



March 10, 2020

Reference No. 11208041

Mr. Zachary Sasnow
Corrective Action Project Manager
U.S. EPA, Region 5
77 West Jackson Boulevard DW-8J
Chicago, Illinois
U.S.A. 60604 3590

Dear Mr. Sasnow:

**Re: Incremental Soil Sampling Results Summary
EPA ID #MID 041 793 340
RACER Nodular Facility - Saginaw, Michigan**

This letter presents the results of the Incremental Sampling Methodology (ISM) soil sampling of two areas where visible slag is present in the southern portion of Investigative Unit (IU) I at Revitalizing Auto Communities Environmental Response Trust's (RACER's) Former Nodular Industrial Lands (Site) in Saginaw, Michigan. The field sampling was completed on December 11, 2019 in accordance with the Scope of Work approved by the United States Environmental Protection Agency (U.S. EPA) on October 18, 2019 (SOW).

The following figures, tables and attachments were prepared in support of the results summary:

Figure 1	ISM Soil Sample Locations
Table 2.1	Screened ISM Soil Results Summary – Area 1
Table 2.2	Screened ISM Soil Results Summary – Area 2
Attachment A	Data Validation Memorandum and Laboratory Analytical Report
Attachment B	Declaration of Restrictive Covenant
Attachment C	Historic Grey Iron and Nodular Iron Slag Testing Results

1. Field Sampling Procedure

ISM sampling of the surface material was completed on December 11, 2019. Sampling was completed consistent with the sampling procedure presented in the SOW. GHD set up the sampling grid on December 9, 2019 in advance of sampling.

Samples were collected sequentially with all of one replicate sample collected before proceeding to the next replicate sample. Surface materials consisted of a mix of weathered slag, foundry sand, and topsoil,

Aliquots were collected using a 3/4-inch diameter soil probe driven approximately 6-inches into the ground. In limited portions of the Decision Units (DUs), weathered slag covered the entirety of individual



aliquot locations. Regardless, the brittle nature of the slag encountered allowed for the collection of the required aliquot.

All sample aliquots were combined and blended prior to being placed in laboratory supplied sample containers.

2. Screening Levels

Triplicate sample results from each area (ISM Area 1 and ISM Area 2) were compared to the following Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Cleanup Criteria and Screening Levels, Table 3, Nonresidential soils:

- Soil Groundwater/Surface Water Interface Protection Criteria - Human Drinking Water Source (GSIPC). Note that GSI values were calculated using the 2011 average hardness of the Saginaw River (220 milligrams CaCO₃/L) at United States Geological Survey (USGS) station 04157005. It is noted that the most likely compliance point for groundwater from beneath the ISM Areas venting to surface water is the Diechmann Drain located immediately south of the ISM Areas (Figure 1).
- Non-Residential Particulate Soil Inhalation Criteria (PSIC)
- Non-Residential Direct Contact Criteria (DCC)
- Residential Drinking Water Protection Criteria (DWPC)

The data was initially screened against EGLE Statewide Default Background Levels (Background) and Lobe specific background values.

The following additional information was considered when reviewing the exceedances of DWPC.

- Existing regulations set forth by EGLE (R325.10800 et seq.) establish controls for the installation of drinking water supply wells which include:
 - Drinking water supply wells must be cased to a depth of at least 25 feet below ground surface.
 - Drinking water supply wells must be located outside areas subject to flooding.
- There is an existing deed restriction prohibiting installation or use of drinking water wells on-Site.
- Drinking water for Saginaw (which also supplies water to Buena Vista) has been obtained from the Whitestone Point area in Lake Huron (SMP II-77) since 1948.
- The materials comprising the upper water bearing zone across the Nodular Site generally consist of black foundry sand fill, fluvially-deposited sand and gravel, and/or silt associated with a marsh environment. The upper water bearing zone across the Site is generally less than 25-feet in depth; except within the floodplain of the Saginaw River the depth may increase to as much as 60-feet. The upper water bearing zone is hydraulically isolated from the lower water bearing zone by a regional



clay layer (15 to 80-feet thick). The lower water-bearing zone consists of subglacial deposits (sands and silts), weathered bedrock, and competent bedrock.

3. Results Summary

Triplicate sampling was completed in both ISM Area 1 and ISM Area 2, as presented in Figure 1. A duplicate sample of one of the triplicates samples was also collected from ISM Area 2. Soil sample results for ISM Area 1 and ISM Area 2 are presented in Table 2.1 and Table 2.2, respectively, as well as summarized on Figure 1. The data validation memorandum and laboratory analytical report are presented in Attachment A. Triplicate samples were first reviewed for outliers. No significant outliers were identified.

To provide a frame of reference a conservative approach was then taken to review the data by comparing the maximum detected concentrations from the triplicate samples from each area (ISM Area 1 and ISM Area 2).

There were no exceedances of DCC. The following sections summarize the exceedances of criteria.

3.1 Exceedances of DWPC

The following metals were detected above the DWPC:

- Aluminum was detected at a maximum concentration of 14,000 mg/kg in ISM Area 1 as compared to the criterion of 1 mg/kg.
- Manganese was detected at a maximum concentration of 4,200 mg/kg in ISM Area 1 and 1,700 mg/kg in ISM Area 2 as compared to the criterion of 1 mg/kg.
- Iron was detected at a maximum concentration of 37,000 mg/kg in ISM Area 2 as compared to the criterion of 6 mg/kg

No further action is recommended based on the following:

- There is a deed restriction prohibiting installation or use of drinking water wells (Attachment B)
- Drinking water for Saginaw (which also supplies water to Buena Vista) has been obtained from the Whitestone Point area in Lake Huron (SMP II-77) since 1948.
- The upper water bearing zone is not continuous.
- The thickness of the upper water bearing zone across the Site is generally less than 25-feet (except near the Saginaw River). Existing regulations set forth by EGLE (further detailed above) requires a minimum casing depth of 25-ft. Therefore, the upper water bearing zone cannot be used for drinking water.

Note that the shallow saturated unit across the Site is hydraulically isolated from the lower aquifer by a regional clay layer and there is no evidence that impacts in the shallow saturated unit, if present, will migrate to the lower aquifer.



3.2 Exceedances of GSIPC

The following metals were detected above the GSIPC:

- Manganese was detected at a maximum concentration of 4,200 mg/kg in ISM Area 1 and 1,700 mg/kg in ISM Area 2 as compared to the criterion of 26 mg/kg.
- Selenium was detected at a maximum concentration of 1.4 mg/kg in ISM Area 1 as compared to the criterion of 0.4 mg/kg.
- Zinc was detected at a maximum concentration of 290 mg/kg in ISM Area 1 and 400 mg/kg in ISM Area 2 as compared to the criterion of 230 mg/kg.

No further action is recommended based on the following:

- A review of historic slag sampling analytical results indicates that the ISM results are consistent with the assessment of slags generated at the nearby Grey Iron Facility (Attachment C). In addition, a review of the historic slag American Society of Testing and Materials (ASTM) Leaching Test and Toxicity Characteristic Leaching Procedure (TCLP) results on the slag produced from both the Grey Iron and Nodular Iron facilities (Attachment C) shows that metals within the slag do not leach in concentrations that would result in GSIC exceedances within local groundwater, as presented below:
- Manganese – Though manganese ASTM leaching test results are not available, the maximum TCLP results of 0.41 mg/L is below the GSIC for surface water not protected for drinking water use of 3.9 mg/L. The TCLP results would provide a conservative estimate of the leachability of manganese from the slag and confirms that manganese exceedances of GSIPC would not result in impacts to local groundwater resources at concentrations exceeding its GSIC.
- Selenium – the maximum leaching test results for selenium is 0.002 mg/L, which is below the GSIC for surface water not protected for drinking water use of 0.005 mg/L. The ASTM Leaching Test results indicate that selenium from the slag exceeding GSIPC would not result in impacts to local groundwater resources at concentrations exceeding GSIC.
- Zinc – the maximum leaching test results for zinc are non-detect at 0.01mg/L, which is below the GSIC for surface water not protected for drinking water use of 0.23 mg/L. The ASTM Leaching Test results indicate that zinc from the slag exceeding GSIPC would not result in impacts to local groundwater resources at concentrations exceeding GSIC.

Therefore, soils within ISM Area 1 and 2 are not expected to leach metals to groundwater in concentrations that exceed GSIC.

3.3 Exceedances of PSIC

The only parameter that was detected above PSIC was manganese (1,500 mg/kg) in ISM Area 1 at a maximum concentration of 4,200 mg/kg and in ISM Area 2 at a maximum concentration of 1,700 mg/kg.

No further action is recommended based on the following:



The EGLE Non-Residential PSIC includes the assumption of inhalation of particulate emissions resulting from vehicle traffic. This assumption is overly conservative and should, therefore, site-specific conditions should be considered. Vehicle traffic in the vicinity of these Areas is very limited. In 2017 EGLE proposed a draft Non-Residential PSIC of 23,000 mg/kg which did not include the assumption of vehicle traffic. Though not adopted, this value is more applicable to the Site conditions in the vicinity of the ISM Areas.

4. Conclusions

As expected for soil containing weathered slag, certain metals were detected at apparently elevated levels. However, as discussed above, there are no site-related concentrations in soil that represent a potential for significant exposure to on- or off-site receptors.

In conclusion, no further action is warranted for these two Areas.

Should you have any questions, please do not hesitate to call.

Yours truly,

GHD

A handwritten signature in blue ink that reads "J. Pardys". The signature is stylized and cursive.

John-Eric Pardys, P. Eng.

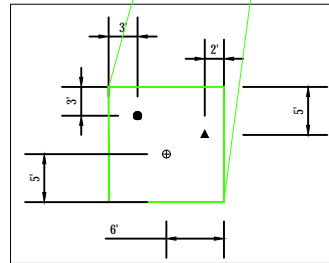
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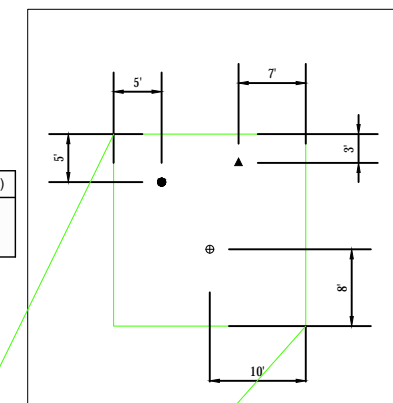
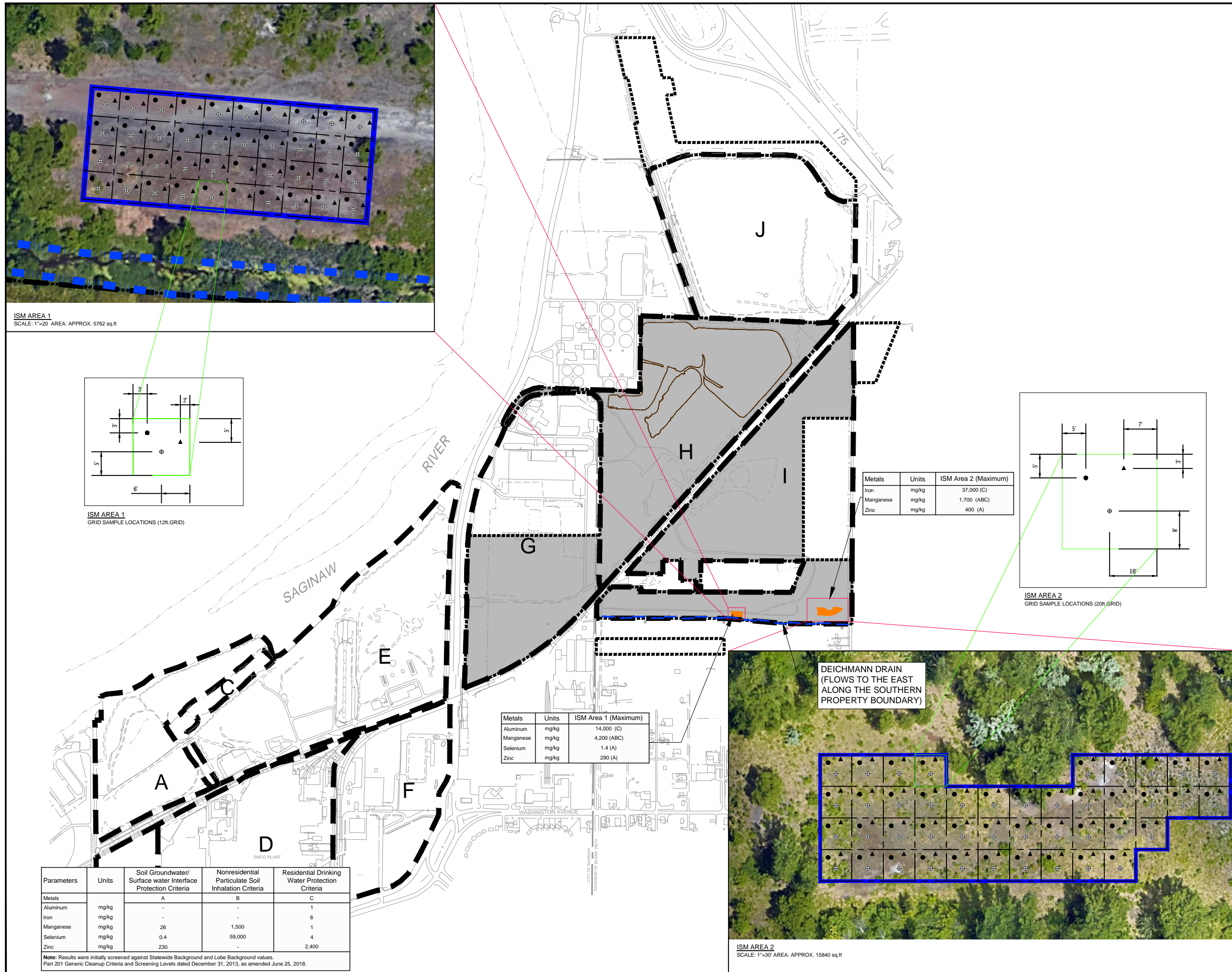
cc: Dave Favero, RACER
Michael Tomka, GHD



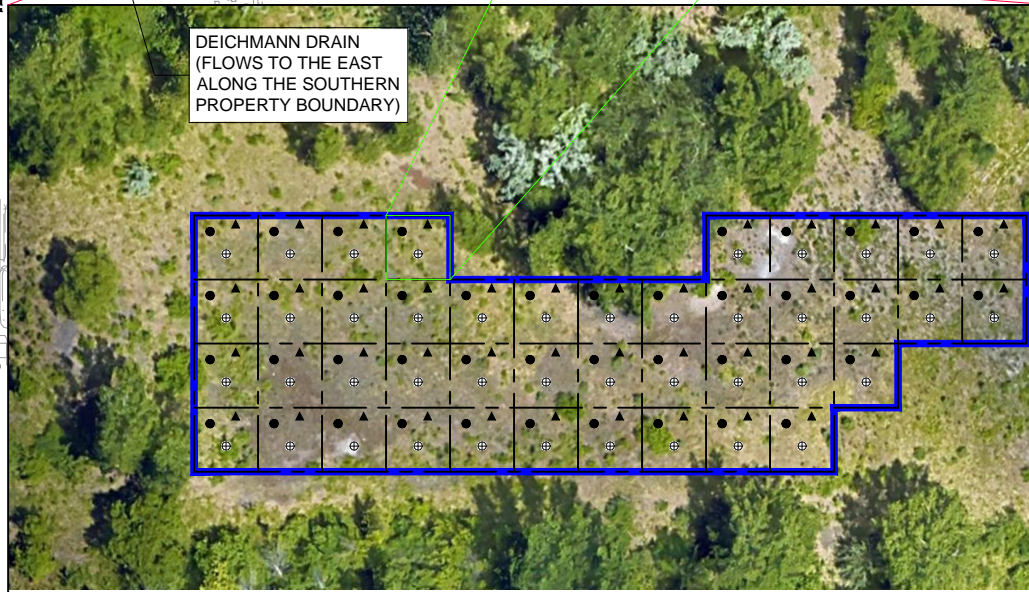
ISM AREA 1
SCALE: 1"=20' AREA: APPROX. 5762 sq.ft



