

Digital EGLE/USACE Joint Permit Application (JPA) for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas and Critical Dune Areas

version 1.12

(Submission #: HNT-09MT-RQM1E, version 1)

Details

Form Alias	Digital EGLE/USACE Joint Permit Application (JPA) for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas and Critical Dune Areas
Submission #	HNT-09MT-RQM1E
Submission Reason	New
Status	Submitted
Fee	\$100.00 (Paid)

Form Input

Instructions

[To download a copy or print these instructions. Please click this link \(recommended\).](#)

Contact Information

Applicant Information (Usually the property owner)**Contact****First Name**

David

Last Name

Favero

Organization Name*Revitalizing Auto Communities Environmental Response Trust (RACER Trust)***Phone Type**

Business

Number

7348799525

Extension**Email**

dfavero@racertrust.org

Address

1505 WOODWARD AVE STE 200

DETROIT, MI 48226

Is the Property Owner different from the Applicant?

No

Has the applicant hired an agent or cooperating agency (agency or firm assisting applicant) to complete the application process?

Yes

Upload Attachment for Authorization from AgentAttachment A - Authorization Letter.pdf - 11/05/2019 10:21 AM**Comment**

NONE PROVIDED

Agent Contact**Contact****First Name**

John-Eric

Last Name

Pardys

Organization Name

GHD

Phone Type

Business

Number

5193404316

Extension**Email**

john-eric.pardys@ghd.com

Address

455 Phillip Street

Waterloo, ON N2L3X2

Are there additional property owners or other contacts you would like to add to the application?

No

Project Location

DEQ Site Reference Number (Pre-Populated)

-7628400720360239443

Project Location

43.4642,-83.9034

West of North Outer Drive, Saginaw, MI

Project Location Address

2100 VETERANS MEMORIAL PKWY

SAGINAW, MI 48601

County

Saginaw

Is there a Property Tax ID Number(s) for the project area?

Yes

Please enter the Tax ID Number(s) for the project location

21 4333 00000

Is there Subdivision/Plat and Lot Number(s)?

No

Is this project within Indian Lands?

No

Local Unit of Government (LUG)

Saginaw

Directions to Project Site

From MDEQ Saginaw, Bay District Office Head West on Ketchum St Turn Right onto Woodside Ave Turn Left onto N Madison Ave Turn Right onto 7th St Turn Left onto Washington Ave Continue onto Garfield Ave Turn Right onto Lafayette Ave Turn Left onto M-13 S/Broadway St/Lafayette St Bridge Follow road south for 8.4 miles to 2100 Veterans Memorial Parkway (Access road on the left)

Background Information

Has the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and/or United States Army Corps of Engineers (USACE) conducted a pre-application meeting/inspection for this project?

Yes

Provide the date of the pre-application meeting/inspection

10/25/2019

Pre-application File Number:

HNT-08W8-Q39D8

EGLE and/or USACE staff person involved in the pre-application meeting/inspection:

Whitney Hoppes, Brian Rudolph, Joy Brooks

Has the project scope or design changed since the pre-application meeting/inspection?

No

Has the EGLE completed a Wetland Identification Program (WIP) assessment for this site?

No

Environmental Area Number (if known):

NONE PROVIDED

Has the United States Army Corps of Engineers (USACE) completed either an approved or preliminary jurisdictional determination for this site?

No

Were any regulated activities previously completed on this site under an EGLE and/or USACE permit?

Yes

List the permit numbers.

WRP004925 v1.0 MI0059042 v2.0

Describe the regulated activities that were previously permitted.

NPDES permit to allow for discharge from the Secondary pond. Work within the floodplain to construct an access road to access a clay pile on-Site. Note that these permits relate to activity on different tax parcel numbers that are part of the larger site.

Have any activities commenced on this project?

No

Is this an after-the-fact application?

No

Are you aware of any unresolved violations of environmental law or litigation involving the property?

No

Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?

Yes

Easement Holder Contact Information

Contact

First Name

David

Last Name

Favero

Organization Name

Revitalizing Auto Communities Environmental Response Trust (RACER Trust)

Phone Type

Business

Number

7348799525

Extension

Email

dfavero@racertrust.org

Address

1505 WOODWARD AVE STE 200

DETROIT, MI 48226

US

Describe the type of easement or encumbrance

Declaration of Restrictive Covenant

Attach a copy of a description of the easement or encumbrance

Attachment B - Declaration of Restriction Covenant.pdf - 11/05/2019 10:22 AM

Comment

NONE PROVIDED

Are there any other federal, interstate, state, or local agency authorizations associated with this project?

Yes

List all other federal, interstate, state, or local agency authorizations.

Agency	Type of Approval	Number	Date Applied	Approved/Denied/Undetermined
U.S. EPA	Administrative Order on Consent	RCRA-05-2011-0023	9/29/2011	Approved

Comments

The Site is currently the subject of a Resource Conservation and Recovery Act (RCRA) Section 3008(h) Performance-Based Administrative Order on Consent, RCRA 05 2011 0023 (Order). In an email dated September 19, 2019 the U.S. EPA project manager (Zachary Sasnow) approved the scope of the low-level PCB impacted shallow soil excavation proposed in this permit application (see Attachment C).

Permit Application Category and Public Notice Information

Indicate the type of permit being applied for.

Minor Project for wetlands, lakes, streams, floodplains, or Great Lakes

If you are applying for a minor project permit, which project type(s) is being proposed?

MP 06. Cleanup of Hazardous and Toxic Waste

If you are applying for a general permit, which project type(s) is being proposed?

NO GP CATEGORY (MP Category only)

Project Description

Project Use: (select all that apply - Private, Commercial, Public/Government/Tribal, Receiving Federal/State Transportation Funds, Non-profit, or Other)

Private

Project Type (select all that apply):

Other: Environmental remediation

Project Summary (Purpose and Use): Provide a summary of all proposed activities including the intended use and reason for the proposed project.

The purpose of the removal is to reduce potential ecological risks within the area of the wetland where PCB-impacted soils will be removed. The area will continue to be used as a wetland after completion of the project. The Site is undergoing Resource Conservation and Recovery Act (RCRA) Corrective Action under Administrative Order on Consent RCRA-05-2011-0023. The project that is the subject of this permit application involves removal of approximately 44 cubic yards of PCB-impacted soil from within a wetland. GHD conducted an environmental assessment of the wetland area and U.S. EPA determined there was potential for small, ecological risks associated with PCBs in shallow soil. U.S. EPA has requested that the shallow soil be removed and disposed of off-site. After PCB-impacted soil is removed the excavation will be filled.

Project Construction Sequence, Methods, and Equipment: Describe how the proposed project timing, methods, and equipment will minimize disturbance from the project construction, including but not limited to soil erosion and sedimentation control measures.

Task 1: Site preparation - Construct, operate, and maintain decontamination area for equipment that comes into contact with PCB-impacted soil - Install erosion control measures, as necessary, and maintain the measures for the duration of the work - Place crane mats to provide for access to the removal area from the existing site roadway and dewater the excavation area, as needed - Survey to define exact removal extents based on previous PCB sample results Task 2: Removal of PCB-impacted soil - Remove, stabilize, and load soil Task 3: Transport, and dispose of PCB-impacted soil at approved landfill - Transport, and dispose of waste at an approved disposal facility - Decontaminate all equipment Task 4: Wetland Establishment - Back fill removal area with clean on-Site fill - Apply wetland seed mix The proposed work is planned for either the winter or late summer to avoid dealing with standing water. Standing water typically dries up through the winter as well as in August/September each year.

Project Alternatives: Describe all options considered as alternatives to the proposed project, and describe how impacts to state and federal regulated waters will be avoided and minimized. This may include other locations, materials, etc.

Project Alternatives: 1) Do Nothing. This alternative was not acceptable to U.S. EPA 2) Cover. This alternative was not selected due to implementability concerns related to placing a cover over water saturated soil, as well as wetland disturbance related to the cover and reducing the volume of the flood storage. The cover could erode over time and expose impacted soil. 3) Removal. Removal of impacted soil results in minimal short-term (one or two months) disturbance to the wetland but provides for longer term effectiveness by reducing potential ecological risks.

Project Compensation: Describe how the proposed impacts to state and federal regulated waters will be compensated, OR explain why compensatory mitigation should not be required for the proposed impacts. Include amount, location, and method of compensation (i.e., bank, on-site, preservation, etc.)

No additional compensatory mitigation should be required since the proposed work is only expected to have minimal short-term impact to state and federal regulated wetlands. Following removal and filling of the area, a wetland seed mix will be applied to the removal area and the wetland will be allowed to naturalize and return to pre-work conditions. In addition, there will be no net loss of flood storage volume from completing this project.

Upload any additional information as needed to provide information applicable to your project regarding project purpose sequence, methods, alternatives, or compensation.

NONE PROVIDED

Comment

NONE PROVIDED

Resource and Activity Type

SELECT THE ACTIVITIES from the list below that are proposed in your project (check ALL that apply). If you don't see your project type listed, select "Other Project Type". These activities listed require additional information to be gathered later in the application.

Other Project Type

The Proposed Project will involve the following resources (check ALL that apply).

Wetland

100-year Floodplain

Major Project Fee Calculation Questions

Is filling of 10,000 cubic yards or more proposed (cumulatively) within wetlands, streams, lakes, or Great Lakes?

No

Is dredging of 10,000 cubic yards (cumulatively) or more proposed within streams, lakes, or Great Lakes? (wetlands not included)

No

Is new dredging or adjacent upland excavation in suspected contamination areas proposed by this application?

No

Is a subdivision, condominium, or new golf course proposed?

No

Wetland Project Information and Impacts

Has a professional wetland delineation been completed for this site?

Yes

Attach a copy of wetland delineation report with data form.

Attachment D - Wetland Delineation Report.pdf - 11/05/2019 10:24 AM

Comment

Niswander Environmental Wetland Delineation Report

Total acres of wetland affected by this project.

Category	Affected area (acres)
Permanent	0.00
Temporary	0.03
	Sum: 0.03

Is filling or draining of 1 acre or more (cumulatively) of wetland proposed?

No

Select all wetland types that will be affected by this project:

Emergent
Scrub-shrub

If your project includes placing fill in wetland then select the proposed activities from the following list. If your activity is not shown, then select "None of the Above" and move to the next question. Only enter an impacted area in one of the impact tables (do not duplicate impact entries):

General Fill
Grading or Mechanical Land Clearing
Temporary Access

Complete this table for projects involving Fill. Enter each activity/ location that corresponds with each activity selected in the previous question and enter the dimensions. Activities may be entered in one line of the table if they occupy the same impact footprint and cannot be broken out separately (Example: Activity - Driveway and Riprap slope). Multiple activities in different locations should be listed on different lines of the table.

Activity	Length (feet)	Width (feet)	Depth (feet)	Area (square feet)	Volume (cubic feet)	Volume (cubic yards)	Corrected value for complex impact AREAS (square feet)
Excavation and Clean Fill	20	60	1	1200	1200	44	NONE PROVIDED
				Sum: 1200	Sum: 1200	Sum: 44	Sum: NaN

Source of Fill Material:

On-site (show on plan)

Type of Fill.

Sand

Is riprap proposed?

No

Select from the following list for Excavation/Dredge Activities (if your proposed project is primarily a structure enter the impact as a structure. Only enter an impacted area in one of the impact tables in one impact section):

Excavation (wetlands)

If your project includes **EXCAVATION/DREDGE IN WETLAND** then select all of the proposed activities in the following list. If your activity is not shown, then select "None of the Above" and move to the next question. Only enter an impacted area in one of the impact tables (do not duplicate impact entries).:

Activity	Length (feet)	Width (feet)	Depth (feet)	Area (sq. feet)	Volume (cubic feet)	Volume (cubic yards)	Corrected value for complex impact AREAS (square feet)
Soil excavation	20	60	1	1200	1200	44	NONE PROVIDED
				Sum: 1200	Sum: 1200	Sum: 44	Sum: NaN

Spoils Disposal

Will the excavation/dredge spoils be disposed of on site or off site?

Off-site

Where will the excavation/dredge spoils be disposed of?

Peoples Landfill, Inc. - Site ID: MIG000050580 - 4143 Rathbun RD, Birch Run, MI 48415 - Type II Landfill

Describe any measures used to retain sediment:

N/A

If your project includes **STRUCTURES IN WETLAND** then select all of the proposed activities in the following list. If your activity is not shown, then select "None of the Above" and move to the next question. Only enter an impacted area in one of the impact tables (do not duplicate impact entries).:

None of the above

If your project includes **Other Activities in WETLAND** not listed in this section, then select from the proposed activities in the following list. If your activity in Wetland has not been listed in this Wetland Section, then select "Other" and enter a description of your activity. Only enter an impacted area in one of the impact tables (do not duplicate impact entries). If you selected a Fill, Excavation/Dredging, or Structure activity above in this section, but do not have an activity listed as Other, then select None of the Above for this question.

Vegetation Removal

Restoration

Projects involving All other: (Many of these types of projects will not have a depth or volume. In this case, enter "0" in those boxes.)

Activity	Length	Width	Depth	Area	Volume	Volume (cubic yards)	Corrected value for complex impact AREAS (square feet)
Vegetation Removal	60	20	0	1200	0	0	NONE PROVIDED
Restoration	60	20	0	1200	0	0	NONE PROVIDED
				Sum: 2400	Sum: 0	Sum: 0	Sum: NaN

Is Wetland Mitigation being proposed as part of this proposed project?

No

Explain why no mitigation is proposed.

