	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	3540C	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	3540C	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	3540C	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	3540C	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	3540C	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	3540C	
MB 240-263257/12-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-263257/13-A	Lab Control Sample	Total/NA	Solid	3540C	
240-74450-1 MS	S-7878-011617-SSH-0117	Total/NA	Solid	3540C	

Analysis Batch: 263585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	8082	263254
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	8082	263254
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	8082	263254
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	8082	263254
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	8082	263254
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	8082	263254
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	8082	263254
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	8082	263254
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	8082	263254
MB 240-263254/20-A	Method Blank	Total/NA	Solid	8082	263254
LCS 240-263254/21-A	Lab Control Sample	Total/NA	Solid	8082	263254

Analysis Batch: 263599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	8081A	263257
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	8081A	263257
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	8081A	263257
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	8081A	263257
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	8081A	263257
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	8081A	263257
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	8081A	263257
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	8081A	263257

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

GC Semi VOA (Continued)

Analysis Batch: 263599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	8081A	263257
MB 240-263257/12-A	Method Blank	Total/NA	Solid	8081A	263257
LCS 240-263257/13-A	Lab Control Sample	Total/NA	Solid	8081A	263257
240-74450-1 MS	S-7878-011617-SSH-0117	Total/NA	Solid	8081A	263257

Analysis Batch: 263800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	8151A	263236
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	8151A	263236
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	8151A	263236
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	8151A	263236
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	8151A	263236
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	8151A	263236
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	8151A	263236
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	8151A	263236
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	8151A	263236
MB 240-263236/12-A	Method Blank	Total/NA	Solid	8151A	263236
LCS 240-263236/13-A	Lab Control Sample	Total/NA	Solid	8151A	263236
240-74450-9 MS	S-7878-011617-SSH-0917	Total/NA	Solid	8151A	263236
240-74450-9 MSD	S-7878-011617-SSH-0917	Total/NA	Solid	8151A	263236

Metals

Prep Batch: 263300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	3050B	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	3050B	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	3050B	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	3050B	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	3050B	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	3050B	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	3050B	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	3050B	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	3050B	
MB 240-263300/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-263300/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 263801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	6020	263300
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	6020	263300
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	6020	263300
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	6020	263300
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	6020	263300
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	6020	263300
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	6020	263300
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	6020	263300
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	6020	263300
MB 240-263300/1-A ^2	Method Blank	Total/NA	Solid	6020	263300
LCS 240-263300/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	263300

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

General Chemistry

Analysis Batch: 263282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-74450-1	S-7878-011617-SSH-0117	Total/NA	Solid	Moisture	
240-74450-2	S-7878-011617-SSH-0217	Total/NA	Solid	Moisture	
240-74450-3	S-7878-011617-SSH-0317	Total/NA	Solid	Moisture	
240-74450-4	S-7878-011617-SSH-0417	Total/NA	Solid	Moisture	
240-74450-5	S-7878-011617-SSH-0517	Total/NA	Solid	Moisture	
240-74450-6	S-7878-011617-SSH-0617	Total/NA	Solid	Moisture	
240-74450-7	S-7878-011617-SSH-0717	Total/NA	Solid	Moisture	
240-74450-8	S-7878-011617-SSH-0817	Total/NA	Solid	Moisture	
240-74450-9	S-7878-011617-SSH-0917	Total/NA	Solid	Moisture	
240-74450-8 DU	S-7878-011617-SSH-0817	Total/NA	Solid	Moisture	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-340763/1-A
Matrix: Solid
Analysis Batch: 340993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	330	U	330	85	ug/Kg		01/20/17 07:44	01/23/17 13:30	1
Atrazine	170	U	170	59	ug/Kg		01/20/17 07:44	01/23/17 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		54 - 120	01/20/17 07:44	01/23/17 13:30	1
2-Fluorobiphenyl	80		60 - 120	01/20/17 07:44	01/23/17 13:30	1
2-Fluorophenol (Surr)	72		52 - 120	01/20/17 07:44	01/23/17 13:30	1
Nitrobenzene-d5 (Surr)	70		53 - 120	01/20/17 07:44	01/23/17 13:30	1
p-Terphenyl-d14 (Surr)	94		65 - 121	01/20/17 07:44	01/23/17 13:30	1
Phenol-d5 (Surr)	74		54 - 120	01/20/17 07:44	01/23/17 13:30	1

Lab Sample ID: LCS 480-340763/2-A
Matrix: Solid
Analysis Batch: 340993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Atrazine	3280	2610		ug/Kg		80	60 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	80		54 - 120
2-Fluorobiphenyl	80		60 - 120
2-Fluorophenol (Surr)	76		52 - 120
Nitrobenzene-d5 (Surr)	83		53 - 120
p-Terphenyl-d14 (Surr)	87		65 - 121
Phenol-d5 (Surr)	76		54 - 120

Lab Sample ID: 240-74450-1 MS
Matrix: Solid
Analysis Batch: 340993

Client Sample ID: S-7878-011617-SSH-0117
Prep Type: Total/NA
Prep Batch: 340763

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Atrazine	200	U	3910	3140		ug/Kg	☼	80	60 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	85		54 - 120
2-Fluorobiphenyl	79		60 - 120
2-Fluorophenol (Surr)	71		52 - 120
Nitrobenzene-d5 (Surr)	82		53 - 120
p-Terphenyl-d14 (Surr)	85		65 - 121
Phenol-d5 (Surr)	71		54 - 120

Lab Sample ID: 240-74450-1 MSD
Matrix: Solid
Analysis Batch: 340993

Client Sample ID: S-7878-011617-SSH-0117
Prep Type: Total/NA
Prep Batch: 340763

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Atrazine	200	U	3830	3100		ug/Kg	☼	81	60 - 150	1	20

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-74450-1 MSD
Matrix: Solid
Analysis Batch: 340993

Client Sample ID: S-7878-011617-SSH-0117
Prep Type: Total/NA
Prep Batch: 340763

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		54 - 120
2-Fluorobiphenyl	77		60 - 120
2-Fluorophenol (Surr)	69		52 - 120
Nitrobenzene-d5 (Surr)	78		53 - 120
p-Terphenyl-d14 (Surr)	76		65 - 121
Phenol-d5 (Surr)	73		54 - 120

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-263257/12-A
Matrix: Solid
Analysis Batch: 263599

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.1	U	5.1	3.3	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
4,4'-DDE	5.1	U	5.1	1.2	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
4,4'-DDT	5.1	U	5.1	1.4	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Aldrin	5.1	U	5.1	2.4	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
alpha-BHC	5.1	U	5.1	1.6	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
alpha-Chlordane	5.1	U	5.1	3.8	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
beta-BHC	5.1	U	5.1	3.9	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
delta-BHC	5.1	U	5.1	1.3	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Dieldrin	5.1	U	5.1	0.90	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endosulfan I	5.1	U	5.1	1.3	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endosulfan II	5.1	U	5.1	1.8	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endosulfan sulfate	5.1	U	5.1	1.2	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endrin	5.1	U	5.1	1.4	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endrin aldehyde	5.1	U	5.1	1.8	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Endrin ketone	5.1	U	5.1	1.1	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
gamma-BHC (Lindane)	5.1	U	5.1	2.9	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
gamma-Chlordane	5.1	U	5.1	1.5	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Heptachlor	5.1	U	5.1	0.78	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Heptachlor epoxide	5.1	U	5.1	2.4	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Methoxychlor	9.9	U	9.9	1.2	ug/Kg		01/18/17 09:28	01/20/17 11:48	1
Toxaphene	100	U	100	37	ug/Kg		01/18/17 09:28	01/20/17 11:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	76		13 - 135	01/18/17 09:28	01/20/17 11:48	1
Tetrachloro-m-xylene	74		30 - 120	01/18/17 09:28	01/20/17 11:48	1

Lab Sample ID: LCS 240-263257/13-A
Matrix: Solid
Analysis Batch: 263599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	100	67.6		ug/Kg		68	48 - 120
4,4'-DDE	100	66.8		ug/Kg		67	46 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-263257/13-A
Matrix: Solid
Analysis Batch: 263599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDT	100	67.7		ug/Kg		68	48 - 120
Aldrin	100	60.1		ug/Kg		60	36 - 120
alpha-BHC	100	66.2		ug/Kg		66	48 - 120
alpha-Chlordane	100	68.3		ug/Kg		68	44 - 120
beta-BHC	100	60.7		ug/Kg		61	45 - 120
delta-BHC	100	52.2		ug/Kg		52	33 - 120
Dieldrin	100	68.9		ug/Kg		69	47 - 120
Endosulfan I	100	48.6		ug/Kg		49	28 - 120
Endosulfan II	100	54.0		ug/Kg		54	39 - 120
Endosulfan sulfate	100	58.1		ug/Kg		58	46 - 120
Endrin	100	71.0		ug/Kg		71	28 - 136
Endrin aldehyde	100	59.4		ug/Kg		59	38 - 120
Endrin ketone	100	64.1		ug/Kg		64	44 - 120
gamma-BHC (Lindane)	100	64.8		ug/Kg		65	39 - 120
gamma-Chlordane	100	70.3		ug/Kg		70	46 - 120
Heptachlor	100	68.3		ug/Kg		68	48 - 120
Heptachlor epoxide	100	71.4		ug/Kg		71	51 - 120
Methoxychlor	100	62.4		ug/Kg		62	38 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	58		13 - 135
Tetrachloro-m-xylene	86		30 - 120

Lab Sample ID: 240-74450-1 MS
Matrix: Solid
Analysis Batch: 263599

Client Sample ID: S-7878-011617-SSH-0117
Prep Type: Total/NA
Prep Batch: 263257

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	5.9	U F1 F2	116	78.5	p	ug/Kg	☼	67	27 - 120
4,4'-DDE	5.9	U	116	72.2	p	ug/Kg	☼	62	25 - 120
4,4'-DDT	5.9	U	116	78.8	p	ug/Kg	☼	68	19 - 125
Aldrin	5.9	U	116	62.4	p	ug/Kg	☼	54	15 - 120
alpha-BHC	5.9	U	116	82.7	p	ug/Kg	☼	71	30 - 120
alpha-Chlordane	5.9	U	116	63.0	p	ug/Kg	☼	54	28 - 120
beta-BHC	5.9	U	116	69.3	p	ug/Kg	☼	60	20 - 120
delta-BHC	5.9	U	116	65.1		ug/Kg	☼	56	20 - 120
Dieldrin	5.9	U	116	75.8	p	ug/Kg	☼	65	29 - 120
Endosulfan I	5.9	U	116	49.9	p	ug/Kg	☼	43	10 - 120
Endosulfan II	5.9	U F2	116	60.7	p	ug/Kg	☼	52	21 - 120
Endosulfan sulfate	5.9	U F1 F2	116	67.7	p	ug/Kg	☼	58	27 - 120
Endrin	5.9	U F2	116	80.5	p	ug/Kg	☼	69	26 - 129
Endrin aldehyde	5.9	U F2	116	66.0	p	ug/Kg	☼	57	18 - 120
Endrin ketone	5.9	U F1 F2	116	71.4	p	ug/Kg	☼	61	28 - 120
gamma-BHC (Lindane)	5.9	U	116	78.6		ug/Kg	☼	68	27 - 120
gamma-Chlordane	5.9	U	116	76.1		ug/Kg	☼	65	29 - 120
Heptachlor	5.9	U	116	73.9		ug/Kg	☼	64	35 - 120
Heptachlor epoxide	5.9	U	116	76.0		ug/Kg	☼	65	32 - 120
Methoxychlor	12	U F1 F2	116	71.2	p	ug/Kg	☼	61	26 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	50	p	13 - 135
Tetrachloro-m-xylene	78		30 - 120

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-263254/20-A
Matrix: Solid
Analysis Batch: 263585

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263254

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	50	U	50	24	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1221	50	U	50	23	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1232	50	U	50	16	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1242	50	U	50	20	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1248	50	U	50	17	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1254	50	U	50	14	ug/Kg		01/18/17 08:47	01/20/17 14:34	1
Aroclor-1260	50	U	50	18	ug/Kg		01/18/17 08:47	01/20/17 14:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	65		14 - 128	01/18/17 08:47	01/20/17 14:34	1
DCB Decachlorobiphenyl	63		10 - 132	01/18/17 08:47	01/20/17 14:34	1

Lab Sample ID: LCS 240-263254/21-A
Matrix: Solid
Analysis Batch: 263585

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263254
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1260	1000	786		ug/Kg		79	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	86		14 - 128
DCB Decachlorobiphenyl	62		10 - 132

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-263236/12-A
Matrix: Solid
Analysis Batch: 263800

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263236

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4,5-T	60	U	60	7.0	ug/Kg		01/18/17 08:01	01/23/17 11:42	1
2,4-D	240	U	240	30	ug/Kg		01/18/17 08:01	01/23/17 11:42	1
Silvex (2,4,5-TP)	60	U	60	6.0	ug/Kg		01/18/17 08:01	01/23/17 11:42	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4-Dichlorophenylacetic acid	70		19 - 120	01/18/17 08:01	01/23/17 11:42	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-263236/13-A

Matrix: Solid
Analysis Batch: 263800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263236

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	250	200		ug/Kg		80	51 - 134
2,4-D	1000	1070		ug/Kg		107	55 - 120
Silvex (2,4,5-TP)	250	187		ug/Kg		75	57 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	80		19 - 120

Lab Sample ID: 240-74450-9 MS

Matrix: Solid
Analysis Batch: 263800

Client Sample ID: S-7878-011617-SSH-0917
Prep Type: Total/NA
Prep Batch: 263236

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	71	U	297	242		ug/Kg	☼	81	30 - 120
2,4-D	280	U	1190	1260		ug/Kg	☼	106	26 - 120
Silvex (2,4,5-TP)	71	U	297	234		ug/Kg	☼	79	32 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4-Dichlorophenylacetic acid	83		19 - 120

Lab Sample ID: 240-74450-9 MSD

Matrix: Solid
Analysis Batch: 263800

Client Sample ID: S-7878-011617-SSH-0917
Prep Type: Total/NA
Prep Batch: 263236

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-T	71	U	297	230		ug/Kg	☼	77	30 - 120	5	40
2,4-D	280	U	1190	1200		ug/Kg	☼	101	26 - 120	5	40
Silvex (2,4,5-TP)	71	U	297	223		ug/Kg	☼	75	32 - 120	5	37

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	79		19 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-263300/1-A ^2

Matrix: Solid
Analysis Batch: 263801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 263300

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	U	1.0	0.026	mg/Kg		01/18/17 11:01	01/20/17 16:21	2
Lead	0.20	U	0.20	0.045	mg/Kg		01/18/17 11:01	01/20/17 16:21	2

Lab Sample ID: LCS 240-263300/3-A ^2

Matrix: Solid
Analysis Batch: 263801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263300

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	100	81.2		mg/Kg		81	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-263300/3-A ^2
Matrix: Solid
Analysis Batch: 263801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 263300
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	100	104		mg/Kg		104	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 240-74450-8 DU
Matrix: Solid
Analysis Batch: 263282

Client Sample ID: S-7878-011617-SSH-0817
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	83.1		83.6		%		0.6	20
Percent Moisture	16.9		16.4		%		3	20

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	TPH (65-121)	PHL (54-120)
240-74450-1	S-7878-011617-SSH-0117	75	75	73	69	87	73
240-74450-1 MS	S-7878-011617-SSH-0117	85	79	71	82	85	71
240-74450-1 MSD	S-7878-011617-SSH-0117	79	77	69	78	76	73
240-74450-2	S-7878-011617-SSH-0217	70	67	73	67	79	74
240-74450-3	S-7878-011617-SSH-0317	74	74	75	70	85	76
240-74450-4	S-7878-011617-SSH-0417	70	68	70	67	76	72
240-74450-5	S-7878-011617-SSH-0517	67	70	70	68	76	71
240-74450-6	S-7878-011617-SSH-0617	72	73	69	69	88	71
240-74450-7	S-7878-011617-SSH-0717	83	80	74	67	86	75
240-74450-8	S-7878-011617-SSH-0817	71	75	69	69	90	71
240-74450-9	S-7878-011617-SSH-0917	69	68	70	66	84	70
LCS 480-340763/2-A	Lab Control Sample	80	80	76	83	87	76
MB 480-340763/1-A	Method Blank	69	80	72	70	94	74

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (13-135)	DCB2 (13-135)	TCX1 (30-120)	TCX2 (30-120)
240-74450-1	S-7878-011617-SSH-0117	61	82	82	115
240-74450-1 MS	S-7878-011617-SSH-0117	50 p	92	78	100
240-74450-2	S-7878-011617-SSH-0217	52	78	81	80
240-74450-3	S-7878-011617-SSH-0317	58	76	63	87
240-74450-4	S-7878-011617-SSH-0417	68	81	100	87
240-74450-5	S-7878-011617-SSH-0517	66	84	67	84
240-74450-6	S-7878-011617-SSH-0617	63	76	87	81
240-74450-7	S-7878-011617-SSH-0717	50	61	67	70
240-74450-8	S-7878-011617-SSH-0817	67	79	90	95
240-74450-9	S-7878-011617-SSH-0917	56	81	77	92
LCS 240-263257/13-A	Lab Control Sample	58	76	86	72
MB 240-263257/12-A	Method Blank	76	79	74	65

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (14-128)	DCB1 (10-132)
240-74450-1	S-7878-011617-SSH-0117	109	89
240-74450-2	S-7878-011617-SSH-0217	86	82
240-74450-3	S-7878-011617-SSH-0317	88	85
240-74450-4	S-7878-011617-SSH-0417	78	76
240-74450-5	S-7878-011617-SSH-0517	82	96
240-74450-6	S-7878-011617-SSH-0617	97	90
240-74450-7	S-7878-011617-SSH-0717	88	81
240-74450-8	S-7878-011617-SSH-0817	100	90
240-74450-9	S-7878-011617-SSH-0917	91	75
LCS 240-263254/21-A	Lab Control Sample	86	62
MB 240-263254/20-A	Method Blank	65	63

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPA1 (19-120)	DCPA2 (19-120)
240-74450-1	S-7878-011617-SSH-0117	57	60
240-74450-2	S-7878-011617-SSH-0217	62	64
240-74450-3	S-7878-011617-SSH-0317	57	61
240-74450-4	S-7878-011617-SSH-0417	70	72
240-74450-5	S-7878-011617-SSH-0517	62	64
240-74450-6	S-7878-011617-SSH-0617	72	74
240-74450-7	S-7878-011617-SSH-0717	61	64
240-74450-8	S-7878-011617-SSH-0817	65	69
240-74450-9	S-7878-011617-SSH-0917	59	63
240-74450-9 MS	S-7878-011617-SSH-0917	77	83
240-74450-9 MSD	S-7878-011617-SSH-0917	75	79
LCS 240-263236/13-A	Lab Control Sample	76	80
MB 240-263236/12-A	Method Blank	65	70

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0117

Date Collected: 01/16/17 10:30

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-1

Matrix: Solid

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 15:14	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 12:37	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 10:53	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 12:31	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:28	AS1	TAL CAN

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0217

Date Collected: 01/16/17 10:35

Date Received: 01/17/17 09:30

Lab Sample ID: 240-74450-2

Matrix: Solid

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 15:40	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 13:50	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 11:11	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 12:55	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:32	AS1	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0317

Lab Sample ID: 240-74450-3

Date Collected: 01/16/17 10:40

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0317

Lab Sample ID: 240-74450-3

Date Collected: 01/16/17 10:40

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 16:06	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 14:14	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 11:30	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 13:19	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:36	AS1	TAL CAN

Client Sample ID: S-7878-011617-SSH-0417

Lab Sample ID: 240-74450-4

Date Collected: 01/16/17 10:45

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0417

Lab Sample ID: 240-74450-4

Date Collected: 01/16/17 10:45

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 16:32	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 14:40	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 11:48	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 13:43	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:40	AS1	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0517

Lab Sample ID: 240-74450-5

Date Collected: 01/16/17 10:50

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0517

Lab Sample ID: 240-74450-5

Date Collected: 01/16/17 10:50

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 84.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 16:58	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 15:04	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 12:07	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 14:32	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:45	AS1	TAL CAN