ISM AREA 1
GRID SAMPLE LOCATIONS (12ft GRID)



ISM AREA 2
GRID SAMPLE LOCATIONS (20ft GRID)



DEICHMANN DRAIN
(FLOWS TO THE EAST
ALONG THE SOUTHERN
PROPERTY BOUNDARY)

ISM AREA 2
SCALE: 1"=30' AREA: APPROX. 15840 sq.ft

LEGEND

- A** ——— INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
- - - - - APPROXIMATE FORMER PROPERTY BOUNDARY
- ISM AREA
- · — · — DEICHMANN DRAIN
- · — · — APPROXIMATE LIMITS OF RACER PROPERTY
- ⊕ ▲ ● ISM ALIQUOT LOCATIONS

NOTE: TOPO - SANBORN, 1996

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

**RACER
SAGINAW NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN
SUMMARY OF EXCEEDANCES
ISM SOIL SAMPLE RESULTS**

Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
AERIAL SOURCE: IMAGE ©2015 GOOGLE (IMAGERY DATE 6/17/2016)

Project Manager: J.P.	Reviewed By: M.T.	Date: March 2020
Scale: 1" = 500'	Project N ^o : 11208041	Report N ^o : SASNOW-1 figure 1

Parameters	Units	Soil Groundwater/ Surface water Interface Protection Criteria	Nonresidential Particulate Soil Inhalation Criteria	Residential Drinking Water Protection Criteria
		A	B	C
Aluminum	mg/kg	-	-	1
Iron	mg/kg	-	-	6
Manganese	mg/kg	26	1,500	1
Selenium	mg/kg	0.4	59,000	4
Zinc	mg/kg	230	-	2,400

Note: Results were initially screened against Statewide Background and Lobe Background values. Part 201 Generic Cleanup Criteria and Screening Levels dated December 31, 2013, as amended June 25, 2018.

Table 2.1
Screened Soil Results Summary - ISM Area 1
RACER Nodular Facility
Saginaw, Michigan

Sample Location:
 Sample ID:
 Sample Date:
 Sample Depth:

ISM Area 1– Sample1
 S-58502-121119-SSH-6219
 12/11/2019
 (0-6) in

ISM Area 1– Sample2
 S-58502-121119-SSH-6319
 12/11/2019
 (0-6) in

ISM Area 1– Sample3
 S-58502-121119-SSH-6419
 12/11/2019
 (0-6) in

Parameters	Units	Statewide Default Background Level	Saginaw Lobe - Background for Topsoil ³	Soil Groundwater/ Surface water Interface Protection Criteria	Nonresidential Particulate Soil Inhalation Criteria	Residential Drinking Water Protection Criteria	Nonresidential Direct Contact Criteria	ISM Area 1 (Maximum)			
				a	b	c	d				
Metals											
Aluminum	mg/kg	6900	10908	-	-	1	370000	14000 ^c	14000	12000	14000
Antimony	mg/kg	-	-	94	5900	4.3	670	0.19 J	0.54 U	0.55 U	0.19 J
Arsenic	mg/kg	5.8	11.8	4.6	910	4.6	37	1.9	1.7	1.5	1.9
Barium	mg/kg	75	77.9	660 ²	150000	1300	130000	200	200	160	190
Beryllium	mg/kg	-	-	320 ²	590	51	1600	2.2	2.2	1.7	2.1
Cadmium	mg/kg	1.2	<2.0	3.0 ²	2200	6	2100	0.15 J	0.13 J	0.12 J	0.15 J
Calcium	mg/kg	-	-	-	-	-	-	100000	100000	84000	99000
Chromium ¹	mg/kg	18	30.9	3500000	150000	1000000	1000000	78	76	65	78
Cobalt	mg/kg	6.8	6.1	2.0	5900	0.8	9000	1.4	1.3	1.2	1.4
Copper	mg/kg	32	23.5	100 ²	59000	5800	73000	18	15	13	18
Iron	mg/kg	12000	27590	-	-	6	580000	14000	12000	11000	14000
Lead	mg/kg	21	30.2	2500 ²	44000	700	900	13	11	12	13
Magnesium	mg/kg	-	4604	-	2900000	8000	1000000	13000	13000	11000	13000
Manganese	mg/kg	440	905	26 ²	1500	1	90000	4200 ^{abc}	4200	3500	4200
Mercury	mg/kg	0.13	0.16	0.0012	88000	1.7	580	0.019 J	0.11 U	0.019 J	0.11 U
Nickel	mg/kg	20	16.6	100 ²	16000	100	150000	12	12	9.5	12
Potassium	mg/kg	-	-	-	-	-	-	1100	1000	910	1100
Selenium	mg/kg	0.41	0.65	0.4	59000	4	9600	1.4 ^a	1.4	1.2 J	1.4
Silver	mg/kg	1	1.6	0.027	2900	4.5	9000	0.11 J	0.11 J	0.10 J	0.11 J
Sodium	mg/kg	-	-	-	-	4600	1000000	460	460	360	430
Thallium	mg/kg	-	-	4.2	5900	2.3	130	ND	0.27 U	0.27 U	0.27 U
Vanadium	mg/kg	-	-	430	-	72	5500	11	10	9.6	11
Zinc	mg/kg	47	122	230 ²	-	2400	630000	290 ^a	230	250	290
Wet											
pH, lab	s.u.							8.7	8.7	8.3	8.6

Notes:

mg/kg milligrams per kilogram

13000^a exceeds criteria presented in the superscript

- 1 Criteria for trivalent chromium used to evaluate total chromium results. Historic samples collected at the Site support the assumption that it is reasonable to expect that chromium reported at the Facility is in the trivalent form
- 2 Soil GSI protection criteria, for human drinking water source, developed using the 2011 average hardness of the Saginaw River (220 mgCaCO3/L) available from USGS station 04157005
- 3 Michigan Background Soil Survey (2015 Update), Table 2 - Topsoil, Saginaw Glacial Lobe Area, mean plus 2 standard deviations
- U Not detected at the associated reporting limit.
- J Estimated concentration below the detection limit

Table 2.2
Screened Soil Results Summary - ISM Area 2
RACER Nodular Facility
Saginaw, Michigan

Sample Location:
 Sample ID:
 Sample Date:
 Sample Depth:

ISM Area 2- Sample1 ISM Area 2- Sample1 ISM Area 2- Sample2 ISM Area 2- Sample3
 S-58502-121119-SSH-6619S-58502-121119-SSH-6619 DUF S-58502-121119-SSH-6719 S-58502-121119-SSH-6819
 12/11/2019 12/11/2019 12/11/2019 12/11/2019
 (0-6) in (0-6) in (0-6) in (0-6) in
 (Duplicate)

Parameters	Units	Statewide Default Background Level	Saginaw Lobe - Topsoil ³	Soil Groundwater/ Surface water Interface Protection Criteria ^a	Nonresidential Particulate Soil Inhalation Criteria ^b	Residential Drinking Water Protection Criteria ^c	Nonresidential Direct Contact Criteria ^d	ISM Area 2 (Maximum)	ISM Area 2- Sample1 (0-6) in	ISM Area 2- Sample1 (0-6) in (Duplicate)	ISM Area 2- Sample2 (0-6) in	ISM Area 2- Sample3 (0-6) in
Metals												
Aluminum	mg/kg	6900	10908	-	-	1	370000	8700	8600	8700	8000	8200
Antimony	mg/kg	-	-	94	5900	4.3	670	0.46 J	0.46 J	0.45 J	0.45 J	0.40 J
Arsenic	mg/kg	5.8	11.8	4.6	910	4.6	37	4.5	4.3	4.5	4.1	4.1
Barium	mg/kg	75	77.9	660 ²	150000	1300	130000	75	74	75	65	64
Beryllium	mg/kg	-	-	320 ²	590	51	1600	0.62	0.62	0.61	0.55	0.52
Cadmium	mg/kg	1.2	<2.0	3.0 ²	2200	6	2100	0.79	0.77	0.79	0.67	0.72
Calcium	mg/kg	-	-	-	-	-	-	23000	23000	23000	21000	20000
Chromium ¹	mg/kg	18	30.9	3500000	150000	1000000	1000000	76	74	75	76	62
Cobalt	mg/kg	6.8	6.1	2.0	5900	0.8	9000	3.5	3.4	3.5	3.4	3.2
Copper	mg/kg	32	23.5	100 ²	59000	5800	73000	41	39	41	40	35
Iron	mg/kg	12000	27590	-	-	6	580000	37000^c	36000	37000	35000	32000
Lead	mg/kg	21	30.2	2500 ²	44000	700	900	97	92	97	83	88
Magnesium	mg/kg	-	4604	-	2900000	8000	1000000	4700	4500	4700	4100	4500
Manganese	mg/kg	440	905	26 ²	1500	1	90000	1700^{abc}	1700	1700	1400	1600
Mercury	mg/kg	0.13	0.16	0.0012	88000	1.7	580	0.031 J	0.031 J	0.031 J	0.028 J	0.029 J
Nickel	mg/kg	20	16.6	100 ²	16000	100	150000	25	25	24	24	20
Potassium	mg/kg	-	-	-	-	-	-	720	710	720	700	720
Selenium	mg/kg	0.41	0.65	0.4	59000	4	9600	0.64 J	0.64 J	0.62 J	0.53 J	0.56 J
Silver	mg/kg	1	1.6	0.027	2900	4.5	9000	0.29	0.28	0.29	0.24 J	0.25 J
Sodium	mg/kg	-	-	-	-	4600	1000000	160 J	160 J	150 J	150 J	140 J
Thallium	mg/kg	-	-	4.2	5900	2.3	130	0.13 J	0.13 J	0.11 J	0.097 J	0.096 J
Vanadium	mg/kg	-	-	430	-	72	5500	13	13	13	13	13
Zinc	mg/kg	47	122	230 ²	-	2400	630000	400^a	390	400	350	370
Wet												
pH, lab	s.u.							8.2	8.2	8.1	8.0	8.0

Notes:

mg/kg milligrams per kilogram

8400^d exceeds criteria presented in the superscript

- 1 Criteria for trivalent chromium used to evaluate total chromium results. Historic samples collected at the Site support the assumption that it is reasonable to expect that chromium reported at the Facility is in the trivalent form
- 2 Soil GSI protection criteria, for human drinking water source, developed using the 2011 average hardness of the Saginaw River (220 mgCaCO3/L) available from USGS station 0415700:
- 3 Michigan Background Soil Survey (2015 Update), Table 2 - Topsoil, Saginaw Glacial Lobe Area, mean plus 2 standard deviations
- U Not detected at the associated reporting limit.
- J Estimated concentration below the detection limit

Attachment A
Data Validation Memorandum and Laboratory
Analytical Report



Memorandum

March 10, 2020

To: Mike Tomka, GHD Ref. No.: 058502A-A03-01Y19

From:  Ruth L. Mickle/sb/2 Tel: 612-524-6872

Cc: John-Eric Pardys, GHD

**Subject: Analytical Results and Full Validation
Incremental Soil Sampling
RACER Trust – Nodular Site
Saginaw, Michigan
December 2019**

1. Introduction

This document details a reduced data validation of analytical results for samples collected in support of the Incremental Soil Sampling at the RACER-Nodular Site during December 2019. Samples were submitted to Eurofins TestAmerica (TestAmerica) located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. Samples were prepared at the lab according to TestAmerica's sample preparation standard operating procedures for soil processing and subsampling. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, duplicate data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the document entitled:

- i) "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 540-R-2017-1, January 2017

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times with the exception of pH sample results presented with qualifiers in Table 4.



The samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The method blank results were non-detect.

4. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits demonstrating acceptable analytical accuracy.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

If the original sample concentration is significantly greater than the spike concentration, or, if sample is diluted five times or greater, the recovery is not assessed.

If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". Table 5 presents the outlying matrix spike results. The associated sample data were qualified estimated, as noted in the table. The remaining percent recoveries and RPD values were within the control limits criteria.



6. Duplicate Sample Analyses – pH Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines".

The duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

7. Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value for water samples.

The field duplicate results were within acceptable agreement demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte adjusted for specific sample dilutions, weights, and volumes. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Table 1

Sample Collection and Analysis Summary
ISM Soil Sampling
RACER Trust - Nodular Site
Saginaw, Michigan
December 2019

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/ Parameters		Comments
							Metals	pH	
TA SDG No.: 240-123685-1									
S-58502-121119-SSH-6219	ISM Area 1– Sample1	soil	0	6	12/11/2019	09:10	X	X	
S-58502-121119-SSH-6319	ISM Area 1– Sample2	soil	0	6	12/11/2019	10:00	X	X	
S-58502-121119-SSH-6419	ISM Area 1– Sample3	soil	0	6	12/11/2019	10:50	X	X	
EW-58502-121119-SSH-6519	Equipment Blank	water			12/11/2019	11:05	X	X	Equipment blank
S-58502-121119-SSH-6619	ISM Area 2– Sample1	soil	0	6	12/11/2019	12:15	X	X	MS/MSD
S-58502-121119-SSH-6619 DUP	ISM Area 2– Sample1	soil	0	6	12/11/2019	12:15	X	X	FD (-6619)
S-58502-121119-SSH-6719	ISM Area 2– Sample2	soil	0	6	12/11/2019	13:15	X	X	
S-58502-121119-SSH-6819	ISM Area 2– Sample3	soil	0	6	12/11/2019	14:15	X	X	

Notes:

MS/MSD - Matrix spike/matrix spike duplicate.