No additional mitigation should be required since the proposed work is only expected to impact a small area of wetland over a short-term (one or two months), and the impacted area will be allowed to naturalize and return to pre-work conditions following the completion of the work.

Floodplain

Proposed Activity

Excavation/Cut

Fill

100-Year Floodplain Elevation

Please provide a name for the stream, river, channel, or waterbody:	100-Year Floodplain Elevation (feet)	Datum	Source of Datum
Saginaw River	589.7	NGVD29	FEMA flood mapping

Upload Documents for Datum Source

[Attachment E - FEMA Flood Mapping.pdf - 11/13/2019 04:08 PM](#)

Comment

FEMA Flood Map, table, and profile

Excavation/Cut volume below the 100-year floodplain elevation (cubic yards)

44

Fill volume below the 100-year floodplain elevation (cubic yards)

44

Source of Fill Material:

On-site

Type of Fill

Sand

Calculations Upload

NONE PROVIDED

Comment

NONE PROVIDED

Is this project located in the floodway?

No

Were one or more Hydraulic Analyses completed for this project?

No

Local Unit of Government (LUG) Acknowledgement Letter Upload

NONE PROVIDED

Comment

GHD is in the process of obtaining the City of Saginaw floodplain permit.

Is there an existing building on site?

No

Upload of Proposed Site Plans

Required on all Site Plan uploads. Please identify that all of the following items are included on your plans that you upload with this application.

Site Plan Features	Existing and Proposed Plan Set
Scale, Compass North, and Property Lines	Yes
Fill and Excavation areas with associated amounts in cubic yards	Yes
Any rivers, lakes, or ponds and associated Ordinary High Water Mark (OHWM)	N/A
Exterior dimensions of Structures, Fill and Excavation areas associated with the proposed project	Yes
Dimensions to other Structures and Lot Lines associated with the project	N/A
Topographic Contour Lines from licensed surveyor or engineer when applicable	Yes

Upload Site Plans and Cross Section Drawings for your Proposed Project

Attachment F - Site Plans and Drawings.pdf - 11/05/2019 04:15 PM

Comment

Site Location, Contours, Excavation Location, Excavation Dimensions, Location of on-site clean fill

Additional Required and Supplementary Documents

[Attachment G - Characterization memo of clean fill.pdf - 11/05/2019 11:02 AM](#)

[Attachment H - Site Photographs.pdf - 11/05/2019 11:02 AM](#)

[Attachment C - U.S. EPA email approval.pdf - 11/05/2019 11:02 AM](#)

Comment

Attachment G - Characterization results for the on-site clean fill material Attachment H - Site photographs of the proposed excavation area Attachment C - U.S. EPA email approval of proposed scope of work

Fees

Minor Project Fee:
+\$100.00

Total Fee Amount:

\$100.00

Is the applicant or landowner a State of Michigan Agency?

No

Status History

	User	Processing Status
9/23/2019 1:41:07 PM	John-Eric Pardys	Draft
11/18/2019 4:40:10 PM	John-Eric Pardys	Submitted

Attachment A



Revitalizing Auto Communities
Environmental Response Trust

Transmitted via Email Only

GHD IS HEREBY AUTHORIZED TO SUBMIT THIS APPLICATION ON BEHALF OF RACER TRUST. BY THIS AUTHORIZATION, I ACKNOWLEDGE THAT I AM CERTIFYING TO ALL OF THE FOLLOWING:

- RACER Trust is applying for a permit(s) to authorize the activities described herein.
- I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program.
- I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information contained in this application is untrue.
- RACER Trust has the legal authority to undertake the activities proposed in this application if a permit is granted.
- RACER Trust agrees to allow representatives of EGLE, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project.
- I understand that RACER Trust must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release RACER Trust from the requirements of obtaining the permit requested herein before commencing the activity.
- I understand that the payment of the application fee does not guarantee the issuance of a permit.

PROPERTY OWNER:

David Favero
RACER Trust Deputy Cleanup Manager - Michigan
RACER Trust

October 1, 2019
DATE

Attachment B



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.

11 pg 4409
Warner Kovercross and Judd LLP
2000 Town Center Ste 2700
Southfield MI 48075

SEP 30 13 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.

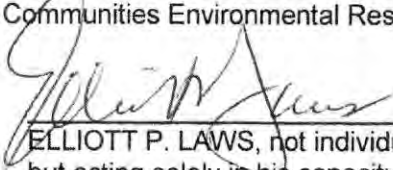
8. Enforcement. The Grantor is entitled to enforce the restrictions and covenants in this Restrictive Covenant by specific performance or other legal action in a court of competent jurisdiction against subsequent Owners of all or part of the Property. The Grantor, on behalf of itself, and its successors 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

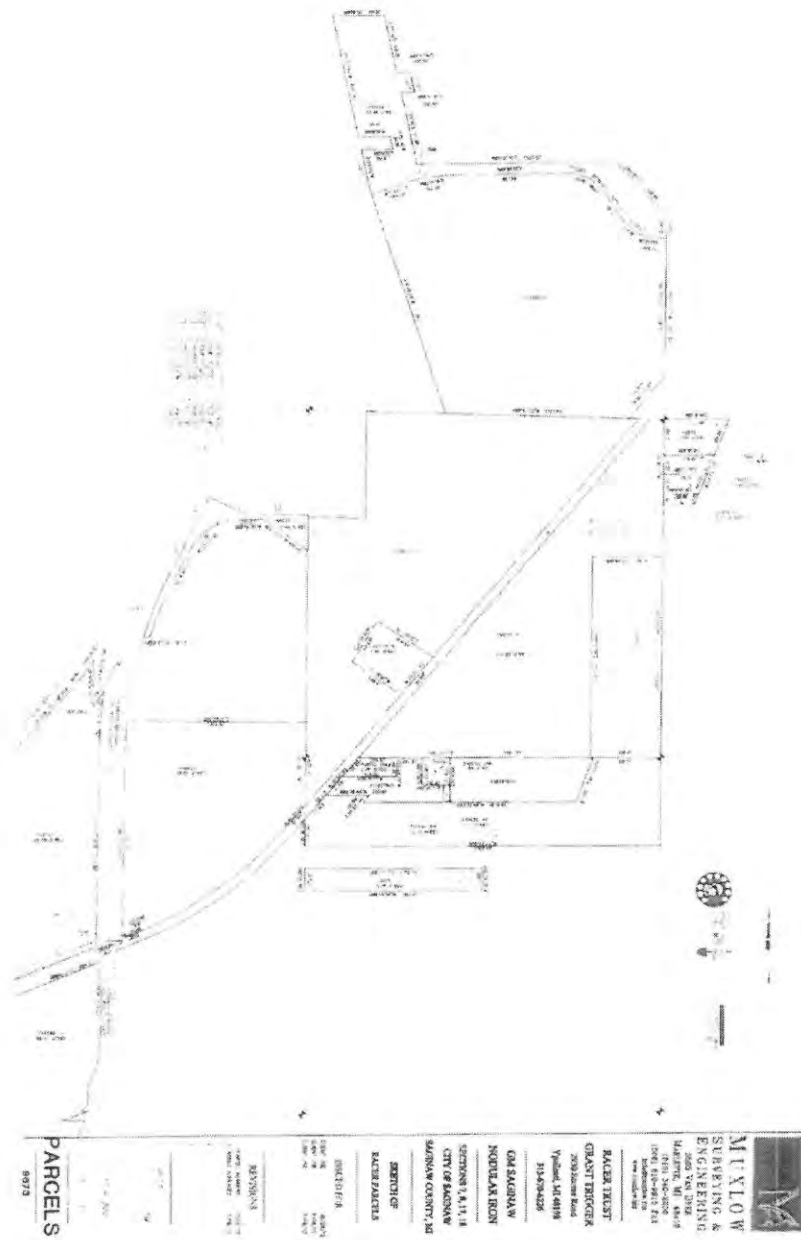


EXHIBIT 3

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

From: Sasnow, Zachary <sasnow.zachary@epa.gov>

Sent: Thursday, September 19, 2019 10:48 AM

To: John Pardys <John-Eric.Pardys@ghd.com>

Cc: Dave Favero <dfavero@racertrust.org>

Subject: RE: Racer Nodular - Update on sediment removal status and progress on Wetland Low Level PCB Excavation

Hello John-Eric,

Please proceed with obtaining the permit for the wetland area.

Thank you for the update on the dredging activities - at this time I am not sure with our end-of-fiscal-year obligations here I will be able to make a site visit work during that time frame.

Provided the black carbon sampling confirms the reduced bioavailability of the PCBs in the North Ditch and the dredging in the Secondary Pond goes as planned, I am expecting EPA will be able to draft a Statement of Basis for the site involving institutional controls on groundwater use, limited MNA monitoring for the elevated pH in the subsurface, and the removal of the PCB-impacted area in the wetlands. So the delay in conditions being favorable for the sediment removal shouldn't interfere with progress on closing the site.

Zack

From: John-Eric.Pardys@ghd.com <John-Eric.Pardys@ghd.com>

Sent: Friday, September 13, 2019 11:15 AM

To: Sasnow, Zachary <sasnow.zachary@epa.gov>

Cc: Dave Favero <dfavero@racertrust.org>

Subject: Racer Nodular - Update on sediment removal status and progress on Wetland Low Level PCB Excavation

Zack

Please find below a status update on the PCB-impacted sediment removal from the Secondary Pond at RACER's Nodular Site, as well as, progress update on the requested excavation of low level PCBs in soil in IU G.

PCB-impacted Sediment Removal – Secondary Pond

Week of August 19, 2019

- Contractor constructed a berm to separate the west portion of the Secondary Pond from the east portion of the Secondary Pond
- Initiated setup of decontamination pad

Weeks August 26 to September 9, 2019

- Contractor pumped water from western portion of Secondary Pond to Lagoon 5 (see attached for dewatered pond)

Proposed work for Week of September 16, 2019

- Install crane mats out to Area 1 and begin installing vinyl sheet piling around Area 1

We expect that, weather permitting, sediment removal activities from Area 1 will occur the weeks of September 23, September 30, and October 7, which may be a good time for a Site visit.

Status of Wetland low-level PCB impacted soil excavation

The following brief scope of work was put together, with the assistance of the contractor (JSS), for the removal of wetland low-level PCB-impacted soil. A scope of work is needed for EGLE permitting.

Please find attached a databox figure of the wetland area on which we have included the proposed excavation extents (a 20' x 60' area). The extents were defined by existing shallow sample locations with results less than 1ppm (shaded in yellow). GHD proposes to remove 1-ft of material over this area (ecological risks to benthic invertebrates are limited to the top 6-inches). No excavation floor sampling would be completed as there are known impacts at lower depths. Instead the excavation would be backfilled with a 1-ft layer of soil.

Currently the area has a thick cover of phragmites 10-12 ft high and was dry enough to walk on. The following is a tentative approach to complete the excavation and backfill activities.

- Track down vegetation with tracked equipment or clear with brush hog.
- Surveyors to stake out the area.
- Place crane mats from edge of gravel road to excavation area.
- Use tracked excavator to excavate impacted soil (will operate on crane mats when tracking to excavation area and while excavating).
- Load soil into off road haul truck (will travel on crane mats when off gravel road).
- Haul truck will travel to staging area and stockpile excavated material onto poly sheeting.
- Once excavation is complete material will be loaded into dump trucks for transport to non-hazardous landfill.
- All efforts will be made to minimize erosion (use of silt fence, as necessary), minimize dust (using water), and minimize tracking to roads.
- Backfill excavation with clean on-Site material.
- Re-vegetate area with wetland seed mix.
- All equipment that comes in contact with PCB-impacted soil will be decontaminated prior to de-mobilization

Some dewatering and/or mixing in stabilization additive may be necessary if the excavation area

starts to fill with water prior to placement of clay.

With regards to permitting, we were able to speak with a representative from the EGLE permitting department on the proposed work. Based on a review of the proposed work and the location of the work, EGLE indicated that a floodplain and/or wetland permit would likely be required. The process usually starts with a Site meeting to review the location and scope of work. After submittal of a formal application, ELGE has 30 calendar days to review a permit and identify whether it is “administratively complete”. Once the permit is considered “administratively complete” EGLE has up to 90 calendar days to provide a permit for the work. When asked about the current review times for permits, EGLE was not willing to commit to anything other than the existing review timeframes. Therefore, assuming we were able to put together an adequate permit and submit by the end of the month. We would not expect a permit to be issued until late January 2020. As such, RACER could complete this work in the winter (if the contractor determines this is feasible) or next August/September 2020 when standing water in the area normally dries up.

We would appreciate your concurrence with the scope of work so we can prepare the permit application. Please let us know if you have any questions or would like to discuss further.

Thanks

John-Eric Pardys, P. Eng.
Project Manager

GHD

Proudly employee owned

T: +1 519 340 4316 | M: +1-226-339-2769 | E: john-eric.pardys@ghd.com
455 Phillip St Waterloo Ontario N2L 3X2 Canada | www.ghd.com

Connect

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Attachment D



9436 Maltby Road
Brighton, MI 48116
810.225.0539 office
810.225.0653 fax
www.niswander-env.com

July 22, 2015

Mr. Patrick Schaffer
Menard, Inc. – Properties Division
5101 Menard Drive
Eau Claire, WI 54703

Subject: *Wetland Delineation*
38.86-Acre Racer Trust Property
Buena Vista Township, Saginaw County, MI
NE 1424

Dear Mr. Schaffer:

Niswander Environmental was contracted in July 2015 to complete a wetland delineation on 38.86-acre property (Property) located at 2100 Veterans Memorial Parkway in Section 8 of Buena Vista Township, Saginaw County, Michigan (T12N, R5E). The Property is a former industrial complex that was decommissioned and demolished over 10 years ago. Currently, this disturbed site is a vacant brownfield that is dominated by wetland, old field, meadow, and/or young successional forested habitat. Russian olive and cottonwood dominate much of the land, particularly in the north. The central portions of the site are primarily scrub-shrub wetland. Areas in the south consist of open meadow and old field. Please refer to Photos 1 and 2 in the attached Photographic Log for a representation of the upland portions of the Property.