Client Sample ID: S-7878-011617-SSH-0617

Lab Sample ID: 240-74450-6

Date Collected: 01/16/17 10:55

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0617

Lab Sample ID: 240-74450-6

Date Collected: 01/16/17 10:55

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 17:24	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 15:29	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 12:25	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 14:56	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:49	AS1	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0717

Lab Sample ID: 240-74450-7

Date Collected: 01/16/17 11:00

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0717

Lab Sample ID: 240-74450-7

Date Collected: 01/16/17 11:00

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		5	340993	01/23/17 17:50	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 15:53	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 12:43	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 15:20	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:53	AS1	TAL CAN

Client Sample ID: S-7878-011617-SSH-0817

Lab Sample ID: 240-74450-8

Date Collected: 01/16/17 11:05

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0817

Lab Sample ID: 240-74450-8

Date Collected: 01/16/17 11:05

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 18:17	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 16:17	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 13:02	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 15:44	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 17:57	AS1	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Client Sample ID: S-7878-011617-SSH-0917

Lab Sample ID: 240-74450-9

Date Collected: 01/16/17 11:10

Matrix: Solid

Date Received: 01/17/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	263282	01/18/17 10:15	JWW	TAL CAN

Client Sample ID: S-7878-011617-SSH-0917

Lab Sample ID: 240-74450-9

Date Collected: 01/16/17 11:10

Matrix: Solid

Date Received: 01/17/17 09:30

Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			340763	01/20/17 07:44	RJS	TAL BUF
Total/NA	Analysis	8270D		1	340993	01/23/17 18:43	LMW	TAL BUF
Total/NA	Prep	3540C			263257	01/18/17 09:28	SDE	TAL CAN
Total/NA	Analysis	8081A		1	263599	01/20/17 16:42	BPM	TAL CAN
Total/NA	Prep	3540C			263254	01/18/17 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	263585	01/20/17 13:20	LSH	TAL CAN
Total/NA	Prep	3546			263236	01/18/17 08:01	SDE	TAL CAN
Total/NA	Analysis	8151A		1	263800	01/23/17 16:09	RTR	TAL CAN
Total/NA	Prep	3050B			263300	01/18/17 11:01	DEE	TAL CAN
Total/NA	Analysis	6020		2	263801	01/20/17 18:02	AS1	TAL CAN

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2927	04-30-17 *
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17
Illinois	NELAP	5	200004	07-31-17
Kansas	NELAP	7	E-10336	01-31-17 *
Kentucky (UST)	State Program	4	58	02-23-17 *
Kentucky (WW)	State Program	4	98016	12-31-16 *
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17
Nevada	State Program	9	OH-000482008A	07-31-17
New Jersey	NELAP	2	OH001	06-30-17
New York	NELAP	2	10975	03-31-17 *
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17 *
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-17
California	State Program	9	1169CA	09-30-17
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-17
Georgia	State Program	4	N/A	03-31-17 *
Georgia	State Program	4	956	03-31-17 *
Illinois	NELAP	5	200003	09-30-17
Iowa	State Program	7	374	03-01-17 *
Kansas	NELAP	7	E-10187	11-30-16 *
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-17 *
Kentucky (WW)	State Program	4	90029	12-31-16 *
Louisiana	NELAP	6	02031	06-30-17
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-17 *
Massachusetts	State Program	1	M-NY044	06-30-17
Michigan	State Program	5	9937	03-31-17 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP Primary AB	1	2973	09-11-17
New Hampshire	NELAP Secondary AB	1	2337	11-17-17
New Jersey	NELAP	2	NY455	06-30-17
New York	NELAP	2	10026	03-31-17 *
North Dakota	State Program	8	R-176	03-31-17 *
Oklahoma	State Program	6	9421	08-31-17

* Certification renewal pending - certification considered valid.

TestAmerica Canton

Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-74450-1

Laboratory: TestAmerica Buffalo (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	NY200003	06-09-17
Pennsylvania	NELAP	3	68-00281	07-31-17
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-17 *
Texas	NELAP	6	T104704412-15-6	07-31-17
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-17
Washington	State Program	10	C784	02-10-17 *
West Virginia DEP	State Program	3	252	09-30-16 *
Wisconsin	State Program	5	998310390	08-31-17

* Certification renewal pending - certification considered valid.

TestAmerica Canton

TESTAMERICA MICHIGAN
 10448 Citation Drive
 Suite 200
 Brighton, MI 48116
 Phone: 810.229.2763 Fax:

0.2/CO2 Chain of Custody Record

190036

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:
 Project Manager: M. Tomlg
 Tel/Fax: 519 884 0510
 Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Client Contact
 Company Name: GHD
 Address: 14416 N. Sheldon Rd
 City/State/Zip: Plymouth, MI 48170
 Phone: 734 453 5123
 Fax:
 Project Name: Racer Trust SMI
 Site: 727B-T01-014
 PO #: 24006918

Site Contact: J. Parlys Date: 1/16/17
 Lab Contact: A. Heckler Carrier: FedEx
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs	SVOCs	pest	Heb.	arsenic	Lead	Sample Specific Notes:
S-7878-011617-SSH-0117	1/16/17	1030	G	SD	W		X	X	X	X	X	X	
-0217		1035	G	SD	W		X	X	X	X	X	X	
-0317		1040	G	SD	W		X	X	X	X	X	X	
-0417		1045	G	SD	W		X	X	X	X	X	X	
-0517		1050	G	SD	W		X	X	X	X	X	X	
-0617		1055	G	SD	W		X	X	X	X	X	X	
-0717		1100	G	SD	W		X	X	X	X	X	X	
-0817		1105	G	SD	W		X	X	X	X	X	X	
S-7878-011617-SSH-0917		1110	G	SD	W		X	X	X	X	X	X	



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other
 Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments: TAT - 1 week

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Received by: GHD Date/Time: 1/16/17 1600
 Company: GHD
 Received in Laboratory by: [Signature] Date/Time: 1/17/17 930
 Company: TAC

Therm ID No.:
 Cooler Temp. (°C): Obs'd: Corr'd:



TestAmerica Canton Sample Receipt Form/Narrative Login # : _____

Canton Facility

Client GHD Site Name _____ Cooler unpacked by: POP

Cooler Received on 1-17-17 Opened on 1-17-17

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

See Multiple Cooler Form

- Cooler temperature upon receipt
 IR GUN# IR-8 (CF +0 °C) Observed Cooler Temp. 0.2 °C Corrected Cooler Temp. 0.2 °C
 IR GUN #36 (CF +1.1°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels be reconciled with the COC? Yes No
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- Are these work share samples? Yes No
 If yes, Questions 11-15 have been checked at the originating laboratory.
- Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC682547
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials? Yes No NA
- Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- Was a LL Hg or Me Hg trip blank present? _____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-74450-1

Login Number: 74450
List Number: 2
Creator: Hulbert, Michael J

List Source: TestAmerica Buffalo
List Creation: 01/19/17 03:50 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7 #1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	



Attachment B.4 Topsoil Analytical Results Source 2



Memorandum

April 20, 2017

To: Dave Favero (RACER)

Ref. No.: 007878

From: *J.E.P.*
John-eric Pardys/kf/164

Subject: Topsoil Characterization

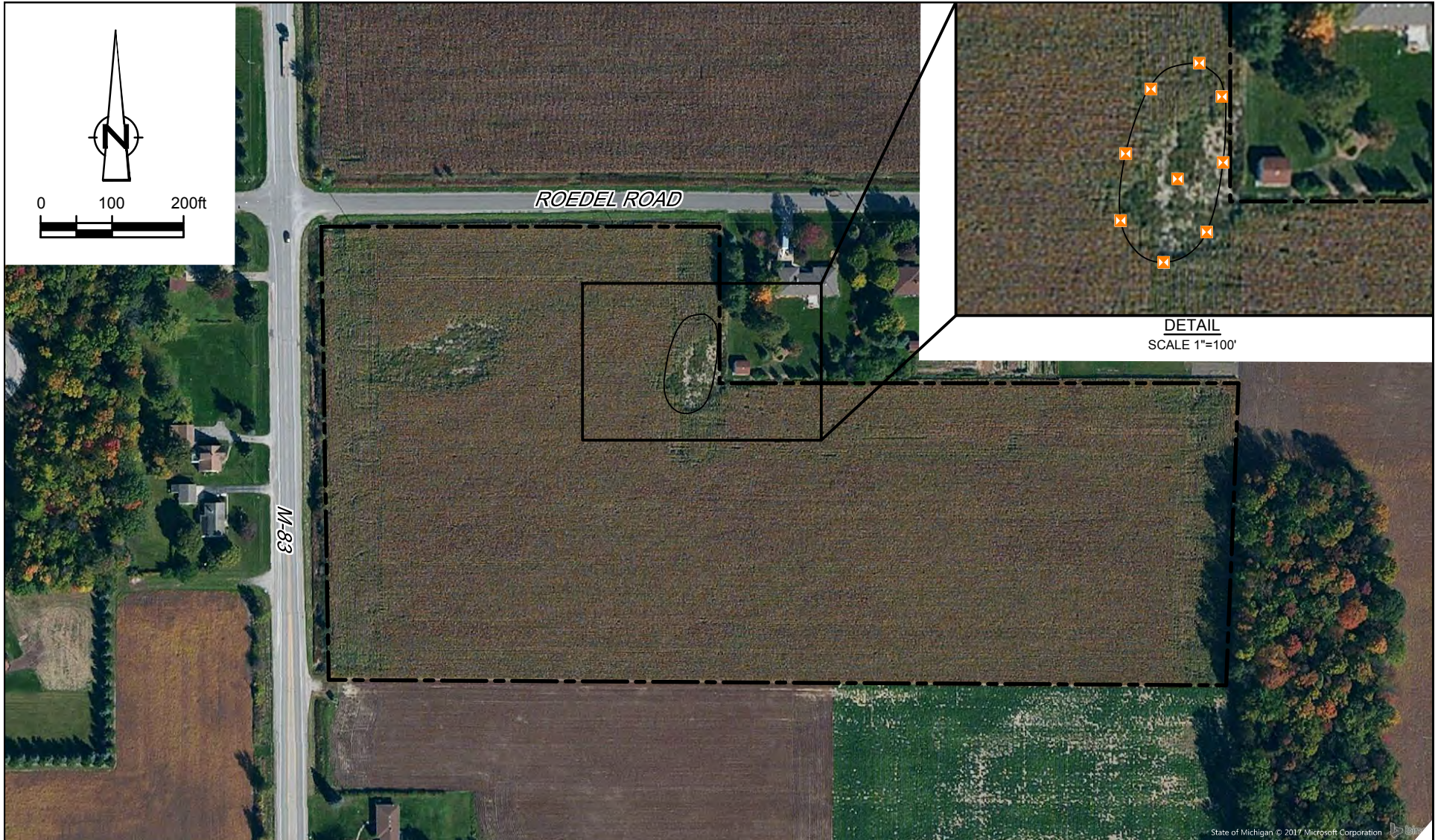
JSS identified a potential source of topsoil to be used at RACER's Saginaw Malleable Industrial Land (Site), in Saginaw, Michigan. The potential topsoil source is located at the intersection of Roedel Road and M-83, Frankenmuth, Michigan as shown in Figure 1. JSS's topsoil subcontractor provided a letter indicating that this land has been virgin farmland for the past 50 years and that historical records do not identify and other land uses (Attachment A).

On, January 12, 2017, GHD reached out to MDEQ to obtain concurrence on an acceptable approach to characterizing the topsoil. On, January 13, 2017, MDEQ provided their concurrence on the approach to characterizing the topsoil which included: collecting 9 discrete samples of the topsoil and analyzing for Pesticides (Method SW 846 8081), Herbicides (Method SW 846 8151), Atrazine and Alachlor (Method SW 846 8270), and Arsenic and Lead (Method 6020).

On April 5, 2017, GHD conducted a Site visit to inspect the topsoil pile and collect 9 discrete samples. Photos of the stockpile are included in Attachment B. The topsoil stockpile was approximately 150' x 60' x 30'. Field staff dug into the pile before collecting the samples. Samples were collected at eight locations surrounding the pile and one sample was collected from the top of the pile. The approximate locations of the samples collected are identified on Figure 1. Samples were submitted to the laboratory on a 1-week turn.

There were no detections reported for pesticides or herbicides. The only detections were for arsenic ranging between 2.7 to 5.0 mg/kg, which is below the statewide default background level (5.8 mg/kg) and lead ranging between 7.9 to 12 mg/kg, which is below the statewide default background level (21 mg/kg). A copy of the analytical report is provided in Attachment C.

Therefore, based on the characterization results, the topsoil is suitable for use at the Site.



Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date Jun/2011 - Oct/2011, Accessed: 2017

State of Michigan © 2017 Microsoft Corporation

figure 1

TOPSOIL SOURCE

INTERSECTION OF ROEDEL ROAD AND M-83, FRANKENMUTH, MICHIGAN

Racer Saginaw Malleable Industrial Land



- LEGEND**
- APPROXIMATE PROPERTY BOUNDARY
 - ✕ TOPSOIL DISCRETE SAMPLE LOCATION

Attachment A

EGGERS EXCAVATING, LLC
PO Box 5908
Saginaw, MI 48603
(989) 695-5205

April 12, 2017

RE: Letter of Virgin Source

To Whom It May Concern:

Eggers Excavating, LLC recently purchased an estimated volume of 8,000 ton of topsoil from a piece of property located at the southeast corner of Roedel Road and M83, Frankenmuth, Michigan. A formal street address has not been assigned at this time. The legal description for the site is: COM AT NW CORN OF SEC 23 TH E 618.89 FT TH S 250.02 FT TH E 715.16 FT TH S 418.98 FT TH W 1334.24 FT TO W SEC LINE TH N 669.37 FT TO POB 16.39 ACRES SEC 23 T11N R6E. The site is being developed as commercial property. Part of the development process is to remove the upper portion of the site soil which is topsoil. This site has been virgin farmland for over the past 50 years.

Historical records indicate that the land has never been utilized for any other purpose.

If you should have any further questions please feel free to call me at (989) 220-1514.

Respectfully Submitted,

EGGERS EXCAVATING LLC



Bill Slaughter
VP of Operations

Attachment B



Photo 1 Topsoil Stockpile. Date – 4/05/2017



Photo 2 Topsoil Stockpile. Date – 4/05/2017





Photo 3 Topsoil Stockpile. Date – 4/05/2017





Photo 4 Topsoil Stockpile. Date – 4/05/2016

Attachment C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-77758-1

Client Project/Site: 7878, RACER SMI

For:

GHD Services Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Ms. Ruth Mickle



Authorized for release by:

4/13/2017 1:02:07 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Job ID: 240-77758-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-77758-1

Comments

No additional comments.

Receipt

The samples were received on 4/6/2017 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8151A: The continuing calibration verification (CCV) associated with batch 240-274329 recovered above the upper control limit for 2,4,5-T, 2,4-D and Silvex (2,4,5-TP). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: S-7878-040517-SSH-HA06 (240-77758-6), S-7878-040517-SSH-HA07 (240-77758-7), S-7878-040517-SSH-HA08 (240-77758-8), S-7878-040517-SSH-HA09 (240-77758-9) and S-7878-040517-SSH-HA10 (240-77758-10).

Method(s) 8151A: The continuing calibration verification (CCV) associated with batch 240-274329 recovered above the upper control limit for Silvex (2,4,5-TP). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: S-7878-040517-SSH-HA01 (240-77758-1), S-7878-040517-SSH-HA02 (240-77758-2), S-7878-040517-SSH-HA03 (240-77758-3), S-7878-040517-SSH-HA04 (240-77758-4) and S-7878-040517-SSH-HA05 (240-77758-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-77758-1	S-7878-040517-SSH-HA01	Solid	04/05/17 11:05	04/06/17 09:15
240-77758-2	S-7878-040517-SSH-HA02	Solid	04/05/17 11:10	04/06/17 09:15
240-77758-3	S-7878-040517-SSH-HA03	Solid	04/05/17 11:15	04/06/17 09:15
240-77758-4	S-7878-040517-SSH-HA04	Solid	04/05/17 11:16	04/06/17 09:15
240-77758-5	S-7878-040517-SSH-HA05	Solid	04/05/17 11:25	04/06/17 09:15
240-77758-6	S-7878-040517-SSH-HA06	Solid	04/05/17 11:30	04/06/17 09:15
240-77758-7	S-7878-040517-SSH-HA07	Solid	04/05/17 11:40	04/06/17 09:15
240-77758-8	S-7878-040517-SSH-HA08	Solid	04/05/17 11:45	04/06/17 09:15
240-77758-9	S-7878-040517-SSH-HA09	Solid	04/05/17 11:50	04/06/17 09:15
240-77758-10	S-7878-040517-SSH-HA10	Solid	04/05/17 11:55	04/06/17 09:15



Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA01

Lab Sample ID: 240-77758-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.4		1.1	0.030	mg/Kg	2	☼	6020	Total/NA
Lead	11		0.23	0.052	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA02

Lab Sample ID: 240-77758-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.8		0.93	0.024	mg/Kg	2	☼	6020	Total/NA
Lead	11		0.19	0.042	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA03

Lab Sample ID: 240-77758-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.0		1.2	0.030	mg/Kg	2	☼	6020	Total/NA
Lead	11		0.23	0.052	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA04

Lab Sample ID: 240-77758-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.7		0.91	0.024	mg/Kg	2	☼	6020	Total/NA
Lead	11		0.18	0.041	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA05

Lab Sample ID: 240-77758-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5		1.2	0.031	mg/Kg	2	☼	6020	Total/NA
Lead	12		0.24	0.053	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA06

Lab Sample ID: 240-77758-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.1		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Lead	12		0.21	0.048	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA07

Lab Sample ID: 240-77758-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.9		1.1	0.029	mg/Kg	2	☼	6020	Total/NA
Lead	7.9		0.22	0.050	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA08

Lab Sample ID: 240-77758-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.7		1.1	0.028	mg/Kg	2	☼	6020	Total/NA
Lead	11		0.21	0.048	mg/Kg	2	☼	6020	Total/NA

Client Sample ID: S-7878-040517-SSH-HA09

Lab Sample ID: 240-77758-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.4		0.88	0.023	mg/Kg	2	☼	6020	Total/NA
Lead	9.7		0.18	0.040	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA10

Lab Sample ID: 240-77758-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.8		0.89	0.023	mg/Kg	2	☼	6020	Total/NA
Lead	9.0		0.18	0.040	mg/Kg	2	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

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Method Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8081A	Organochlorine Pesticides (GC)	SW846	TAL CAN
8151A	Herbicides (GC)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA01

Date Collected: 04/05/17 11:05

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-1

Matrix: Solid

Percent Solids: 80.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 12:27	1
Atrazine	210	U	210	72	ug/Kg	☼	04/10/17 14:12	04/11/17 12:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		54 - 120				04/10/17 14:12	04/11/17 12:27	1
2-Fluorobiphenyl	78		60 - 120				04/10/17 14:12	04/11/17 12:27	1
2-Fluorophenol (Surr)	64		52 - 120				04/10/17 14:12	04/11/17 12:27	1
Nitrobenzene-d5 (Surr)	69		53 - 120				04/10/17 14:12	04/11/17 12:27	1
p-Terphenyl-d14 (Surr)	86		65 - 121				04/10/17 14:12	04/11/17 12:27	1
Phenol-d5 (Surr)	69		54 - 120				04/10/17 14:12	04/11/17 12:27	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA02

Date Collected: 04/05/17 11:10

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-2

Matrix: Solid

Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 12:53	1
Atrazine	210	U	210	71	ug/Kg	☼	04/10/17 14:12	04/11/17 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		54 - 120	04/10/17 14:12	04/11/17 12:53	1
2-Fluorobiphenyl	75		60 - 120	04/10/17 14:12	04/11/17 12:53	1
2-Fluorophenol (Surr)	66		52 - 120	04/10/17 14:12	04/11/17 12:53	1
Nitrobenzene-d5 (Surr)	69		53 - 120	04/10/17 14:12	04/11/17 12:53	1
p-Terphenyl-d14 (Surr)	81		65 - 121	04/10/17 14:12	04/11/17 12:53	1
Phenol-d5 (Surr)	70		54 - 120	04/10/17 14:12	04/11/17 12:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA03