FD - Field Duplicate Sample of sample in parenthesis

Validated Analytical Results Summary
ISM Soil Sampling
Racer Trust - Nodular Site
Saginaw, Michigan
December 2019

Location ID:	ISM Area 1– Sample1	ISM Area 1– Sample2	ISM Area 1– Sample3	ISM Area 2– Sample1	ISM Area 2– Sample1	ISM Area 2– Sample2	ISM Area 2– Sample3	
Sample Name:	S-58502-121119-SSH-6219	S-58502-121119-SSH-6319	S-58502-121119-SSH-6419	S-58502-121119-SSH-6619	S-58502-121119-SSH-6619 DUP	S-58502-121119-SSH-6719	S-58502-121119-SSH-6819	
Sample Date:	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019	12/11/2019	
Depth:	0-6 in	0-6 in	0-6 in	0-6 in	0-6 in Duplicate	0-6 in	0-6 in	
Parameters	Unit							
Metals								
Aluminum	mg/kg	14000	12000	14000	8600	8700	8000	8200
Antimony	mg/kg	0.54 UJ	0.55 UJ	0.19 J-	0.46 J-	0.45 J-	0.45 J-	0.40 J-
Arsenic	mg/kg	1.7	1.5	1.9	4.3	4.5	4.1	4.1
Barium	mg/kg	200	160	190	74	75	65	64
Beryllium	mg/kg	2.2	1.7	2.1	0.62	0.61	0.55	0.52
Cadmium	mg/kg	0.13 J	0.12 J	0.15 J	0.77	0.79	0.67	0.72
Calcium	mg/kg	100000	84000	99000	23000	23000	21000	20000
Chromium	mg/kg	76	65	78	74	75	76	62
Cobalt	mg/kg	1.3	1.2	1.4	3.4	3.5	3.4	3.2
Copper	mg/kg	15	13	18	39	41	40	35
Iron	mg/kg	12000	11000	14000	36000	37000	35000	32000
Lead	mg/kg	11	12	13	92	97	83	88
Magnesium	mg/kg	13000 J+	11000 J+	13000 J+	4500 J+	4700 J+	4100 J+	4500 J+
Manganese	mg/kg	4200	3500	4200	1700	1700	1400	1600
Mercury	mg/kg	0.11 U	0.019 J	0.11 U	0.031 J	0.031 J	0.028 J	0.029 J
Nickel	mg/kg	12	9.5	12	25	24	24	20
Potassium	mg/kg	1000	910	1100	710	720	700	720
Selenium	mg/kg	1.4	1.2 J	1.4	0.64 J	0.62 J	0.53 J	0.56 J
Silver	mg/kg	0.11 J	0.10 J	0.11 J	0.28	0.29	0.24 J	0.25 J
Sodium	mg/kg	460	360	430	160 J	150 J	150 J	140 J
Thallium	mg/kg	0.27 U	0.27 U	0.27 U	0.13 J	0.11 J	0.097 J	0.096 J
Vanadium	mg/kg	10	9.6	11	13	13	13	13
Zinc	mg/kg	230	250	290	390	400	350	370
General Chemistry								
pH	s.u.	8.7 J	8.3 J	8.6 J	8.2 J	8.1 J	8.0 J	8.0 J

Notes:

- J - Estimated concentration
- J+ - Estimated concentration; result may be biased high.
- J- - Estimated concentration; result may be biased low.
- UJ - Not detected; associated reporting limit is estimated

Table 3

**Analytical Methods and Holding Time Criteria
ISM Soil Sampling
RACER Trust - Nodular Site
Saginaw, Michigan
December 2019**

Parameter	Method	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
TAL Metals	SW-846 6020/7470/7471A	Water/Soil	-	180 (Mercury - 28)
pH	SW-846 9040/9045	Water/Soil	-	Analyze Immediately (15 mins)

Notes

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.

TAL - Target Analyte List

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
ISM Soil Sampling
RACER Trust - Nodular Site
Saginaw, Michigan
December 2019**

Parameter	Sample ID	Holding Time (hours)	Holding Time Criteria (hours)	Analyte	Qualified Sample Results	Units
General Chemistry	EW-58502-121119-SSH-6519	30	Analyze Immediately (0.25 hours)	pH	6.0 J	s.u.
	S-58502-121119-SSH-6219	32	Analyze Immediately (0.25 hours)	pH	8.7 J	s.u.
	S-58502-121119-SSH-6319	32	Analyze Immediately (0.25 hours)	pH	8.3 J	s.u.
	S-58502-121119-SSH-6419	31	Analyze Immediately (0.25 hours)	pH	8.6 J	s.u.
	S-58502-121119-SSH-6619	30	Analyze Immediately (0.25 hours)	pH	8.1 J	s.u.
	S-58502-121119-SSH-6619	30	Analyze Immediately (0.25 hours)	pH	8.2 J	s.u.
	S-58502-121119-SSH-6619 DUP	30	Analyze Immediately (0.25 hours)	pH	8.1 J	s.u.
	S-58502-121119-SSH-6719	29	Analyze Immediately (0.25 hours)	pH	8.0 J	s.u.
	S-58502-121119-SSH-6819	28	Analyze Immediately (0.25 hours)	pH	8.0 J	s.u.

Notes:

- J - Estimated concentration
s.u. - Standard unit

Table 5

**Qualified Sample Results Due to Outlying MS/MSD Results
ISM Soil Sampling
RACER Trust - Nodular Site
Saginaw, Michigan
December 2019**

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits		Assoc Samples	Qualified Result	Units
						% Recovery	RPD			
Metals	S-58502-121119-SSH-6619	Antimony	44	35	18	75-125	35	S-58502-121119-SSH-6219	0.54 UJ	mg/kg
								S-58502-121119-SSH-6319	0.55 UJ	mg/kg
								S-58502-121119-SSH-6419	0.19 J-	mg/kg
								S-58502-121119-SSH-6619	0.46 J-	mg/kg
								S-58502-121119-SSH-6619 DUP	0.45 J-	mg/kg
								S-58502-121119-SSH-6719	0.45 J-	mg/kg
								S-58502-121119-SSH-6819	0.40 J-	mg/kg
Metals	S-58502-121119-SSH-6619	Magnesium	141	126	3	75-125	35	S-58502-121119-SSH-6219	13000 J+	mg/kg
								S-58502-121119-SSH-6319	11000 J+	mg/kg
								S-58502-121119-SSH-6419	13000 J+	mg/kg
								S-58502-121119-SSH-6619	4500 J+	mg/kg
								S-58502-121119-SSH-6619 DUP	4700 J+	mg/kg
								S-58502-121119-SSH-6719	4100 J+	mg/kg
								S-58502-121119-SSH-6819	4500 J+	mg/kg

Notes:

- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- RPD - Relative Percent Difference
- J+ - Estimated concentration; result may be biased high.
- J- - Estimated concentration; result may be biased low.
- UJ - Not detected; associated reporting limit is estimated

ANALYTICAL REPORT

Eurofins TestAmerica, Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

Laboratory Job ID: 240-123685-1

Client Project/Site: 58502-A03, RACER Nodular Iron

For:

GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle



Authorized for release by:
12/31/2019 10:34:53 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: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Job ID: 240-123685-1

Laboratory: Eurofins TestAmerica, Canton

Narrative

Job Narrative 240-123685-1

Comments

The samples were processed per SOPs: NC-OP-044 entitled "Soil Processing" and SOP NC-OP-046 entitled "Subsampling". Each sample was laid out as received, then mixed thoroughly and then a 2D slabcake was performed to collect the sample for pH analysis. Each sample was then air dried, then disaggregated using the entire volume with rotary hammers and sieved using a #10, 2 mm sieve. After sieving, a statistical subsampling procedure was performed to sub-aliquot sample volume to be used for metals analysis.

Receipt

The samples were received on 12/12/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° C.

Metals

Methods 6020: The initial continuing calibration verification low (ICVL) associated with batch 240-416149 recovered above the upper control limit for antimony. The samples associated with this ICVL were below the requested reporting limit for the affected analyte; therefore, the data have been reported. The following samples are impacted: EW-58502-121119-SSH-6519 (240-123685-4).

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: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
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.
F1	MS and/or MSD Recovery is outside acceptance limits.
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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
240-123685-1	S-58502-121119-SSH-6219	Solid	12/11/19 09:10	12/12/19 09:40	
240-123685-2	S-58502-121119-SSH-6319	Solid	12/11/19 10:00	12/12/19 09:40	
240-123685-3	S-58502-121119-SSH-6419	Solid	12/11/19 10:50	12/12/19 09:40	
240-123685-4	EW-58502-121119-SSH-6519	Water	12/11/19 11:05	12/12/19 09:40	
240-123685-5	S-58502-121119-SSH-6619	Solid	12/11/19 12:15	12/12/19 09:40	
240-123685-6	S-58502-121119-SSH-6619 DUP	Solid	12/11/19 12:15	12/12/19 09:40	
240-123685-7	S-58502-121119-SSH-6719	Solid	12/11/19 13:15	12/12/19 09:40	
240-123685-8	S-58502-121119-SSH-6819	Solid	12/11/19 14:15	12/12/19 09:40	

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6219

Lab Sample ID: 240-123685-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.11	J	0.27	0.030	mg/Kg	5		6020	Total/NA
Aluminum	14000		14	4.1	mg/Kg	5		6020	Total/NA
Arsenic	1.7		1.4	0.081	mg/Kg	5		6020	Total/NA
Beryllium	2.2		0.27	0.064	mg/Kg	5		6020	Total/NA
Cadmium	0.13	J	0.27	0.058	mg/Kg	5		6020	Total/NA
Cobalt	1.3		0.27	0.071	mg/Kg	5		6020	Total/NA
Chromium	76		0.54	0.34	mg/Kg	5		6020	Total/NA
Copper	15		0.54	0.31	mg/Kg	5		6020	Total/NA
Iron	12000		27	11	mg/Kg	5		6020	Total/NA
Manganese	4200		2.7	1.1	mg/Kg	10		6020	Total/NA
Nickel	12		0.54	0.33	mg/Kg	5		6020	Total/NA
Lead	11		0.27	0.085	mg/Kg	5		6020	Total/NA
Selenium	1.4		1.4	0.16	mg/Kg	5		6020	Total/NA
Vanadium	10		1.4	0.31	mg/Kg	5		6020	Total/NA
Zinc	230		5.4	2.2	mg/Kg	5		6020	Total/NA
Barium	200		1.4	0.39	mg/Kg	5		6020	Total/NA
Calcium	100000		270	69	mg/Kg	5		6020	Total/NA
Potassium	1000		270	75	mg/Kg	5		6020	Total/NA
Magnesium	13000		270	66	mg/Kg	5		6020	Total/NA
Sodium	460		270	69	mg/Kg	5		6020	Total/NA
pH	8.7	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: S-58502-121119-SSH-6319

Lab Sample ID: 240-123685-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.10	J	0.27	0.030	mg/Kg	5		6020	Total/NA
Aluminum	12000		14	4.1	mg/Kg	5		6020	Total/NA
Arsenic	1.5		1.4	0.082	mg/Kg	5		6020	Total/NA
Beryllium	1.7		0.27	0.065	mg/Kg	5		6020	Total/NA
Cadmium	0.12	J	0.27	0.059	mg/Kg	5		6020	Total/NA
Cobalt	1.2		0.27	0.071	mg/Kg	5		6020	Total/NA
Chromium	65		0.55	0.34	mg/Kg	5		6020	Total/NA
Copper	13		0.55	0.31	mg/Kg	5		6020	Total/NA
Iron	11000		27	11	mg/Kg	5		6020	Total/NA
Manganese	3500		2.7	1.1	mg/Kg	10		6020	Total/NA
Nickel	9.5		0.55	0.34	mg/Kg	5		6020	Total/NA
Lead	12		0.27	0.086	mg/Kg	5		6020	Total/NA
Selenium	1.2	J	1.4	0.16	mg/Kg	5		6020	Total/NA
Vanadium	9.6		1.4	0.31	mg/Kg	5		6020	Total/NA
Zinc	250		5.5	2.3	mg/Kg	5		6020	Total/NA
Barium	160		1.4	0.40	mg/Kg	5		6020	Total/NA
Calcium	84000		270	70	mg/Kg	5		6020	Total/NA
Potassium	910		270	76	mg/Kg	5		6020	Total/NA
Magnesium	11000		270	67	mg/Kg	5		6020	Total/NA
Sodium	360		270	70	mg/Kg	5		6020	Total/NA
Mercury	0.019	J	0.10	0.019	mg/Kg	1		7471A	Total/NA
pH	8.3	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: S-58502-121119-SSH-6419

Lab Sample ID: 240-123685-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.11	J	0.27	0.030	mg/Kg	5		6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6419 (Continued)

Lab Sample ID: 240-123685-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	14000		14	4.1	mg/Kg	5		6020	Total/NA
Arsenic	1.9		1.4	0.082	mg/Kg	5		6020	Total/NA
Beryllium	2.1		0.27	0.064	mg/Kg	5		6020	Total/NA
Cadmium	0.15	J	0.27	0.059	mg/Kg	5		6020	Total/NA
Cobalt	1.4		0.27	0.071	mg/Kg	5		6020	Total/NA
Chromium	78		0.55	0.34	mg/Kg	5		6020	Total/NA
Copper	18		0.55	0.31	mg/Kg	5		6020	Total/NA
Iron	14000		27	11	mg/Kg	5		6020	Total/NA
Manganese	4200		2.7	1.1	mg/Kg	10		6020	Total/NA
Nickel	12		0.55	0.33	mg/Kg	5		6020	Total/NA
Lead	13		0.27	0.085	mg/Kg	5		6020	Total/NA
Antimony	0.19	J	0.55	0.17	mg/Kg	5		6020	Total/NA
Selenium	1.4		1.4	0.16	mg/Kg	5		6020	Total/NA
Vanadium	11		1.4	0.31	mg/Kg	5		6020	Total/NA
Zinc	290		5.5	2.2	mg/Kg	5		6020	Total/NA
Barium	190		1.4	0.40	mg/Kg	5		6020	Total/NA
Calcium	99000		270	70	mg/Kg	5		6020	Total/NA
Potassium	1100		270	76	mg/Kg	5		6020	Total/NA
Magnesium	13000		270	67	mg/Kg	5		6020	Total/NA
Sodium	430		270	70	mg/Kg	5		6020	Total/NA
pH	8.6	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: EW-58502-121119-SSH-6519

Lab Sample ID: 240-123685-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	4.5	J	5.0	2.1	ug/L	1		6020	Total Recoverable
Nickel	2.0		2.0	1.5	ug/L	1		6020	Total Recoverable
pH	6.0	HF	0.1	0.1	SU	1		9040C	Total/NA

Client Sample ID: S-58502-121119-SSH-6619

Lab Sample ID: 240-123685-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.28		0.26	0.029	mg/Kg	5		6020	Total/NA
Aluminum	8600		13	3.9	mg/Kg	5		6020	Total/NA
Arsenic	4.3		1.3	0.078	mg/Kg	5		6020	Total/NA
Beryllium	0.62		0.26	0.061	mg/Kg	5		6020	Total/NA
Cadmium	0.77		0.26	0.056	mg/Kg	5		6020	Total/NA
Cobalt	3.4		0.26	0.068	mg/Kg	5		6020	Total/NA
Chromium	74	F1	0.52	0.33	mg/Kg	5		6020	Total/NA
Copper	39		0.52	0.30	mg/Kg	5		6020	Total/NA
Iron	36000		26	10	mg/Kg	5		6020	Total/NA
Manganese	1700		1.3	0.52	mg/Kg	5		6020	Total/NA
Nickel	25		0.52	0.32	mg/Kg	5		6020	Total/NA
Lead	92		0.26	0.081	mg/Kg	5		6020	Total/NA
Antimony	0.46	J F1	0.52	0.16	mg/Kg	5		6020	Total/NA
Selenium	0.64	J	1.3	0.16	mg/Kg	5		6020	Total/NA
Thallium	0.13	J	0.26	0.063	mg/Kg	5		6020	Total/NA
Vanadium	13		1.3	0.30	mg/Kg	5		6020	Total/NA
Zinc	390		5.2	2.1	mg/Kg	5		6020	Total/NA
Barium	74		1.3	0.38	mg/Kg	5		6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6619 (Continued)

Lab Sample ID: 240-123685-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	23000		260	66	mg/Kg	5		6020	Total/NA
Potassium	710		260	72	mg/Kg	5		6020	Total/NA
Magnesium	4500	F1	260	63	mg/Kg	5		6020	Total/NA
Sodium	160	J	260	66	mg/Kg	5		6020	Total/NA
Mercury	0.031	J	0.11	0.020	mg/Kg	1		7471A	Total/NA
pH	8.2	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: S-58502-121119-SSH-6619 DUP