Niswander Environmental assessed the Property for existing wetlands, watercourses, and floodplains, and delineated the wetland features. During the on-site investigation, **Niswander Environmental identified five (5) wetlands within the Property (Figure 1 – Wetland Location Map)**. The following is a report detailing the results of Niswander Environmental's investigation.

SUPPORTING DOCUMENTATION

Wetlands and Watercourses

Prior to the site investigation, Niswander Environmental completed a thorough review of available State and County GIS data, online resources, wetland maps, historic aerial photos, topographic maps, soil maps, and other materials. Infrared and color aerial photographs (Michigan Geospatial Digital Library – MiGDL, 1998, 2005, and 2012) and 2014 color aerial photographs (GoogleEarth) were obtained and evaluated for any remarkable features. A review of National Wetland Inventory (NWI), Michigan Department of Environmental Quality (MDEQ) Final Wetland Inventory Map, and Saginaw County GIS data was conducted to determine the likely presence, location, size and type of wetlands that may be located on the Property. The United States Fish and Wildlife Service (USFWS) produce the NWI data

through aerial photograph interpretation. The MDEQ Final Wetland Inventory Map was created from the NWI, USDA Soils Map, and Land Cover, as mapped by the Michigan Resource Inventory System (MIRIS).

Review of the available wetland maps, including the NWI and MDEQ Final Wetland Inventory Map for Saginaw County, did not identify wetlands or hydric soil on the Property, likely because this Property contained an industrial facility until recently. These maps, however, may not always accurately show the extent or existence of wetland systems in a specific area or correctly identify the wetlands present since they were primarily generated through aerial interpretation. Wetland inventory maps are utilized for preliminary analysis only. Field investigations are always necessary to determine the actual existence and type of wetlands in a given area.

METHODS

Wetlands and Watercourses

Potential wetland areas within the Property were evaluated in the field using the procedures outlined in the US Army Corps of Engineers *1987 Wetland Delineation Manual* (“87 Manual”), and the Northeast/NorthCentral Supplement to the “87 Manual” as required by the State of Michigan, Department of Environmental Quality, under Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, PA451 of 1994, as amended (NREPA). According to these procedures, wetlands are identified by the presence of hydric soils, signs of hydrology indicators, and dominant hydrophytic vegetation.

Hydric soil indicators were assessed in the field through soil pits that were dug in and around potential wetland areas. A soil is considered hydric if it meets requirements as stated in the Natural Resources Conservation Service *Field Indicators of Hydric Soils in the United States* (Version 7.0, 2010), which specifies parameters such as soil matrix color, amount and contrast of redox concentrations or depletions, and depth and thickness for a specific soil type such as loamy, clayey, or sandy soils. Soils were not reviewed in areas with standing or flowing water since these areas are assumed to be hydric.

Signs of hydrology within potential wetland areas were also investigated. Standing water or saturated soils, water marks on trees, drift lines, sediment deposits, and water-stained leaves (among others) are considered primary indicators of hydrology, while secondary signs include drainage patterns, moss trim lines, crayfish burrows, and surface soil cracks. Either one primary or two secondary indicators are necessary in determining the presence of wetland hydrology.

Dominant vegetation for wetland areas are typically determined by estimating the most common species of tree, shrub, and forb layers. The top dominants are visually estimated for each layer or strata, and the indicator status of each dominant species is then determined. An indicator status of obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU) and/or upland (UPL) is typically assigned to each plant species on the U.S. Army Corps of Engineers *National Wetland Plant List* (<http://rsgisias.crrel.usace.army.mil/NWPL/>). An area has hydrophytic (wetland) vegetation when, under normal circumstances, more than 50 percent of the composition of the dominant species from all strata are OBL, FACW, and/or FAC species. An area has non-hydrophytic vegetation when 50 percent or more of the composition of the dominant species from all strata are FACU and/or UPL species. Areas

that meet the three criteria of hydric soils, wetland hydrology, and hydrophytic vegetation are considered wetlands. The perimeter of a wetland is typically determined by locating areas where one of these three criteria is no longer present (*i.e.*, where wetland vegetation transitions to upland vegetation or where signs of hydrology are no longer apparent, etc.).

The wetland boundary was flagged and GPS'd in the field, and then digitized into a GIS database (Figure 1 – Wetland Location Map). The actual wetland boundary should be surveyed and incorporated into any development plans to determine the exact size, shape, and location of the wetland.

Under NREPA, wetlands are regulated if they are greater than 5 acres in size or if they are connected to or within 500 feet of an inland lake, pond, river, drain, or stream (*i.e.*, watercourse). A pond is defined in Part 303 Administrative Rules (R 281.921) as a natural or artificial pond that has permanent open water with a surface area that is more than 1 acre, but less than 5 acres. Other watercourses are regulated by the State under Part 301 (Inland Lakes and Streams) if they exhibit defined banks, a bed, and visible evidence of a continued flow or continued occurrence of water. An inland lake or stream does not include the Great Lakes, Lake St. Clair, or a lake or pond that has a surface area of less than 5 acres. It should be noted that the MDEQ has the final authority on the regulatory status of wetlands and watercourses in the State of Michigan.

FINDINGS

On July 15 and 16, 2015 Niswander Environmental conducted a wetland delineation on the Property using the *87 Manual*. Five wetlands (Wetland A - E) were identified and flagged on the Property. The limits of the wetland were flagged in the field with pink flagging labeled A1 – A80, B1 – B145, C1 – C24, D1 – D14, and E1 – E 65. The wetland delineation, once surveyed by a registered surveyor, will provide the exact shape, size, and location of the on-site wetland.

WETLANDS A, B, AND D

Wetlands A, B, and D are similar in terms of habitat type, vegetative composition, soil structure, and hydrologic indicators. They are separated from each other through access roads and driveways, and there does not appear to be a hydrologic connection (Figure 1). Each of these wetlands are classified as emergent/scrub-shrub wetlands, meaning there are portions that are dominated by woody shrubs and small trees, but there are also openings comprised primarily of herbaceous plants. Despite their diversity, these wetlands are considered to be of moderate to moderately low quality because of recent disturbance (*i.e.*, the wetlands have developed since the demolition of the pre-existing buildings and infrastructure on the site) and contain an abundance of invasive vegetation such as Phragmites (*Phragmites australis*), red top (*Agrostis gigantea*), narrow-leaved cattail (*Typha angustifolia*), and purple loosestrife (*Lythrum salicaria*). Other common-to-abundant plants within Wetlands A, B, and D include path rush (*Juncus tenuis*), Torrey's rush (*Juncus torreyi*), sandbar willow (*Salix exigua*), cottonwood (*Populus deltoides*), slender fragrant goldenrod (*Euthamia graminifolia*), and sedge (*Carex* spp.). Wetland A contains a disturbed meadow area in the southern portion of the Property, where wildflowers such as vervain (*Verbena hastata*), late goldenrod (*Solidago gigantea*), swamp milkweed (*Asclepias incarnata*), and swamp aster (*Symphotrichum puniceum*) along with a variety of sedges and rushes. Please refer to Photos 3 – 7 in the attached Photographic Log.

Hydrologic indicators present at the time of inspection include standing water, saturated soils, aquatic fauna, algal mats, and a positive FAC-Neutral test. Soils within each wetland proved to be similar, consisting of a sandy mucky mineral that is hydric. The upland/wetland interface was determined through topographical differences and the presence/absence of upland species such as common buckthorn (*Rhamnus cathartica*), Virginia creeper (*Parthenocissus quinquefolia*), Russian olive (*Elaeagnus angustifolia*), thistle (*Cirsium arvense*), tall goldenrod (*Solidago altissima*), Queen Anne's lace (*Daucus carota*), spotted knapweed (*Centaurea stoebe*) and various upland grasses. Upland areas generally contained a few wetland species intermixed with an abundance of upland plants, and also lacked primary indicators of hydrology. Please refer to the attached Wetland Determination Data Form for more details pertaining to Wetlands A, B, and D.

Wetland B is likely regulated by the MDEQ due to the fact that it is greater than five acres in size. Wetlands A and D are likely not regulated since they are smaller than five acres and are hydrologically isolated.

WETLAND C

Wetland C is a small, depressional wetland located within a disturbed field along Veterans Memorial Parkway (Figure 1). This emergent wetland is dominated by scouring rush (*Equisetum hyemale*), meadow sedge (*Carex granularis*), and taper-tip rush (*Juncus articulatus*). Other species present within this wetland include fowl bluegrass (*Poa palustris*), Torrey's rush, spikerush (*Eleocharis obtusa*), and swamp milkweed (Photo 8; Photographic Log).

Although the interior of the wetland contained standing water, a majority of the wetland was only saturated at the time of inspection. Hydric soils were confirmed when a mucky sand was revealed. Please refer to the attached Wetland Determination Data Form for more details pertaining to Wetland C.

Wetland C is likely not regulated by the MDEQ since it is less than five acres in size and is not hydrologically connected to a regulating body of water.

WETLAND D

Wetland E is a small (~1 ac) wetland located in the northwest portion of the Property, beginning just north of the access drive (Figure 1). Like the other on-site wetlands, this wetland is disturbed but is becoming more naturalized as the years pass. Most of the wetland is classified as scrub-shrub due to the abundance of sapling cottonwood, but other portions are more open and resemble a meadow (Photos 9 and 10; Photographic Log). While no single species truly dominates, the most abundant plants within this wetland include cottonwood, sandbar willow, purple loosestrife, scouring rush, vervain, late goldenrod, slender-fragrant goldenrod, and riverbank grape (*Vitis riparia*).

Wetland E contained a few pockets of standing water, but in general was saturated at or just below the surface. Please refer to the attached Wetland Determination Data Form for more details pertaining to Wetland E.

Wetland E is likely not regulated by the MDEQ since it is less than five acres in size and is hydrologically isolated.

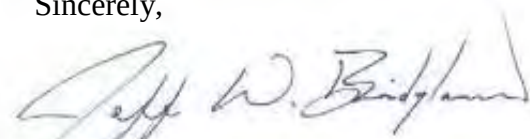
CONCLUSIONS

Niswander Environmental identified five wetlands (Wetlands A, B, C, D, and E) on the Property. The approximate size and shape of the wetland is represented in Figure 1 (Wetland Location Map). A survey of the wetland delineation should be conducted to accurately determine the wetland boundaries and any potential impacts resulting from future work within this area.

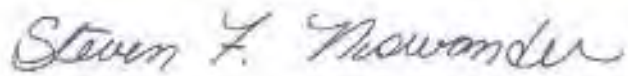
It is Niswander Environmental's professional opinion that Wetland B is regulated by the MDEQ due to the fact that it is greater than 5 acres in size. The remaining four wetlands are less than 5 acres in size, and are hydrologically isolated. However, since the MDEQ has the final regulatory authority, we recommend that a Pre-Application Meeting with the MDEQ be held prior to moving forward with any potential development. A MDEQ Part 303 Permit will be necessary if impacts to regulated wetland are proposed.

We look forward to working with you to make this project a success. If you have any questions or require additional information please call us at your convenience.

Sincerely,



Jeff W. Bridgland
Ecologist
Professional Wetland Scientist #1810



Steven F. Niswander
Principal
Professional Wetland Scientist #1276

Attachments: Figure 1 – Wetland Location Map
Photographic Log
Wetland Determination Data Forms



Photographic Log



Photo 1

The Racer Trust property is a 38.86-acre site that was a former industrial facility that was demolished roughly 10-15 years ago and left fallow.



Photo 2

This disturbed property is dominated by pioneer species such as cottonwood, willow, and Russian olive.



Photographic Log

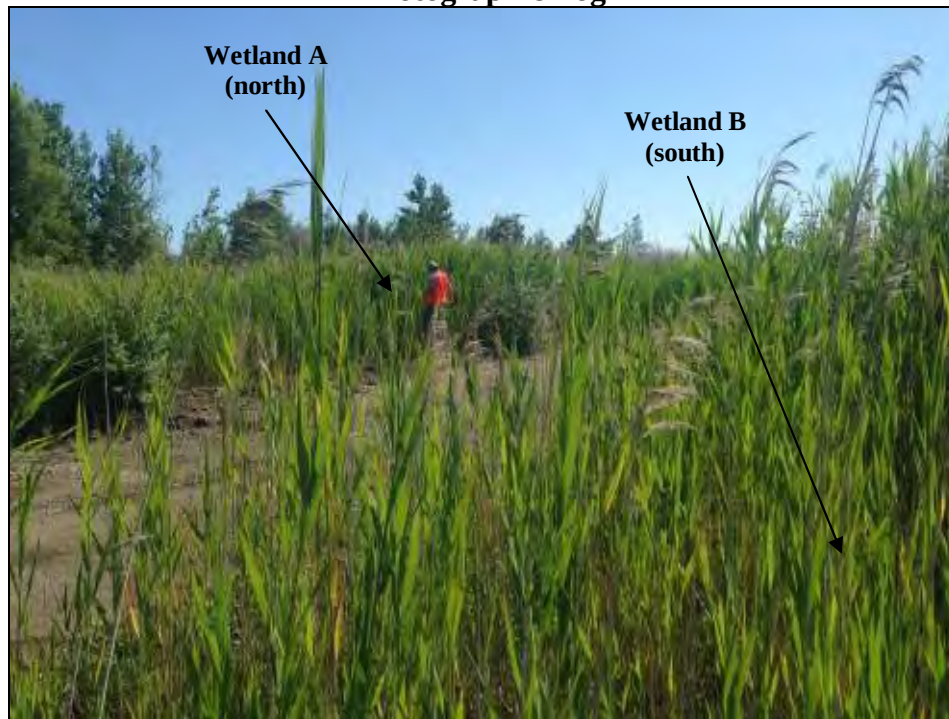


Photo 3

An access driveway splits Wetlands A and B, but there does not appear to be a hydrologic connection between the two. Along the road, these wetlands contain an abundance of invasive Phragmites.