Date Collected: 04/05/17 11:15

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-3

Matrix: Solid

Percent Solids: 81.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 13:20	1
Atrazine	210	U	210	71	ug/Kg	☼	04/10/17 14:12	04/11/17 13:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		54 - 120	04/10/17 14:12	04/11/17 13:20	1
2-Fluorobiphenyl	76		60 - 120	04/10/17 14:12	04/11/17 13:20	1
2-Fluorophenol (Surr)	71		52 - 120	04/10/17 14:12	04/11/17 13:20	1
Nitrobenzene-d5 (Surr)	71		53 - 120	04/10/17 14:12	04/11/17 13:20	1
p-Terphenyl-d14 (Surr)	85		65 - 121	04/10/17 14:12	04/11/17 13:20	1
Phenol-d5 (Surr)	75		54 - 120	04/10/17 14:12	04/11/17 13:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA04

Date Collected: 04/05/17 11:16

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-4

Matrix: Solid

Percent Solids: 80.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 13:46	1
Atrazine	210	U	210	71	ug/Kg	☼	04/10/17 14:12	04/11/17 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		54 - 120	04/10/17 14:12	04/11/17 13:46	1
2-Fluorobiphenyl	78		60 - 120	04/10/17 14:12	04/11/17 13:46	1
2-Fluorophenol (Surr)	70		52 - 120	04/10/17 14:12	04/11/17 13:46	1
Nitrobenzene-d5 (Surr)	73		53 - 120	04/10/17 14:12	04/11/17 13:46	1
p-Terphenyl-d14 (Surr)	86		65 - 121	04/10/17 14:12	04/11/17 13:46	1
Phenol-d5 (Surr)	75		54 - 120	04/10/17 14:12	04/11/17 13:46	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA05

Date Collected: 04/05/17 11:25

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-5

Matrix: Solid

Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 14:12	1
Atrazine	210	U	210	72	ug/Kg	☼	04/10/17 14:12	04/11/17 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		54 - 120	04/10/17 14:12	04/11/17 14:12	1
2-Fluorobiphenyl	79		60 - 120	04/10/17 14:12	04/11/17 14:12	1
2-Fluorophenol (Surr)	73		52 - 120	04/10/17 14:12	04/11/17 14:12	1
Nitrobenzene-d5 (Surr)	73		53 - 120	04/10/17 14:12	04/11/17 14:12	1
p-Terphenyl-d14 (Surr)	89		65 - 121	04/10/17 14:12	04/11/17 14:12	1
Phenol-d5 (Surr)	77		54 - 120	04/10/17 14:12	04/11/17 14:12	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA06

Date Collected: 04/05/17 11:30

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-6

Matrix: Solid

Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	390	U	390	100	ug/Kg	☼	04/10/17 14:12	04/11/17 14:39	1
Atrazine	200	U	200	70	ug/Kg	☼	04/10/17 14:12	04/11/17 14:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		54 - 120	04/10/17 14:12	04/11/17 14:39	1
2-Fluorobiphenyl	77		60 - 120	04/10/17 14:12	04/11/17 14:39	1
2-Fluorophenol (Surr)	71		52 - 120	04/10/17 14:12	04/11/17 14:39	1
Nitrobenzene-d5 (Surr)	68		53 - 120	04/10/17 14:12	04/11/17 14:39	1
p-Terphenyl-d14 (Surr)	83		65 - 121	04/10/17 14:12	04/11/17 14:39	1
Phenol-d5 (Surr)	74		54 - 120	04/10/17 14:12	04/11/17 14:39	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA07

Date Collected: 04/05/17 11:40

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-7

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	380	U	380	97	ug/Kg	☼	04/10/17 14:12	04/11/17 12:01	1
Atrazine	190	U	190	68	ug/Kg	☼	04/10/17 14:12	04/11/17 12:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	55		54 - 120	04/10/17 14:12	04/11/17 12:01	1
2-Fluorobiphenyl	62		60 - 120	04/10/17 14:12	04/11/17 12:01	1
2-Fluorophenol (Surr)	54		52 - 120	04/10/17 14:12	04/11/17 12:01	1
Nitrobenzene-d5 (Surr)	55		53 - 120	04/10/17 14:12	04/11/17 12:01	1
p-Terphenyl-d14 (Surr)	75		65 - 121	04/10/17 14:12	04/11/17 12:01	1
Phenol-d5 (Surr)	58		54 - 120	04/10/17 14:12	04/11/17 12:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA08

Date Collected: 04/05/17 11:45

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-8

Matrix: Solid

Percent Solids: 81.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	410	U	410	100	ug/Kg	☼	04/10/17 14:12	04/11/17 15:05	1
Atrazine	210	U	210	73	ug/Kg	☼	04/10/17 14:12	04/11/17 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		54 - 120	04/10/17 14:12	04/11/17 15:05	1
2-Fluorobiphenyl	80		60 - 120	04/10/17 14:12	04/11/17 15:05	1
2-Fluorophenol (Surr)	73		52 - 120	04/10/17 14:12	04/11/17 15:05	1
Nitrobenzene-d5 (Surr)	75		53 - 120	04/10/17 14:12	04/11/17 15:05	1
p-Terphenyl-d14 (Surr)	88		65 - 121	04/10/17 14:12	04/11/17 15:05	1
Phenol-d5 (Surr)	77		54 - 120	04/10/17 14:12	04/11/17 15:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA09

Date Collected: 04/05/17 11:50

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-9

Matrix: Solid

Percent Solids: 82.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	400	U	400	100	ug/Kg	☼	04/10/17 14:12	04/11/17 15:31	1
Atrazine	200	U	200	71	ug/Kg	☼	04/10/17 14:12	04/11/17 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		54 - 120	04/10/17 14:12	04/11/17 15:31	1
2-Fluorobiphenyl	72		60 - 120	04/10/17 14:12	04/11/17 15:31	1
2-Fluorophenol (Surr)	61		52 - 120	04/10/17 14:12	04/11/17 15:31	1
Nitrobenzene-d5 (Surr)	64		53 - 120	04/10/17 14:12	04/11/17 15:31	1
p-Terphenyl-d14 (Surr)	81		65 - 121	04/10/17 14:12	04/11/17 15:31	1
Phenol-d5 (Surr)	68		54 - 120	04/10/17 14:12	04/11/17 15:31	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: S-7878-040517-SSH-HA10

Date Collected: 04/05/17 11:55

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-10

Matrix: Solid

Percent Solids: 82.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	390	U	390	100	ug/Kg	☼	04/10/17 14:12	04/11/17 15:58	1
Atrazine	200	U	200	70	ug/Kg	☼	04/10/17 14:12	04/11/17 15:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		54 - 120				04/10/17 14:12	04/11/17 15:58	1
2-Fluorobiphenyl	74		60 - 120				04/10/17 14:12	04/11/17 15:58	1
2-Fluorophenol (Surr)	66		52 - 120				04/10/17 14:12	04/11/17 15:58	1
Nitrobenzene-d5 (Surr)	65		53 - 120				04/10/17 14:12	04/11/17 15:58	1
p-Terphenyl-d14 (Surr)	83		65 - 121				04/10/17 14:12	04/11/17 15:58	1
Phenol-d5 (Surr)	71		54 - 120				04/10/17 14:12	04/11/17 15:58	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA01

Date Collected: 04/05/17 11:05

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-1

Matrix: Solid

Percent Solids: 80.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.5	U	6.5	4.2	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
4,4'-DDE	6.5	U	6.5	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
4,4'-DDT	6.5	U	6.5	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Aldrin	6.5	U	6.5	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
alpha-BHC	6.5	U	6.5	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
alpha-Chlordane	6.5	U	6.5	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
beta-BHC	6.5	U	6.5	4.9	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
delta-BHC	6.5	U	6.5	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Dieldrin	6.5	U	6.5	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endosulfan I	6.5	U	6.5	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endosulfan II	6.5	U	6.5	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endosulfan sulfate	6.5	U	6.5	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endrin	6.5	U	6.5	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endrin aldehyde	6.5	U	6.5	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Endrin ketone	6.5	U	6.5	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
gamma-BHC (Lindane)	6.5	U	6.5	3.7	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
gamma-Chlordane	6.5	U	6.5	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Heptachlor	6.5	U	6.5	0.99	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Heptachlor epoxide	6.5	U	6.5	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Methoxychlor	13	U	13	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1
Toxaphene	130	U	130	47	ug/Kg	☼	04/07/17 09:01	04/11/17 11:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	53		13 - 135	04/07/17 09:01	04/11/17 11:59	1
Tetrachloro-m-xylene	75		30 - 120	04/07/17 09:01	04/11/17 11:59	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA02

Date Collected: 04/05/17 11:10

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-2

Matrix: Solid

Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.4	U	6.4	4.1	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
4,4'-DDE	6.4	U	6.4	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
4,4'-DDT	6.4	U	6.4	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Aldrin	6.4	U	6.4	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
alpha-BHC	6.4	U	6.4	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
alpha-Chlordane	6.4	U	6.4	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
beta-BHC	6.4	U	6.4	4.9	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
delta-BHC	6.4	U	6.4	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Dieldrin	6.4	U	6.4	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endosulfan I	6.4	U	6.4	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endosulfan II	6.4	U	6.4	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endosulfan sulfate	6.4	U	6.4	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endrin	6.4	U	6.4	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endrin aldehyde	6.4	U	6.4	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Endrin ketone	6.4	U	6.4	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
gamma-BHC (Lindane)	6.4	U	6.4	3.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
gamma-Chlordane	6.4	U	6.4	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Heptachlor	6.4	U	6.4	0.98	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Heptachlor epoxide	6.4	U	6.4	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Methoxychlor	12	U	12	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Toxaphene	130	U	130	47	ug/Kg	☼	04/07/17 09:01	04/11/17 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	44		13 - 135				04/07/17 09:01	04/11/17 12:23	1
<i>Tetrachloro-m-xylene</i>	68		30 - 120				04/07/17 09:01	04/11/17 12:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA03

Date Collected: 04/05/17 11:15

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-3

Matrix: Solid

Percent Solids: 81.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.0	U	6.0	3.9	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
4,4'-DDE	6.0	U	6.0	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
4,4'-DDT	6.0	U	6.0	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Aldrin	6.0	U	6.0	2.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
alpha-BHC	6.0	U	6.0	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
alpha-Chlordane	6.0	U	6.0	4.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
beta-BHC	6.0	U	6.0	4.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
delta-BHC	6.0	U	6.0	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Dieldrin	6.0	U	6.0	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endosulfan I	6.0	U	6.0	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endosulfan II	6.0	U	6.0	2.1	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endosulfan sulfate	6.0	U	6.0	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endrin	6.0	U	6.0	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endrin aldehyde	6.0	U	6.0	2.1	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Endrin ketone	6.0	U	6.0	1.3	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
gamma-BHC (Lindane)	6.0	U	6.0	3.4	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
gamma-Chlordane	6.0	U	6.0	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Heptachlor	6.0	U	6.0	0.92	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Heptachlor epoxide	6.0	U	6.0	2.8	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1
Toxaphene	120	U	120	44	ug/Kg	☼	04/07/17 09:01	04/11/17 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	37		13 - 135	04/07/17 09:01	04/11/17 12:48	1
Tetrachloro-m-xylene	50		30 - 120	04/07/17 09:01	04/11/17 12:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA04

Date Collected: 04/05/17 11:16

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-4

Matrix: Solid

Percent Solids: 80.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.2	U	6.2	4.0	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
4,4'-DDE	6.2	U	6.2	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
4,4'-DDT	6.2	U	6.2	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Aldrin	6.2	U	6.2	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
alpha-BHC	6.2	U	6.2	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
alpha-Chlordane	6.2	U	6.2	4.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
beta-BHC	6.2	U	6.2	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
delta-BHC	6.2	U	6.2	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Dieldrin	6.2	U	6.2	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endosulfan I	6.2	U	6.2	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endosulfan II	6.2	U	6.2	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endosulfan sulfate	6.2	U	6.2	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endrin	6.2	U	6.2	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endrin aldehyde	6.2	U	6.2	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Endrin ketone	6.2	U	6.2	1.3	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
gamma-BHC (Lindane)	6.2	U	6.2	3.6	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
gamma-Chlordane	6.2	U	6.2	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Heptachlor	6.2	U	6.2	0.96	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Heptachlor epoxide	6.2	U	6.2	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Methoxychlor	12	U	12	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1
Toxaphene	120	U	120	45	ug/Kg	☼	04/07/17 09:01	04/11/17 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	46		13 - 135	04/07/17 09:01	04/11/17 13:13	1
Tetrachloro-m-xylene	56		30 - 120	04/07/17 09:01	04/11/17 13:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA05

Date Collected: 04/05/17 11:25

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-5

Matrix: Solid

Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.5	U	6.5	4.2	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
4,4'-DDE	6.5	U	6.5	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
4,4'-DDT	6.5	U	6.5	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Aldrin	6.5	U	6.5	3.1	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
alpha-BHC	6.5	U	6.5	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
alpha-Chlordane	6.5	U	6.5	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
beta-BHC	6.5	U	6.5	5.0	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
delta-BHC	6.5	U	6.5	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Dieldrin	6.5	U	6.5	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endosulfan I	6.5	U	6.5	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endosulfan II	6.5	U	6.5	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endosulfan sulfate	6.5	U	6.5	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endrin	6.5	U	6.5	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endrin aldehyde	6.5	U	6.5	2.3	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Endrin ketone	6.5	U	6.5	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
gamma-BHC (Lindane)	6.5	U	6.5	3.7	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
gamma-Chlordane	6.5	U	6.5	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Heptachlor	6.5	U	6.5	0.99	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Heptachlor epoxide	6.5	U	6.5	3.1	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Methoxychlor	13	U	13	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1
Toxaphene	130	U	130	47	ug/Kg	☼	04/07/17 09:01	04/11/17 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	41		13 - 135	04/07/17 09:01	04/11/17 13:38	1
Tetrachloro-m-xylene	56		30 - 120	04/07/17 09:01	04/11/17 13:38	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA06

Date Collected: 04/05/17 11:30

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-6

Matrix: Solid

Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.4	U	6.4	4.1	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
4,4'-DDE	6.4	U	6.4	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
4,4'-DDT	6.4	U	6.4	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Aldrin	6.4	U	6.4	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
alpha-BHC	6.4	U	6.4	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
alpha-Chlordane	6.4	U	6.4	4.7	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
beta-BHC	6.4	U	6.4	4.9	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
delta-BHC	6.4	U	6.4	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Dieldrin	6.4	U	6.4	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endosulfan I	6.4	U	6.4	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endosulfan II	6.4	U	6.4	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endosulfan sulfate	6.4	U	6.4	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endrin	6.4	U	6.4	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endrin aldehyde	6.4	U	6.4	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Endrin ketone	6.4	U	6.4	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
gamma-BHC (Lindane)	6.4	U	6.4	3.6	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
gamma-Chlordane	6.4	U	6.4	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Heptachlor	6.4	U	6.4	0.97	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Heptachlor epoxide	6.4	U	6.4	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Methoxychlor	12	U	12	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Toxaphene	120	U	120	46	ug/Kg	☼	04/07/17 09:01	04/11/17 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	38		13 - 135				04/07/17 09:01	04/11/17 14:03	1
<i>Tetrachloro-m-xylene</i>	45		30 - 120				04/07/17 09:01	04/11/17 14:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA07

Date Collected: 04/05/17 11:40

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-7

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	3.8	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
4,4'-DDE	5.9	U	5.9	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
4,4'-DDT	5.9	U	5.9	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Aldrin	5.9	U	5.9	2.8	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
alpha-BHC	5.9	U	5.9	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
alpha-Chlordane	5.9	U	5.9	4.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
beta-BHC	5.9	U	5.9	4.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
delta-BHC	5.9	U	5.9	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Dieldrin	5.9	U	5.9	1.0	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endosulfan I	5.9	U	5.9	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endosulfan II	5.9	U	5.9	2.1	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endosulfan sulfate	5.9	U	5.9	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endrin	5.9	U	5.9	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endrin aldehyde	5.9	U	5.9	2.1	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Endrin ketone	5.9	U	5.9	1.3	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
gamma-BHC (Lindane)	5.9	U	5.9	3.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
gamma-Chlordane	5.9	U	5.9	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Heptachlor	5.9	U	5.9	0.91	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Heptachlor epoxide	5.9	U	5.9	2.8	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Toxaphene	120	U	120	43	ug/Kg	☼	04/07/17 09:01	04/11/17 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	42		13 - 135				04/07/17 09:01	04/11/17 14:29	1
<i>Tetrachloro-m-xylene</i>	52		30 - 120				04/07/17 09:01	04/11/17 14:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA08

Date Collected: 04/05/17 11:45

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-8

Matrix: Solid

Percent Solids: 81.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.3	U	6.3	4.1	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
4,4'-DDE	6.3	U	6.3	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
4,4'-DDT	6.3	U	6.3	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Aldrin	6.3	U	6.3	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
alpha-BHC	6.3	U	6.3	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
alpha-Chlordane	6.3	U	6.3	4.7	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
beta-BHC	6.3	U	6.3	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
delta-BHC	6.3	U	6.3	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Dieldrin	6.3	U	6.3	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endosulfan I	6.3	U	6.3	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endosulfan II	6.3	U	6.3	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endosulfan sulfate	6.3	U	6.3	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endrin	6.3	U	6.3	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endrin aldehyde	6.3	U	6.3	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Endrin ketone	6.3	U	6.3	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
gamma-BHC (Lindane)	6.3	U	6.3	3.6	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
gamma-Chlordane	6.3	U	6.3	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Heptachlor	6.3	U	6.3	0.96	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Heptachlor epoxide	6.3	U	6.3	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Methoxychlor	12	U	12	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Toxaphene	120	U	120	45	ug/Kg	☼	04/07/17 09:01	04/11/17 15:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	48		13 - 135				04/07/17 09:01	04/11/17 15:44	1
<i>Tetrachloro-m-xylene</i>	56		30 - 120				04/07/17 09:01	04/11/17 15:44	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA09

Date Collected: 04/05/17 11:50

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-9

Matrix: Solid

Percent Solids: 82.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.3	U	6.3	4.1	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
4,4'-DDE	6.3	U	6.3	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
4,4'-DDT	6.3	U	6.3	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Aldrin	6.3	U	6.3	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
alpha-BHC	6.3	U	6.3	2.0	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
alpha-Chlordane	6.3	U	6.3	4.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
beta-BHC	6.3	U	6.3	4.8	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
delta-BHC	6.3	U	6.3	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Dieldrin	6.3	U	6.3	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endosulfan I	6.3	U	6.3	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endosulfan II	6.3	U	6.3	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endosulfan sulfate	6.3	U	6.3	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endrin	6.3	U	6.3	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endrin aldehyde	6.3	U	6.3	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Endrin ketone	6.3	U	6.3	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
gamma-BHC (Lindane)	6.3	U	6.3	3.6	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
gamma-Chlordane	6.3	U	6.3	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Heptachlor	6.3	U	6.3	0.96	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Heptachlor epoxide	6.3	U	6.3	3.0	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Methoxychlor	12	U	12	1.5	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Toxaphene	120	U	120	46	ug/Kg	☼	04/07/17 09:01	04/11/17 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	35		13 - 135				04/07/17 09:01	04/11/17 16:09	1
<i>Tetrachloro-m-xylene</i>	47		30 - 120				04/07/17 09:01	04/11/17 16:09	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-7878-040517-SSH-HA10