Lab Sample ID: 240-123685-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.29		0.26	0.029	mg/Kg	5		6020	Total/NA
Aluminum	8700		13	3.9	mg/Kg	5		6020	Total/NA
Arsenic	4.5		1.3	0.078	mg/Kg	5		6020	Total/NA
Beryllium	0.61		0.26	0.061	mg/Kg	5		6020	Total/NA
Cadmium	0.79		0.26	0.056	mg/Kg	5		6020	Total/NA
Cobalt	3.5		0.26	0.068	mg/Kg	5		6020	Total/NA
Chromium	75		0.52	0.33	mg/Kg	5		6020	Total/NA
Copper	41		0.52	0.30	mg/Kg	5		6020	Total/NA
Iron	37000		26	10	mg/Kg	5		6020	Total/NA
Manganese	1700		1.3	0.52	mg/Kg	5		6020	Total/NA
Nickel	24		0.52	0.32	mg/Kg	5		6020	Total/NA
Lead	97		0.26	0.081	mg/Kg	5		6020	Total/NA
Antimony	0.45	J	0.52	0.16	mg/Kg	5		6020	Total/NA
Selenium	0.62	J	1.3	0.16	mg/Kg	5		6020	Total/NA
Thallium	0.11	J	0.26	0.062	mg/Kg	5		6020	Total/NA
Vanadium	13		1.3	0.30	mg/Kg	5		6020	Total/NA
Zinc	400		5.2	2.1	mg/Kg	5		6020	Total/NA
Barium	75		1.3	0.38	mg/Kg	5		6020	Total/NA
Calcium	23000		260	66	mg/Kg	5		6020	Total/NA
Potassium	720		260	72	mg/Kg	5		6020	Total/NA
Magnesium	4700		260	63	mg/Kg	5		6020	Total/NA
Sodium	150	J	260	66	mg/Kg	5		6020	Total/NA
Mercury	0.031	J	0.11	0.020	mg/Kg	1		7471A	Total/NA
pH	8.1	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: S-58502-121119-SSH-6719

Lab Sample ID: 240-123685-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.24	J	0.27	0.030	mg/Kg	5		6020	Total/NA
Aluminum	8000		14	4.1	mg/Kg	5		6020	Total/NA
Arsenic	4.1		1.4	0.081	mg/Kg	5		6020	Total/NA
Beryllium	0.55		0.27	0.064	mg/Kg	5		6020	Total/NA
Cadmium	0.67		0.27	0.058	mg/Kg	5		6020	Total/NA
Cobalt	3.4		0.27	0.070	mg/Kg	5		6020	Total/NA
Chromium	76		0.54	0.34	mg/Kg	5		6020	Total/NA
Copper	40		0.54	0.31	mg/Kg	5		6020	Total/NA
Iron	35000		27	11	mg/Kg	5		6020	Total/NA
Manganese	1400		1.4	0.55	mg/Kg	5		6020	Total/NA
Nickel	24		0.54	0.33	mg/Kg	5		6020	Total/NA
Lead	83		0.27	0.084	mg/Kg	5		6020	Total/NA
Antimony	0.45	J	0.54	0.17	mg/Kg	5		6020	Total/NA
Selenium	0.53	J	1.4	0.16	mg/Kg	5		6020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6719 (Continued)

Lab Sample ID: 240-123685-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.097	J	0.27	0.065	mg/Kg	5		6020	Total/NA
Vanadium	13		1.4	0.31	mg/Kg	5		6020	Total/NA
Zinc	350		5.4	2.2	mg/Kg	5		6020	Total/NA
Barium	65		1.4	0.39	mg/Kg	5		6020	Total/NA
Calcium	21000		270	69	mg/Kg	5		6020	Total/NA
Potassium	700		270	75	mg/Kg	5		6020	Total/NA
Magnesium	4100		270	66	mg/Kg	5		6020	Total/NA
Sodium	150	J	270	69	mg/Kg	5		6020	Total/NA
Mercury	0.028	J	0.11	0.020	mg/Kg	1		7471A	Total/NA
pH	8.0	HF	0.1	0.1	SU	1		9045C	Total/NA

Client Sample ID: S-58502-121119-SSH-6819

Lab Sample ID: 240-123685-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.25	J	0.27	0.030	mg/Kg	5		6020	Total/NA
Aluminum	8200		14	4.1	mg/Kg	5		6020	Total/NA
Arsenic	4.1		1.4	0.082	mg/Kg	5		6020	Total/NA
Beryllium	0.52		0.27	0.064	mg/Kg	5		6020	Total/NA
Cadmium	0.72		0.27	0.059	mg/Kg	5		6020	Total/NA
Cobalt	3.2		0.27	0.071	mg/Kg	5		6020	Total/NA
Chromium	62		0.55	0.34	mg/Kg	5		6020	Total/NA
Copper	35		0.55	0.31	mg/Kg	5		6020	Total/NA
Iron	32000		27	11	mg/Kg	5		6020	Total/NA
Manganese	1600		1.4	0.55	mg/Kg	5		6020	Total/NA
Nickel	20		0.55	0.33	mg/Kg	5		6020	Total/NA
Lead	88		0.27	0.085	mg/Kg	5		6020	Total/NA
Antimony	0.40	J	0.55	0.17	mg/Kg	5		6020	Total/NA
Selenium	0.56	J	1.4	0.16	mg/Kg	5		6020	Total/NA
Thallium	0.096	J	0.27	0.066	mg/Kg	5		6020	Total/NA
Vanadium	13		1.4	0.31	mg/Kg	5		6020	Total/NA
Zinc	370		5.5	2.2	mg/Kg	5		6020	Total/NA
Barium	64		1.4	0.40	mg/Kg	5		6020	Total/NA
Calcium	20000		270	70	mg/Kg	5		6020	Total/NA
Potassium	720		270	76	mg/Kg	5		6020	Total/NA
Magnesium	4500		270	67	mg/Kg	5		6020	Total/NA
Sodium	140	J	270	70	mg/Kg	5		6020	Total/NA
Mercury	0.029	J	0.11	0.020	mg/Kg	1		7471A	Total/NA
pH	8.0	HF	0.1	0.1	SU	1		9045C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
7471A	Mercury (CVAA)	SW846	TAL CAN
9040C	pH	SW846	TAL CAN
9045C	pH	SW846	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
3050B	Preparation, Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
7471A	Preparation, Mercury	SW846	TAL CAN
Increment, prep	ISM - As-received, 2 D slabcake subsample	EPA	TAL CAN
Increment, prep	ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	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 = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6219

Date Collected: 12/11/19 09:10

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.11	J	0.27	0.030	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Aluminum	14000		14	4.1	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Arsenic	1.7		1.4	0.081	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Beryllium	2.2		0.27	0.064	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Cadmium	0.13	J	0.27	0.058	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Cobalt	1.3		0.27	0.071	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Chromium	76		0.54	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Copper	15		0.54	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Iron	12000		27	11	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Manganese	4200		2.7	1.1	mg/Kg		12/17/19 14:00	12/19/19 15:37	10
Nickel	12		0.54	0.33	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Lead	11		0.27	0.085	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Antimony	0.54	U	0.54	0.17	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Selenium	1.4		1.4	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Thallium	0.27	U	0.27	0.065	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Vanadium	10		1.4	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Zinc	230		5.4	2.2	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Barium	200		1.4	0.39	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Calcium	100000		270	69	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Potassium	1000		270	75	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Magnesium	13000		270	66	mg/Kg		12/17/19 14:00	12/18/19 14:06	5
Sodium	460		270	69	mg/Kg		12/17/19 14:00	12/18/19 14:06	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6319

Date Collected: 12/11/19 10:00

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.10	J	0.27	0.030	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Aluminum	12000		14	4.1	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Arsenic	1.5		1.4	0.082	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Beryllium	1.7		0.27	0.065	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Cadmium	0.12	J	0.27	0.059	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Cobalt	1.2		0.27	0.071	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Chromium	65		0.55	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Copper	13		0.55	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Iron	11000		27	11	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Manganese	3500		2.7	1.1	mg/Kg		12/17/19 14:00	12/19/19 15:39	10
Nickel	9.5		0.55	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Lead	12		0.27	0.086	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Antimony	0.55	U	0.55	0.17	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Selenium	1.2	J	1.4	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Thallium	0.27	U	0.27	0.066	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Vanadium	9.6		1.4	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Zinc	250		5.5	2.3	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Barium	160		1.4	0.40	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Calcium	84000		270	70	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Potassium	910		270	76	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Magnesium	11000		270	67	mg/Kg		12/17/19 14:00	12/18/19 14:08	5
Sodium	360		270	70	mg/Kg		12/17/19 14:00	12/18/19 14:08	5

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6419

Date Collected: 12/11/19 10:50

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.11	J	0.27	0.030	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Aluminum	14000		14	4.1	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Arsenic	1.9		1.4	0.082	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Beryllium	2.1		0.27	0.064	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Cadmium	0.15	J	0.27	0.059	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Cobalt	1.4		0.27	0.071	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Chromium	78		0.55	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Copper	18		0.55	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Iron	14000		27	11	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Manganese	4200		2.7	1.1	mg/Kg		12/17/19 14:00	12/19/19 15:41	10
Nickel	12		0.55	0.33	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Lead	13		0.27	0.085	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Antimony	0.19	J	0.55	0.17	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Selenium	1.4		1.4	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Thallium	0.27	U	0.27	0.066	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Vanadium	11		1.4	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Zinc	290		5.5	2.2	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Barium	190		1.4	0.40	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Calcium	99000		270	70	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Potassium	1100		270	76	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Magnesium	13000		270	67	mg/Kg		12/17/19 14:00	12/18/19 14:15	5
Sodium	430		270	70	mg/Kg		12/17/19 14:00	12/18/19 14:15	5

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6619

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.28		0.26	0.029	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Aluminum	8600		13	3.9	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Arsenic	4.3		1.3	0.078	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Beryllium	0.62		0.26	0.061	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Cadmium	0.77		0.26	0.056	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Cobalt	3.4		0.26	0.068	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Chromium	74	F1	0.52	0.33	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Copper	39		0.52	0.30	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Iron	36000		26	10	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Manganese	1700		1.3	0.52	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Nickel	25		0.52	0.32	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Lead	92		0.26	0.081	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Antimony	0.46	J F1	0.52	0.16	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Selenium	0.64	J	1.3	0.16	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Thallium	0.13	J	0.26	0.063	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Vanadium	13		1.3	0.30	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Zinc	390		5.2	2.1	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Barium	74		1.3	0.38	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Calcium	23000		260	66	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Potassium	710		260	72	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Magnesium	4500	F1	260	63	mg/Kg		12/17/19 14:00	12/18/19 13:53	5
Sodium	160	J	260	66	mg/Kg		12/17/19 14:00	12/18/19 13:53	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6619 DUP

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.29		0.26	0.029	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Aluminum	8700		13	3.9	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Arsenic	4.5		1.3	0.078	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Beryllium	0.61		0.26	0.061	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Cadmium	0.79		0.26	0.056	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Cobalt	3.5		0.26	0.068	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Chromium	75		0.52	0.33	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Copper	41		0.52	0.30	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Iron	37000		26	10	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Manganese	1700		1.3	0.52	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Nickel	24		0.52	0.32	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Lead	97		0.26	0.081	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Antimony	0.45	J	0.52	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Selenium	0.62	J	1.3	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Thallium	0.11	J	0.26	0.062	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Vanadium	13		1.3	0.30	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Zinc	400		5.2	2.1	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Barium	75		1.3	0.38	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Calcium	23000		260	66	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Potassium	720		260	72	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Magnesium	4700		260	63	mg/Kg		12/17/19 14:00	12/18/19 14:17	5
Sodium	150	J	260	66	mg/Kg		12/17/19 14:00	12/18/19 14:17	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6719

Date Collected: 12/11/19 13:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.24	J	0.27	0.030	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Aluminum	8000		14	4.1	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Arsenic	4.1		1.4	0.081	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Beryllium	0.55		0.27	0.064	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Cadmium	0.67		0.27	0.058	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Cobalt	3.4		0.27	0.070	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Chromium	76		0.54	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Copper	40		0.54	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Iron	35000		27	11	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Manganese	1400		1.4	0.55	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Nickel	24		0.54	0.33	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Lead	83		0.27	0.084	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Antimony	0.45	J	0.54	0.17	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Selenium	0.53	J	1.4	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Thallium	0.097	J	0.27	0.065	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Vanadium	13		1.4	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Zinc	350		5.4	2.2	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Barium	65		1.4	0.39	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Calcium	21000		270	69	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Potassium	700		270	75	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Magnesium	4100		270	66	mg/Kg		12/17/19 14:00	12/18/19 14:19	5
Sodium	150	J	270	69	mg/Kg		12/17/19 14:00	12/18/19 14:19	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121119-SSH-6819

Date Collected: 12/11/19 14:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-8

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.25	J	0.27	0.030	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Aluminum	8200		14	4.1	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Arsenic	4.1		1.4	0.082	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Beryllium	0.52		0.27	0.064	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Cadmium	0.72		0.27	0.059	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Cobalt	3.2		0.27	0.071	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Chromium	62		0.55	0.34	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Copper	35		0.55	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Iron	32000		27	11	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Manganese	1600		1.4	0.55	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Nickel	20		0.55	0.33	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Lead	88		0.27	0.085	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Antimony	0.40	J	0.55	0.17	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Selenium	0.56	J	1.4	0.16	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Thallium	0.096	J	0.27	0.066	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Vanadium	13		1.4	0.31	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Zinc	370		5.5	2.2	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Barium	64		1.4	0.40	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Calcium	20000		270	70	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Potassium	720		270	76	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Magnesium	4500		270	67	mg/Kg		12/17/19 14:00	12/18/19 14:22	5
Sodium	140	J	270	70	mg/Kg		12/17/19 14:00	12/18/19 14:22	5

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: EW-58502-121119-SSH-6519

Lab Sample ID: 240-123685-4

Date Collected: 12/11/19 11:05

Matrix: Water

Date Received: 12/12/19 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.0	U	1.0	0.053	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Aluminum	50	U	50	34	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Arsenic	5.0	U	5.0	0.75	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Beryllium	1.0	U	1.0	0.31	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Cadmium	1.0	U	1.0	0.20	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Cobalt	1.0	U	1.0	0.19	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Chromium	2.0	U	2.0	0.98	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Copper	2.0	U	2.0	1.7	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Iron	100	U	100	47	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Manganese	4.5	J	5.0	2.1	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Nickel	2.0		2.0	1.5	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Lead	1.0	U	1.0	0.45	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Antimony	2.0	U ^	2.0	0.57	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Selenium	5.0	U	5.0	0.89	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Thallium	1.0	U	1.0	0.20	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Vanadium	5.0	U	5.0	0.82	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Zinc	20	U	20	15	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Barium	5.0	U	5.0	2.2	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Calcium	1000	U	1000	580	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Potassium	1000	U	1000	220	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Magnesium	1000	U	1000	200	ug/L	-	12/13/19 14:00	12/17/19 20:23	1
Sodium	1000	U	1000	330	ug/L	-	12/13/19 14:00	12/17/19 20:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: EW-58502-121119-SSH-6519

Date Collected: 12/11/19 11:05

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		12/13/19 12:00	12/16/19 23:58	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6219