Photo 4

Wetland A, located on the north side of the access drive, is dominated by Phragmites (although other species are present throughout).



Photographic Log



Photo 5

View facing south showing Wetland B, a large (~7⁺ acre) scrub-shrub wetland. This wetland is likely regulated by the MDEQ.



Photo 6

The southern portion of Wetland B is comprised primarily of meadow species as opposed to woody species that dominate further north.



Photographic Log



Photo 7

Wetland D, located in the northeast portion of the property, is primarily an emergent wetland dominated by Phragmites, cattail, sedge, and rush.



Photo 8

Wetland C is a small, isolated emergent wetland located along Veterans Memorial Highway.



Photographic Log



Photo 9

View facing north showing the scrub-shrub portion of Wetland E. This wetland contains both meadow and scrub-shrub characteristics, and is very diverse.



Photo 10

Pockets of open meadow are common throughout Wetland E. These areas contain an abundance of sedges, rushes and wildflowers such as vervain, goldenrod, milkweed, and aster.

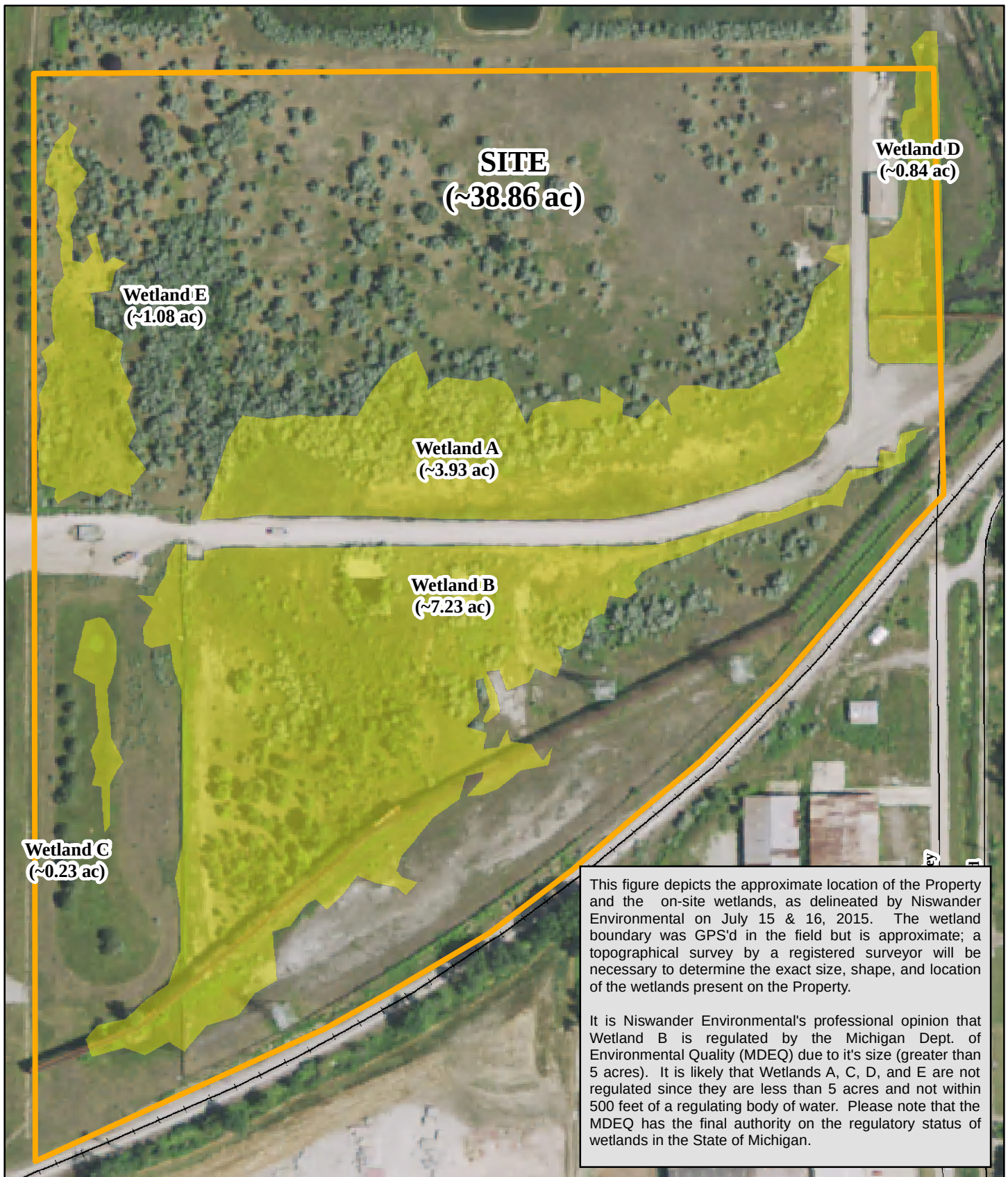


Figure 1. Wetland Location Map

NE 1424 Racer Trust Industrial Park

Client: Menard, Inc.

38.86-Acre Property at 2100 Veterans Memorial Parkway
Section 8 of Buena Vista Twp., Saginaw Co., MI (T12N, R5E)

Delineation Date: July 15 & 16, 2015

Map Created: July 16, 2015

Feet 0 100 200 400



NISWANDER
ENVIRONMENTAL

9436 Maltby Road, Brighton, MI 48116
810.225.0539 office | 810.225.0653 fax



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Menard's Saginaw City/County: Buena Vista Twp., Saginaw Co. Sampling Date: 7/15/2015
 Applicant/Owner: Racer Trust State: MI Sampling Point: A, B, D
 Investigator(s): J. Bridgland, T. Smith - Niswander Environmental Section, Township, Range: Sec. 8, T12N, R5E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____
 Subregion (LRR or MLRA): Lat: 43 27' 25.00"N Long: 83 54' 32.82"W Datum: GoogleEarth
 Soil Map Unit Name: Urban Land (74) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Wetland Data Form for Wetlands A, B, and D. Each of these three wetlands exhibit similar habitat types, vegetative composition, soils, and hydrology. Separated by an access driveway, but no apparent hydrologic connection (no culverts observed). Highly disturbed - former industrial facility that was demolished roughly 10-15 years ago, capped with soil, and left to naturally vegetate. Wetland A = ~3.93 acres (80 flags); Wetland B = ~7.23ac (145 flags); Wetland C = ~ 0.23 ac (24 flags); Wetland D = ~0.84 ac (14 flags); Wetland E = ~ 1.08 ac (65 flags). Wetland B is likely regulated due to size. It is Niswander Environmental's professional opinion that Wetlands A, C, D, and E are hydrologically isolated and smaller than five acres in size and therefore are likely not regulated by the MDEQ.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☒ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☒ High Water Table (A2) ☒ Aquatic Fauna (B13) ☒ Saturation (A3) ☐ Marl Deposits (B15) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☒ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetlands A, B, and D exhibited standing water throughout much of the wetland at the time of the inspection. Much of the remainder of each wetland was saturated at the surface.		

VEGETATION – Use scientific names of plants.

 Sampling Point: A, B, D

Tree Stratum (Plot size: <u> 30 ft. </u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Eastern Cottonwood</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 6 </u> (A) Total Number of Dominant Species Across All Strata: <u> 8 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 75.0% </u> (A/B)																
2. <u>Russian-Olive</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Black Willow</u>	<u>2</u>	<u>No</u>	<u>OBL</u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>22</u>	=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u> 15 ft. </u>)																				
1. <u>Sandbar Willow</u>	<u>65</u>	<u>Yes</u>		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>117</u></td> <td>x 1 = <u>117</u></td> </tr> <tr> <td>FACW species <u>175</u></td> <td>x 2 = <u>350</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>347</u> (A)</td> <td><u>642</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.85</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>117</u>	x 1 = <u>117</u>	FACW species <u>175</u>	x 2 = <u>350</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>347</u> (A)	<u>642</u> (B)	Prevalence Index = B/A = <u>1.85</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>117</u>	x 1 = <u>117</u>																			
FACW species <u>175</u>	x 2 = <u>350</u>																			
FAC species <u>45</u>	x 3 = <u>135</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>347</u> (A)	<u>642</u> (B)																			
Prevalence Index = B/A = <u>1.85</u>																				
2. <u>Silky Dogwood</u>	<u>10</u>	<u>No</u>																		
3. <u>European Buckthorn</u>	<u>10</u>	<u>No</u>																		
4. <u>Russian-Olive</u>	<u>10</u>	<u>No</u>																		
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>95</u>	=Total Cover																	
Herb Stratum (Plot size: <u> 5 ft. </u>)																				
1. <u>Common Reed</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X </u> 2 - Dominance Test is >50% <u> X </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Purple Loosestrife</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>																	
3. <u>Narrow-Leaf Cat-Tail</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Torrey's Rush</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>																	
5. <u>Late Goldenrod</u>	<u>25</u>	<u>No</u>	<u>FACW</u>																	
6. <u><i>Juncus tenuis</i></u>	<u>25</u>	<u>No</u>	<u>FAC</u>																	
7. <u><i>Agrostis gigantea</i></u>	<u>20</u>	<u>No</u>	<u>FACW</u>																	
8. <u>Common Fox Sedge</u>	<u>10</u>	<u>No</u>	<u>OBL</u>																	
9. <u>Flat-Top Goldentop</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
10. <u>Swamp Milkweed</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
11. <u>water plantain</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
12. <u>Bebb's Sedge</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
		<u>315</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u> 15 ft. </u>)																				
1. <u><i>Vitis riparia</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>																	
		<u>10</u>	=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)

Other species present include vervain, swamp aster, chairmakers rush, soft rush, green bulrush, joe-pye weed, boneset, taper-tip rush, and Indian hemp. Northern portions of Wetland A dominated 99% by Phragmites. Southern portions of Wetland B contain disturbed meadow. Upland/Wetland interface determined by presence of upland species such as spotted knapweed, russian olive, tall goldenrod, Virginia creeper, orchard grass, Queen Anne's lace, and/or thistle.

SOIL

Sampling Point A, B, D

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Menard's Saginaw City/County: Buena Vista Twp., Saginaw Co. Sampling Date: 7/15/2015
 Applicant/Owner: Racer Trust State: MI Sampling Point: C
 Investigator(s): J. Bridgland, T. Smith - Niswander Environmental Section, Township, Range: Sec. 8, T12N, R5E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____
 Subregion (LRR or MLRA): Lat: 43 27' 25.00"N Long: 83 54' 32.82"W Datum: GoogleEarth
 Soil Map Unit Name: Urban Land (74) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Small, depressional PEM located within overgrown grassy field. Roughly 0.23 acres (24 flags). Likely not regulated due to lack of size and hydrologically isolated.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☒ Surface Water (A1) _____ Water-Stained Leaves (B9) ☐ High Water Table (A2) _____ Aquatic Fauna (B13) ☒ Saturation (A3) _____ Marl Deposits (B15) ☐ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) ☐ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) ☐ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) ☐ Iron Deposits (B5) _____ Thin Muck Surface (C7) ☐ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8) _____	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Interior portions of Wetland C contained standing water, but a majority of the wetland was saturated at the surface at the time of inspection	

VEGETATION – Use scientific names of plants.

Sampling Point: C

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>38</u></td> <td>x 1 = <u>38</u></td> </tr> <tr> <td>FACW species <u>72</u></td> <td>x 2 = <u>144</u></td> </tr> <tr> <td>FAC species <u>55</u></td> <td>x 3 = <u>165</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>347</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.10</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>38</u>	x 1 = <u>38</u>	FACW species <u>72</u>	x 2 = <u>144</u>	FAC species <u>55</u>	x 3 = <u>165</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>347</u> (B)	Prevalence Index = B/A = <u>2.10</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>38</u>	x 1 = <u>38</u>																			
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FAC species <u>55</u>	x 3 = <u>165</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>165</u> (A)	<u>347</u> (B)																			
Prevalence Index = B/A = <u>2.10</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)																				
1. <u>Equisetum hyemale</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u>Carex granularis</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Juncus articulatus</u>	<u>30</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Poa palustris</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Juncus torreyi</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
6. <u>Eleocharis obtusa</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
7. <u>Asclepias incarnata</u>	<u>1</u>	<u>No</u>	<u>OBL</u>																	
8. <u>Carex vulpinoidea</u>	<u>1</u>	<u>No</u>	<u>OBL</u>																	
9. <u>Scirpus cyperinus</u>	<u>1</u>	<u>No</u>	<u>OBL</u>																	
10. <u>Agrostis gigantea</u>	<u>1</u>	<u>No</u>	<u>FACW</u>																	
11. <u>Solidago gigantea</u>	<u>1</u>	<u>No</u>	<u>FACW</u>																	
12. _____	_____	_____	_____																	
		=Total Cover																		
Woody Vine Stratum (Plot size: <u>15 ft.</u>)																				
1. <u>Vitis riparia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)
 Dominated by scouring rush, C. granularis (or C. pellita), and taper-tip rush. Upland/Wetland interface determined by subtle slope, presence of upland grasses and thistle.