Date Collected: 04/05/17 11:55

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-10

Matrix: Solid

Percent Solids: 82.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.1	U	6.1	3.9	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
4,4'-DDE	6.1	U	6.1	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
4,4'-DDT	6.1	U	6.1	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Aldrin	6.1	U	6.1	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
alpha-BHC	6.1	U	6.1	1.9	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
alpha-Chlordane	6.1	U	6.1	4.5	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
beta-BHC	6.1	U	6.1	4.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
delta-BHC	6.1	U	6.1	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Dieldrin	6.1	U	6.1	1.1	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endosulfan I	6.1	U	6.1	1.6	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endosulfan II	6.1	U	6.1	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endosulfan sulfate	6.1	U	6.1	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endrin	6.1	U	6.1	1.7	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endrin aldehyde	6.1	U	6.1	2.2	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Endrin ketone	6.1	U	6.1	1.3	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
gamma-BHC (Lindane)	6.1	U	6.1	3.5	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
gamma-Chlordane	6.1	U	6.1	1.8	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Heptachlor	6.1	U	6.1	0.93	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Heptachlor epoxide	6.1	U	6.1	2.9	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Methoxychlor	12	U	12	1.4	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1
Toxaphene	120	U	120	44	ug/Kg	☼	04/07/17 09:01	04/11/17 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	30		13 - 135	04/07/17 09:01	04/11/17 16:34	1
Tetrachloro-m-xylene	40		30 - 120	04/07/17 09:01	04/11/17 16:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA01

Date Collected: 04/05/17 11:05

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-1

Matrix: Solid

Percent Solids: 80.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	74	U	74	8.6	ug/Kg	☼	04/10/17 15:19	04/12/17 10:07	1
2,4-D	300	U	300	37	ug/Kg	☼	04/10/17 15:19	04/12/17 10:07	1
Silvex (2,4,5-TP)	74	U	74	7.4	ug/Kg	☼	04/10/17 15:19	04/12/17 10:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	80	p	19 - 120				04/10/17 15:19	04/12/17 10:07	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA02

Date Collected: 04/05/17 11:10

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-2

Matrix: Solid

Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	73	U	73	8.5	ug/Kg	☼	04/10/17 15:19	04/12/17 10:29	1
2,4-D	290	U	290	37	ug/Kg	☼	04/10/17 15:19	04/12/17 10:29	1
Silvex (2,4,5-TP)	73	U	73	7.3	ug/Kg	☼	04/10/17 15:19	04/12/17 10:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	80	p	19 - 120				04/10/17 15:19	04/12/17 10:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA03

Date Collected: 04/05/17 11:15

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-3

Matrix: Solid

Percent Solids: 81.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	72	U	72	8.4	ug/Kg	☼	04/10/17 15:19	04/12/17 10:51	1
2,4-D	290	U	290	36	ug/Kg	☼	04/10/17 15:19	04/12/17 10:51	1
Silvex (2,4,5-TP)	72	U	72	7.2	ug/Kg	☼	04/10/17 15:19	04/12/17 10:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	80		19 - 120				04/10/17 15:19	04/12/17 10:51	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA04

Date Collected: 04/05/17 11:16

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-4

Matrix: Solid

Percent Solids: 80.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	74	U	74	8.6	ug/Kg	☼	04/10/17 15:19	04/12/17 11:13	1
2,4-D	290	U	290	37	ug/Kg	☼	04/10/17 15:19	04/12/17 11:13	1
Silvex (2,4,5-TP)	74	U	74	7.4	ug/Kg	☼	04/10/17 15:19	04/12/17 11:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	77	p	19 - 120				04/10/17 15:19	04/12/17 11:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA05

Date Collected: 04/05/17 11:25

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-5

Matrix: Solid

Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	74	U	74	8.6	ug/Kg	☼	04/10/17 15:19	04/12/17 11:34	1
2,4-D	290	U	290	37	ug/Kg	☼	04/10/17 15:19	04/12/17 11:34	1
Silvex (2,4,5-TP)	74	U	74	7.4	ug/Kg	☼	04/10/17 15:19	04/12/17 11:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	82	p	19 - 120				04/10/17 15:19	04/12/17 11:34	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA06

Date Collected: 04/05/17 11:30

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-6

Matrix: Solid

Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	72	U	72	8.4	ug/Kg	☼	04/10/17 15:19	04/12/17 12:18	1
2,4-D	290	U	290	36	ug/Kg	☼	04/10/17 15:19	04/12/17 12:18	1
Silvex (2,4,5-TP)	72	U	72	7.2	ug/Kg	☼	04/10/17 15:19	04/12/17 12:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	78	p	19 - 120				04/10/17 15:19	04/12/17 12:18	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA07

Date Collected: 04/05/17 11:40

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-7

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	70	U F1	70	8.2	ug/Kg	☼	04/10/17 15:19	04/12/17 12:40	1
2,4-D	280	U F1	280	35	ug/Kg	☼	04/10/17 15:19	04/12/17 12:40	1
Silvex (2,4,5-TP)	70	U	70	7.0	ug/Kg	☼	04/10/17 15:19	04/12/17 12:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	80	p	19 - 120				04/10/17 15:19	04/12/17 12:40	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA08

Date Collected: 04/05/17 11:45

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-8

Matrix: Solid

Percent Solids: 81.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	73	U	73	8.5	ug/Kg	☼	04/10/17 15:19	04/12/17 13:45	1
2,4-D	290	U	290	37	ug/Kg	☼	04/10/17 15:19	04/12/17 13:45	1
Silvex (2,4,5-TP)	73	U	73	7.3	ug/Kg	☼	04/10/17 15:19	04/12/17 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	82	p	19 - 120				04/10/17 15:19	04/12/17 13:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA09

Date Collected: 04/05/17 11:50

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-9

Matrix: Solid

Percent Solids: 82.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	71	U	71	8.3	ug/Kg	☼	04/10/17 15:19	04/12/17 14:07	1
2,4-D	290	U	290	36	ug/Kg	☼	04/10/17 15:19	04/12/17 14:07	1
Silvex (2,4,5-TP)	71	U	71	7.1	ug/Kg	☼	04/10/17 15:19	04/12/17 14:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	54	p	19 - 120				04/10/17 15:19	04/12/17 14:07	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Client Sample ID: S-7878-040517-SSH-HA10

Date Collected: 04/05/17 11:55

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-10

Matrix: Solid

Percent Solids: 82.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	73	U	73	8.5	ug/Kg	☼	04/10/17 15:19	04/12/17 14:29	1
2,4-D	290	U	290	36	ug/Kg	☼	04/10/17 15:19	04/12/17 14:29	1
Silvex (2,4,5-TP)	73	U	73	7.3	ug/Kg	☼	04/10/17 15:19	04/12/17 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	79	p	19 - 120				04/10/17 15:19	04/12/17 14:29	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA01

Date Collected: 04/05/17 11:05

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-1

Matrix: Solid

Percent Solids: 80.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4		1.1	0.030	mg/Kg	☼	04/10/17 11:10	04/11/17 16:32	2
Lead	11		0.23	0.052	mg/Kg	☼	04/10/17 11:10	04/11/17 16:32	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA02

Date Collected: 04/05/17 11:10

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-2

Matrix: Solid

Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		0.93	0.024	mg/Kg	☼	04/10/17 11:10	04/11/17 16:36	2
Lead	11		0.19	0.042	mg/Kg	☼	04/10/17 11:10	04/11/17 16:36	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA03

Date Collected: 04/05/17 11:15

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-3

Matrix: Solid

Percent Solids: 81.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		1.2	0.030	mg/Kg	☼	04/10/17 11:10	04/11/17 16:41	2
Lead	11		0.23	0.052	mg/Kg	☼	04/10/17 11:10	04/11/17 16:41	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA04

Date Collected: 04/05/17 11:16

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-4

Matrix: Solid

Percent Solids: 80.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		0.91	0.024	mg/Kg	☼	04/10/17 11:10	04/11/17 16:53	2
Lead	11		0.18	0.041	mg/Kg	☼	04/10/17 11:10	04/11/17 16:53	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA05

Date Collected: 04/05/17 11:25

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-5

Matrix: Solid

Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		1.2	0.031	mg/Kg	☼	04/10/17 11:10	04/11/17 16:57	2
Lead	12		0.24	0.053	mg/Kg	☼	04/10/17 11:10	04/11/17 16:57	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA06

Date Collected: 04/05/17 11:30

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-6

Matrix: Solid

Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		1.1	0.028	mg/Kg	☼	04/10/17 11:10	04/11/17 17:01	2
Lead	12		0.21	0.048	mg/Kg	☼	04/10/17 11:10	04/11/17 17:01	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA07

Date Collected: 04/05/17 11:40

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-7

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		1.1	0.029	mg/Kg	☼	04/10/17 11:10	04/11/17 16:12	2
Lead	7.9		0.22	0.050	mg/Kg	☼	04/10/17 11:10	04/11/17 16:12	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA08

Date Collected: 04/05/17 11:45

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-8

Matrix: Solid

Percent Solids: 81.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.7		1.1	0.028	mg/Kg	☼	04/10/17 11:10	04/11/17 17:06	2
Lead	11		0.21	0.048	mg/Kg	☼	04/10/17 11:10	04/11/17 17:06	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA09

Date Collected: 04/05/17 11:50

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-9

Matrix: Solid

Percent Solids: 82.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		0.88	0.023	mg/Kg	☼	04/10/17 11:10	04/11/17 17:10	2
Lead	9.7		0.18	0.040	mg/Kg	☼	04/10/17 11:10	04/11/17 17:10	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-7878-040517-SSH-HA10

Date Collected: 04/05/17 11:55

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-10

Matrix: Solid

Percent Solids: 82.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.8		0.89	0.023	mg/Kg	☼	04/10/17 11:10	04/11/17 17:14	2
Lead	9.0		0.18	0.040	mg/Kg	☼	04/10/17 11:10	04/11/17 17:14	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA01

Date Collected: 04/05/17 11:05

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-1

Matrix: Solid

Percent Solids: 80.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.6		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	19.4		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA02

Date Collected: 04/05/17 11:10

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-2

Matrix: Solid

Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.4		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	18.6		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA03

Date Collected: 04/05/17 11:15

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-3

Matrix: Solid

Percent Solids: 81.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.3		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	18.7		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA04

Date Collected: 04/05/17 11:16

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-4

Matrix: Solid

Percent Solids: 80.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.5		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	19.5		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA05

Date Collected: 04/05/17 11:25

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-5

Matrix: Solid

Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	19.0		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA06

Date Collected: 04/05/17 11:30

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-6

Matrix: Solid

Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.4		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	17.6		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA07

Date Collected: 04/05/17 11:40

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-7

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.4		0.1	0.1	%			04/06/17 18:16	1
Percent Moisture	14.6		0.1	0.1	%			04/06/17 18:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA08

Date Collected: 04/05/17 11:45

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-8

Matrix: Solid

Percent Solids: 81.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.1		0.1	0.1	%			04/06/17 18:21	1
Percent Moisture	18.9		0.1	0.1	%			04/06/17 18:21	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA09

Date Collected: 04/05/17 11:50

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-9

Matrix: Solid

Percent Solids: 82.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.5		0.1	0.1	%			04/06/17 18:21	1
Percent Moisture	17.5		0.1	0.1	%			04/06/17 18:21	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

General Chemistry

Client Sample ID: S-7878-040517-SSH-HA10

Date Collected: 04/05/17 11:55

Date Received: 04/06/17 09:15

Lab Sample ID: 240-77758-10

Matrix: Solid

Percent Solids: 82.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.0		0.1	0.1	%			04/06/17 18:21	1
Percent Moisture	18.0		0.1	0.1	%			04/06/17 18:21	1

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

GC/MS Semi VOA

Prep Batch: 351162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	3550C	
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	3550C	
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	3550C	
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	3550C	
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	3550C	
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	3550C	
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	3550C	
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	3550C	
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	3550C	
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	3550C	
MB 480-351162/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-351162/2-A	Lab Control Sample	Total/NA	Solid	3550C	
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	3550C	
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	3550C	

Analysis Batch: 351269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	8270D	351162
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	8270D	351162
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	8270D	351162
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	8270D	351162
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	8270D	351162
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	8270D	351162
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	8270D	351162
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	8270D	351162
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	8270D	351162
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	8270D	351162
MB 480-351162/1-A	Method Blank	Total/NA	Solid	8270D	351162
LCS 480-351162/2-A	Lab Control Sample	Total/NA	Solid	8270D	351162
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	8270D	351162
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	8270D	351162

GC Semi VOA

Prep Batch: 273757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	3540C	
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	3540C	
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	3540C	
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	3540C	
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	3540C	
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	3540C	
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	3540C	
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	3540C	
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	3540C	
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	3540C	
MB 240-273757/13-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-273757/14-A	Lab Control Sample	Total/NA	Solid	3540C	
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	3540C	
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

GC Semi VOA (Continued)

Prep Batch: 274070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	3546	
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	3546	
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	3546	
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	3546	
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	3546	
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	3546	
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	3546	
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	3546	
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	3546	
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	3546	
MB 240-274070/13-A	Method Blank	Total/NA	Solid	3546	
LCS 240-274070/14-A	Lab Control Sample	Total/NA	Solid	3546	
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	3546	
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	3546	

Analysis Batch: 274120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	8081A	273757
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	8081A	273757
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	8081A	273757
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	8081A	273757
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	8081A	273757
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	8081A	273757
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	8081A	273757
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	8081A	273757
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	8081A	273757
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	8081A	273757
MB 240-273757/13-A	Method Blank	Total/NA	Solid	8081A	273757
LCS 240-273757/14-A	Lab Control Sample	Total/NA	Solid	8081A	273757
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	8081A	273757
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	8081A	273757

Analysis Batch: 274329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	8151A	274070
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	8151A	274070
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	8151A	274070
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	8151A	274070
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	8151A	274070
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	8151A	274070
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	8151A	274070
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	8151A	274070
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	8151A	274070
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	8151A	274070
MB 240-274070/13-A	Method Blank	Total/NA	Solid	8151A	274070
LCS 240-274070/14-A	Lab Control Sample	Total/NA	Solid	8151A	274070
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	8151A	274070
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	8151A	274070

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Metals

Prep Batch: 274009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	3050B	
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	3050B	
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	3050B	
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	3050B	
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	3050B	
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	3050B	
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	3050B	
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	3050B	
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	3050B	
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	3050B	
MB 240-274009/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-274009/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	3050B	
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	3050B	

Analysis Batch: 274388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	6020	274009
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	6020	274009
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	6020	274009
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	6020	274009
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	6020	274009
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	6020	274009
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	6020	274009
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	6020	274009
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	6020	274009
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	6020	274009
MB 240-274009/1-A ^2	Method Blank	Total/NA	Solid	6020	274009
LCS 240-274009/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	274009
240-77758-7 MS	S-7878-040517-SSH-HA07	Total/NA	Solid	6020	274009
240-77758-7 MSD	S-7878-040517-SSH-HA07	Total/NA	Solid	6020	274009

General Chemistry

Analysis Batch: 273600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-77758-1	S-7878-040517-SSH-HA01	Total/NA	Solid	Moisture	
240-77758-2	S-7878-040517-SSH-HA02	Total/NA	Solid	Moisture	
240-77758-3	S-7878-040517-SSH-HA03	Total/NA	Solid	Moisture	
240-77758-4	S-7878-040517-SSH-HA04	Total/NA	Solid	Moisture	
240-77758-5	S-7878-040517-SSH-HA05	Total/NA	Solid	Moisture	
240-77758-6	S-7878-040517-SSH-HA06	Total/NA	Solid	Moisture	
240-77758-7	S-7878-040517-SSH-HA07	Total/NA	Solid	Moisture	
240-77758-8	S-7878-040517-SSH-HA08	Total/NA	Solid	Moisture	
240-77758-9	S-7878-040517-SSH-HA09	Total/NA	Solid	Moisture	
240-77758-10	S-7878-040517-SSH-HA10	Total/NA	Solid	Moisture	
240-77758-2 DU	S-7878-040517-SSH-HA02	Total/NA	Solid	Moisture	
240-77758-7 DU	S-7878-040517-SSH-HA07	Total/NA	Solid	Moisture	

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-351162/1-A

Matrix: Solid

Analysis Batch: 351269

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 351162

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	320	U	320	83	ug/Kg		04/10/17 14:12	04/11/17 10:15	1
Atrazine	170	U	170	58	ug/Kg		04/10/17 14:12	04/11/17 10:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		54 - 120	04/10/17 14:12	04/11/17 10:15	1
2-Fluorobiphenyl	76		60 - 120	04/10/17 14:12	04/11/17 10:15	1
2-Fluorophenol (Surr)	70		52 - 120	04/10/17 14:12	04/11/17 10:15	1
Nitrobenzene-d5 (Surr)	69		53 - 120	04/10/17 14:12	04/11/17 10:15	1
p-Terphenyl-d14 (Surr)	87		65 - 121	04/10/17 14:12	04/11/17 10:15	1
Phenol-d5 (Surr)	73		54 - 120	04/10/17 14:12	04/11/17 10:15	1

Lab Sample ID: LCS 480-351162/2-A

Matrix: Solid

Analysis Batch: 351269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 351162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	3310	2740		ug/Kg		83	60 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		54 - 120
2-Fluorobiphenyl	73		60 - 120
2-Fluorophenol (Surr)	66		52 - 120
Nitrobenzene-d5 (Surr)	68		53 - 120
p-Terphenyl-d14 (Surr)	81		65 - 121
Phenol-d5 (Surr)	70		54 - 120

Lab Sample ID: 240-77758-7 MS

Matrix: Solid

Analysis Batch: 351269

Client Sample ID: S-7878-040517-SSH-HA07

Prep Type: Total/NA

Prep Batch: 351162

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	190	U	3800	3110		ug/Kg	☼	82	60 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	80		54 - 120
2-Fluorobiphenyl	72		60 - 120
2-Fluorophenol (Surr)	62		52 - 120
Nitrobenzene-d5 (Surr)	66		53 - 120
p-Terphenyl-d14 (Surr)	81		65 - 121
Phenol-d5 (Surr)	67		54 - 120

Lab Sample ID: 240-77758-7 MSD

Matrix: Solid

Analysis Batch: 351269

Client Sample ID: S-7878-040517-SSH-HA07

Prep Type: Total/NA

Prep Batch: 351162

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine	190	U	3880	3290		ug/Kg	☼	85	60 - 150	5	20

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-77758-7 MSD
Matrix: Solid
Analysis Batch: 351269

Client Sample ID: S-7878-040517-SSH-HA07
Prep Type: Total/NA
Prep Batch: 351162

Surrogate	MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	84		54 - 120
2-Fluorobiphenyl	78		60 - 120
2-Fluorophenol (Surr)	66		52 - 120
Nitrobenzene-d5 (Surr)	70		53 - 120
p-Terphenyl-d14 (Surr)	84		65 - 121
Phenol-d5 (Surr)	72		54 - 120

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-273757/13-A
Matrix: Solid
Analysis Batch: 274120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 273757

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	5.1	U	5.1	3.3	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
4,4'-DDE	5.1	U	5.1	1.2	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
4,4'-DDT	5.1	U	5.1	1.4	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Aldrin	5.1	U	5.1	2.4	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
alpha-BHC	5.1	U	5.1	1.6	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
alpha-Chlordane	5.1	U	5.1	3.8	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
beta-BHC	5.1	U	5.1	3.9	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
delta-BHC	5.1	U	5.1	1.3	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Dieldrin	5.1	U	5.1	0.90	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endosulfan I	5.1	U	5.1	1.3	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endosulfan II	5.1	U	5.1	1.8	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endosulfan sulfate	5.1	U	5.1	1.2	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endrin	5.1	U	5.1	1.4	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endrin aldehyde	5.1	U	5.1	1.8	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Endrin ketone	5.1	U	5.1	1.1	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
gamma-BHC (Lindane)	5.1	U	5.1	2.9	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
gamma-Chlordane	5.1	U	5.1	1.5	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Heptachlor	5.1	U	5.1	0.78	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Heptachlor epoxide	5.1	U	5.1	2.4	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Methoxychlor	9.9	U	9.9	1.2	ug/Kg		04/07/17 09:01	04/11/17 11:11	1
Toxaphene	100	U	100	37	ug/Kg		04/07/17 09:01	04/11/17 11:11	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	55		13 - 135	04/07/17 09:01	04/11/17 11:11	1
Tetrachloro-m-xylene	66		30 - 120	04/07/17 09:01	04/11/17 11:11	1