Date Collected: 12/11/19 09:10

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	U	0.11	0.020	mg/Kg		12/18/19 11:30	12/20/19 13:49	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6319

Date Collected: 12/11/19 10:00

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.019	J	0.10	0.019	mg/Kg		12/18/19 11:30	12/20/19 13:56	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6419

Date Collected: 12/11/19 10:50

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	U	0.11	0.019	mg/Kg		12/18/19 11:30	12/20/19 13:58	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6619

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031	J	0.11	0.020	mg/Kg		12/18/19 11:30	12/20/19 13:43	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6619 DUP

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031	J	0.11	0.020	mg/Kg		12/18/19 11:30	12/20/19 14:00	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6719

Date Collected: 12/11/19 13:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.028	J	0.11	0.020	mg/Kg		12/18/19 11:30	12/20/19 14:02	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121119-SSH-6819

Date Collected: 12/11/19 14:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-8

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.029	J	0.11	0.020	mg/Kg		12/18/19 11:30	12/20/19 14:04	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6219

Date Collected: 12/11/19 09:10

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.7	HF	0.1	0.1	SU			12/12/19 17:56	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6319

Date Collected: 12/11/19 10:00

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.3	HF	0.1	0.1	SU			12/12/19 17:58	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6419

Date Collected: 12/11/19 10:50

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.6	HF	0.1	0.1	SU			12/12/19 18:01	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: EW-58502-121119-SSH-6519

Date Collected: 12/11/19 11:05

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.0	HF	0.1	0.1	SU			12/12/19 17:13	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6619

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-5

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.2	HF	0.1	0.1	SU			12/12/19 18:04	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6619 DUP

Date Collected: 12/11/19 12:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.1	HF	0.1	0.1	SU			12/12/19 18:10	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6719

Date Collected: 12/11/19 13:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			12/12/19 18:13	1

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

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry

Client Sample ID: S-58502-121119-SSH-6819

Date Collected: 12/11/19 14:15

Date Received: 12/12/19 09:40

Lab Sample ID: 240-123685-8

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			12/12/19 18:15	1

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

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Metals

ISM Prep Batch: 415372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	Increment, prep	
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	Increment, prep	
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	Increment, prep	
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	Increment, prep	
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	Increment, prep	
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	Increment, prep	
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	Increment, prep	
240-123685-5 MS	S-58502-121119-SSH-6619	Total/NA	Solid	Increment, prep	
240-123685-5 MSD	S-58502-121119-SSH-6619	Total/NA	Solid	Increment, prep	

Prep Batch: 415394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-4	EW-58502-121119-SSH-6519	Total Recoverable	Water	3005A	
MB 240-415394/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-415394/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 415397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-4	EW-58502-121119-SSH-6519	Total/NA	Water	7470A	
MB 240-415397/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-415397/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 415791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-4	EW-58502-121119-SSH-6519	Total/NA	Water	7470A	415397
MB 240-415397/1-A	Method Blank	Total/NA	Water	7470A	415397
LCS 240-415397/2-A	Lab Control Sample	Total/NA	Water	7470A	415397

Prep Batch: 415984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	3050B	415372
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	3050B	415372
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	3050B	415372
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	3050B	415372
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	3050B	415372
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	3050B	415372
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	3050B	415372
MB 240-415984/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 240-415984/3-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
240-123685-5 MS	S-58502-121119-SSH-6619	Total/NA	Solid	3050B	415372
240-123685-5 MSD	S-58502-121119-SSH-6619	Total/NA	Solid	3050B	415372

Analysis Batch: 416149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-4	EW-58502-121119-SSH-6519	Total Recoverable	Water	6020	415394
MB 240-415394/1-A	Method Blank	Total Recoverable	Water	6020	415394
LCS 240-415394/2-A	Lab Control Sample	Total Recoverable	Water	6020	415394

Prep Batch: 416168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	7471A	415372

Eurofins TestAmerica, Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Metals (Continued)

Prep Batch: 416168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	7471A	415372
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	7471A	415372
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	415372
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	7471A	415372
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	7471A	415372
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	7471A	415372
MB 240-416168/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 240-416168/2-A	Lab Control Sample	Total/NA	Solid	7471A	
240-123685-5 MS	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	415372
240-123685-5 MSD	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	415372

Analysis Batch: 416336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	6020	415984
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	6020	415984
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	6020	415984
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	6020	415984
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	6020	415984
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	6020	415984
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	6020	415984
MB 240-415984/1-A ^5	Method Blank	Total/NA	Solid	6020	415984
LCS 240-415984/3-A ^5	Lab Control Sample	Total/NA	Solid	6020	415984
240-123685-5 MS	S-58502-121119-SSH-6619	Total/NA	Solid	6020	415984
240-123685-5 MSD	S-58502-121119-SSH-6619	Total/NA	Solid	6020	415984

Analysis Batch: 416464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	6020	415984
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	6020	415984
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	6020	415984

Analysis Batch: 416875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	7471A	416168
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	7471A	416168
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	7471A	416168
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	416168
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	7471A	416168
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	7471A	416168
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	7471A	416168
MB 240-416168/1-A	Method Blank	Total/NA	Solid	7471A	416168
LCS 240-416168/2-A	Lab Control Sample	Total/NA	Solid	7471A	416168
240-123685-5 MS	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	416168
240-123685-5 MSD	S-58502-121119-SSH-6619	Total/NA	Solid	7471A	416168

General Chemistry

ISM Prep Batch: 415218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	Increment, prep	
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	Increment, prep	

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

General Chemistry (Continued)

ISM Prep Batch: 415218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	Increment, prep	
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	Increment, prep	
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	Increment, prep	
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	Increment, prep	
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	Increment, prep	
240-123685-5 DU	S-58502-121119-SSH-6619	Total/NA	Solid	Increment, prep	

Analysis Batch: 415247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-123685-1	S-58502-121119-SSH-6219	Total/NA	Solid	9045C	415218
240-123685-2	S-58502-121119-SSH-6319	Total/NA	Solid	9045C	415218
240-123685-3	S-58502-121119-SSH-6419	Total/NA	Solid	9045C	415218
240-123685-4	EW-58502-121119-SSH-6519	Total/NA	Water	9040C	
240-123685-5	S-58502-121119-SSH-6619	Total/NA	Solid	9045C	415218
240-123685-6	S-58502-121119-SSH-6619 DUP	Total/NA	Solid	9045C	415218
240-123685-7	S-58502-121119-SSH-6719	Total/NA	Solid	9045C	415218
240-123685-8	S-58502-121119-SSH-6819	Total/NA	Solid	9045C	415218
LCS 240-415247/2	Lab Control Sample	Total/NA	Water	9040C	
240-123685-4 DU	EW-58502-121119-SSH-6519	Total/NA	Water	9040C	
240-123685-5 DU	S-58502-121119-SSH-6619	Total/NA	Solid	9045C	415218

QC Sample Results

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-415984/1-A ^5
Matrix: Solid
Analysis Batch: 416336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.25	U	0.25	0.028	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Aluminum	13	U	13	3.8	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Arsenic	1.3	U	1.3	0.075	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Beryllium	0.25	U	0.25	0.059	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Cadmium	0.25	U	0.25	0.054	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Cobalt	0.25	U	0.25	0.065	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Chromium	0.50	U	0.50	0.31	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Copper	0.50	U	0.50	0.29	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Iron	25	U	25	10	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Manganese	1.3	U	1.3	0.50	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Nickel	0.50	U	0.50	0.31	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Lead	0.25	U	0.25	0.078	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Antimony	0.50	U	0.50	0.16	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Selenium	1.3	U	1.3	0.15	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Thallium	0.25	U	0.25	0.060	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Vanadium	1.3	U	1.3	0.29	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Zinc	5.0	U	5.0	2.0	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Barium	1.3	U	1.3	0.36	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Calcium	250	U	250	63	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Potassium	250	U	250	69	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Magnesium	250	U	250	61	mg/Kg		12/17/19 14:00	12/18/19 13:48	5
Sodium	250	U	250	64	mg/Kg		12/17/19 14:00	12/18/19 13:48	5

Lab Sample ID: LCS 240-415984/3-A ^5
Matrix: Solid
Analysis Batch: 416336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	5.00	5.03		mg/Kg		101	80 - 120
Aluminum	250	253		mg/Kg		101	80 - 120
Arsenic	50.0	49.1		mg/Kg		98	80 - 120
Beryllium	25.0	25.1		mg/Kg		100	80 - 120
Cadmium	25.0	24.7		mg/Kg		99	80 - 120
Cobalt	25.0	24.8		mg/Kg		99	80 - 120
Chromium	25.0	25.5		mg/Kg		102	80 - 120
Copper	25.0	25.3		mg/Kg		101	80 - 120
Iron	250	256		mg/Kg		102	80 - 120
Manganese	25.0	26.7		mg/Kg		107	80 - 120
Nickel	25.0	25.3		mg/Kg		101	80 - 120
Lead	25.0	25.0		mg/Kg		100	80 - 120
Antimony	5.00	5.14		mg/Kg		103	80 - 120
Selenium	50.0	48.4		mg/Kg		97	80 - 120
Thallium	50.0	49.1		mg/Kg		98	80 - 120
Vanadium	25.0	25.0		mg/Kg		100	80 - 120
Zinc	25.0	25.5		mg/Kg		102	80 - 120
Barium	50.0	48.4		mg/Kg		97	80 - 120
Calcium	1250	1280		mg/Kg		102	80 - 120
Potassium	1250	1340		mg/Kg		107	80 - 120
Magnesium	1250	1330		mg/Kg		106	80 - 120

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

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

Lab Sample ID: LCS 240-415984/3-A ^5
Matrix: Solid
Analysis Batch: 416336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	1250	1310		mg/Kg		105	80 - 120

Lab Sample ID: 240-123685-5 MS
Matrix: Solid
Analysis Batch: 416336

Client Sample ID: S-58502-121119-SSH-6619
Prep Type: Total/NA
Prep Batch: 415984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	0.28		5.21	5.54		mg/Kg		101	75 - 125
Aluminum	8600		260	9420	4	mg/Kg		304	75 - 125
Arsenic	4.3		52.1	56.4		mg/Kg		100	75 - 125
Beryllium	0.62		26.0	26.4		mg/Kg		99	75 - 125
Cadmium	0.77		26.0	26.7		mg/Kg		99	75 - 125
Cobalt	3.4		26.0	29.6		mg/Kg		101	75 - 125
Chromium	74	F1	26.0	108	F1	mg/Kg		133	75 - 125
Copper	39		26.0	69.5		mg/Kg		119	75 - 125
Iron	36000		260	38300	4	mg/Kg		1090	75 - 125
Manganese	1700		26.0	1680	4	mg/Kg		108	75 - 125
Nickel	25		26.0	51.9		mg/Kg		105	75 - 125
Lead	92		26.0	121		mg/Kg		113	75 - 125
Antimony	0.46	J F1	5.21	2.75	F1	mg/Kg		44	75 - 125
Selenium	0.64	J	52.1	51.1		mg/Kg		97	75 - 125
Thallium	0.13	J	52.1	49.9		mg/Kg		96	75 - 125
Vanadium	13		26.0	40.1		mg/Kg		104	75 - 125
Zinc	390		26.0	424	4	mg/Kg		127	75 - 125
Barium	74		52.1	136		mg/Kg		118	75 - 125
Calcium	23000		1300	25500	4	mg/Kg		223	75 - 125
Potassium	710		1300	2050		mg/Kg		103	75 - 125
Magnesium	4500	F1	1300	6290	F1	mg/Kg		141	75 - 125
Sodium	160	J	1300	1520		mg/Kg		105	75 - 125

Lab Sample ID: 240-123685-5 MSD
Matrix: Solid
Analysis Batch: 416336

Client Sample ID: S-58502-121119-SSH-6619
Prep Type: Total/NA
Prep Batch: 415984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Silver	0.28		5.22	5.53		mg/Kg		100	75 - 125	0	20
Aluminum	8600		261	9480	4	mg/Kg		328	75 - 125	1	20
Arsenic	4.3		52.2	55.5		mg/Kg		98	75 - 125	2	20
Beryllium	0.62		26.1	26.0		mg/Kg		97	75 - 125	1	20
Cadmium	0.77		26.1	26.8		mg/Kg		99	75 - 125	0	20
Cobalt	3.4		26.1	29.1		mg/Kg		98	75 - 125	2	20
Chromium	74	F1	26.1	99.9		mg/Kg		100	75 - 125	8	20
Copper	39		26.1	69.2		mg/Kg		117	75 - 125	1	20
Iron	36000		261	37000	4	mg/Kg		578	75 - 125	4	20
Manganese	1700		26.1	1670	4	mg/Kg		40	75 - 125	1	20
Nickel	25		26.1	49.3		mg/Kg		95	75 - 125	5	20
Lead	92		26.1	120		mg/Kg		108	75 - 125	1	20
Antimony	0.46	J F1	5.22	2.29	F1	mg/Kg		35	75 - 125	18	20
Selenium	0.64	J	52.2	50.5		mg/Kg		95	75 - 125	1	20

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

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

Lab Sample ID: 240-123685-5 MSD

Client Sample ID: S-58502-121119-SSH-6619

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 416336

Prep Batch: 415984

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier		Result	Qualifier				Limits		
Thallium	0.13	J	52.2	50.4		mg/Kg		96	75 - 125	1	20
Vanadium	13		26.1	39.0		mg/Kg		100	75 - 125	3	20
Zinc	390		26.1	408	4	mg/Kg		64	75 - 125	4	20
Barium	74		52.2	135		mg/Kg		117	75 - 125	0	20
Calcium	23000		1310	24500	4	mg/Kg		151	75 - 125	4	20
Potassium	710		1310	2070		mg/Kg		104	75 - 125	1	20
Magnesium	4500	F1	1310	6110	F1	mg/Kg		126	75 - 125	3	20
Sodium	160	J	1310	1500		mg/Kg		103	75 - 125	1	20

Lab Sample ID: MB 240-415394/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total Recoverable

Analysis Batch: 416149

Prep Batch: 415394

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Silver	1.0	U	1.0	0.053	ug/L		12/13/19 14:00	12/17/19 18:45	1
Aluminum	50	U	50	34	ug/L		12/13/19 14:00	12/17/19 18:45	1
Arsenic	5.0	U	5.0	0.75	ug/L		12/13/19 14:00	12/17/19 18:45	1
Beryllium	1.0	U	1.0	0.31	ug/L		12/13/19 14:00	12/17/19 18:45	1
Cadmium	1.0	U	1.0	0.20	ug/L		12/13/19 14:00	12/17/19 18:45	1
Cobalt	1.0	U	1.0	0.19	ug/L		12/13/19 14:00	12/17/19 18:45	1
Chromium	2.0	U	2.0	0.98	ug/L		12/13/19 14:00	12/17/19 18:45	1
Copper	2.0	U	2.0	1.7	ug/L		12/13/19 14:00	12/17/19 18:45	1
Iron	102		100	47	ug/L		12/13/19 14:00	12/17/19 18:45	1
Manganese	5.0	U	5.0	2.1	ug/L		12/13/19 14:00	12/17/19 18:45	1
Nickel	2.0	U	2.0	1.5	ug/L		12/13/19 14:00	12/17/19 18:45	1
Lead	1.0	U	1.0	0.45	ug/L		12/13/19 14:00	12/17/19 18:45	1
Antimony	2.0	U ^	2.0	0.57	ug/L		12/13/19 14:00	12/17/19 18:45	1
Selenium	5.0	U	5.0	0.89	ug/L		12/13/19 14:00	12/17/19 18:45	1
Thallium	1.0	U	1.0	0.20	ug/L		12/13/19 14:00	12/17/19 18:45	1
Vanadium	5.0	U	5.0	0.82	ug/L		12/13/19 14:00	12/17/19 18:45	1
Zinc	20	U	20	15	ug/L		12/13/19 14:00	12/17/19 18:45	1
Barium	5.0	U	5.0	2.2	ug/L		12/13/19 14:00	12/17/19 18:45	1
Calcium	1000	U	1000	580	ug/L		12/13/19 14:00	12/17/19 18:45	1
Potassium	1000	U	1000	220	ug/L		12/13/19 14:00	12/17/19 18:45	1
Magnesium	1000	U	1000	200	ug/L		12/13/19 14:00	12/17/19 18:45	1
Sodium	1000	U	1000	330	ug/L		12/13/19 14:00	12/17/19 18:45	1