SOIL

Sampling Point C

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Menard's Saginaw City/County: Buena Vista Twp., Saginaw Co. Sampling Date: 7/16/2015
 Applicant/Owner: Racer Trust State: MI Sampling Point: E
 Investigator(s): J. Bridgland - Niswander Environmental Section, Township, Range: Sec. 8, T12N, R5E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope %: _____
 Subregion (LRR or MLRA): Lat: 43 27' 25.00"N Long: 83 54' 32.82"W Datum: GoogleEarth
 Soil Map Unit Name: Urban Land (74) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No x
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) PSS wetland with open meadow portions; diverse; hummocky, portions marginally wetland (mesic); Approximately 1.08 ac (65 flags). Likely not regulated due to size and lack of hydrologic connectivity.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) <u>X</u> Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Very few pockets of standing water; portions saturated at surface, but mostly below the surface (@ roughly 4")		

VEGETATION – Use scientific names of plants.

 Sampling Point: E

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Populus deltoides</i></u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>55</u></td> <td>x 1 = <u>55</u></td> </tr> <tr> <td>FACW species <u>140</u></td> <td>x 2 = <u>280</u></td> </tr> <tr> <td>FAC species <u>135</u></td> <td>x 3 = <u>405</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>340</u> (A)</td> <td><u>780</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.29</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>55</u>	x 1 = <u>55</u>	FACW species <u>140</u>	x 2 = <u>280</u>	FAC species <u>135</u>	x 3 = <u>405</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>340</u> (A)	<u>780</u> (B)	Prevalence Index = B/A = <u>2.29</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>55</u>	x 1 = <u>55</u>																			
FACW species <u>140</u>	x 2 = <u>280</u>																			
FAC species <u>135</u>	x 3 = <u>405</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>340</u> (A)	<u>780</u> (B)																			
Prevalence Index = B/A = <u>2.29</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>30</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																				
1. <u><i>Populus deltoides</i></u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Salix interior</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u><i>Russian olive</i></u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. <u><i>Cornus amomum</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>85</u>	=Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)																				
1. <u><i>Lythrum salicaria</i></u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
2. <u><i>Equisetum hyemale</i></u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u><i>Verbena hastata</i></u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u><i>Solidago gigantea</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
5. <u><i>Euthamia graminifolia</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
6. <u><i>Agrostis gigantea</i></u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
7. <u><i>Carex vulpinoidea</i></u>	<u>15</u>	<u>No</u>	<u>OBL</u>																	
8. <u><i>Apocynum cannabinum</i></u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
9. <u><i>Juncus torreyi</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
10. <u><i>Phragmites australis</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
11. <u><i>Juncus tenuis</i></u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
12. <u><i>Juncus articulatus</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
	<u>205</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>15 ft.</u>)																				
1. <u><i>Vitis riparia</i></u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	<u>20</u>	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

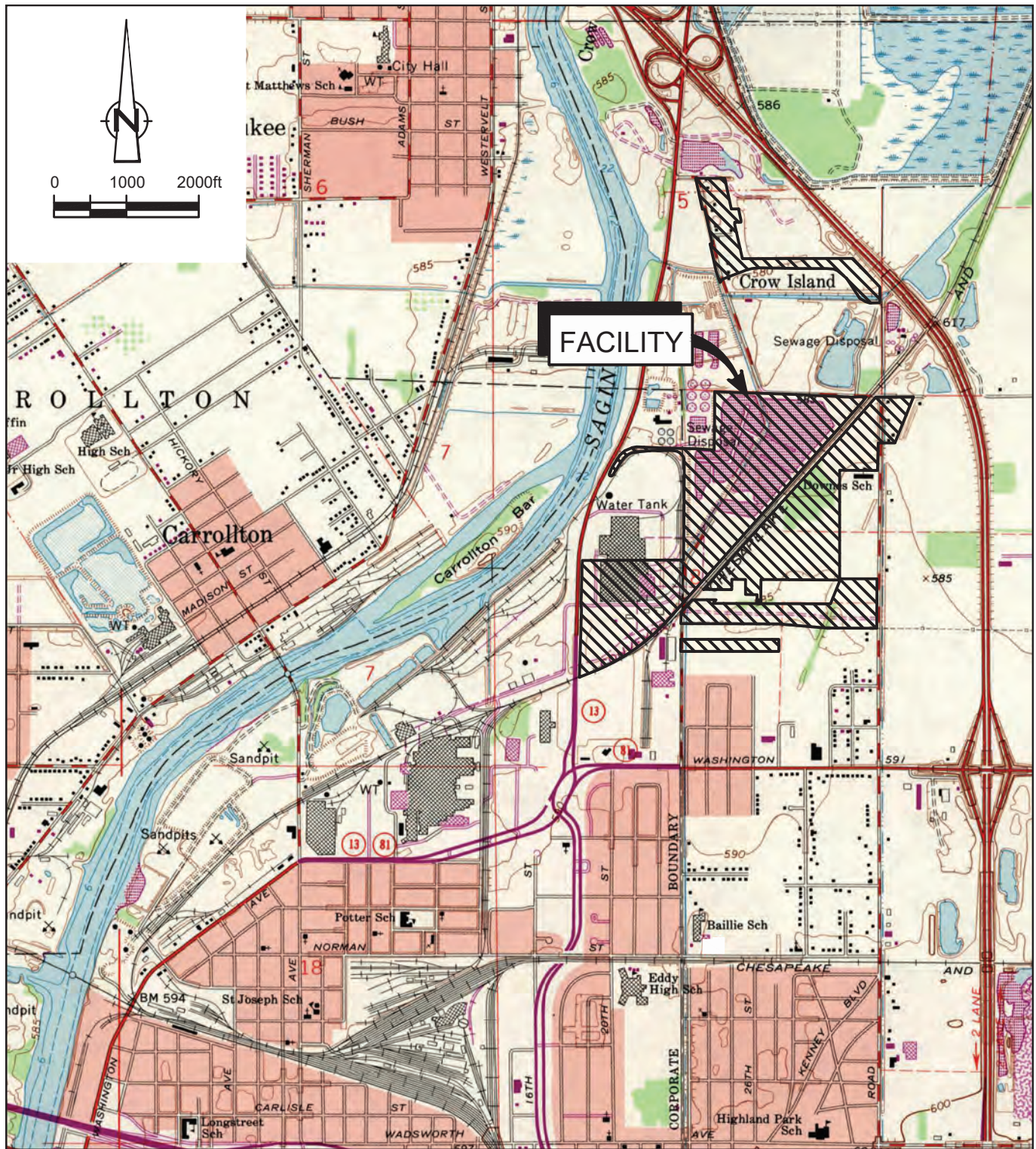
Wetland E is dominated by cottonwood, sandbar willow, purple loosestrife, and grapevine. Abundant and common species include vervain, late goldenrod, scouring rush, slender-fragrant goldenrod, fox sedge, red top, and Indian hemp. Upland/Wetland interface marked by presence of Virginia creeper, russian olive, tall goldenrod, thistle, and poison ivy.

SOIL

Sampling Point	E

[illegible]

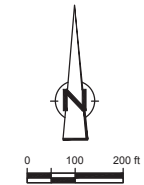
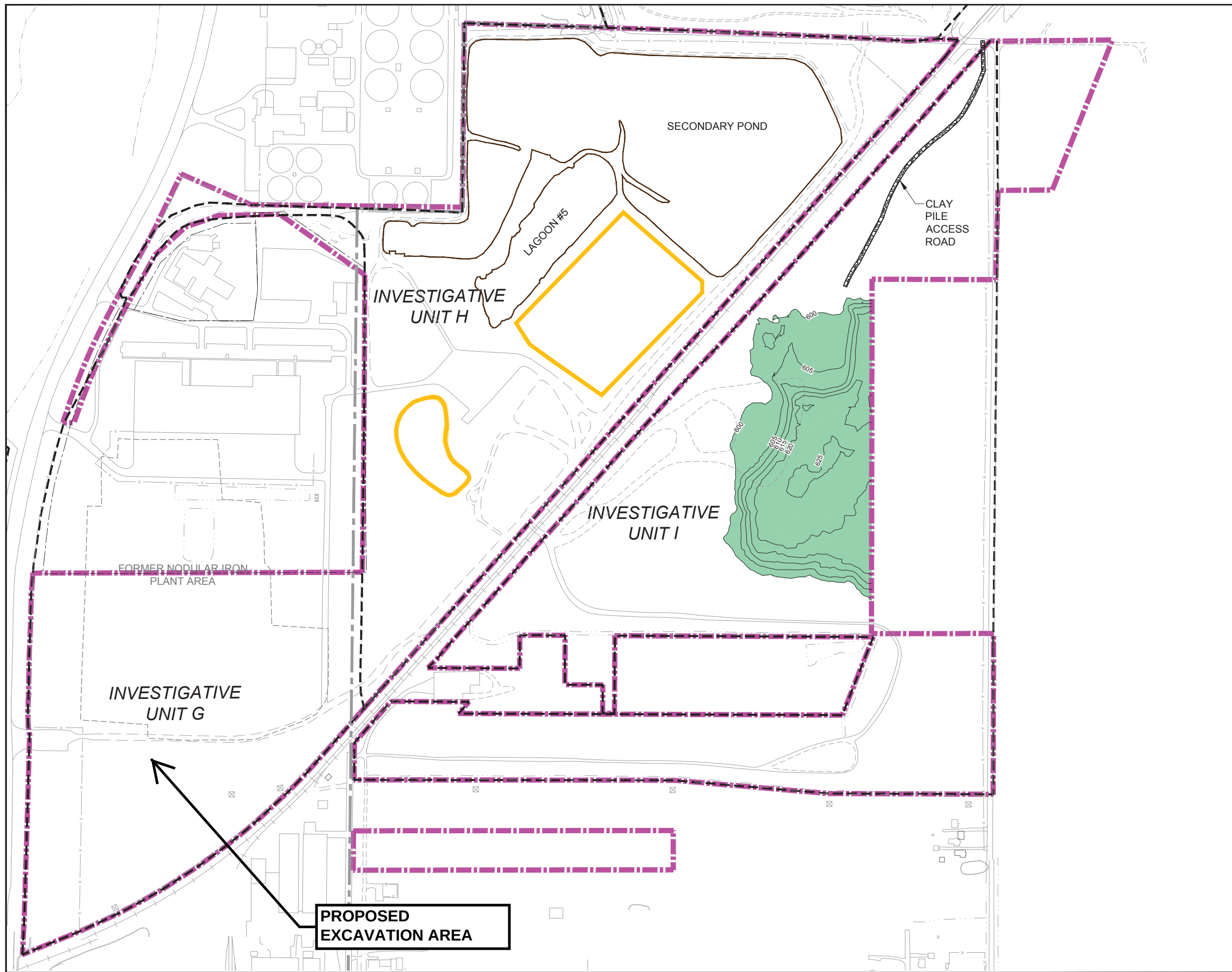
Attachment E



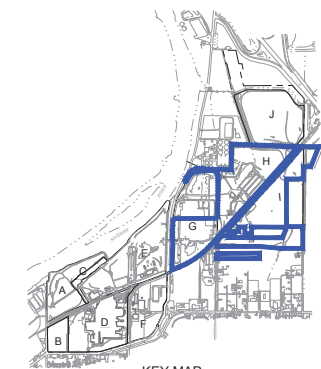
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE; SAGINAW, MICHIGAN 1967



figure 1.1
 SITE LOCATION
 REVITALIZING AUTOMOTIVE COMMUNITY
 ENVIRONMENTAL RESPONSE
Saginaw, Michigan



- LEGEND
- INVESTIGATIVE UNIT BOUNDARY
 - RACER TRUST PROPERTY
 - CLEAN BACKFILL LOCATION
 - CLAY PILE EXTENTS
 - CLAY PILE CONTOUR



KEY MAP

SCALE VERIFICATION

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

RACER TRUST

SAGINAW, MICHIGAN

CLEAN BACKFILL STOCKPILES



Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
SPICER SURVEY, OCTOBER 2009.

Project Manager: I.R.	Reviewed By: J.E.P.	Date: OCTOBER 2016
Scale: 1:200	Project N°: 58502-T02	Report N°: 015
		Drawing N°: figure 2

Attachment F

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD), and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Corporate limits shown on this map are based on the best data available. The user should contact appropriate community officials to verify the corporate limits delineations shown on this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

DIGITAL DATA AVAILABILITY: Digital files containing the thematic floodplain information shown on these maps are published by the Federal Emergency Management Agency in DLE-3 Optional format on CD-ROM. Requests for data should include the full name of the community or county and the Flood Insurance Rate Map panel numbers covered by the request. Contact the Federal Emergency Management Agency, Map Service Center, 6730 Santa Barbara Court, Baltimore, Maryland 21227-5832. Telephone 1-800-358-9616.

NOTE: The coordinate system used for the production of this Flood Insurance Rate Map (FIRM) is Universal Transverse Mercator (UTM), North American Datum of 1927 (NAD27). Clarke 1866 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the Universal Transverse Mercator projection, NAD27. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of the information shown on the FIRM.