Lab Sample ID: LCS 240-273757/14-A
Matrix: Solid
Analysis Batch: 274120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273757

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDE	100	52.4		ug/Kg		52	46 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-273757/14-A
Matrix: Solid
Analysis Batch: 274120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273757

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDT	100	49.4		ug/Kg		49	48 - 120
Aldrin	100	52.5		ug/Kg		53	36 - 120
alpha-BHC	100	55.4		ug/Kg		55	48 - 120
alpha-Chlordane	100	55.4		ug/Kg		55	44 - 120
beta-BHC	100	52.6		ug/Kg		53	45 - 120
delta-BHC	100	42.3		ug/Kg		42	33 - 120
Dieldrin	100	53.6		ug/Kg		54	47 - 120
Endosulfan I	100	35.3		ug/Kg		35	28 - 120
Endosulfan II	100	41.1		ug/Kg		41	39 - 120
Endosulfan sulfate	100	46.6		ug/Kg		47	46 - 120
Endrin	100	51.7		ug/Kg		52	28 - 136
Endrin aldehyde	100	49.0		ug/Kg		49	38 - 120
Endrin ketone	100	49.6		ug/Kg		50	44 - 120
gamma-BHC (Lindane)	100	54.0		ug/Kg		54	39 - 120
gamma-Chlordane	100	52.8		ug/Kg		53	46 - 120
Heptachlor	100	55.5		ug/Kg		56	48 - 120
Heptachlor epoxide	100	52.8		ug/Kg		53	51 - 120
Methoxychlor	100	45.0		ug/Kg		45	38 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	46		13 - 135
Tetrachloro-m-xylene	59		30 - 120

Lab Sample ID: 240-77758-7 MS
Matrix: Solid
Analysis Batch: 274120

Client Sample ID: S-7878-040517-SSH-HA07
Prep Type: Total/NA
Prep Batch: 273757

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	5.9	U	117	52.0		ug/Kg	☼	44	27 - 120
4,4'-DDE	5.9	U	117	56.7		ug/Kg	☼	48	25 - 120
4,4'-DDT	5.9	U	117	51.7		ug/Kg	☼	44	19 - 125
Aldrin	5.9	U	117	52.0		ug/Kg	☼	44	15 - 120
alpha-BHC	5.9	U	117	58.3		ug/Kg	☼	50	30 - 120
alpha-Chlordane	5.9	U	117	51.5		ug/Kg	☼	44	28 - 120
beta-BHC	5.9	U	117	48.1		ug/Kg	☼	41	20 - 120
delta-BHC	5.9	U	117	44.1		ug/Kg	☼	38	20 - 120
Dieldrin	5.9	U	117	55.3		ug/Kg	☼	47	29 - 120
Endosulfan I	5.9	U	117	36.1		ug/Kg	☼	31	10 - 120
Endosulfan II	5.9	U	117	42.1		ug/Kg	☼	36	21 - 120
Endosulfan sulfate	5.9	U	117	47.1		ug/Kg	☼	40	27 - 120
Endrin	5.9	U	117	57.7		ug/Kg	☼	49	26 - 129
Endrin aldehyde	5.9	U	117	48.2		ug/Kg	☼	41	18 - 120
Endrin ketone	5.9	U	117	49.5		ug/Kg	☼	42	28 - 120
gamma-BHC (Lindane)	5.9	U	117	55.6		ug/Kg	☼	47	27 - 120
gamma-Chlordane	5.9	U	117	57.9		ug/Kg	☼	49	29 - 120
Heptachlor	5.9	U	117	56.0		ug/Kg	☼	48	35 - 120
Heptachlor epoxide	5.9	U	117	55.7		ug/Kg	☼	48	32 - 120
Methoxychlor	12	U	117	47.9		ug/Kg	☼	41	26 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	40		13 - 135
Tetrachloro-m-xylene	53		30 - 120

Lab Sample ID: 240-77758-7 MSD
Matrix: Solid
Analysis Batch: 274120

Client Sample ID: S-7878-040517-SSH-HA07
Prep Type: Total/NA
Prep Batch: 273757

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	5.9	U	116	57.0		ug/Kg	☼	49	27 - 120	9	40
4,4'-DDE	5.9	U	116	62.3		ug/Kg	☼	54	25 - 120	10	40
4,4'-DDT	5.9	U	116	57.7		ug/Kg	☼	50	19 - 125	11	40
Aldrin	5.9	U	116	58.1		ug/Kg	☼	50	15 - 120	11	40
alpha-BHC	5.9	U	116	65.7		ug/Kg	☼	57	30 - 120	12	40
alpha-Chlordane	5.9	U	116	56.4		ug/Kg	☼	49	28 - 120	9	40
beta-BHC	5.9	U	116	54.9		ug/Kg	☼	47	20 - 120	13	40
delta-BHC	5.9	U	116	52.0		ug/Kg	☼	45	20 - 120	16	40
Dieldrin	5.9	U	116	61.9		ug/Kg	☼	53	29 - 120	11	40
Endosulfan I	5.9	U	116	41.0		ug/Kg	☼	35	10 - 120	12	40
Endosulfan II	5.9	U	116	47.1		ug/Kg	☼	41	21 - 120	11	40
Endosulfan sulfate	5.9	U	116	53.8		ug/Kg	☼	46	27 - 120	13	40
Endrin	5.9	U	116	64.2		ug/Kg	☼	55	26 - 129	11	40
Endrin aldehyde	5.9	U	116	53.7		ug/Kg	☼	46	18 - 120	11	40
Endrin ketone	5.9	U	116	56.3		ug/Kg	☼	48	28 - 120	13	40
gamma-BHC (Lindane)	5.9	U	116	63.4		ug/Kg	☼	55	27 - 120	13	40
gamma-Chlordane	5.9	U	116	61.5		ug/Kg	☼	53	29 - 120	6	40
Heptachlor	5.9	U	116	62.6		ug/Kg	☼	54	35 - 120	11	40
Heptachlor epoxide	5.9	U	116	61.0		ug/Kg	☼	53	32 - 120	9	40
Methoxychlor	12	U	116	53.7		ug/Kg	☼	46	26 - 120	11	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	44		13 - 135
Tetrachloro-m-xylene	48		30 - 120

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 240-274070/13-A
Matrix: Solid
Analysis Batch: 274329

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	60	U	60	7.0	ug/Kg		04/10/17 15:19	04/12/17 09:24	1
2,4-D	240	U	240	30	ug/Kg		04/10/17 15:19	04/12/17 09:24	1
Silvex (2,4,5-TP)	60	U	60	6.0	ug/Kg		04/10/17 15:19	04/12/17 09:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	94	p	19 - 120	04/10/17 15:19	04/12/17 09:24	1

Lab Sample ID: LCS 240-274070/14-A
Matrix: Solid
Analysis Batch: 274329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	250	279		ug/Kg		112	51 - 134

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 240-274070/14-A
Matrix: Solid
Analysis Batch: 274329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4-D	1000	1060		ug/Kg		106	55 - 120
Silvex (2,4,5-TP)	250	252		ug/Kg		101	57 - 120
		LCS LCS					
Surrogate	%Recovery	Qualifier	Limits				
2,4-Dichlorophenylacetic acid	83	p	19 - 120				

Lab Sample ID: 240-77758-7 MS
Matrix: Solid
Analysis Batch: 274329

Client Sample ID: S-7878-040517-SSH-HA07
Prep Type: Total/NA
Prep Batch: 274070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	70	U F1	290	365	F1	ug/Kg	☼	126	30 - 120
2,4-D	280	U F1	1160	1480	F1	ug/Kg	☼	128	26 - 120
Silvex (2,4,5-TP)	70	U	290	345		ug/Kg	☼	119	32 - 120
		MS MS							
Surrogate	%Recovery	Qualifier	Limits						
2,4-Dichlorophenylacetic acid	91	p	19 - 120						

Lab Sample ID: 240-77758-7 MSD
Matrix: Solid
Analysis Batch: 274329

Client Sample ID: S-7878-040517-SSH-HA07
Prep Type: Total/NA
Prep Batch: 274070

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-T	70	U F1	288	326		ug/Kg	☼	113	30 - 120	11	40
2,4-D	280	U F1	1150	1320		ug/Kg	☼	115	26 - 120	11	40
Silvex (2,4,5-TP)	70	U	288	299		ug/Kg	☼	104	32 - 120	14	37
		MSD MSD									
Surrogate	%Recovery	Qualifier	Limits								
2,4-Dichlorophenylacetic acid	85	p	19 - 120								

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-274009/1-A ^2
Matrix: Solid
Analysis Batch: 274388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274009

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	U	1.0	0.026	mg/Kg		04/10/17 11:10	04/11/17 16:03	2
Lead	0.20	U	0.20	0.045	mg/Kg		04/10/17 11:10	04/11/17 16:03	2

Lab Sample ID: LCS 240-274009/3-A ^2
Matrix: Solid
Analysis Batch: 274388

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274009

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	100	87.4		mg/Kg		87	80 - 120
Lead	100	102		mg/Kg		102	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-77758-7 MS

Matrix: Solid

Analysis Batch: 274388

Client Sample ID: S-7878-040517-SSH-HA07

Prep Type: Total/NA

Prep Batch: 274009

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	%Rec.
	Result	Qualifier		Result	Qualifier					
Arsenic	2.9		92.9	85.2		mg/Kg	☼	89	75 - 125	
Lead	7.9		92.9	103		mg/Kg	☼	103	75 - 125	

Lab Sample ID: 240-77758-7 MSD

Matrix: Solid

Analysis Batch: 274388

Client Sample ID: S-7878-040517-SSH-HA07

Prep Type: Total/NA

Prep Batch: 274009

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Arsenic	2.9		92.9	85.0		mg/Kg	☼	88	75 - 125	0	20
Lead	7.9		92.9	102		mg/Kg	☼	101	75 - 125	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 240-77758-2 DU

Matrix: Solid

Analysis Batch: 273600

Client Sample ID: S-7878-040517-SSH-HA02

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result				
Percent Solids	81.4		82.9		%		2	20
Percent Moisture	18.6		17.1		%		9	20

Lab Sample ID: 240-77758-7 DU

Matrix: Solid

Analysis Batch: 273600

Client Sample ID: S-7878-040517-SSH-HA07

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result				
Percent Solids	85.4		85.2		%		0.2	20
Percent Moisture	14.6		14.8		%		1	20

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	TPH (65-121)	PHL (54-120)
240-77758-1	S-7878-040517-SSH-HA01	78	78	64	69	86	69
240-77758-2	S-7878-040517-SSH-HA02	71	75	66	69	81	70
240-77758-3	S-7878-040517-SSH-HA03	73	76	71	71	85	75
240-77758-4	S-7878-040517-SSH-HA04	77	78	70	73	86	75
240-77758-5	S-7878-040517-SSH-HA05	78	79	73	73	89	77
240-77758-6	S-7878-040517-SSH-HA06	68	77	71	68	83	74
240-77758-7	S-7878-040517-SSH-HA07	55	62	54	55	75	58
240-77758-7 MS	S-7878-040517-SSH-HA07	80	72	62	66	81	67
240-77758-7 MSD	S-7878-040517-SSH-HA07	84	78	66	70	84	72
240-77758-8	S-7878-040517-SSH-HA08	75	80	73	75	88	77
240-77758-9	S-7878-040517-SSH-HA09	75	72	61	64	81	68
240-77758-10	S-7878-040517-SSH-HA10	73	74	66	65	83	71
LCS 480-351162/2-A	Lab Control Sample	79	73	66	68	81	70
MB 480-351162/1-A	Method Blank	71	76	70	69	87	73

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPH = p-Terphenyl-d14 (Surr)

PHL = Phenol-d5 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (13-135)	DCB2 (13-135)	TCX1 (30-120)	TCX2 (30-120)
240-77758-1	S-7878-040517-SSH-HA01	53	51	75	59
240-77758-2	S-7878-040517-SSH-HA02	44	45	68	48
240-77758-3	S-7878-040517-SSH-HA03	37	43	50	44
240-77758-4	S-7878-040517-SSH-HA04	46	49	56	51
240-77758-5	S-7878-040517-SSH-HA05	41	44	56	44
240-77758-6	S-7878-040517-SSH-HA06	38	41	45	41
240-77758-7	S-7878-040517-SSH-HA07	42	41	52	47
240-77758-7 MS	S-7878-040517-SSH-HA07	40	47	53	50
240-77758-7 MSD	S-7878-040517-SSH-HA07	44	50	48	55
240-77758-8	S-7878-040517-SSH-HA08	48	55	56	51
240-77758-9	S-7878-040517-SSH-HA09	35	38	47	41
240-77758-10	S-7878-040517-SSH-HA10	30	32	40	35
LCS 240-273757/14-A	Lab Control Sample	46	51	59	56
MB 240-273757/13-A	Method Blank	55	61	66	64

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPA1 (19-120)	DCPA2 (19-120)
240-77758-1	S-7878-040517-SSH-HA01	80 p	207 X
240-77758-2	S-7878-040517-SSH-HA02	80 p	193 X
240-77758-3	S-7878-040517-SSH-HA03	80	120
240-77758-4	S-7878-040517-SSH-HA04	77 p	282 X
240-77758-5	S-7878-040517-SSH-HA05	82 p	212 X
240-77758-6	S-7878-040517-SSH-HA06	78 p	136 X
240-77758-7	S-7878-040517-SSH-HA07	80 p	247 X
240-77758-7 MS	S-7878-040517-SSH-HA07	91 p	214 X
240-77758-7 MSD	S-7878-040517-SSH-HA07	85 p	151 X
240-77758-8	S-7878-040517-SSH-HA08	82 p	132 X
240-77758-9	S-7878-040517-SSH-HA09	54 p	229 X
240-77758-10	S-7878-040517-SSH-HA10	79 p	121 X
LCS 240-274070/14-A	Lab Control Sample	83 p	245 X
MB 240-274070/13-A	Method Blank	94 p	154 X

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA01

Lab Sample ID: 240-77758-1

Date Collected: 04/05/17 11:05

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA01

Lab Sample ID: 240-77758-1

Date Collected: 04/05/17 11:05

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 12:27	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 11:59	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 10:07	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:32	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA02

Lab Sample ID: 240-77758-2

Date Collected: 04/05/17 11:10

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA02

Lab Sample ID: 240-77758-2

Date Collected: 04/05/17 11:10

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 12:53	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 12:23	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 10:29	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:36	AS1	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA03

Lab Sample ID: 240-77758-3

Date Collected: 04/05/17 11:15

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA03

Lab Sample ID: 240-77758-3

Date Collected: 04/05/17 11:15

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 81.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 13:20	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 12:48	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 10:51	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:41	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA04

Lab Sample ID: 240-77758-4

Date Collected: 04/05/17 11:16

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA04

Lab Sample ID: 240-77758-4

Date Collected: 04/05/17 11:16

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 13:46	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 13:13	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 11:13	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:53	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA05

Lab Sample ID: 240-77758-5

Date Collected: 04/05/17 11:25

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA05

Lab Sample ID: 240-77758-5

Date Collected: 04/05/17 11:25

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 14:12	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 13:38	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 11:34	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:57	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA06

Lab Sample ID: 240-77758-6

Date Collected: 04/05/17 11:30

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA06

Lab Sample ID: 240-77758-6

Date Collected: 04/05/17 11:30

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 14:39	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 14:03	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 12:18	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 17:01	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA07

Lab Sample ID: 240-77758-7

Date Collected: 04/05/17 11:40

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:16	JWW	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA07

Lab Sample ID: 240-77758-7

Date Collected: 04/05/17 11:40

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 12:01	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 14:29	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 12:40	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 16:12	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA08

Lab Sample ID: 240-77758-8

Date Collected: 04/05/17 11:45

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:21	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA08

Lab Sample ID: 240-77758-8

Date Collected: 04/05/17 11:45

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 15:05	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 15:44	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 13:45	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 17:06	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA09

Lab Sample ID: 240-77758-9

Date Collected: 04/05/17 11:50

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:21	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA09

Lab Sample ID: 240-77758-9

Date Collected: 04/05/17 11:50

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Client Sample ID: S-7878-040517-SSH-HA09

Lab Sample ID: 240-77758-9

Date Collected: 04/05/17 11:50

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D		1	351269	04/11/17 15:31	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 16:09	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 14:07	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 17:10	AS1	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA10

Lab Sample ID: 240-77758-10

Date Collected: 04/05/17 11:55

Matrix: Solid

Date Received: 04/06/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	273600	04/06/17 18:21	JWW	TAL CAN

Client Sample ID: S-7878-040517-SSH-HA10

Lab Sample ID: 240-77758-10

Date Collected: 04/05/17 11:55

Matrix: Solid

Date Received: 04/06/17 09:15

Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			351162	04/10/17 14:12	SMP	TAL BUF
Total/NA	Analysis	8270D		1	351269	04/11/17 15:58	LMW	TAL BUF
Total/NA	Prep	3540C			273757	04/07/17 09:01	JT	TAL CAN
Total/NA	Analysis	8081A		1	274120	04/11/17 16:34	BPM	TAL CAN
Total/NA	Prep	3546			274070	04/10/17 15:19	CS	TAL CAN
Total/NA	Analysis	8151A		1	274329	04/12/17 14:29	DEB	TAL CAN
Total/NA	Prep	3050B			274009	04/10/17 11:10	DEE	TAL CAN
Total/NA	Analysis	6020		2	274388	04/11/17 17:14	AS1	TAL CAN

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	04-30-17 *
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-17 *
Illinois	NELAP	5	200004	07-31-17 *
Kansas	NELAP	7	E-10336	01-31-18
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17
Minnesota	NELAP	5	039-999-348	12-31-17
Minnesota (Petrofund)	State Program	1	3506	07-31-17 *
Nevada	State Program	9	OH-000482008A	07-31-17 *
New Jersey	NELAP	2	OH001	06-30-17 *
New York	NELAP	2	10975	03-31-18
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-17
Texas	NELAP	6	T104704517-15-5	08-31-17
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-17
Washington	State Program	10	C971	01-12-18
West Virginia DEP	State Program	3	210	12-31-16 *
Wisconsin	State Program	5	999518190	08-31-17

Laboratory: TestAmerica Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-17
California	State Program	9	1169CA	09-30-17
Connecticut	State Program	1	PH-0568	09-30-18
Florida	NELAP	4	E87672	06-30-17
Georgia	State Program	4	N/A	03-31-18
Illinois	NELAP	5	200003	09-30-17
Iowa	State Program	7	374	03-01-17 *
Kansas	NELAP	7	E-10187	01-31-18
Kentucky (DW)	State Program	4	90029	12-31-17
Kentucky (UST)	State Program	4	30	03-31-17 *
Kentucky (WW)	State Program	4	90029	12-31-17
Louisiana	NELAP	6	02031	06-30-17
Maine	State Program	1	NY00044	12-04-18
Maryland	State Program	3	294	03-31-18
Massachusetts	State Program	1	M-NY044	06-30-17
Michigan	State Program	5	9937	03-31-17 *
Minnesota	NELAP	5	036-999-337	12-31-17
New Hampshire	NELAP Primary AB	1	2973	09-11-17
New Hampshire	NELAP Secondary AB	1	2337	11-17-17
New Jersey	NELAP	2	NY455	06-30-17
New York	NELAP	2	10026	03-31-18
North Dakota	State Program	8	R-176	03-31-17 *
Oklahoma	State Program	6	9421	08-31-17
Oregon	NELAP	10	NY200003	06-09-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Canton

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 7878, RACER SMI

TestAmerica Job ID: 240-77758-1

Laboratory: TestAmerica Buffalo (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	68-00281	07-31-17
Rhode Island	State Program	1	LAO00328	12-30-17
Tennessee	State Program	4	TN02970	03-31-18
Texas	NELAP	6	T104704412-15-6	07-31-17
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-17
Washington	State Program	10	C784	02-10-18
Wisconsin	State Program	5	998310390	08-31-17

TestAmerica Michigan
 10448 Citation Drive
 Suite 200
 Brighton, MI 48116
 Phone: 810.229.2763 Fax:

1.8/C1.5
 MICHIGAN
 190

Chain of Custody Record

197512

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Laboratories, Inc.
 TAL-8210 (07/19)

Regulatory Program: DW NPDES RCRA Other:

Client Contact
 Company Name: GHD
 Address: 14496 W. Sheldahl Rd. Suite 200
 City/State/Zip: Plymouth, MI
 Phone: 734 453 5123
 Fax: 734 453 5123
 Project Name: Riverfront SMT
 Site: 5500 7878-01
 PO# Lab# 2400918

Project Manager: M. Tarkenton
 Tel/Fax: 519 884 0510

Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
 TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Site Contact: JE Parsdys Date: 4/5/17
 Lab Contact: D Hendler Carrier: FedEx

COC No: 197512 of COCs

Sampler: S. Heveringer
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	IES:
S-7878-040517-SS4-HA01	4/5/17	1105	G	SO	2	MM	XX	
HA02		1110	G	SO	2	MM	XX	
HA03		1115	G	SO	2	MM	XX	
HA04		1116	G	SO	2	MM	XX	
HA05		1125	G	SO	2	MM	XX	
HA06		1130	G	SO	2	MM	XX	
HA07		1140	G	SO	4	MM	XX	
HA08		1145	G	SO	2	MM	XX	
HA09		1150	G	SO	2	MM	XX	
S-7878-040517-SS4-HA10		1155	G	SO	2	MM	XX	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification:
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Unknown Poison B

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.: 822346
 Company: GHD
 Date/Time: 4/5/17 1600

Relinquished by: AEA Mar
 Date/Time: 4/6/17 9:05

Relinquished by:
 Date/Time:

Relinquished by:
 Date/Time:



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Client GHD Site Name _____ Cooler unpacked by: _____
Cooler Received on 4.6.17 Opened on 4.6.17

FedEx: 1st Grd UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____
Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. 1.5 °C Corrected Cooler Temp. 1.5 °C
IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
- 3. Shippers' packing slip attached to the cooler(s)? Yes No
- 4. Did custody papers accompany the sample(s)? Yes No
- 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
- 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- 7. Did all bottles arrive in good condition (Unbroken)? Yes No
- 8. Could all bottle labels be reconciled with the COC? Yes No
- 9. Were correct bottle(s) used for the test(s) indicated? Yes No
- 10. Sufficient quantity received to perform indicated analyses? Yes No
- 11. Are these work share samples? Yes No
If yes, Questions 11-15 have been checked at the originating laboratory.
- 11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC682547
- 12. Were VOAs on the COC? Yes No
- 13. Were air bubbles >6 mm in any VOA vials? Yes No NA
- 14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- 15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-77758-1

Login Number: 77758
List Number: 2
Creator: Hulbert, Michael J

List Source: TestAmerica Buffalo
List Creation: 04/08/17 01:32 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8 #1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Attachment C Agency Approvals

John Pardys

From: Armbruster, Amanda (DEQ) <ARMBRUSTERA@michigan.gov>
Sent: Wednesday, April 26, 2017 1:17 PM
To: Greensley, Jean; Pardys, John-Eric; 'dfavero@racertrust.org'
Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

John-Eric,
Sorry for the delayed response. I do not have issue with the proposal to extend the cover. The information for the topsoil source also looks good.

Thank you,
Amanda Armbruster, Geologist
Remediation and Redevelopment Division
Saginaw Bay District Office
989-894-6242

From: Greensley, Jean [mailto:greensley.jean@epa.gov]
Sent: Wednesday, April 26, 2017 8:58 AM
To: Pardys, John-Eric
Cc: Dave Favero; Armbruster, Amanda (DEQ)
Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Good Morning John-Eric –

Since the sample results are under 1 ppm PCBs, I have no concerns regarding the extension of the cover around the former oil house slab. If you have any questions, let me know. Regards, Jean

Jean M. Greensley, Geologist
U.S. Environmental Protection Agency
Corrective Action Section 1
77 W. Jackson, LU-16J
Chicago, Illinois 60601
312-353-1171
fax: 312-385-5334
greensley.jean@epa.gov

From: Pardys, John-Eric [mailto:John-Eric.Pardys@ghd.com]
Sent: Wednesday, April 26, 2017 7:03 AM
To: Greensley, Jean <greensley.jean@epa.gov>; Armbruster, Amanda (DEQ) <ARMBRUSTERA@michigan.gov>
Cc: Dave Favero <dfavero@racertrust.org>
Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Jean/Amanda,

Was wondering whether you have had a chance to review the additional delineation of PCBs outside the Plant floor area results provided in the emails below? Please let us know if you have any questions or concerns or if our approach is acceptable.

Thanks

John-Eric Pardys P. Eng.

GHD

T: 1 519 884 0510 x3554 | F: 1 519 884 0525 | E: john-eric.pardys@ghd.com | www.ghd.com
Mailing address: 651 Colby Drive Waterloo Ontario N2V 1C2 Canada
Office address: 40 Bathurst Drive Waterloo Ontario N2V 1V6 Canada

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Please consider our environment before printing this email

From: Pardys, John-Eric
Sent: Thursday, April 20, 2017 4:55 PM
To: 'Greensley, Jean'; 'Armbruster, Amanda (DEQ)'
Cc: 'Dave Favero'
Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Jean/Amanda,

Please use this table instead, there was an issue with the sample dates in the other file.

Thanks

John-Eric Pardys P. Eng.

GHD

T: 1 519 884 0510 x3554 | F: 1 519 884 0525 | E: john-eric.pardys@ghd.com | www.ghd.com
Mailing address: 651 Colby Drive Waterloo Ontario N2V 1C2 Canada
Office address: 40 Bathurst Drive Waterloo Ontario N2V 1V6 Canada

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Please consider our environment before printing this email

From: Pardys, John-Eric
Sent: Thursday, April 20, 2017 3:12 PM
To: 'Greensley, Jean'; 'Armbruster, Amanda (DEQ)'
Cc: 'Dave Favero'
Subject: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Jean/Amanda,

As discussed, GHD, on behalf of RACER, conducted additional delineation of historical PCB samples with results between 1ppm and 10ppm outside the footprint of the former SMI floor slab on April 13, 2017.

- Samples were collected from the historical location FLR-CMG-01-095 (located within the former maintenance building) and in 10-ft steps out in each direction and submitted for analysis of PCBs on a 1-week turn. Samples were also collected at 20-foot step-outs in each direction but placed on hold pending the initial results.
- Samples were collected from two 10-ft step out locations south of historical sample location C00-007.

- The concrete in the area of historical sample location FLR-CMG-01-084 was previously demolished as part of the plant decommissioning as shown in the attached photo. This area was the location of a former tunnel that connected the locker rooms to the main plant. During demolition of the plant, the tunnel was collapsed and backfilled with soil. Therefore, no samples were collected from historical sample location FLR-CMG-01-084.

All samples collected on April 13, 2017 that were analyzed for PCBs, reported PCBs less than 1ppm (see attached table and analytical report). There was no need to sample any of the samples that were placed on hold. Therefore, RACER would like to extend the cover as identified in the attached figure around the former oil house slab (area including historical sample location C00-007) and since we were not able to recreate the historical sample results from FLR-CMG-01-095 and FLR-CMG-01-84, no further action is proposed in these areas.

Amanda, note that if extending the cover is acceptable, we will contact you regarding how this proposal impacts the floodplain permit.

Should you have any questions or clarifications, please do not hesitate to contact myself.

Thanks

John-Eric Pardys P. Eng.

GHD

T: 1 519 884 0510 x3554 | F: 1 519 884 0525 | E: john-eric.pardys@ghd.com | www.ghd.com

Mailing address: 651 Colby Drive Waterloo Ontario N2V 1C2 Canada

Office address: 40 Bathurst Drive Waterloo Ontario N2V 1V6 Canada

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Please consider our environment before printing this email

From: Pardys, John-Eric
Sent: Monday, April 10, 2017 3:15 PM
To: Greensley, Jean
Cc: Dave Favero; Armbruster, Amanda (DEQ)
Subject: Re: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Jean,

What I meant is that if we go back and collect samples from the same area and the samples all come back below 1ppm, that we would not propose an excavation or cover.

JE

Sent from my Samsung device

----- Original message -----

From: "Greensley, Jean" <greensley.jean@epa.gov>

Date: 2017-04-10 2:01 PM (GMT-05:00)

To: "Pardys, John-Eric" <John-Eric.Pardys@ghd.com>

Cc: Dave Favero <dfavero@racertrust.org>, "Armbruster, Amanda (DEQ)" <ARMBRUSTERA@michigan.gov>

Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

John-Eric – Thank you for the summary of our call this morning. Can you clarify what you mean by the statement that you will leave it as it if you can't recreate the historical sample results above 1 ppm and less than 10 ppm. Thanks, Jean

Jean M. Greensley, Geologist
U.S. Environmental Protection Agency
Corrective Action Section 1
77 W. Jackson, LU-16J
Chicago, Illinois 60601
312-353-1171
fax: 312-385-5334
greensley.jean@epa.gov

From: Pardys, John-Eric [<mailto:John-Eric.Pardys@ghd.com>]
Sent: Monday, April 10, 2017 9:09 AM
To: Greensley, Jean <greensley.jean@epa.gov>
Cc: Dave Favero <dfavero@racertrust.org>; Armbruster, Amanda (DEQ) <ARMBRUSTERA@michigan.gov>
Subject: RE: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Jean,

Further to our call, it is GHD's understanding that EPA supports RACER in its decision to conduct some additional delineation of PCBs to the south of the plant, as identified on the figure. The additional delineation is being conducted with the purpose of either extending the cap and/or conducting a removal or if unable to re-create the historical sample results above 1ppm (and less than 10ppm), leave as is.

As discussed, we will plan to conduct the additional investigation later this week.

Thanks

John-Eric Pardys P. Eng.

GHD

T: 1 519 884 0510 x3554 | F: 1 519 884 0525 | E: john-eric.pardys@ghd.com | www.ghd.com
Mailing address: 651 Colby Drive Waterloo Ontario N2V 1C2 Canada
Office address: 40 Bathurst Drive Waterloo Ontario N2V 1V6 Canada

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Please consider our environment before printing this email

From: Pardys, John-Eric
Sent: Friday, April 07, 2017 8:33 AM
To: 'Armbruster, Amanda (DEQ)'; 'Greensley, Jean'
Cc: 'Dave Favero'
Subject: ~COR-007878~Malleable - Additional Delineation of PCB impacts

Amanda/Jean

Following completion of the PCB removal work on the slab (removal of PCBs in concrete flooring above 10ppm), we identified three areas to south and east of the Malleable concrete floor slab with sample results above 1ppm PCBs but less than 10ppm PCBs.

To be consistent with the work that has already been completed (removing impacts above 10ppm PCBs and covering impacts less than 10ppm PCBs), we are proposing to delineate the three areas that have sample results above 1ppm PCBs.

For the former oil house slab (where Area 13 was removed as part of the Work Plan), we propose to complete additional delineation to the south to 1ppm and then to adjust the proposed cover to extend over the entire former oil house slab. See attached figure for the proposed sample locations and potential adjustment to the extent of the cover.

For the other two areas, there is one sample above 1ppm but less than 10ppm PCBs in each area. We propose to complete additional delineation to 1ppm PCBs at 10-ft stepouts. A sample would also be collected at the historical location. Pending the analysis we would evaluate leaving areas as is (if all results are less than 1ppm PCBs) or excavate and remove impacts greater than 1ppm and backfill with sand or extend the cover over these areas (potential for flood plain permit implications).

We would like to schedule the sampling for Thursday, April 13 but let us know if this is enough time for you to consider this proposal or if you would like to schedule a call to discuss.

Thanks

John-Eric Pardys P. Eng.

GHD

T: 1 519 884 0510 x3554 | F: 1 519 884 0525 | E: john-eric.pardys@ghd.com | www.ghd.com
Mailing address: 651 Colby Drive Waterloo Ontario N2V 1C2 Canada
Office address: 40 Bathurst Drive Waterloo Ontario N2V 1V6 Canada

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Attachment D Cover Testing Results

Attachment D.1 Compaction Testing Results



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: PTR:0393622-1-S31

Issue No: 1

These test results apply only to the specific locations and materials noted and may not represent any other locations or elevations. This report may not be reproduced, except in full, without written permission by Professional Service Industries, Inc. If a non-compliance appears on this report, to the extent that the reported non-compliance impacts the project, the resolution is outside the PSI scope of engagement.

Proctor Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

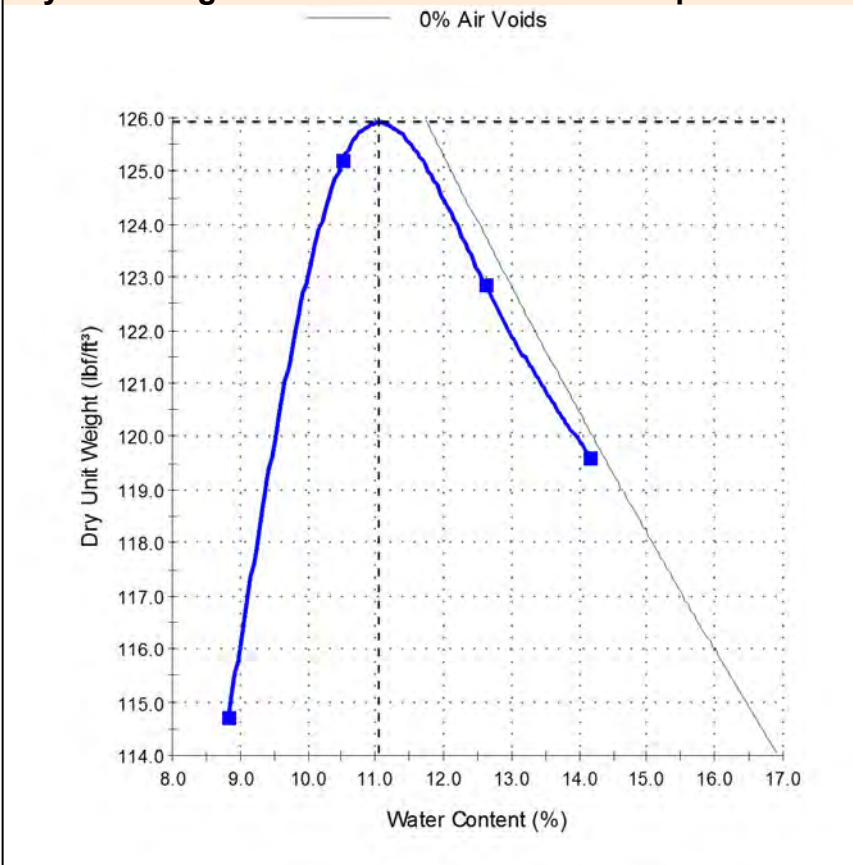
Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/2/2017

Sample Details

Sample ID: 0393622-1-S31	Date Sampled: 4/19/2017
Sampled By: Others	Specification:
Supplier: On-site borrow	Source: On Site Borrow
Material: Medium brown lean clay w/ tr gravel	Sampling Method: Stockpile/Trans - ASTM D 75 - 5.3.3
General Location: GM Malleable Iron	Location: Sampled from on site stock pile
Tested By: Andrew Kamyszek	Date Tested: 4/22/2017

Dry Unit Weight - Water Content Relationship



Test Results

ASTM D 698

Maximum Dry Unit Weight (lb/ft³): 125.9

Optimum Water Content (%): 11.1

Method: A

Preparation Method: Moist

Rammer Type: Manual

Specific Gravity (Fines): 2.65

Specific Gravity Method: estimated

Retained Sieve No 4 (4.75mm) (%): 0

Passing Sieve No 4 (4.75mm) (%): 100

Comments

Sample deliver by SSI.



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-1

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Testing Details			
Tested By:	Matthew Ottinger		
Date Tested:	5/9/2017		
Field Methods:	ASTM D 6938		
Gauge Type:	Troxler	Test Mode:	Direct Transmission
Model Number:	3430	Standard Count: Density:	2384
Serial Number:	30095	Standard Count: Moisture:	529

Proctor Information					
Sample ID	Supplier	Material	Method	MDD (lb/ft ³)	OWC (%)
0393622-1-S31	On-site borrow	Medium brown lean clay w/ tr gravel	ASTM D 698 (A)	125.9	11.1

Test Results								
Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
1	0393622-1-S31	10	133.3	9.3	122.0	96.9	≥95	A
2	0393622-1-S31	10	138.2	10.3	125.3	99.5	≥95	A
3	0393622-1-S31	10	140.3	9.9	127.7	101.4	≥95	A
4	0393622-1-S31	10	139.5	11.0	125.7	99.8	≥95	A
5	0393622-1-S31	10	138.1	9.7	125.9	100.0	≥95	A
6	0393622-1-S31	10	139.6	10.4	126.4	100.4	≥95	A

Location			
General Location: Acres 1 to 6- see attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
1	Acre #1	to grade	Fill Material
2	Acre #1	to grade	Fill Material
3	Acre #1	to grade	Fill Material
4	Acre #1	to grade	Fill Material
5	Acre #1	to grade	Fill Material
6	Acre #2	to grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-1

Issue No: 1

These test results apply only to the specific locations and materials noted and may not represent any other locations or elevations. This report may not be reproduced, except in full, without written permission by Professional Service Industries, Inc. If a non-compliance appears on this report, to the extent that the reported non-compliance impacts the project, the resolution is outside the PSI scope of engagement.

Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
7	0393622-1-S31	10	136.1	10.0	123.7	98.3	≥95	A
8	0393622-1-S31	10	139.0	10.6	125.7	99.8	≥95	A
9	0393622-1-S31	10	135.6	10.6	122.6	97.4	≥95	A
10	0393622-1-S31	10	137.4	10.0	124.9	99.2	≥95	A
11	0393622-1-S31	10	137.7	9.5	125.8	99.9	≥95	A
12	0393622-1-S31	10	137.7	10.2	125.0	99.3	≥95	A
13	0393622-1-S31	10	136.7	9.9	124.4	98.8	≥95	A
14	0393622-1-S31	10	138.3	10.3	125.4	99.6	≥95	A
15	0393622-1-S31	10	137.0	11.4	123.0	97.7	≥95	A
16	0393622-1-S31	10	139.3	10.8	125.7	99.8	≥95	A
17	0393622-1-S31	10	136.8	9.7	124.7	99.0	≥95	A
18	0393622-1-S31	10	137.4	10.0	124.9	99.2	≥95	A

Location			
General Location: Acres 1 to 6- see attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
7	Acre #2	to grade	Fill Material
8	Acre #2	to grade	Fill Material
9	Acre #2	to grade	Fill Material
10	Acre #2	to grade	Fill Material
11	Acre #3	to grade	Fill Material
12	Acre #3	to grade	Fill Material
13	Acre #3	to grade	Fill Material
14	Acre #3	to grade	Fill Material
15	Acre #3	to grade	Fill Material
16	Acre #4	to grade	Fill Material
17	Acre #4	to grade	Fill Material
18	Acre #4	to grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-1

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

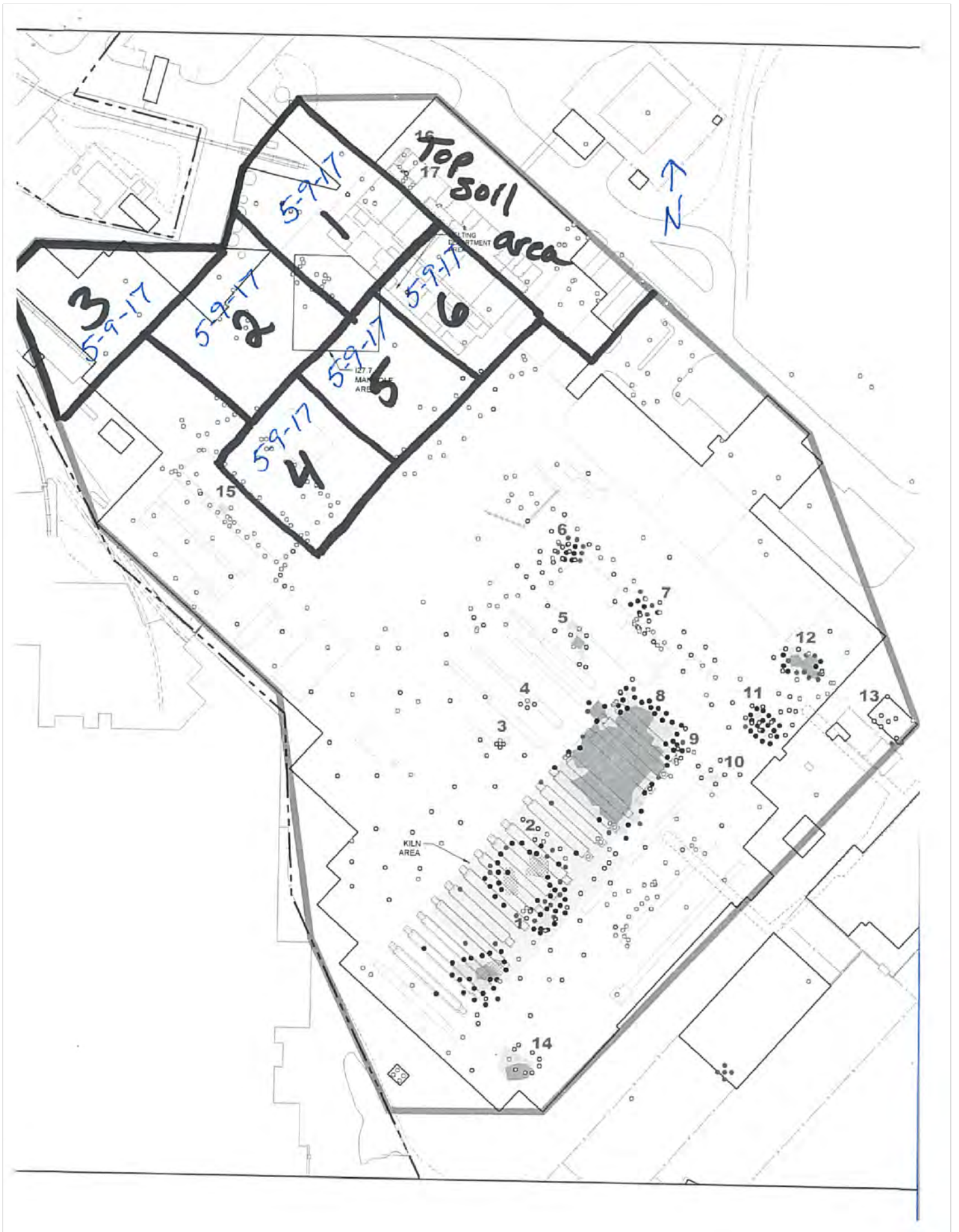
Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
19	0393622-1-S31	10	135.4	10.1	123.0	97.7	≥95	A
20	0393622-1-S31	10	138.4	10.6	125.1	99.4	≥95	A
21	0393622-1-S31	10	138.0	10.1	125.3	99.5	≥95	A
22	0393622-1-S31	10	139.5	11.0	125.7	99.8	≥95	A
23	0393622-1-S31	10	138.9	10.4	125.8	99.9	≥95	A
24	0393622-1-S31	10	138.5	11.1	124.7	99.0	≥95	A
25	0393622-1-S31	10	137.0	10.6	123.9	98.4	≥95	A
26	0393622-1-S31	10	138.1	11.8	123.5	98.1	≥95	A
27	0393622-1-S31	10	138.2	10.3	125.3	99.5	≥95	A
28	0393622-1-S31	10	137.3	10.0	124.8	99.1	≥95	A
29	0393622-1-S31	10	135.9	10.1	123.4	98.0	≥95	A
30	0393622-1-S31	10	135.0	10.2	122.5	97.3	≥95	A

Location			
General Location: Acres 1 to 6- see attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
19	Acre #4	to grade	Fill Material
20	Acre #4	to grade	Fill Material
21	Acre #5	to grade	Fill Material
22	Acre #5	to grade	Fill Material
23	Acre #5	to grade	Fill Material
24	Acre #5	to grade	Fill Material
25	Acre #5	to grade	Fill Material
26	Acre #6	to grade	Fill Material
27	Acre #6	to grade	Fill Material
28	Acre #6	to grade	Fill Material
29	Acre #6	to grade	Fill Material
30	Acre #6	to grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION





Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-2

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Testing Details			
Tested By:	Matthew Ottinger	Test Mode:	Direct Transmission
Date Tested:	5/10/2017	Standard Count: Density:	2372
Field Methods:	ASTM D 6938	Standard Count: Moisture:	531
Gauge Type:	Troxler		
Model Number:	3430		
Serial Number:	30095		

Proctor Information					
Sample ID	Supplier	Material	Method	MDD (lb/ft ³)	OWC (%)
0393622-1-S31	On-site borrow	Medium brown lean clay w/ tr gravel	ASTM D 698 (A)	125.9	11.1

Test Results								
Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
1	0393622-1-S31	10	138.7	11.1	124.8	99.1	≥95	A
2	0393622-1-S31	10	135.5	9.7	123.5	98.1	≥95	A
3	0393622-1-S31	10	140.4	10.5	127.1	101.0	≥95	A
4	0393622-1-S31	10	136.3	10.6	123.2	97.9	≥95	A
5	0393622-1-S31	10	137.7	10.0	125.2	99.4	≥95	A
6	0393622-1-S31	10	140.2	11.6	125.6	99.8	≥95	A

Location			
General Location: Acres 7 to 11- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
1	Acre # 7	Grade	Fill Material
2	Acre # 7	Grade	Fill Material
3	Acre # 7	Grade	Fill Material
4	Acre # 7	Grade	Fill Material
5	Acre # 7	Grade	Fill Material
6	Acre # 8	Grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
7	0393622-1-S31	10	138.3	10.0	125.7	99.8	≥95	A
8	0393622-1-S31	10	139.7	11.5	125.3	99.5	≥95	A
9	0393622-1-S31	10	140.2	10.9	126.4	100.4	≥95	A
10	0393622-1-S31	10	137.9	10.5	124.8	99.1	≥95	A
11	0393622-1-S31	10	138.1	10.3	125.2	99.4	≥95	A
12	0393622-1-S31	10	136.1	11.1	122.5	97.3	≥95	A
13	0393622-1-S31	10	137.0	11.1	123.3	97.9	≥95	A
14	0393622-1-S31	10	137.7	10.4	124.7	99.0	≥95	A
15	0393622-1-S31	10	140.7	10.9	126.9	100.8	≥95	A
16	0393622-1-S31	10	136.4	10.2	123.8	98.3	≥95	A
17	0393622-1-S31	10	139.4	11.0	125.6	99.8	≥95	A
18	0393622-1-S31	10	139.7	11.5	125.3	99.5	≥95	A

Location			
General Location: Acres 7 to 11- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
7	Acre # 8	Grade	Fill Material
8	Acre # 8	Grade	Fill Material
9	Acre # 8	Grade	Fill Material
10	Acre # 8	Grade	Fill Material
11	Acre # 9	Grade	Fill Material
12	Acre # 9	Grade	Fill Material
13	Acre # 9	Grade	Fill Material
14	Acre # 9	Grade	Fill Material
15	Acre # 9	Grade	Fill Material
16	Acre # 10	Grade	Fill Material
17	Acre # 10	Grade	Fill Material
18	Acre # 10	Grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-2

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

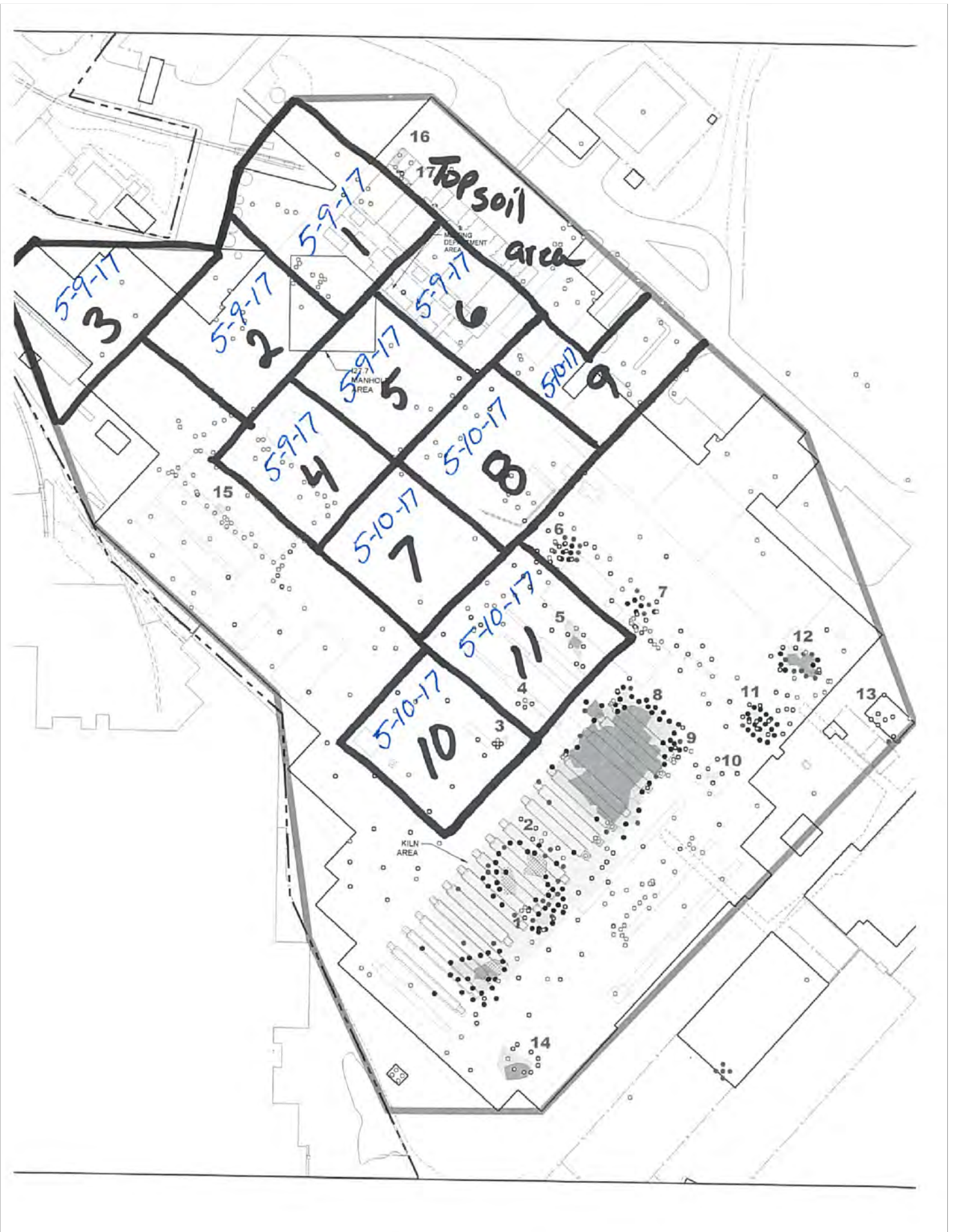
Test Results								
Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
19	0393622-1-S31	10	137.6	11.6	123.3	97.9	≥95	A
20	0393622-1-S31	10	137.5	11.9	122.9	97.6	≥95	A
21	0393622-1-S31	10	137.3	12.3	122.3	97.1	≥95	A
22	0393622-1-S31	10	136.4	10.2	123.8	98.3	≥95	A
23	0393622-1-S31	10	137.9	10.5	124.8	99.1	≥95	A
24	0393622-1-S31	10	137.6	11.6	123.3	97.9	≥95	A
25	0393622-1-S31	10	140.2	12.3	124.8	99.1	≥95	A

Location

General Location: Acres 7 to 11- See attached drawing

Test No.	Location	Test Elev/Depth	Material/Layer
19	Acre # 10	Grade	Fill Material
20	Acre # 10	Grade	Fill Material
21	Acre # 11	Grade	Fill Material
22	Acre # 11	Grade	Fill Material
23	Acre # 11	Grade	Fill Material
24	Acre # 11	Grade	Fill Material
25	Acre # 11	Grade	Fill Material

Comments	Legend
	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION





Professional Service Industries, Inc.
 218 E Morley Drive
 Saginaw, MI 48601
 Phone: (989) 755-6777
 Fax: (989) 755-6775

Report No: FDR:0393622-3

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
 4395 WILDER RD
 BAY CITY, MI 48706
CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
 SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
 Date of Issue: 6/12/2017

Testing Details

Tested By: Matthew Ottinger
Date Tested: 5/17/2017
Field Methods: ASTM D 6938
Gauge Type: Troxler
Model Number: 3430
Serial Number: 30095

Test Mode: Direct Transmission
Standard Count: Density: 2385
Standard Count: Moisture: 528

Proctor Information

Sample ID	Supplier	Material	Method	MDD (lb/ft ³)	OWC (%)
0393622-1-S31	On-site borrow	Medium brown lean clay w/ tr gravel	ASTM D 698 (A)	125.9	11.1

Test Results

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
1	0393622-1-S31	10	135.3	10.0	123.0	97.7	≥95	A
2	0393622-1-S31	10	135.7	10.5	122.8	97.5	≥95	A
3	0393622-1-S31	10	136.1	11.0	122.6	97.4	≥95	A
4	0393622-1-S31	10	135.3	10.0	123.0	97.7	≥95	A
5	0393622-1-S31	10	135.7	11.1	122.1	97.0	≥95	A
6	0393622-1-S31	10	133.1	9.9	121.1	96.2	≥95	A

Location

General Location: Acres 12 to 15- See attached drawing

Test No.	Location	Test Elev/Depth	Material/Layer
1	Acre #12	Grade	Fill Material
2	Acre #12	Grade	Fill Material
3	Acre #12	Grade	Fill Material
4	Acre #12	Grade	Fill Material
5	Acre #12	Grade	Fill Material
6	Acre #13	Grade	Fill Material

Comments

All tests were taken at random locations per acre. Attached drawing shows acreage that was tested.

Legend

OWC = Optimum Water Content
 MDD = Maximum Dry Density
 A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
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Report No: FDR:0393622-3

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
7	0393622-1-S31	10	137.5	11.1	123.8	98.3	≥95	A
8	0393622-1-S31	10	138.8	10.8	125.3	99.5	≥95	A
9	0393622-1-S31	10	136.2	11.9	121.7	96.7	≥95	A
10	0393622-1-S31	10	139.6	11.8	124.9	99.2	≥95	A
11	0393622-1-S31	10	137.5	11.1	123.8	98.3	≥95	A
12	0393622-1-S31	10	135.4	11.1	121.9	96.8	≥95	A
13	0393622-1-S31	10	139.8	10.7	126.3	100.3	≥95	A
14	0393622-1-S31	10	139.3	10.9	125.6	99.8	≥95	A
15	0393622-1-S31	10	136.5	10.9	123.1	97.8	≥95	A
16	0393622-1-S31	10	135.2	11.4	121.4	96.4	≥95	A
17	0393622-1-S31	10	138.9	11.4	124.7	99.0	≥95	A
18	0393622-1-S31	10	137.0	11.6	122.8	97.5	≥95	A

Location			
General Location: Acres 12 to 15- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
7	Acre #13	Grade	Fill Material
8	Acre #13	Grade	Fill Material
9	Acre #13	Grade	Fill Material
10	Acre #13	Grade	Fill Material
11	Acre #14	Grade	Fill Material
12	Acre #14	Grade	Fill Material
13	Acre #14	Grade	Fill Material
14	Acre #14	Grade	Fill Material
15	Acre #14	Grade	Fill Material
16	Acre #15	Grade	Fill Material
17	Acre #15	Grade	Fill Material
18	Acre #15	Grade	Fill Material

Comments
All tests were taken at random locations per acre. Attached drawing shows acreage that was tested.

Legend
OWC = Optimum Water Content
MDD = Maximum Dry Density
A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-3

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

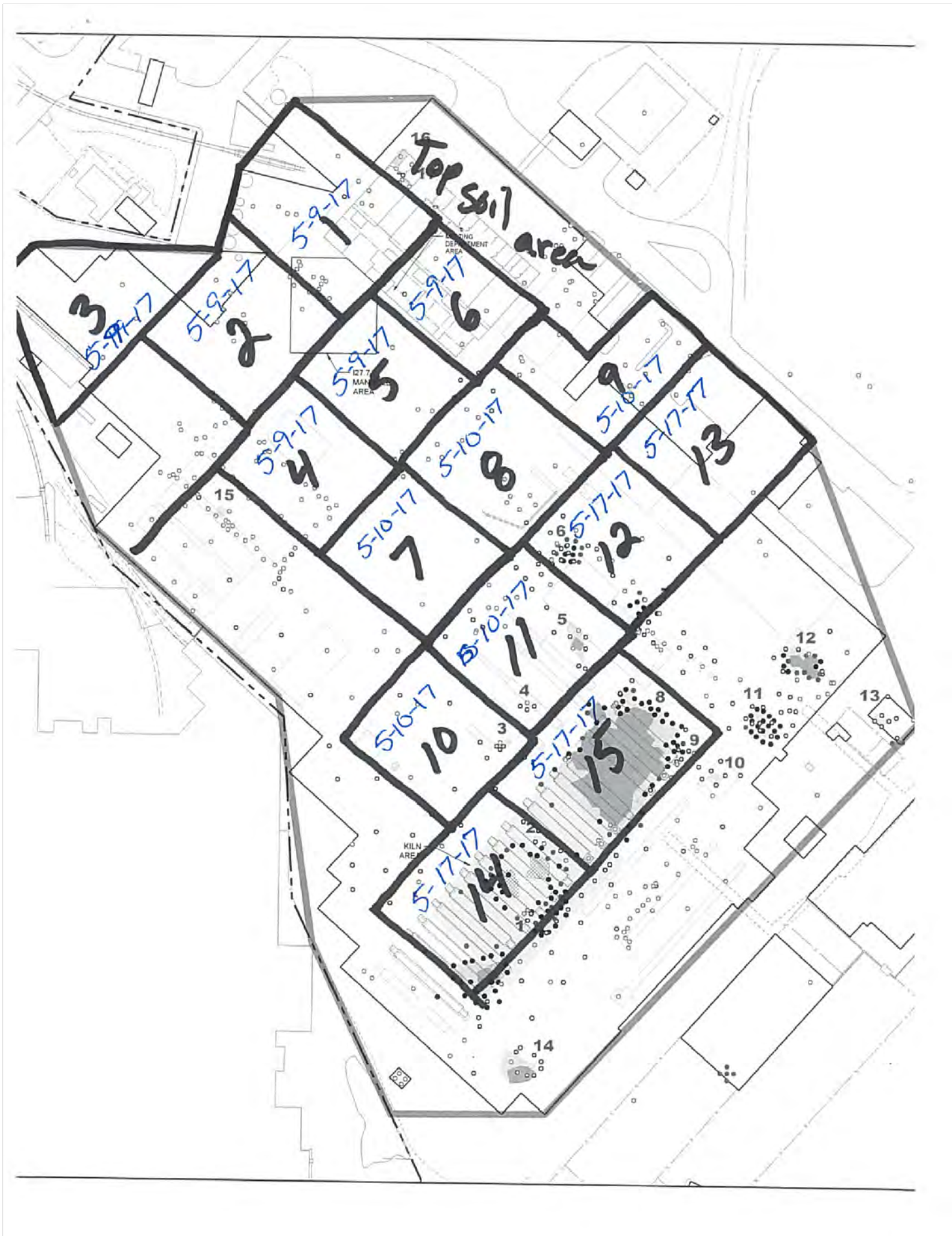
Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test Results								
Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
19	0393622-1-S31	10	137.9	11.0	124.2	98.6	≥95	A
20	0393622-1-S31	10	137.4	11.1	123.7	98.3	≥95	A

Location			
General Location: Acres 12 to 15- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
19	Acre #15	Grade	Fill Material
20	Acre #15	Grade	Fill Material

Comments
All tests were taken at random locations per acre. Attached drawing shows acreage that was tested.