Lab Sample ID: LCS 240-415394/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total Recoverable

Analysis Batch: 416149

Prep Batch: 415394

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Result
Silver	100	103		ug/L		103	80 - 120
Aluminum	5000	4910		ug/L		98	80 - 120
Arsenic	1000	1020		ug/L		102	80 - 120
Beryllium	500	480		ug/L		96	80 - 120
Cadmium	500	501		ug/L		100	80 - 120
Cobalt	500	515		ug/L		103	80 - 120
Chromium	500	513		ug/L		103	80 - 120

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

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

Lab Sample ID: LCS 240-415394/2-A
Matrix: Water
Analysis Batch: 416149

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	500	523		ug/L		105	80 - 120
Iron	5000	5100		ug/L		102	80 - 120
Manganese	500	512		ug/L		102	80 - 120
Nickel	500	493		ug/L		99	80 - 120
Lead	500	500		ug/L		100	80 - 120
Antimony	100	112	^	ug/L		112	80 - 120
Selenium	1000	1010		ug/L		101	80 - 120
Thallium	1000	1000		ug/L		100	80 - 120
Vanadium	500	504		ug/L		101	80 - 120
Zinc	500	547		ug/L		109	80 - 120
Barium	1000	971		ug/L		97	80 - 120
Calcium	25000	24900		ug/L		100	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Magnesium	25000	24700		ug/L		99	80 - 120
Sodium	25000	25100		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-415397/1-A
Matrix: Water
Analysis Batch: 415791

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415397

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		12/13/19 12:00	12/16/19 23:11	1

Lab Sample ID: LCS 240-415397/2-A
Matrix: Water
Analysis Batch: 415791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.79		ug/L		96	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-416168/1-A
Matrix: Solid
Analysis Batch: 416875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.018	mg/Kg		12/18/19 11:30	12/20/19 13:39	1

Lab Sample ID: LCS 240-416168/2-A
Matrix: Solid
Analysis Batch: 416875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.844		mg/Kg		101	80 - 120

Eurofins TestAmerica, Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-123685-5 MS
Matrix: Solid
Analysis Batch: 416875

Client Sample ID: S-58502-121119-SSH-6619
Prep Type: Total/NA
Prep Batch: 416168
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.031	J	0.189	0.220		mg/Kg		101	80 - 120

Lab Sample ID: 240-123685-5 MSD
Matrix: Solid
Analysis Batch: 416875

Client Sample ID: S-58502-121119-SSH-6619
Prep Type: Total/NA
Prep Batch: 416168
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.031	J	0.190	0.213		mg/Kg		96	80 - 120	3	20

Method: 9040C - pH

Lab Sample ID: LCS 240-415247/2
Matrix: Water
Analysis Batch: 415247

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
pH	6.00	6.0		SU		101	97 - 103

Lab Sample ID: 240-123685-4 DU
Matrix: Water
Analysis Batch: 415247

Client Sample ID: EW-58502-121119-SSH-6519
Prep Type: Total/NA
%Rec.

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	6.0	HF	6.0		SU		0.5	20

Method: 9045C - pH

Lab Sample ID: 240-123685-5 DU
Matrix: Solid
Analysis Batch: 415247

Client Sample ID: S-58502-121119-SSH-6619
Prep Type: Total/NA
%Rec.

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	8.2	HF	8.1	HF	SU		0.9	20

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6219

Lab Sample ID: 240-123685-1

Date Collected: 12/11/19 09:10

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:06	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		10	416464	12/19/19 15:37	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 13:49	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 17:56	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6319

Lab Sample ID: 240-123685-2

Date Collected: 12/11/19 10:00

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:08	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		10	416464	12/19/19 15:39	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 13:56	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 17:58	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6419

Lab Sample ID: 240-123685-3

Date Collected: 12/11/19 10:50

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:15	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		10	416464	12/19/19 15:41	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 13:58	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 18:01	JWW	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: EW-58502-121119-SSH-6519

Lab Sample ID: 240-123685-4

Date Collected: 12/11/19 11:05

Matrix: Water

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415394	12/13/19 14:00	SLD	TAL CAN
Total Recoverable	Analysis	6020		1	416149	12/17/19 20:23	DTN	TAL CAN
Total/NA	Prep	7470A			415397	12/13/19 12:00	SLD	TAL CAN
Total/NA	Analysis	7470A		1	415791	12/16/19 23:58	SLD	TAL CAN
Total/NA	Analysis	9040C		1	415247	12/12/19 17:13	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6619

Lab Sample ID: 240-123685-5

Date Collected: 12/11/19 12:15

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 13:53	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 13:43	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 18:04	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6619 DUP

Lab Sample ID: 240-123685-6

Date Collected: 12/11/19 12:15

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:17	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 14:00	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 18:10	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6719

Lab Sample ID: 240-123685-7

Date Collected: 12/11/19 13:15

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:19	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 14:02	DTN	TAL CAN

Lab Chronicle

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Client Sample ID: S-58502-121119-SSH-6719

Lab Sample ID: 240-123685-7

Date Collected: 12/11/19 13:15

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 18:13	JWW	TAL CAN

Client Sample ID: S-58502-121119-SSH-6819

Lab Sample ID: 240-123685-8

Date Collected: 12/11/19 14:15

Matrix: Solid

Date Received: 12/12/19 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	3050B			415984	12/17/19 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		5	416336	12/18/19 14:22	DSH	TAL CAN
Total/NA	ISM Prep	Increment, prep			415372	12/12/19 14:44	DRJ	TAL CAN
Total/NA	Prep	7471A			416168	12/18/19 11:30	DEE	TAL CAN
Total/NA	Analysis	7471A		1	416875	12/20/19 14:04	DTN	TAL CAN
Total/NA	ISM Prep	Increment, prep			415218	12/12/19 14:44	PW1	TAL CAN
Total/NA	Analysis	9045C		1	415247	12/12/19 18:15	JWW	TAL CAN

Laboratory References:

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



Accreditation/Certification Summary

Client: GHD Services Inc.
 Project/Site: 58502-A03, RACER Nodular Iron

Job ID: 240-123685-1

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19



Canton Facility _____
 Client GHD Site Name _____ Cooler unpacked by: Adam
 Cooler Received on 12-12-19 Opened on 12-12-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

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

TestAmerica Cooler # 77 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

- Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 4.3 °C Corrected Cooler Temp. 5.0 °C
 IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
- 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 12-16 have been checked at the originating laboratory.
- Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials? Yes No NA ← Larger than this.
- 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

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: Adam

18. 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)

19. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
EW-58502-121109-SSH-6519	240-123685-B-4	Plastic 500ml - with Nitric Acid	<2	_____	_____

- 1
- 2
- 3
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- 6
- 7
- 8
- 9
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- 11
- 12
- 13

Attachment B

Declaration of Restrictive Covenant



2013031243
 L-2746 P-1409 X DC
 Page 1 of 11
 OFFICIAL SEAL Saginaw County, Michigan
 Mildred M. Dodak Register Of Deeds
 September 30, 2013 01:52 PM

DECLARATION OF RESTRICTIVE COVENANT

This Declaration of Restrictive Covenant is made to protect public health, safety, and welfare, and the environment pursuant to the provisions of Part 111, Hazardous Waste Management, Michigan Compiled Laws ("MCL") 324.11101, *et seq.* ("Part 111") and the applicable Sections of Part 201, Environmental Remediation, MCL 324.20101 *et seq.* ("Part 201") of the Natural Resources and Environmental Protection Act ("NREPA"), 1994 PA 451, as amended, MCL 324.101, *et seq.*

This Declaration of Restrictive Covenant ("Restrictive Covenant") is made on September 27, 2013 by RACER Properties LLC, a Delaware limited liability company ("Grantor"), the current fee title holder of the property, whose address is 500 Woodward Avenue, Suite 1510, Detroit, Michigan 48226, for the benefit of the Grantee, *i.e.*, State of Michigan, Department of Environmental Quality ("MDEQ"), whose address is 525 West Allegan Street, P.O. Box 30473, Lansing, Michigan 48909-7926.

This Restrictive Covenant has been made to prohibit or restrict activities that could result in unacceptable exposure to environmental contamination present at the property commonly known as 2100 Veterans Memorial Parkway, Saginaw, Michigan 48602, in the City of Saginaw, Saginaw County, Tax Identification Number(s): 10-12-5-05-4001-700; 10-12-5-09-2024-000; 10-12-5-09-2006-000; 10-12-5-09-2021-000; 10-12-5-09-2022-000; 10-12-5-08-1001-001; 21-4333-00500; 10-12-5-08-1011-000; 21-4333-00000; 10-12-5-08-4001-000; 10-12-5-08-4001-000; 10-12-5-08-4001-000; 10-12-5-08-4041-000; and 10-12-5-08-4029-000 and legally described in Exhibit 1 ("Property") and illustrated in Exhibit 2.

Recording of this Restrictive Covenant is designed to restrict exposures to groundwater on the Property and require any future work or other activities on the property by or for the owner to be conducted in conformance with; i) applicable MDEQ soil relocation requirements including but not limited to MCL 324.20120c and any related administrative rules and MDEQ guidance, and ii) applicable due care obligations under MCL 324.20107a and associated administrative rules and guidance, and the Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) 29 CFR Part 1910.

The land or resource use restrictions contained in this Restrictive Covenant are based upon information available at the time this document was recorded. Future changes in the environmental condition of the Property or changes in the cleanup criteria developed under Part 201; the discovery of environmental conditions at the Property that were not known at the time this document was recorded; or use of the Property in a manner inconsistent with the restrictions described herein, may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment. Additional restrictions may become necessary.

Definitions

"MDEQ" means the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf.

Warner Norcross and Judd LLP
 2000 Town Center Ste 2700
 Southfield MI 48075
 11 pg 4400

SEP 30 12 PM 1:51

"Owner" means at any given time the then current fee title holder(s) and the holder(s) of a life estate of the Property or any portion thereof, including the fee title holder's lessees and those persons or entities authorized to act on its behalf. On March 31, 2011 the Revitalizing Auto Communities Environmental Response Trust ("Trust") took title to the Property – title held by RACER Properties LLC, an entity wholly owned by the Trust (RACER Properties and the Trust are collectively referred to herein as "RACER"). RACER was established and assumed the rights, title, and interest of Motors Liquidation Company in and to the Property pursuant to an Environmental Response Trust Consent Decree and Settlement Agreement ("Settlement Agreement") entered by the U.S. Bankruptcy Court for the Southern District of New York on March 29, 2011, in the case of *In re Motors Liquidation Company, et al.*, Debtors, Case No. 09-50026 (REG), among the Debtors, the United States of America, certain states including the State of Michigan, the Saint Regis Mohawk Tribe, and EPLET, LLC, (not individually but solely in its representative capacity as Administrative Trustee of the Trust).

All other terms used in this document which are defined in Parts 3, 111, and 201 of NREPA or Parts 111 and 201 of Michigan Administrative Rules, shall have the same meaning in this document as in those statutes and rules as on the date this Restrictive Covenant is made.

NOW THEREFORE,

Declaration of Land Use or Resource Use Restrictions

The Grantor(s) as current fee title holder(s) of the Property, hereby declare(s) and covenant(s) that the Property, shall be subject to those restrictions on use described below and intends that said restrictions and covenants shall run with the land, and may be enforced in perpetuity against the Owner by the following entities: (1) the Grantor, if it is no longer owner; and (2) the MDEQ.

1. Land Use Prohibitions. The Owner shall prohibit all uses of the Property that are not compatible with nonresidential land use category under MCL 324.20120a(1)(b) and generally described in the Description of Allowable Uses, attached hereto as Exhibit 3.

Part 201 cleanup criteria for land use-based response activities are located in the Government Documents Section of the State of Michigan Library, MCL 324.201201, *et seq.* effective December 2010, and MAC R 299.5701 – R 299.5727, effective December 21, 2002.

2. Activities Prohibited. The Owner shall prohibit activities on the Property that may result in exposures above the nonresidential land use category. These prohibited activities include:
 - a. No drinking water wells may be installed or used on the Property.
 - b. No groundwater extraction wells may be installed or used on the Property except for wells and devices that are part of an MDEQ-approved response activity and for short-term dewatering for construction purposes, provided the dewatering, including management and disposal of the groundwater, is conducted in accordance with all applicable environmental laws and does not cause or result in a new release, exacerbation of any pre-existing environmental condition, or any other violation of environmental laws.

- c. No contaminated soils, if any, may be relocated on the Property except as provided for under Part 201, Section 20120c, MCL 324.20120c.
 - d. No buildings or structures may be constructed on the Property unless the Owner has considered the potential for vapor intrusion, if any, and has taken steps to address such potential, if necessary, as may be required by the MDEQ.
 - e. The Owner shall not "treat," "store," "dispose," or release any Hazardous Substances, on, at, or below the Property, in a manner that would require a permit under the Resource Conservation and Recovery Act, 42 U.S.C. §6901 *et seq.* or equivalent State Law, except pursuant to a plan or permit approved in writing by the MDEQ and the Grantor.
 - f. If the Owner elects to remove any slabs, pavement or other impervious surface on the Property, the Owner shall be responsible for any and all obligations under environmental laws arising from any such removal, alteration or disturbance, whether or not caused by, arising from or related to, an environmental condition.
3. Contaminated Soil Management. The Owner shall manage contaminated soils, media and/or debris (if any) and all other soils located on the Property in accordance with the requirements of Part 111, and Subtitle C of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 *et seq.* (RCRA), the administrative rules promulgated pursuant to Part 111 and RCRA, and all other relevant state and federal laws, including but not limited to MCL 324.20120c.
5. Access. The Owner shall grant to the MDEQ the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with this Restrictive Covenant, including the right to take samples and, inspect any records relating thereto, and to perform any actions necessary to maintain compliance with Part 111 and Part 201.
6. Notice. The Owner shall provide notice to the MDEQ of the Owner's intent to transfer any interest in the Property prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant and the applicable provisions of MCL 324.20116. The notice required to be made to the MDEQ under this Paragraph shall be made to: Chief, Office of Waste Management and Radiological Protection, P.O. Box 30241, Lansing, Michigan 48909-7741 and Chief, Remediation and Redevelopment Division, P.O. Box 30241, Lansing, Michigan 48909-7741 (or to the similar position should the MDEQ change organizational names from time-to-time); and shall include a statement that the notice is being made pursuant to the requirements of this Restrictive Covenant. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, easement holders, assigns, and transferees by the person transferring the interest.
7. Term. This Restrictive Covenant shall run with the Property and shall be binding on the Owner, and all current and future successors, lessees, easement holders, their assigns, and their authorized agents, employees, or persons acting under their direction and control. This Restrictive Covenant may only be modified or rescinded with the written approval of the MDEQ.