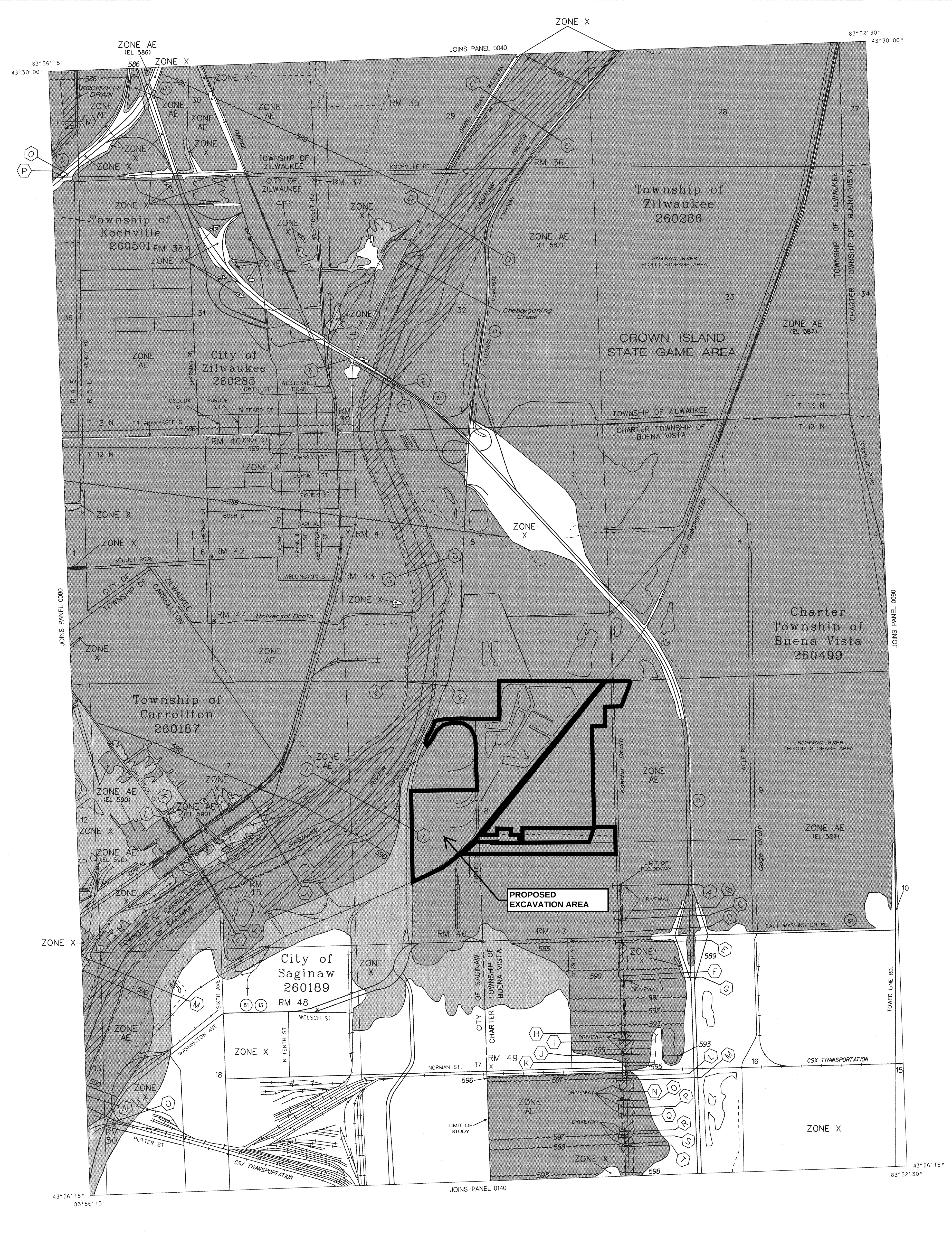
ATTENTION: Flood elevations on this map are referenced to the National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, contact the National Geodetic Survey at the following address:
Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

BASE MAP SOURCE: Planimetric base map files were provided in digital format by the Detroit District of the U.S. Army Corps of Engineers (USACE). These files were compiled from aerial photographs dated 1962 to 1987 provided by the USACE and digital U.S. Geological Survey 7.5 Minute Series Topographic Maps at a scale of 1:24,000 provided by the Michigan Department of Natural Resources. Additional information may have been derived from other sources. Users of this FIRM should be aware that minor adjustments may have been made to specific base map features.

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD) ¹	DESCRIPTION OF LOCATION
RM 35	585.02	A railroad spike in the west side of a power pole, approximately 900 feet east from Westervelt Road along Kochville Road and approximately 1,600 feet north-east from Kochville Road along a farm lane, approximately 15 feet southeast of the farm lane Johnson & Anderson.
RM 36	587.83	A bronze disk, stamped Sand, 36 feet west of the west edge of the Veteran's Memorial Parkway government, approximately 1.25 miles north of southbound Interstate 75 Johnson & Anderson.
RM 37	586.78	A chiseled cross on the top west bolt on the hydrant flange, 27 feet west and approximately 75 feet south of the intersection of Westervelt and Kochville Roads Johnson & Anderson.
RM 38	584.00	A railroad spike in the southwest side of a power pole, 33 feet west of the centerline of Sherman Road, approximately 1,500 feet south of the intersection of Sherman and Kochville Roads Johnson & Anderson.
RM 39	589.69	A cross cut in the concrete on top of the southwest foot of the transmission tower, 0.9 foot from the south face and 1.0 foot from the west face, at the foot of Tittabawassee Street Johnson & Anderson.
RM 40	586.77	A railroad spike in the west side of a power pole at the southeast corner of the intersection of Sherman Road and Tittabawassee Street Johnson & Anderson.
RM 41	589.47	A railroad spike in the east side of a power pole, approximately 18 feet east of the centerline of Westervelt Road, approximately 100 feet south of the intersection of Westervelt Road and Capital Street Johnson & Anderson.
RM 42	588.03	A chiseled cross on the top of the east bolt on the hydrant flange on the north-east corner of the intersection of Sherman Road and Schust Road Johnson & Anderson.
RM 43	587.76	A railroad spike in the east side of a power pole, approximately 18 feet east of the centerline of Westervelt Road, approximately 100 feet north of the intersection of Wellington Street and Westervelt Road Johnson and Anderson.
RM 44	587.70	Top of arrow over "W" in "CW" on fire hydrant located on east side of Sherman Road, approximately 100 feet north of Universal Drain.
RM 45	592.79	Bronze disk set vertically in the south-east face of south silo in a group of six at the Huron Portland Cement Company located approximately 225 feet northeast along the Grand Trunk Western from intersection of Grand Trunk Western and Sixth Avenue.
RM 46	592.44	Arrow over "W" in "CW" on fire hydrant located in southwest corner of intersection of East Washington Road and Findley Street.
RM 47	588.61	Top of east-northeast bolt on fire hydrant located in southeast corner of intersection of North 29th Street and East Washington Road.
RM 48	595.53	A bronze U.S. Lake Survey disk designated "SR 13" set vertically on east face of Chevrolet office building located northeast of intersection of Welsh Street and North 10th Street, approximately 2.4 feet from southeast corner of building.
RM 49	596.65	Arrow over "M" in "Michigan" on fire hydrant located in northeast corner of intersection of Findley Street and Norman Street.
RM 50	597.04	A U.S. Geological Survey disk designated "U39" set vertically in north face of CSX Transportation depot located north-east of the intersection of Potter Street and Washington Avenue, approximately 6.0 feet east of northeast corner.

¹National Geodetic Vertical Datum of 1929



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDED BY 100-YEAR FLOOD

ZONE A

ZONE AE

ZONE AH

ZONE AO

ZONE A99

ZONE V

ZONE VE

No base flood elevations determined.

Base flood elevations determined.

Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

Coastal flood with velocity hazard (wave action); no base flood elevations determined.

Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

OTHER AREAS

ZONE X

ZONE D

UNDEVELOPED COASTAL BARRIERS*

Identified 1983

Identified 1990

Otherwise Protected Areas

* Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

Base Flood Elevation Line; Elevation in Feet**

Cross Section Line

Base Flood Elevation in Feet Where Uniform Within Zone**

Elevation Reference Mark

River Mile

**Referenced to the National Geodetic Vertical Datum of 1929

MAP REPOSITORY

Refer to Repository Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

OCTOBER 16, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

Refer to the FLOOD INSURANCE RATE MAP effective date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE

1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

SAGINAW COUNTY, MICHIGAN (ALL JURISDICTIONS)

PANEL 85 OF 360 (SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUENA VISTA, CHARTER TOWNSHIP OF	260499	0085	0
CARROLLTON, TOWNSHIP OF	260187	0085	0
KOCHVILLE, TOWNSHIP OF	260501	0085	0
SAGINAW, CITY OF	260285	0085	0
ZILWAUKEE, CITY OF	260286	0085	0
ZILWAUKEE, TOWNSHIP OF	260286	0085	0

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER 26145C0085 D

EFFECTIVE DATE : OCTOBER 16, 1997

Federal Emergency Management Agency

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Saginaw River								
A	11.802	923	14,252	4.8	587.2	587.2	587.3	0.1
B	12.569	1,416	20,955	3.3	587.8	587.8	587.9	0.1
C	13.249	1,085	15,405	4.4	588.0	588.0	588.1	0.1
D	13.747	1,195	17,540	3.9	588.3	588.3	588.4	0.1
E	14.385	537	14,224	4.8	588.6	588.6	588.7	0.1
F	14.407	540	10,764	6.4	588.6	588.6	588.6	0.0
G	15.156	713	15,498	4.4	589.1	589.1	589.2	0.1
H	15.612	545	13,361	5.1	589.3	589.3	589.4	0.1
I	16.169	1009	14,687	4.7	589.7	589.7	589.8	0.1
J	16.500	659	16,294	4.2	589.9	589.9	590.0	0.1
K	16.758	447	14,365	4.7	590.0	590.0	590.1	0.1
L	16.776	561	12,181	5.6	590.0	590.0	590.0	0.0
M	17.282	592	14,446	4.7	590.3	590.3	590.4	0.1
N	17.758	450	12,384	5.5	590.5	590.5	590.6	0.1
O	17.791	732	15,750	4.3	590.7	590.7	590.8	0.1
P	18.134	560	13,585	5.0	590.8	590.8	590.9	0.1
Q	18.161	531	12,616	5.4	590.8	590.8	590.8	0.0
R	18.268	518	12,345	5.5	590.8	590.8	590.9	0.1
S	18.335	430	12,428	5.5	590.9	590.9	591.0	0.1
T	18.431	441	10,255	6.6	590.8	590.8	590.9	0.1
U	18.598	435	11,431	5.9	591.1	591.1	591.2	0.1
V	18.871	460	12,171	5.6	591.3	591.3	591.4	0.1
W	18.939	550	11,467	5.9	591.3	591.3	591.4	0.1
X	19.432	510	11,830	5.7	591.7	591.7	591.8	0.1
Y	19.463	575	12,717	5.3	591.9	591.9	592.0	0.1
Z	20.116	510	10,866	6.3	592.2	592.2	592.3	0.1

¹Miles above mouth

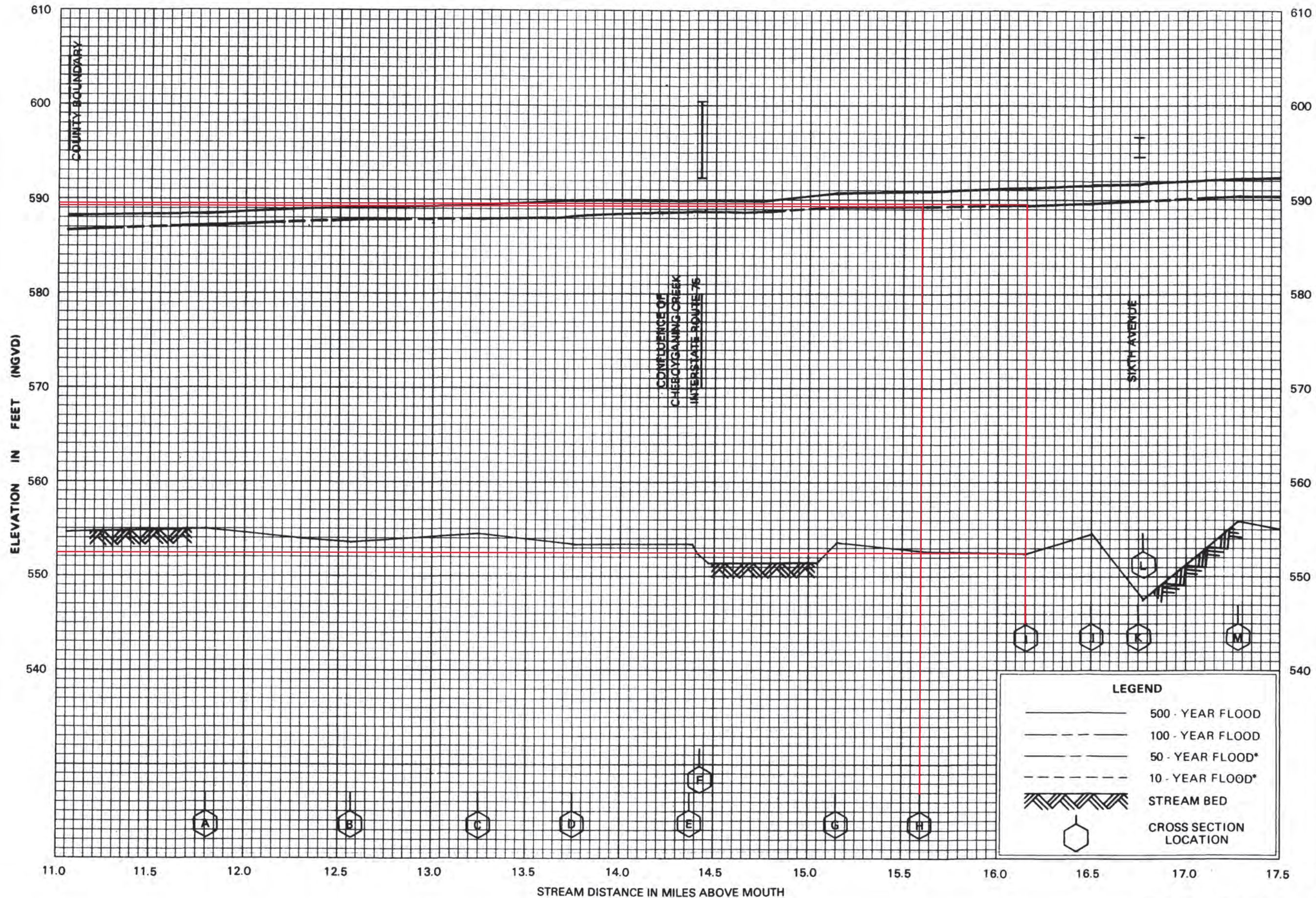
TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAGINAW COUNTY, MI
(ALL JURISDICTIONS)