Legend
OWC = Optimum Water Content
MDD = Maximum Dry Density
A = TEST RESULTS COMPLY WITH SPECIFICATION





Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-5

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Testing Details

Tested By: Matthew Ottinger
Date Tested: 5/24/2017
Field Methods: ASTM D 6938
Gauge Type: Troxler 3430
Model Number:
Serial Number:

Test Mode: Direct Transmission
Standard Count: Density: 2451
Standard Count: Moisture: 692

Proctor Information

Sample ID	Supplier	Material	Method	MDD (lb/ft ³)	OWC (%)
0393622-1-S31	On-site borrow	Medium brown lean clay w/ tr gravel	ASTM D 698 (A)	125.9	11.1

Test Results

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
1	0393622-1-S31	10	140.9	11.3	126.6	100.6	≥95	A
2	0393622-1-S31	10	136.0	10.8	122.7	97.5	≥95	A
3	0393622-1-S31	10	137.7	11.2	123.8	98.3	≥95	A
4	0393622-1-S31	10	138.0	10.3	125.1	99.4	≥95	A
5	0393622-1-S31	10	138.9	12.0	124.0	98.5	≥95	A
6	0393622-1-S31	10	139.1	11.0	125.3	99.5	≥95	A

Location

General Location: Acres 16 to 25- See attached drawing

Test No.	Location	Test Elev/Depth	Material/Layer
1	Acre #16	Grade	Fill Material
2	Acre #16	Grade	Fill Material
3	Acre #16	Grade	Fill Material
4	Acre #16	Grade	Fill Material
5	Acre #16	Grade	Fill Material
6	Acre #17	Grade	Fill Material

Comments All tests were taken at random locations per acre. Attached drawing shows acres that were tested today.	Legend OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION
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Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-5

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
7	0393622-1-S31	10	139.8	11.4	125.5	99.7	≥95	A
8	0393622-1-S31	10	138.6	11.1	124.8	99.1	≥95	A
9	0393622-1-S31	10	136.0	10.8	122.7	97.5	≥95	A
10	0393622-1-S31	10	137.9	11.2	124.0	98.5	≥95	A
11	0393622-1-S31	10	137.1	12.1	122.3	97.1	≥95	A
12	0393622-1-S31	10	140.3	11.9	125.4	99.6	≥95	A
13	0393622-1-S31	10	139.6	12.7	123.9	98.4	≥95	A
14	0393622-1-S31	10	138.0	12.2	123.0	97.7	≥95	A
15	0393622-1-S31	10	135.2	11.2	121.6	96.6	≥95	A
16	0393622-1-S31	10	139.9	12.3	124.6	99.0	≥95	A
17	0393622-1-S31	10	139.6	12.7	123.9	98.4	≥95	A
18	0393622-1-S31	10	138.0	12.2	123.0	97.7	≥95	A

Location			
General Location: Acres 16 to 25- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
7	Acre #17	Grade	Fill Material
8	Acre #17	Grade	Fill Material
9	Acre #17	Grade	Fill Material
10	Acre #17	Grade	Fill Material
11	Acre #18	Grade	Fill Material
12	Acre #18	Grade	Fill Material
13	Acre #18	Grade	Fill Material
14	Acre #18	Grade	Fill Material
15	Acre #18	Grade	Fill Material
16	Acre #19	Grade	Fill Material
17	Acre #19	Grade	Fill Material
18	Acre #19	Grade	Fill Material

Comments	Legend
All tests were taken at random locations per acre. Attached drawing shows acres that were tested today.	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
Fax: (989) 755-6775

Report No: FDR:0393622-5

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
19	0393622-1-S31	10	137.9	11.5	123.7	98.3	≥95	A
20	0393622-1-S31	10	139.2	13.1	123.1	97.8	≥95	A
21	0393622-1-S31	10	137.7	11.2	123.8	98.3	≥95	A
22	0393622-1-S31	10	139.1	11.0	125.3	99.5	≥95	A
23	0393622-1-S31	10	136.0	10.8	122.7	97.5	≥95	A
24	0393622-1-S31	10	138.0	12.2	123.0	97.7	≥95	A
25	0393622-1-S31	10	137.5	11.1	123.8	98.3	≥95	A
26	0393622-1-S31	10	136.2	11.9	121.7	96.7	≥95	A
27	0393622-1-S31	10	138.8	10.8	125.3	99.5	≥95	A
28	0393622-1-S31	10	139.6	11.8	124.9	99.2	≥95	A
29	0393622-1-S31	10	137.5	11.1	123.8	98.3	≥95	A
30	0393622-1-S31	10	135.4	11.1	121.9	96.8	≥95	A

Location			
General Location: Acres 16 to 25- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
19	Acre #19	Grade	Fill Material
20	Acre #19	Grade	Fill Material
21	Acre #20	Grade	Fill Material
22	Acre #20	Grade	Fill Material
23	Acre #20	Grade	Fill Material
24	Acre #20	Grade	Fill Material
25	Acre #20	Grade	Fill Material
26	Acre #21	Grade	Fill Material
27	Acre #21	Grade	Fill Material
28	Acre #21	Grade	Fill Material
29	Acre #21	Grade	Fill Material
30	Acre #21	Grade	Fill Material

Comments
All tests were taken at random locations per acre. Attached drawing shows acres that were tested today.

Legend
OWC = Optimum Water Content
MDD = Maximum Dry Density
A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
 218 E Morley Drive
 Saginaw, MI 48601
 Phone: (989) 755-6777
 Fax: (989) 755-6775

Report No: FDR:0393622-5

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
 4395 WILDER RD
 BAY CITY, MI 48706
CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
 SAGINAW, MI

Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
 Date of Issue: 6/12/2017

Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
31	0393622-1-S31	10	138.0	12.2	123.0	97.7	≥95	A
32	0393622-1-S31	10	139.9	12.3	124.6	99.0	≥95	A
33	0393622-1-S31	10	139.6	12.7	123.9	98.4	≥95	A
34	0393622-1-S31	10	135.2	11.2	121.6	96.6	≥95	A
35	0393622-1-S31	10	137.7	11.2	123.8	98.3	≥95	A
36	0393622-1-S31	10	136.3	10.6	123.2	97.9	≥95	A
37	0393622-1-S31	10	139.7	11.5	125.3	99.5	≥95	A
38	0393622-1-S31	10	138.1	10.3	125.2	99.4	≥95	A
39	0393622-1-S31	10	136.1	11.1	122.5	97.3	≥95	A
40	0393622-1-S31	10	139.4	11.5	125.0	99.3	≥95	A
41	0393622-1-S31	10	139.7	11.5	125.3	99.5	≥95	A
42	0393622-1-S31	10	136.4	10.2	123.8	98.3	≥95	A

Test No.	Location	Test Elev/Depth	Material/Layer
31	Acre #22	Grade	Fill Material
32	Acre #22	Grade	Fill Material
33	Acre #22	Grade	Fill Material
34	Acre #22	Grade	Fill Material
35	Acre #22	Grade	Fill Material
36	Acre #23	Grade	Fill Material
37	Acre #23	Grade	Fill Material
38	Acre #23	Grade	Fill Material
39	Acre #23	Grade	Fill Material
40	Acre #23	Grade	Fill Material
41	Acre #24	Grade	Fill Material
42	Acre #24	Grade	Fill Material

Comments
 All tests were taken at random locations per acre. Attached drawing shows acres that were tested today.

Legend
 OWC = Optimum Water Content
 MDD = Maximum Dry Density
 A = TEST RESULTS COMPLY WITH SPECIFICATION



Professional Service Industries, Inc.
218 E Morley Drive
Saginaw, MI 48601

Phone: (989) 755-6777
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Report No: FDR:0393622-5

Issue No: 1

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Field Density Test Report

Client: JOB SITE SERVICES
4395 WILDER RD
BAY CITY, MI 48706

CC: TOM HOLDEMAN

Project: GM MALLEABLE IRON
SAGINAW, MI

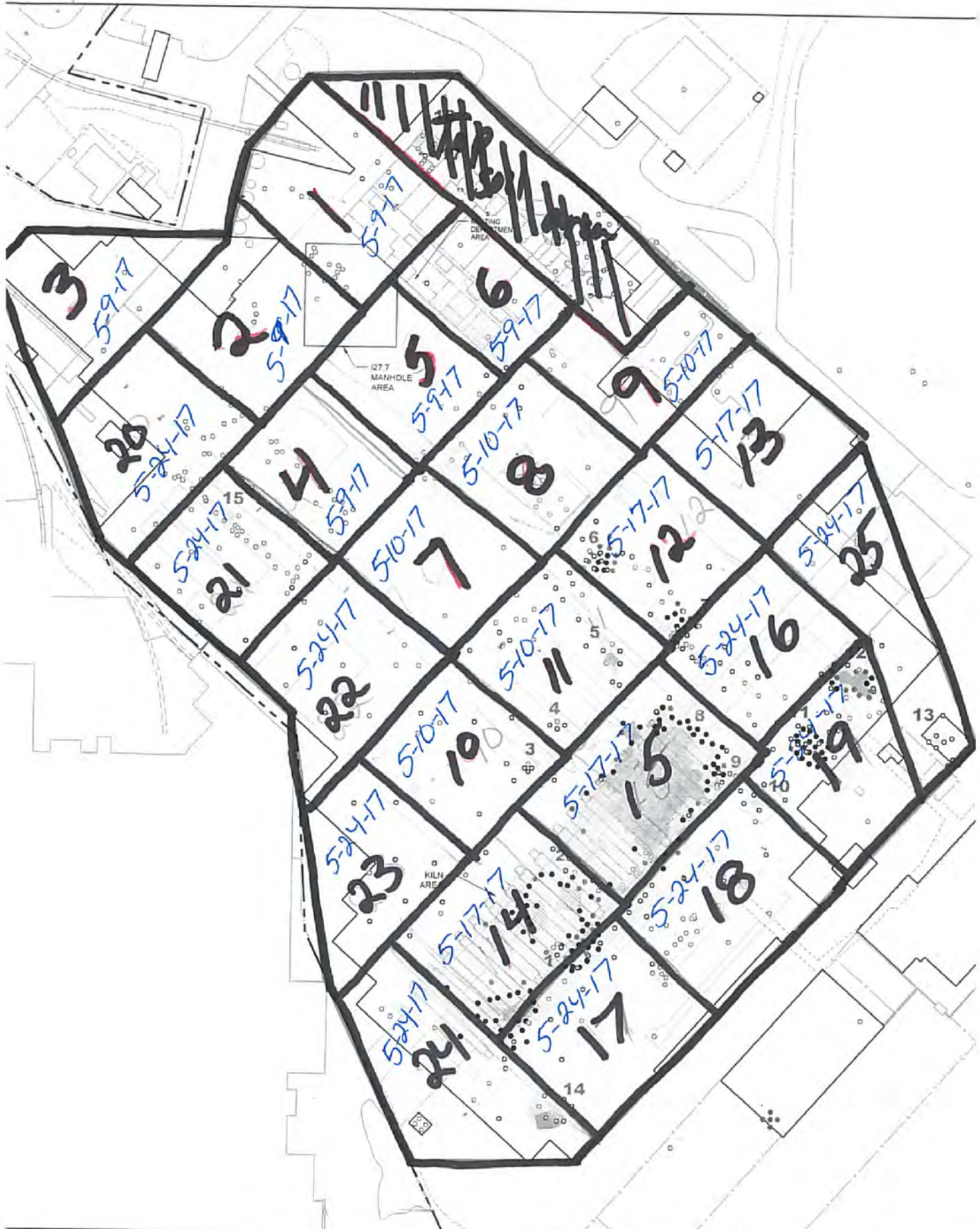
Russell Bennett

Approved Signatory: Russell Bennett (Branch Manager)
Date of Issue: 6/12/2017

Test Results								
Test No.	Proctor Sample ID	Probe Depth (in.)	Wet Density (lb/ft ³)	Water Content (%)	Dry Density (lb/ft ³)	Comp (%)	Comp Spec	Results
43	0393622-1-S31	10	137.6	11.6	123.3	97.9	≥95	A
44	0393622-1-S31	10	136.4	10.2	123.8	98.3	≥95	A
45	0393622-1-S31	10	140.2	12.3	124.8	99.1	≥95	A
46	0393622-1-S31	10	139.0	10.6	125.7	99.8	≥95	A
47	0393622-1-S31	10	139.3	10.8	125.7	99.8	≥95	A
48	0393622-1-S31	10	139.5	11.0	125.7	99.8	≥95	A
49	0393622-1-S31	10	135.4	10.1	123.0	97.7	≥95	A
50	0393622-1-S31	10	135.9	10.1	123.4	98.0	≥95	A

Location			
General Location: Acres 16 to 25- See attached drawing			
Test No.	Location	Test Elev/Depth	Material/Layer
43	Acre #24	Grade	Fill Material
44	Acre #24	Grade	Fill Material
45	Acre #24	Grade	Fill Material
46	Acre #25	Grade	Fill Material
47	Acre #25	Grade	Fill Material
48	Acre #25	Grade	Fill Material
49	Acre #25	Grade	Fill Material
50	Acre #25	Grade	Fill Material

Comments	Legend
All tests were taken at random locations per acre. Attached drawing shows acres that were tested today.	OWC = Optimum Water Content MDD = Maximum Dry Density A = TEST RESULTS COMPLY WITH SPECIFICATION



Attachment D.2 Permeability Testing Results



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PSI

Client: Job Site Services
 4395 Wilder Rd
 Bay City, MI 48706
 Project: GM Malleable Iron
 Saginaw, MI

Tested By: John Brooks
 Project #: 0393622-4
 Date Sampled: 5-23-17
 Report Date: 7-19-17

REPORT OF PERMEABILITY TEST

ASTM D5084, falling head - rising tail system method C, modified

	Sample ID	#1
	Description - ASTM D2488	0
	Sample type	undisturbed
	Specific Gravity - ASTM D854	2.65 assumed
Initial Data		
	Sample mass, g	503.2
	Length, in.	2.161
	Diameter, in.	2.824
	Volume, cf	0.0078
	Water Content, %	11.0
	Dry Density, pcf	127.5
	Void ratio	0.297
	Saturation, %	98
Final Data		
	Sample mass, g	508.23
	Length, in.	2.161
	Diameter, in.	2.824
	Volume, cf	0.0080
	Water Content, %	11.8
	Dry Density, pcf	125.5
	Saturation, %	100
Test boundary conditions		
	Permeant liquid	tap water
	Total back pressure, psi	62
	Effective Consolidation Stress, psi	3
	Headwater tube area, sq.cm.	0.89
	Tailwater tube area, sq.cm.	0.89
	Test Sample Length, cm.	5.49
	Test Sample area, sq cm.	40.42
	Hydraulic gradient	3.1
Average corrected hydraulic conductivity		
	k ₂₀ , cm/s	1.2E-07



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Client: Job Site Services
 4395 Wilder Rd
 Bay City, MI 48706
 Project: GM Malleable Iron
 Saginaw, MI

Tested By: John Brooks
 Project #: 0393622-4
 Date: 6-12-2017

REPORT OF PERMEABILITY TEST

ASTM D5084, falling head - rising tail system method C, modified

	Sample ID	#2
	Description - ASTM D2488	0
	Sample type	undisturbed
	Specific Gravity - ASTM D854	2.65 assumed
Initial Data		
	Sample mass, g	412.14
	Length, in.	1.787
	Diameter, in.	2.845
	Volume, cf	0.0066
	Water Content, %	10.4
	Dry Density, pcf	125.2
	Void ratio	0.321
	Saturation, %	86
Final Data		
	Sample mass, g	415.38
	Length, in.	1.759
	Diameter, in.	2.845
	Volume, cf	0.0065
	Water Content, %	12.3
	Dry Density, pcf	124.4
	Saturation, %	100
Test boundary conditions		
	Permeant liquid	tap water
	Total back pressure, psi	62
	Effective Consolidation Stress, psi	3
	Headwater tube area, sq.cm.	0.89
	Tailwater tube area, sq.cm.	0.89
	Test Sample Length, cm.	4.54
	Test Sample area, sq cm.	41.01
	Hydraulic gradient	4.5
Average corrected hydraulic conductivity		
	k ₂₀ , cm/s	5.2E-09



PSI

Client: Job Site Services
 4395 Wilder Rd
 Bay City, MI 48706
 Project: GM Malleable Iron
 Saginaw, MI

Tested By: John Brooks
 Project #: 0393622-4
 Date Sampled: 5-23-17
 Report Date: 7-19-17

REPORT OF PERMEABILITY TEST

ASTM D5084, falling head - rising tail system method C, modified

	Sample ID	#3
	Description - ASTM D2488	0
	Sample type	undisturbed
	Specific Gravity - ASTM D854	2.65 assumed
Initial Data		
	Sample mass, g	481.72
	Length, in.	2.064
	Diameter, in.	2.831
	Volume, cf	0.0075
	Water Content, %	9.7
	Dry Density, pcf	128.8
	Void ratio	0.284
	Saturation, %	90
Final Data		
	Sample mass, g	488.72
	Length, in.	2.064
	Diameter, in.	2.831
	Volume, cf	0.0076
	Water Content, %	11.7
	Dry Density, pcf	126.0
	Saturation, %	100
Test boundary conditions		
	Permeant liquid	tap water
	Total back pressure, psi	62
	Effective Consolidation Stress, psi	3
	Headwater tube area, sq.cm.	0.89
	Tailwater tube area, sq.cm.	0.89
	Test Sample Length, cm.	5.24
	Test Sample area, sq cm.	40.60
	Hydraulic gradient	3.8
Average corrected hydraulic conductivity		
	k ₂₀ , cm/s	2.8E-08



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 Project: GM Malleable Iron
 Saginaw, MI

Tested By: John Brooks
 Project #: 0393622-4
 Date: 6-14-2017

REPORT OF PERMEABILITY TEST

ASTM D5084, falling head - rising tail system method C, modified

Sample ID	#4
Description - ASTM D2488	0
Sample type	undisturbed
Specific Gravity - ASTM D854	2.65 assumed
Initial Data	
Sample mass, g	483.58
Length, in.	2.058
Diameter, in.	2.852
Volume, cf	0.0076
Water Content, %	10.8
Dry Density, pcf	126.5
Void ratio	0.308
Saturation, %	93
Final Data	
Sample mass, g	484.39
Length, in.	2.040
Diameter, in.	2.842
Volume, cf	0.0075
Water Content, %	11.4
Dry Density, pcf	126.7
Saturation, %	100
Test boundary conditions	
Permeant liquid	tap water
Total back pressure, psi	62
Effective Consolidation Stress, psi	3
Headwater tube area, sq.cm.	0.89
Tailwater tube area, sq.cm.	0.89
Test Sample Length, cm.	5.23
Test Sample area, sq cm.	41.22
Hydraulic gradient	2.9
Average corrected hydraulic conductivity	
k_{20} , cm/s	4.1E-06



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 Project: GM Malleable Iron
 Saginaw, MI

Tested By: John Brooks
 Project #: 0393622-4
 Date: 6-12-2017

REPORT OF PERMEABILITY TEST

ASTM D5084, falling head - rising tail system method C, modified

	Sample ID	#5
	Description - ASTM D2488	0
	Sample type	undisturbed
	Specific Gravity - ASTM D854	2.65 assumed
Initial Data		
	Sample mass, g	483.58
	Length, in.	2.058
	Diameter, in.	2.852
	Volume, cf	0.0076
	Water Content, %	10.8
	Dry Density, pcf	126.5
	Void ratio	0.308
	Saturation, %	93
Final Data		
	Sample mass, g	415.78
	Length, in.	2.127
	Diameter, in.	2.525
	Volume, cf	0.0065
	Water Content, %	11.3
	Dry Density, pcf	126.1
	Saturation, %	97
Test boundary conditions		
	Permeant liquid	tap water
	Total back pressure, psi	62
	Effective Consolidation Stress, psi	3
	Headwater tube area, sq.cm.	0.89
	Tailwater tube area, sq.cm.	0.89
	Test Sample Length, cm.	5.23
	Test Sample area, sq cm.	41.22
	Hydraulic gradient	3.7
Average corrected hydraulic conductivity		
	k ₂₀ , cm/s	1.2E-07