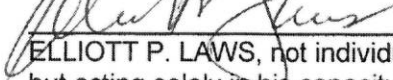
8. Enforcement. The Grantor is entitled to enforce the restrictions and covenants in this Restrictive Covenant by specific performance or other legal action in a court of competent jurisdiction against subsequent Owners of all or part of the Property. The Grantor, on behalf of itself, and its successors in title, intends and agrees that the MDEQ is entitled to enforce the restrictions and covenants in this Restrictive Covenant by specific performance or other legal action in a court of competent jurisdiction against the Grantor, as Owner, and thereafter against subsequent Owners of all or part of the Property. All remedies available hereunder shall be in addition to any and all other remedies at law or equity.
9. Severability. If any provision of this Restrictive Covenant is held to be invalid by a court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions of this Restrictive Covenant and all other provisions shall continue to remain in full force and effect.
10. Limitation on RACER's Liability. RACER's and the Administrative Trustee's liability is limited by the terms and conditions of the Settlement Agreement, which are incorporated herein by reference.
11. Authority to Execute Restrictive Covenant. The undersigned person executing this Restrictive Covenant represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant.

IN WITNESS WHEREOF, Racer Properties LLC has caused this Restrictive Covenant, to be executed on this 27th day of September, 2013.

RACER PROPERTIES LLC

By: Revitalizing Auto Communities Environmental Response Trust,
Sole Member of RACER Properties LLC

By: EPLET, LLC, acting solely in its capacity as Administrative Trustee of Revitalizing
Auto Communities Environmental Response Trust

By: 
ELLIOTT P. LAWS, not individually,
but acting solely in his capacity as
Managing Member of EPLET, LLC

Date: September 27, 2013

STATE OF District)
) ss:
COUNTY OF Columbia)

The foregoing instrument was acknowledged before me this 27th day of Sept. 2013, by Elliott P. Laws, not individually, but acting solely in his capacity as Managing Member of EPLET, LLC, a Delaware limited liability company, acting solely in its capacity as Administrative Trustee of Revitalizing Auto Communities Environmental Response Trust, a New York trust, acting solely in its capacity as Sole Member of RACER Properties LLC, a Delaware limited liability company, on behalf of said limited liability companies and said trust.

Notary Public Cheryl L. Best

My commission expires 11-14-15

Acting in District of Columbia County

This document is exempt from state and county transfer taxes pursuant to MCL 207.505(a) and MCL 207.526(a).

Prepared by/return to:
Kurt M. Brauer, Esq.
Warner Norcross & Judd LLP
2000 Town Center, Suite 2700
Southfield, Michigan 48075-1318
Telephone: 248-784-5000
9486744

9413071?



EXHIBIT 1

LEGAL DESCRIPTION OF PROPERTY Racer Site #10040

Parcel 1: Part of the Northeast Quarter of Section 5, Town 12 North, Range 5 East, Buena Vista Township, Saginaw County, Michigan; described as commencing at the Southeast corner of said Section; thence N00°02'00"W 1343.16 feet to the point of beginning; thence N82°25'28"W 194.04 feet; thence N53°09'33"W 139.38 feet; thence N35°52'45"W 87.47 feet; thence N45°59'32"W 160.63 feet; thence N75°52'26"W 130.59 feet; thence S89°00'10"W 967.66 feet; thence S82°11'16"W 203.32 feet; thence S71°48'13"W 384.20 feet; thence N19°49'03"W 52.47 feet; thence N12°57'42"W 292.73 feet; thence N89°06'50"E 244.41 feet; thence N12°57'42"W 94.08 feet; thence S89°06'50"W 244.41 feet; thence N12°57'42"W 928.54 feet; thence N89°06'50"E 400.00 feet; thence S12°57'42"E 435.30 feet; thence N89°06'50"E 100.00 feet; thence S12°57'42"E 155.77 feet; thence S89°06'50"W 100.00 feet; thence S12°57'42"E 547.99 feet; thence N89°06'50" E 1523.56 feet; thence S44°09'05"E 548.94 feet; thence S00°02'00"E 178.15 feet to the point of beginning.

Tax Identification Number: 10-12-5-05-4001-700

Parcel 2: A parcel of land in the North 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 9, Town 12 North, Range 5 East, Buena Vista Township, Saginaw County, Michigan, lying Westerly of the Consumers Power Company right-of-way, formerly the Interurban Railroad right-of-way, described as follows: Commencing at the Northwest corner of said Section 9; thence South 86 degrees 43 minutes 52 seconds East, on the North line of said Section, 477.49 feet; thence South 25 degrees 39 minutes 38 seconds West, on the Westerly line of said right-of-way, 288.69 feet; thence North 86 degrees 36 minutes 15 seconds West, on a line which is parallel with and 50.00 feet, measured at right angles, North of the South line of the North 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4, 372.98 feet to the West line of said Section; thence North 04 degrees 26 minutes 35 seconds East, on said West line, 266.15 feet to the point of beginning.

Tax Identification Number: 10-12-5-09-2024-000

Parcel 3: The South 50 feet of that part of the North 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 9, Township 12 North, Range 5 East, lying Westerly from the right-of-way of the Michigan Railway Company, so-called, now Consumers Power Company; and the North 90 feet of the South 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 9, Township 12 North, Range 5 East, lying West of the Michigan Railway Company, so-called, now Consumers Power Company, all in Township of Buena Vista, County of Saginaw, State of Michigan.

Tax Identification Number: 10-12-5-09-2006-000

Parcel 4: The South 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 9, Town 12 North, Range 5 East, lying Northwesterly of the Consumers Power Company right-of-way formerly the Interurban Railroad right-of-way between Saginaw and Bay City, excepting there from the North 90 feet and also excepting there from the South 75 feet.

Tax Identification Number: 10-12-5-09-2021-000

Parcel 5: A parcel of land in the South 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of Section 9, Town 12 North, Range 5 East, Buena Vista Township, Saginaw County,

Michigan, lying Westerly of the Consumers Power Company right-of-way, formerly the Interurban Railroad right-of-way, described as follows: Commencing on the West line of said Section 9 at a point 557.31 feet, South 04 degrees 26 minutes 35 seconds West of the Northwest corner of said Section 9; thence South 86 degrees 28 minutes 38 seconds East, on a line which is parallel with and 75.00 feet, measured at right angles, North of the South line of the South 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4, 258.88 feet; thence South 25 degrees 39 minutes 38 seconds West, on the Westerly line of said right-of-way, 80.97 feet; thence North 86 degrees 28 minutes 38 seconds West, on said South line of the South 1/2 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4, 229.57 feet to the West line of said Section; thence North 04 degrees 26 minutes 35 seconds East, on said West Section line, 75.01 feet to the point of beginning.

Tax Identification Number: 10-12-5-09-2022-000

Parcel 6: The Southeast Quarter of Section 8 lying Northwesterly of the Railroad. Also the Northeast Quarter of Section 8, Town 12 North, Range 5 East, Buena Vista Township, Saginaw County, Michigan; except the North 800 feet of the West 435 feet; also except the Railroad; also except described as beginning at the East Quarter Corner of said Section; thence S89°44'00"W 530.01 feet along the East West Quarter line; thence N00°00'00"E 1502.00 feet; thence N89°44'00"E 530.01 feet; thence S00°00'00"W 1502.00 feet along the East Section line to the point of beginning. Also except commencing at the Northeast corner of said Section; thence N88°37'30"W 1196.19 feet; thence S32°06'00"W 1825.38 feet to the point of beginning; thence S57°54'00"E 504.68 feet; thence S40°53'30"W 368.16 feet; thence N57°54'00"W 448.41 feet; thence N32°06'00"E 363.84 feet to the Point of Beginning.

Tax Identification Number: 10-12-5-08-1001-001

Parcel 7: City of Saginaw, County of Saginaw, State of Michigan and described as follows: A parcel of land in NW 1/4 of Section 8, Town 12 North, Range 5 East viz; beginning at a point on N & S 1/4 line of said Section 800 feet Southerly of North Section line, thence Westerly parallel to North Section line 450 feet, thence Northwesterly to a point on Easterly line of M-13 which is 705.75 feet from said North Section line, thence Southerly along East line of M-13 to a point that is 1718.07 feet Southerly of North Section line as measured at right angles more or less from North & South 1/4 line, thence South 89 degrees 45 minutes 40 seconds East 47.17 feet, to a point on a curve to the right having a radius of 2719.79 feet, thence Northeasterly on the arc of said curve 507.93 feet, said arc being subtended by a chord bearing North 23 degrees 09 minutes 25 seconds East 507.20 feet, thence North 29 degrees 10 minutes 67 seconds feet, thence South 54 degrees 30 minutes 01 seconds East 408.48 feet to North & South 1/4, thence Northerly along 1/4 line 265.23 feet to point of beginning.

Tax Identification Number: 21-4333-00500

Parcel 8: A parcel of land in the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 8, Township 12 North, Range 5 East, Buena Vista Township, Saginaw County, Michigan, described as follows: To fix a point of beginning, commence at the Northeast corner of Section 8; thence North 88 degrees 37 minutes 30 seconds West, on the North line of Section 8, 1,196.19 feet to the centerline of Crow Island Road; thence South 32 degrees 06 minutes 00 seconds West, on said centerline, 1,825.38 feet to the point of beginning of this description; thence South 57 degrees 54 minutes 00 seconds East, on the North line of the South 3 acres of so-called Lot 27 of Fuller's Unrecorded Map, as described by Deed Fuller to Horr and recorded in Liber 167, Page 360, 504.68 feet to the Northwesterly right-of-way line of C&O Railway; thence South 40 degrees 53 minutes 30 seconds West, on said right-of-way line, 368.16 feet; thence North 57 degrees 54 minutes 00 seconds West, on the Southerly line of the Northerly 1.42 chains of so-called Lot 26 of Fuller's Unrecorded Map, as described by deed

Fuller to Miller and recorded in Liber 160, Page 501, 448.41 feet to the centerline of Crow Island Road; thence 32 degrees 06 minutes 00 seconds East, on said center-line, 363.84 feet to the point of beginning.

Tax Identification Number: 10-12-5-08-1011-000

Parcel 9 (Assessed as follows): City of Saginaw, County of Saginaw, State of Michigan and described as follows: All that part of West 1/2 of Section 8, Town 12 North, Range 5 East lying North of PMRR and East of State Highway M-13, Exc that part viz; Beginning at North 1/4 post of said Section thence Southerly on North and South 1/4 line of said Section to a point 800 feet Southerly of North Section line, thence Westerly parallel with Northerly line of said Section 450 feet, thence Northwesterly to a point on Easterly line of State Hwy M-13, 705.75 feet Southerly of Northerly Section line measured along Easterly line of said Hwy, thence Northerly along Easterly Hwy line to Northerly line of said Section, thence Easterly along Northerly Section line 544.56 feet to point of beginning, Also Exc a parcel viz; commencing at North 1/4 corner of said Section, thence South 00 degrees 00 minutes 00 seconds West on North and South 1/4 line of said Section 800 feet, thence North 88 degrees 37 minutes 30 seconds West parallel with North line of Northeast 1/4 of said Section 138.39 feet, thence South 00 degrees 30 minutes 20 seconds West 168.81 feet to POBM, thence continue South 00 degrees 30 minutes 20 seconds West 309.13 feet to a point on a curve to the right having a radius of 75 feet, thence point on a curve to the right having a radius of 75 feet, thence Southwesterly on the arc of said curve 201.45 feet said arc being subtended by a chord bearing South 77 degrees 11 minutes 13 seconds West 146.13 feet, thence North 89 degrees 45 minutes 40 seconds West 354.61 feet, thence South 12 degrees 41 minutes 02 seconds West 419.73 feet, thence North 89 degrees 45 minutes 40 seconds West 466.58 feet to a point on a curve to the right having a radius of 2719.79 feet, thence Northeasterly on the arc of said curve 507.93, said arc being subtended by a chord bearing North 23 degrees 09 minutes 25 seconds East 507.19 feet, thence North 29 degrees 10 minutes 49 seconds East 282.72 feet, thence North 47 degrees 31 minutes 03 seconds East 176.12 feet, thence North 71 degrees 15 minutes 34 seconds East 149.97 feet, thence North 88 degrees 56 minutes 30 seconds East 256.67 feet, thence South 54 degrees 30 minutes 01 seconds East 236.71 feet to point of beginning.

Tax Identification Number: 21-4333-00000

Parcel 10A: Part of the Southeast 1/4 of Section 8, Town 12 North, Range 5 East; commencing at the East Quarter corner of said Section; thence N89°35'11"W 2002.61 feet along the East West Quarter line to the point of beginning; thence S00°24'49"W 140.36 feet; thence N89°35'11"W 419.16 feet; thence N41°23'49"E 188.20 feet; thence S89°35'11"E 295.50 feet along said East West Quarter line to the point of beginning.

Tax Identification Number: 10-12-5-08-4001-000

Parcel 10B: Part of the Southeast 1/4 of Section 8, Town 12 North, Range 5 East; commencing at the East Quarter corner of said Section; thence N89°35'11"W 1601.23 feet; thence S00°47'51"W 209.72 feet; thence N89°35'11"W 210.00 feet; thence N00°47'49"E 209.72 feet; thence S89°35'11"E 210.00 feet along said East West Quarter line to the point of beginning.

Tax Identification Number: 10-12-5-08-4001-000

Parcel 10C: North 1/2 of North 1/2 of Southeast 1/4 of Section 8, Town 12 North, Range 5 East lying Easterly of C & O RR R/W, except Consumers Power R/W, also except commencing at a point on East & West 1/4 line 509.12 feet North 89 degrees 35 minutes 11 seconds West from East 1/4 corner of Section 8 to Northwesterly R/W of Consumers Power Company; thence South 21 degrees 53 minutes 49 seconds West on said R/W to South line of North 1/2 of North 1/2 of Southeast 1/4 of Section 8; thence North 89 degrees 38 minutes 48 seconds West on

said line 1619.56 feet; thence North 41 degrees 29 minutes 28 seconds East parallel to C&O R/W 66 feet; thence North 89 degrees 38 minutes 49 seconds West 330 feet to Easterly R/W of C&O RR R/W; thence North 41 degrees 29 minutes 28 seconds East on said R/W 378.37 feet along the Easterly R/W of C&O R/W to the East West Quarter line; thence South 89 degrees 35 minutes 11 seconds East 1788.98 feet along said East West Quarter line to the point of beginning.

Tax Identification Number: 10-12-5-08-4001-000

Parcel 11: The West 50 feet of the East 1651 feet of the South 120 feet of the North 329.1 feet of the Southeast 1/4 of Section 8, Township 12 North, Range 5 East; described as commencing at the East Quarter corner of said Section; thence N89°35'11"W 1601.01 feet along the East West Quarter line; thence S00°11'26"W 209.10 feet to the point of beginning; thence S00°11'26"W 120.00 feet; thence N89°35'11"W 50.00 feet; thence N00°11'26"E 120.00 feet; thence S89°35'11"E 50.00 feet to the point of beginning.