FLOODWAY DATA

SAGINAW RIVER



*DATA NOT AVAILABLE

FLOOD PROFILES

SAGINAW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAGINAW COUNTY, MI

(ALL JURISDICTIONS)

Attachment G



Memorandum

Draft for Review

January 29, 2018

To: Dave Favero (RACER)

Ref. No.: 058502

From: John-Eric Pardys/kf/28

Subject: Soil Characterization Results

GHD Services Inc. (GHD) has prepared the following memorandum at the request of RACER to document the results of soil samples collected from material stockpiled by Dan's Excavating Inc. from the nearby Interstate 75 (I-75) construction project at RACER's Saginaw Nodular Industrial Land (Site) in Saginaw, Michigan. Figure 1 presents the approximate location of the source of the stockpiled material from I-75 construction project. The purpose of the sampling was to characterize the stockpiled material for future re-use. Possible future re-use scenarios include but are not limited to; use as on-Site structural fill for future development or cover material for impacted sediments in the Secondary Pond.

The material removed from the I-75 construction project and stockpiled at the Site consisted of road bedding material (sand). Stockpiling of the road bedding material was initiated in June 2017. The material was placed in two stockpiles, one located near the Secondary Pond and the other located behind the former Waste Water Treatment Plant (WWTP) as presented in Figure 2. Material was unloaded at the Site then spread out and positioned at the top of the stockpile utilizing a bull-dozer. The estimated total volume of the stockpiled material is between 40,000 and 50,000 cubic yards with 2/3's of the material stockpiled near the Secondary Pond and 1/3 of the material stockpiled behind the former WWTP. Material stockpiling at the Site was stopped in November 2017, after which the stockpiles were stabilized and seeded.

On December 18, 2017, GHD staff collected 20 discrete samples of the stockpiled material, 12 from the stockpile located near the Secondary Pond and 8 from the stockpile located behind the former WWTP. Samples were collected utilizing a hand auger with locations spread out evenly around the stockpiles and at various depths. Figure 2 presents the approximate sample locations. The samples were submitted to TestAmerica Laboratories, Inc. on a standard 2-week turn, for analysis of Michigan 10 metals (SW 6010/6020/7471), VOCs (SW 8260), SVOCs (SW 8270), PCBs (SW 8082), TCL Herbicides (SW 8151), TCL Pesticides (SW 8082), and organic carbon (Walkley black method). The laboratory analytical reports are presented as Attachment A.

The sample results were initially compared to the Statewide Default Background levels. If the data were above State Default Background levels, the data were screened against the 2017 Proposed Non-Residential MDEQ Part 201 Criteria:

- Direct Contact, Criteria
- Particulate Soil Inhalation Criteria
- Infinite Source Volatile Soil Inhalation Criteria.



The data were not screened against:

- Groundwater/Surface Water Interface (GSI) Protection Criteria since there is no GSI Protection Criteria in the 2017 Proposed Non-Residential MDEQ Part 201 Criteria.
- Drinking Water Protection Criteria as the use of water as a potable source will be restricted at the Site.
- Residential Criteria since the Site will be restricted to non-residential use.

Table 1 presents a summary of the results. There were no exceedances of criteria for any of the samples.

In addition to the above analysis, GHD collected one sample from each stockpile to test for geotechnical properties (Proctor, Grain Size Analysis, Atterburg Limits, and Moisture Content). Please note that based on the sand content in Sample 2, the Atterburg limits were not able to be performed. The results of the geotechnical analysis are presented as Attachment B. Based on the sand content and gradation results, the material was deemed suitable for general back fill as well as structural back fill. Both the proctors and the visual observation of the material indicated good compaction properties.

Therefore, based on the analytical and geotechnical results, GHD has determined the stockpiled material is suitable for re-use on the site as either a general back fill or a structural back fill material.

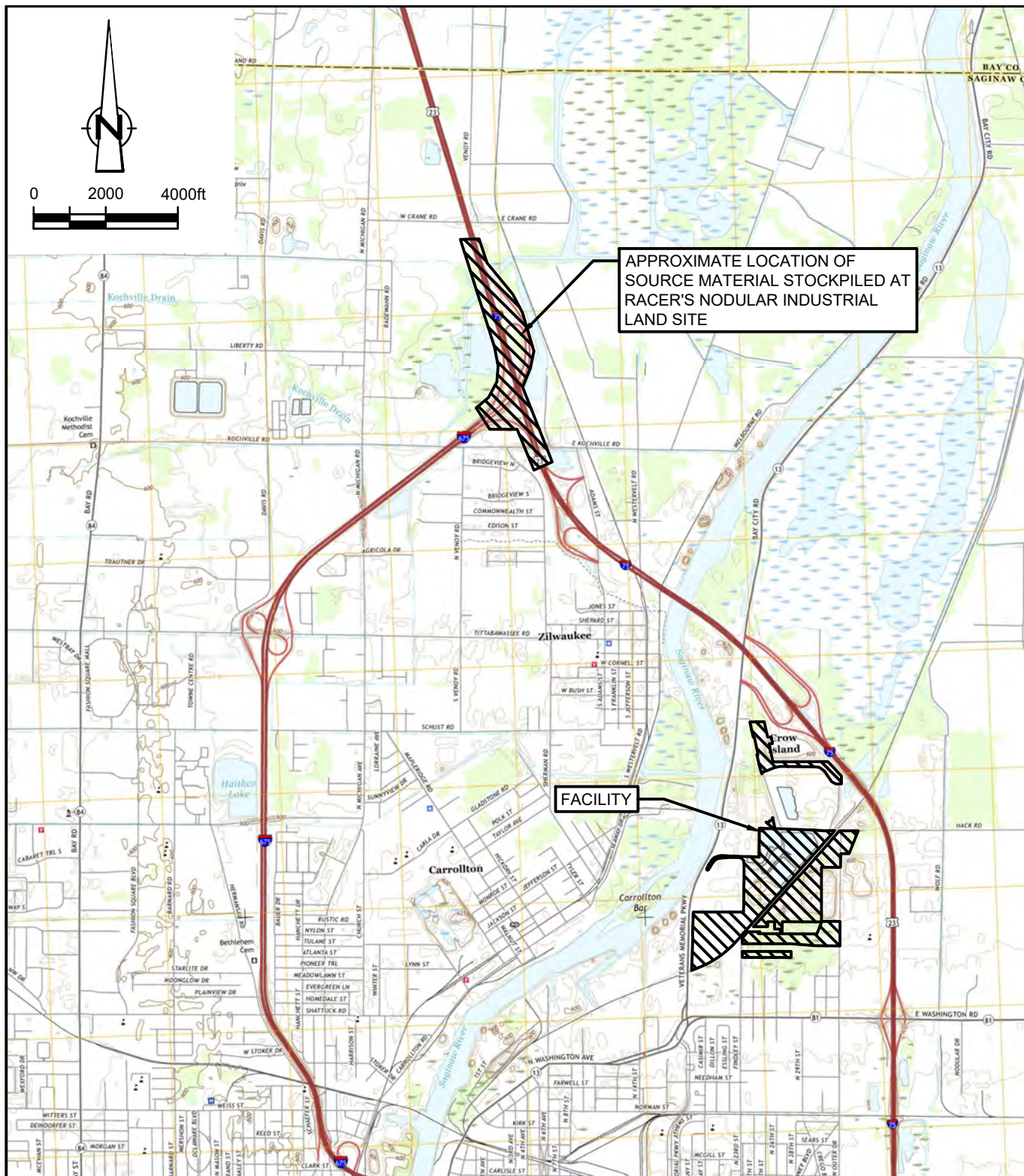
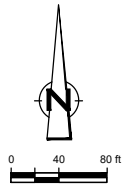
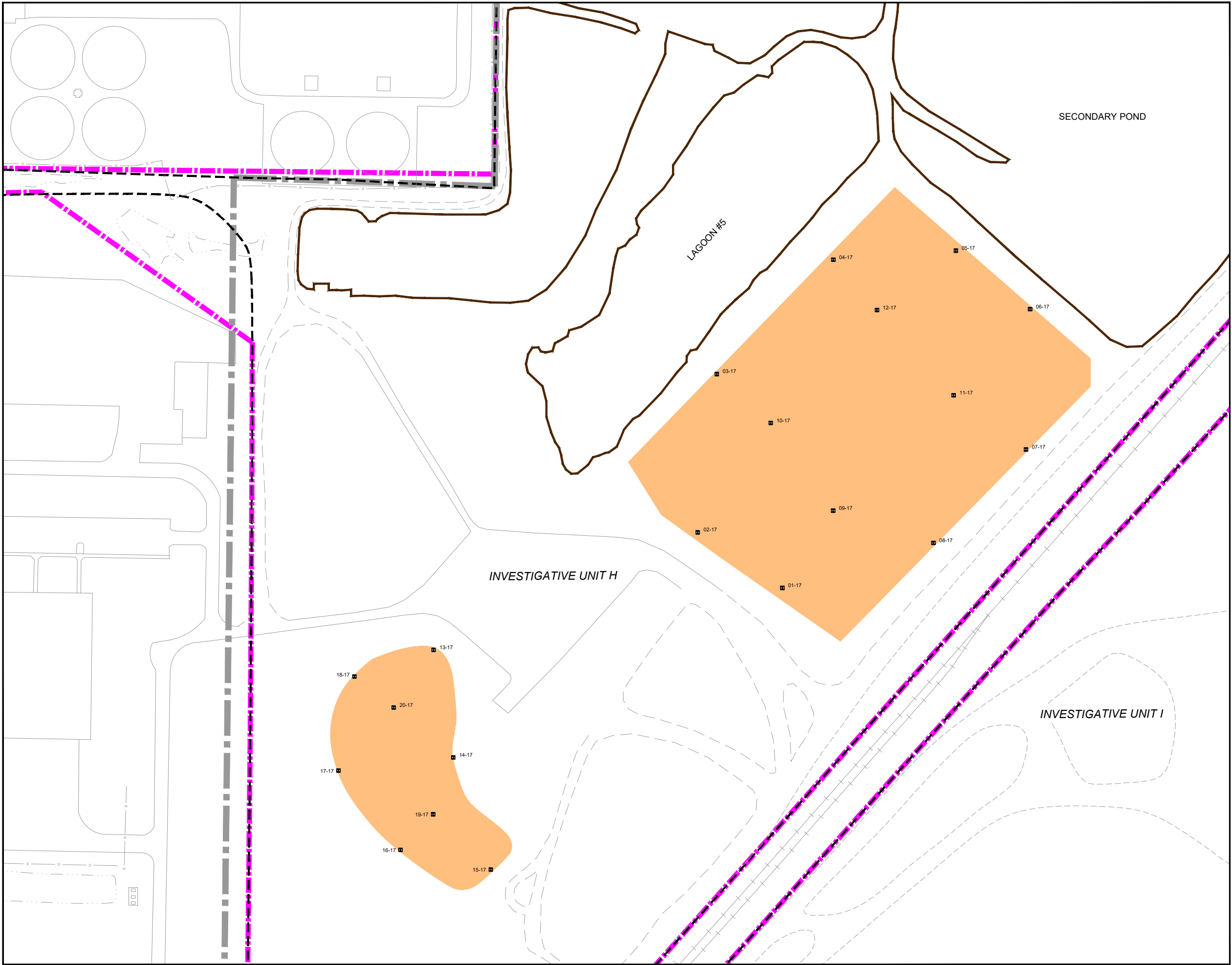


figure 1

STOCKPILE SOURCE LOCATION RACER - SAGINAW NODULAR INDUSTRIAL LAND *Saginaw, Michigan*

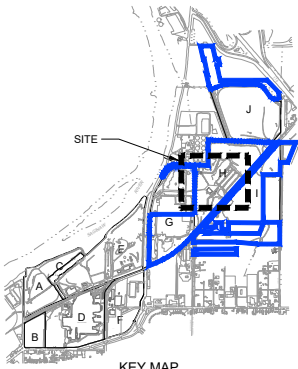




LEGEND

- INVESTIGATIVE UNIT BOUNDARY
- RACER PROPERTY
- APPROXIMATE LOCATION OF MATERIAL STOCKPILED BY DAYS EXCAVATING
- APPROXIMATE STOCKPILE CHARACTERIZATION SAMPLE LOCATION

NOTE:
SAMPLES COLLECTED AT TOP EDGE OF SLOPE.