Tax Identification Number: 10-12-5-08-4041-000

Parcel 12: The South 1/2 of the North 1/2 of the South 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 8, Township 12 North, of Range 5 East; described as commencing at the East Quarter corner of said Section; thence N89°35'11"W 2698.56 feet along the East West Quarter line to the center of said Section; thence S00°36'39"W 836.06 feet along the North South Quarter line to the point of beginning; thence S89°44'07"E 1352.34 feet; thence S00°24'05"W 166.51 feet; thence N89°45'54"W 1352.95 feet; thence N00°36'39"E 167.21 feet along said North South Quarter line to the Point of Beginning.

Tax Identification Number: 10-12-5-08-4029-000

EXHIBIT 2

DRAWING ILLUSTRATING DESCRIPTION OF PROPERTY

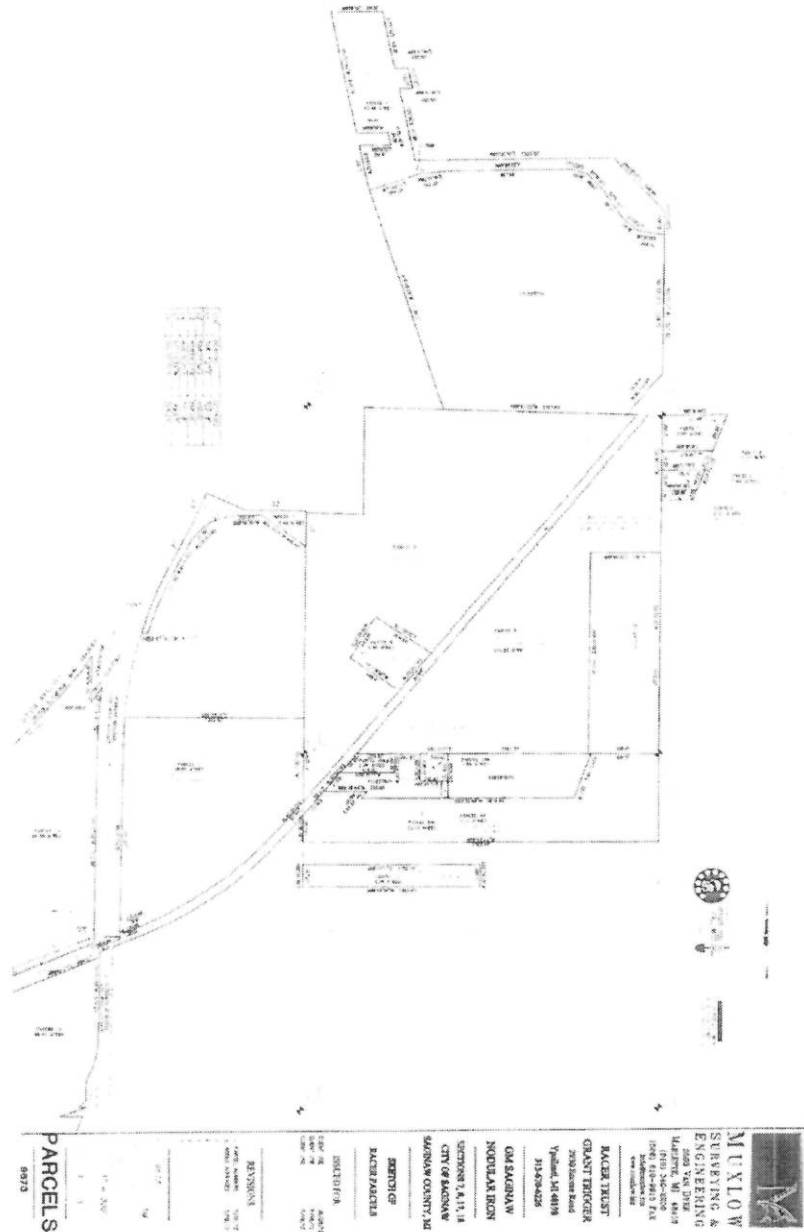


EXHIBIT 3

DESCRIPTION OF ALLOWABLE USES

Nonresidential Land Use: This land use is characterized by any use which is not residential in nature and is primarily characterized by industrial and commercial uses. Industrial uses typically involve manufacturing operations engaged in processing and manufacturing of materials or products. Other examples of industrial uses are utility companies, industrial research and development, and petroleum bulk storage. Commercial uses include any business or income-producing use such as commercial warehouses, lumber yards, retail gas stations, auto dealerships and service stations, as well as office buildings, banks, and medical/dental offices (not including hospitals). Commercial uses also include retail businesses whose principal activity is the sale of food or merchandise within an enclosed building and personal service establishments which perform services indoors such as health clubs, barber/beauty salons, photographic studios, etc.

Any residential use is specifically prohibited from the non-residential land use category. This would include the primary use of the property for human habitation and includes structures such as single family dwellings, multiple family structures, mobile homes, condominiums, and apartment buildings. Residential use is also characterized by any use which is intended to house, educate, or provide care for children, the elderly, the infirm, or other sensitive populations, and therefore could include day care centers, educational facilities, hospitals, elder care facilities, and nursing homes. The use of any accessory building or portion of an existing building as a dwelling unit permitted for a proprietor or storekeeper and their families, located in the same building as their place of occupation, or for a watchman or caretaker is also prohibited. Any authority that allows for residential use of the Property as a legal non-conforming use is also restricted per the prohibitions contained in this restrictive covenant.

Attachment C

Historic Grey Iron and Nodular Iron Slag Testing Results

GREY IRON QUENCH SLAG PILE

Compositional Analysis

Parameter mg/L	10/13/88 ⁽¹⁾			10/90 ⁽²⁾	1991 ⁽³⁾	11/16/92 ⁽⁴⁾							10/13/93 ⁽⁵⁾							
	1	2	3			1	2	3	4	5	6	7	8	9	10	11	12			
Aluminum																26000	30000	29000	28000	
Antimony		< 7		< 20	< 1.1															
Arsenic	0.88	< 0.87	1.7	1.4	< 1.3	1.1	0.9	3.4	4.4	0.5	0.4	0.56	0.9	1	1	760	610	810	350	
Barium	590	760	680	430	620	250	240	58	500	570	590	500	520							
Beryllium		1.6		1.7	2.6															
Cadmium	1.1	1.1	0.54	< 0.6	< 0.54	0.17	0.14	0.6	0.14	0.27	0.66	0.19	0.27	0.2	0.2	0.2	0.2	0.28		
Chloride		41		24	15															
Chromium	520	490	600	560	590	300	210	190	460	400	360	420	450	540	610	990	480			
Cobalt		3.3		< 6	< 5.4	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
Copper	83	110	93	70	22	19	17	57	9	10	11	15	18	15	6	19	11			
Cyanide		4.1		11	4.3	0.6	1.6	0.6	< 0.5	< 0.5	10	18	8	< 0.5	< 0.5	< 0.5	< 0.5			
Fluoride		< 20		38	46	20								< 0.5	< 0.5	< 0.5	< 0.5			
Iron*														14000	11000	19000	12000			
Lead	67	56	38	20	24	7.3	20	10	20	20	20	30	20	29	20	64	24			
Lithium		33		14	21		7.4	< 5	14	16	17	15	16	20	20	20	20			
Mercury	< 0.095	< 0.11	< 0.1	< 0.11	< 0.11	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	
Molybdenum						< 5	< 5	30	< 5	< 5	< 5	< 5	< 5							
Nickel		12		17	7	10	8	38	4	4	4	5	8	6	3	7	4			
Phenols		< 1.4		< 2.8	< 2.7															
Selenium	< 1.7	< 1.7	< 0.87	1	< 3.2	0.71	0.6	< 0.2	< 0.2	1.7	1.1	1.5	1.4	2	0.4	2.4	2			
Silver	< 1	< 1	< 1	2	< 1.1	< 0.2	< 0.2	< 0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2			
Solids (%)	92	92	92	90	93.3	93	93	91	93	94	92	94	93	96	96	95	98			
Zinc	2100	810	1800	1900	2000	410	700	230	1200	690	730	1100	1200	1700	760	720	1800			
BOD				< 6.7	< 36									< 3	< 3	< 3	< 3			
Calcium				220000	260000	96000	91000	15000	190000	200000	190000	180000	180000	240000	240000	210000	210000			
Corrosivity(pH)				10.5	9.6									9.71	9.7	9.62	9.81			
Magnesium				5300	6500	2500	2500	780	4600	4600	4300	4600	4400	5000	5100	5600	4400			
Manganese				14000	22000	7600	7200	1700	14000	17000	19000	17000	16000	18000	19000	15000	22000			
Nitrate				< 0.56	0.65									< 1	< 1	< 1	< 1			
Nitrite				< 0.22																
Nitrogen				310	370															
Phosphorous				14	12	< 2.5	< 2.5	< 5	2.6	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5			
Potassium				2000	2400	1000	830	300	1700	1700	1800	1700	1700	1900	1900	1600	1800			
Sodium				980	1500	500	480	200	1000	1100	1100	1200	1100	1100	1100	1300	1100			
Ammonia				< 27										0.1	< 0.1	0.1	< 0.1			

(1) Results taken from "General Motors Corporation Saginaw Grey Iron Foundry Annual Sampling of Solid Wastes for Michigan Public Act 641 Disposal Designations," February 1989. Verified with laboratory data.
 (2) Results taken from "General Motors Corporation Saginaw Grey Iron Foundry Annual Sampling of Solid Wastes for Michigan Public Act 641 Disposal Designation," October 1990. No record of sampling date. No laboratory data.
 (3) Results taken from "General Motors Corporation Saginaw Grey Iron Foundry Annual Sampling of Solid Wastes," January 1992. No Record of sampling date. No laboratory data.
 (4) Results taken from laboratory data of samples collected 11/16/92.
 (5) Results taken from laboratory data of samples collected on 10/13/93.

GREY IRON QUENCH SLAG PILE

ASTM Leaching Test

Parameter mg/L	2/4/85 ⁽¹⁾	3/86 ⁽²⁾	10/27/86 ⁽³⁾	2/23/87 ⁽⁴⁾	10/20/87 ⁽⁵⁾
Arsenic	< 0.001	0.002	< 0.001	< 0.001	0.005
Barium	< 0.2	< 0.2	< 0.02	0.02	0.01
Cadmium	< 0.01	< 0.01	< 0.005	< 0.005	< 0.004
Chromium	< 0.05	< 0.05	< 0.005	< 0.025	< 0.01
Copper	< 0.02	< 0.02	< 0.01	< 0.02	< 0.01
Cyanide	< 0.05	< 0.02	< 0.02	< 0.2	< 0.03
Fluoride	0.88	0.34	0.34	< 0.2	0.22
Lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006
Mercury	< 0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002
Phenols	< 0.01	< 0.012	< 0.006	0.087	< 0.012
Selenium	0.002	< 0.004	< 0.002	0.002	< 0.003
Silver	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01
TOC	< 1	1.6	1.5	2.2	4.2
COD	< 20	< 20	25	47	24
Zinc	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005
pH	9.9	10.6	10.1	11.1	10.2

(1) Results taken from "Waste Characterization Study for Foundry Process Solid Wastes," June 1986. Verified with laboratory data.

(2) Results taken from "Waste Sampling and Testing Summary," October 1986. No laboratory data available.

(3) Results taken from "Summary Report: Sampling and Analysis of Foundry Process Solid Wastes," December 1986. Verified with laboratory data.

(4) Results taken from, "Summary Report: Sampling and Analysis of Foundry Process Solid Wastes," July 1987. Verified with laboratory data.

(5) Results taken from, "Summary Report: Sampling and Analysis of Foundry Process Solid Wastes," January 1988. No laboratory data available.

NODULAR IRON QUENCH SLAG

ASTM Leaching Test

Parameter mg/L	2/4/85 ⁽¹⁾		6/24/86 ⁽²⁾
	Composite	Grab	
Arsenic	< 0.001	< 0.001	0.001
Barium	< 0.2	< 0.2	0.02
Cadmium	< 0.01	< 0.01	< 0.01
Chromium	< 0.05	< 0.05	< 0.05
Copper	< 0.02	< 0.02	< 0.02
Cyanide	< 0.02	< 0.05	< 0.025
Fluoride	0.42	0.4	< 0.1
Lead	< 0.005	< 0.005	< 0.005
Mercury	< 0.0002	< 0.0002	< 0.0004
Phenols	0.026	4.6	< 0.012
Selenium	< 0.001	< 0.001	< 0.002
Silver	< 0.02	< 0.02	< 0.02
TOC	2	9.1	1.6
COD	< 20	< 20	< 20
Zinc	< 0.01	< 0.01	< 0.01
pH	11.3	9.6	10.9

- (1) Results taken from "Request for Classification of Foundry Process Materials," June 1985. No laboratory data.
 And "Waste Characterization Study of Foundry Process Solid Wastes," January 1986. Verified with laboratory data.
- (2) Results taken from "Annual Retest of Waste materials for GM-CFD Saginaw Nodular Iron," August 1986. Verified with laboratory data

TABLE 14.11

GREY IRON QUENCH SLAG PILE

TCLP Analysis

Parameter mg/L	10/90 ⁽¹⁾	1991 ⁽²⁾			11/16/92 ⁽³⁾								10/6/93 ⁽⁴⁾							
		1	2	3	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Arsenic	< 0.003	< 0.006	< 0.006	< 0.006																
Barium	3.5	2.2	1.8	3	< 1	< 1	1.1	< 1	1.4	< 1	< 1	1	0.16	0.13	0.19	0.15	0.13	0.19	0.17	0.15
Cadmium	0.006	< 0.006	< 0.006	0.00083	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	0.01	0.01
Chromium	1.5	0.94	0.68	1.4	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2	< 0.2	< 0.2	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02	0.02	0.02
Iron													2.1	1.4	3.3	2.9	2.6	2.2	2.1	2.6
Lead	< 0.1	0.085	0.032	0.097	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1								
Lithium													< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	0.05	0.05
Mercury	< 0.0004	< 0.0004	< 0.0004	< 0.0004																
Manganese													0.17	0.15	0.22	0.34	0.31	0.2	0.21	0.28
Selenium	< 0.015	< 0.03	< 0.012	< 0.03	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.1	0.1
Silver	< 0.02	< 0.002	< 0.002	< 0.002																
Copper	0.02	< 0.022	0.021	0.028	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2								
Zinc	12	2.4	24	12	5.6	19	33	28	13	13	30	42	0.81	0.8	1.1	1.8	1.3	0.82	1	1.5
Fluoride	1.2		0.35																	
Phenols	0.44		< 0.05																	
Phosphorous	< 0.1		< 0.1																	
Formaldehyde			0.54		1.5	0.39	0.37	0.47	0.14	0.13	0.19	0.12	< 20	< 20	< 20	20	< 20	< 20	20	20
Benzene	< 0.1		< 0.001																	
Toluene	< 0.1		< 0.001																	
Xylene	< 0.1		< 0.003																	
Nickel													< 0.04	< 0.04	< 0.04	0.04	< 0.04	< 0.04	0.04	0.04

(1) Results taken from "General Motors Corporation Saginaw Grey Iron Foundry Annual Sampling of Solid Wastes for Michigan Public Act 641 Disposal Designation," October 1990. No record of sampling date. No laboratory data.
 (2) Results taken from "General Motors Corporation Saginaw Grey Iron Foundry Annual Sampling of Solid Wastes," January 1992. No record of sampling date. No laboratory data.
 (3) Results taken from laboratory data of samples collected 11/16/92.
 (4) Results taken from laboratory data of samples collected 10/6/93.