KEY MAP

SCALE VERIFICATION

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



REVITALIZING AUTO COMMUNITES
ENVIRONMENTAL RESPONSE

SAGINAW, MICHIGAN

MATERIAL STOCKPILE CHARACTERIZATION
SAMPLE LOCATIONS - DEC. 18, 2017



Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
SPICER SURVEY, OCTOBER 2009.

Project Manager: I.R.	Reviewed By: M.T.	Date: JANUARY 2018
Scale: 1:80	Project N°: 58502-T02	Report N°: MEMO028
		Drawing N°: figure 2

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

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

Stockpile-01-17
S-58502-121817-SSH-1001
12/18/2017
(0-1) ft BGS

Stockpile-02-17
S-58502-121817-SSH-1002
12/18/2017
(1-2) ft BGS

Stockpile-03-17
S-58502-121817-SSH-1003
12/18/2017
(2-3) ft BGS

Stockpile-04-17
S-58502-121817-SSH-1004
12/18/2017
(0-1) ft BGS

Stockpile-05-17
S-58502-121817-SSH-1005
12/18/2017
(1-2) ft BGS

Stockpile-06-17
S-58502-121817-SSH-1006
12/18/2017
(2-3) ft BGS

Stockpile-07-17
S-58502-121817-SSH-1007
12/18/2017
(0-1) ft BGS

Stockpile-08-17
S-58502-121817-SSH-1008
12/18/2017
(1-2) ft BGS

Stockpile-09-17
S-58502-121817-SSH-1009
12/18/2017
(2-3) ft BGS

Parameters	Units	Statewide Default Background	NONRES_Direct Contact Criteria	AA_NONRES_Partiate Soil Inhalation	AA_NONRES_Infinite Source Volatile Soil Inhalation Criteria									
VOAs		a	b	c	d									
1,1,1-Trichloroethane	mg/kg	-	100000	350000000	3700	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,1,2,2-Tetrachloroethane	mg/kg	-	170	52000	4.6	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,1,2-Trichloroethane	mg/kg	-	340	15	0.00066	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,1-Dichloroethane	mg/kg	-	5800	1900000	24	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,1-Dichloroethene	mg/kg	-	43000	15000000	120	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,2,4-Trichlorobenzene	mg/kg	-	1100	150000	27	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	41	540	0.1	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	17	5000	0.26	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
1,2-Dichlorobenzene	mg/kg	-	100000	23000000	1600	0.1 U	0.11 U	0.1 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
1,2-Dichloroethane	mg/kg	-	360	120000	3.1	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,2-Dichloropropane	mg/kg	-	920	310000	7	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
1,3-Dichlorobenzene	mg/kg	-	1700	230000	14	0.1 U	0.11 U	0.1 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
1,4-Dichlorobenzene	mg/kg	-	2600	770000	48	0.1 U	0.11 U	0.1 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	100000	250000000	18000	0.78 U	0.8 U	0.75 U	0.74 U	0.74 U	0.77 U	0.77 U	0.76 U	0.72 U
2-Hexanone	mg/kg	-	4300	2300000	180	2.6 U	2.7 U	2.5 U	2.5 U	2.5 U	2.6 U	2.6 U	2.5 U	2.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	43000	150000000	9400	2.6 U	2.7 U	2.5 U	2.5 U	2.5 U	2.6 U	2.6 U	2.5 U	2.4 U
Acetone	mg/kg	-	100000	1600000000	130000	0.78 U	0.8 U	0.75 U	0.74 U	0.74 U	0.77 U	0.77 U	0.76 U	0.72 U
Benzene	mg/kg	-	430	380000	8.2	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Bromodichloromethane	mg/kg	-	530	150000	3.7	0.1 U	0.11 U	0.1 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
Bromoform	mg/kg	-	4200	2700000	160	0.1 U	0.11 U	0.1 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
Bromomethane (Methyl bromide)	mg/kg	-	17000	770000	6.8	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Carbon disulfide	mg/kg	-	55000	54000000	400	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Carbon tetrachloride	mg/kg	-	510	540000	5.2	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Chlorobenzene	mg/kg	-	17000	3800000	150	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Chloroethane	mg/kg	-	17000	310000000	2500	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Chloroform (Trichloromethane)	mg/kg	-	8500	130000	2.1	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Chloromethane (Methyl chloride)	mg/kg	-	10000	6900000	52	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
cis-1,2-Dichloroethene	mg/kg	-	1700	620000	9.3	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Cyclohexane	mg/kg	-	-	460000000	3200	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Dibromochloromethane	mg/kg	-	390	120000	5.9	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Dichlorodifluoromethane (CFC-12)	mg/kg	-	4300	25000000	160	0.1 U	0.11 U	0.099 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
Ethylbenzene	mg/kg	-	3000	1200000	41	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Isopropyl benzene	mg/kg	-	85000	290000	11	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Methyl acetate	mg/kg	-	-	-	-	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Methyl cyclohexane	mg/kg	-	-	-	-	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Methyl tert butyl ether (MTBE)	mg/kg	-	9800	12000000	340	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Methylene chloride	mg/kg	-	5100	46000000	610	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Styrene	mg/kg	-	2600	5300000	290	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Tetrachloroethene	mg/kg	-	5100	2100000	30	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Toluene	mg/kg	-	67000	380000000	9700	0.1 U	0.11 U	0.099 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
trans-1,2-Dichloroethene	mg/kg	-	17000	40000000	460	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Trichloroethene	mg/kg	-	250	100000	1.4	0.052 U	0.054 U	0.05 U	0.049 U	0.049 U	0.051 U	0.051 U	0.051 U	0.048 U
Trichlorofluoromethane (CFC-11)	mg/kg	-	100000	34000000	240	0.1 U	0.11 U	0.099 U	0.099 U	0.099 U	0.1 U	0.1 U	0.1 U	0.096 U
Trifluorotrichloroethane (CFC-113)	mg/kg	-	100000	1500000000	14000	0.26 U	0.27 U	0.25 U	0.25 U	0.25 U	0.26 U	0.26 U	0.25 U	0.24 U
Vinyl chloride	mg/kg	-	46	680000	4.3	0.042 U	0.043 U	0.04 U	0.04 U	0.039 U	0.041 U	0.041 U	0.041 U	0.038 U
Xylenes (total)	mg/kg	-	100000	17000000	580	0.16 U	0.16 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.14 U
SVOAs														
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,4,5-Trichlorophenol	mg/kg	-	26000	27000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,4,6-Trichlorophenol	mg/kg	-	3000	970000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,4-Dichlorophenol	mg/kg	-	17000	850000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,4-Dimethylphenol	mg/kg	-	17000	5400000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,4-Dinitrophenol	mg/kg	-	1700	540000	-	0.17 U	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.17 U	0.17 U	0.16 U
2,4-Dinitrotoluene	mg/kg	-	49	34000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2,6-Dinitrotoluene	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2-Chloronaphthalene	mg/kg	-	68000	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2-Chlorophenol	mg/kg	-	4000	900000	680	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2-Methylnaphthalene	mg/kg	-	3400	770000	270	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2-Methylphenol	mg/kg	-	100000	7700000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
2-Nitroaniline	mg/kg	-	-	-	-	0.23 U	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.22 U
2-Nitrophenol	mg/kg	-	1700	3900	2.7	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
3&4-Methylphenol	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
3,3'-Dichlorobenzidine	mg/kg	-	74	8800	-	1.8 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
3-Nitroaniline	mg/kg	-	-	-	-	0.23 U	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.22 U
4,6-Dinitro-2-methylphenol	mg/kg	-	340	150000	-	0.17 U	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.17 U	0.17 U	0.16 U
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
4-Chloro-3-methylphenol	mg/kg	-	50000	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
4-Chloroaniline	mg/kg	-	170	-	-	0.23 U	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.22 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U
4-Nitroaniline	mg/kg	-	-	-	-	0.23 U	0.24 U	0.22 U	0.22 U	0.22 U	0.23 U	0.22 U	0.22 U	0.22 U
4-Nitrophenol	mg/kg	-	-	-	-	0.38 U	0.4 U	0.37 U	0.37 U	0.36 U	0.38 U	0.37 U	0.37 U	0.36 U

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

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

Stockpile-01-17
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S-58502-121817-SSH-1002
12/18/2017
(1-2) ft BGS

Stockpile-03-17
S-58502-121817-SSH-1003
12/18/2017
(2-3) ft BGS

Stockpile-04-17
S-58502-121817-SSH-1004
12/18/2017
(0-1) ft BGS

Stockpile-05-17
S-58502-121817-SSH-1005
12/18/2017
(1-2) ft BGS

Stockpile-06-17
S-58502-121817-SSH-1006
12/18/2017
(2-3) ft BGS

Stockpile-07-17
S-58502-121817-SSH-1007
12/18/2017
(0-1) ft BGS

Stockpile-08-17
S-58502-121817-SSH-1008
12/18/2017
(1-2) ft BGS

Stockpile-09-17
S-58502-121817-SSH-1009
12/18/2017
(2-3) ft BGS

Parameters	Units	Statewide Default Background	NONRES_Direct Contact Criteria	AA_NONRES_Partiate Soil Inhalation	AA_NONRES_Infinite Source Volatile Soil Inhalation Criteria										
Acenaphthene	mg/kg	-	51000	16000000	14000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Acenaphthylene	mg/kg	-	51000	16000000	18000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Acetophenone	mg/kg	-	100000	160000000	58000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Anthracene	mg/kg	-	100000	77000000	240000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Atrazine	mg/kg	-	15000	16000000	-	0.046 U	0.048 U	0.045 U	0.045 U	0.044 U*	0.046 U*	0.045 U*	0.045 U*	0.044 U*	0.044 U*
Benzaldehyde	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Benzo(a)anthracene	mg/kg	-	-	50000	1300	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Benzo(a)pyrene	mg/kg	-	41	100	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Benzo(b)fluoranthene	mg/kg	-	-	50000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Benzo(g,h,i)perylene	mg/kg	-	2100	540000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Benzo(k)fluoranthene	mg/kg	-	-	5000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Biphenyl (1,1-Biphenyl)	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
bis(2-Chloroethyl)ether	mg/kg	-	30	9100	1.8	0.091 U	0.096 U	0.089 U	0.09 U	0.088 U	0.092 U	0.09 U	0.089 U	0.088 U	0.088 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	3400	1900000	-	0.3 U	0.32 U	0.29 U	0.3 UF1	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Butyl benzylphthalate (BBP)	mg/kg	-	9900	60000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Caprolactam	mg/kg	-	100000	170000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Carbazole	mg/kg	-	340	1100000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Chrysene	mg/kg	-	-	5000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Dibenz(a,h)anthracene	mg/kg	-	-	5000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Dibenzofuran	mg/kg	-	850	310000	410	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Diethyl phthalate	mg/kg	-	100000	220000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Dimethyl phthalate	mg/kg	-	85000	3800000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Di-n-butylphthalate (DBP)	mg/kg	-	3300	1000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Di-n-octyl phthalate (DnOP)	mg/kg	-	15000	36000000	450000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Fluoranthene	mg/kg	-	49000	11000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Fluorene	mg/kg	-	34000	11000000	15000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Hexachlorobenzene	mg/kg	-	12	2700	1.1	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Hexachlorobutadiene	mg/kg	-	430	140000	8.8	0.046 U	0.048 U	0.045 U	0.045 U	0.044 U	0.046 U	0.045 U	0.045 U	0.044 U	0.044 U
Hexachlorocyclopentadiene	mg/kg	-	7400	15000	0.78	0.3 U	0.32 U	0.29 U	0.3 UF2F1	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Hexachloroethane	mg/kg	-	600	300000	14	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	50000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Isophorone	mg/kg	-	35000	11000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Naphthalene	mg/kg	-	85000	88000	24	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Nitrobenzene	mg/kg	-	1700	75000	33	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
N-Nitrosodi-n-propylamine	mg/kg	-	4.7	1500	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
N-Nitrosodiphenylamine	mg/kg	-	6800	-	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Pentachlorophenol	mg/kg	-	65	27000	-	0.17 U	0.18 U	0.17 U	0.17 U	0.16 U	0.17 U	0.17 U	0.17 U	0.16 U	0.16 U
Phenanthrene	mg/kg	-	26000	7700	28	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Phenol	mg/kg	-	100000	15000000	-	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Pyrene	mg/kg	-	37000	7700000	110000	0.3 U	0.32 U	0.29 U	0.3 U	0.29 U	0.3 U	0.3 U	0.29 U	0.29 U	0.29 U
Metals															
Arsenic	mg/kg	5.5	52	700	-	4.7	3.1	4.8	2.0	2.5	2.4	2.3	1.4	3.3	
Barium	mg/kg	45	100000	380000	-	24	63	25	25	37	45	21	8.7	38	
Cadmium	mg/kg	2	220	1700	-	0.10	0.25	0.11	0.12	0.13	0.18	0.092	0.065 U	0.12	
Chromium	mg/kg	-	-	-	-	8.5	22	10	8.3	11	14	7.1	3.7	12	
Copper	mg/kg	14	2500	150000	-	6.9	20	7.3	7.1	8.7	11	6.1	2.4	8.0	
Lead	mg/kg	11	760	12000	-	16	16	4.3	3.6	5.3	11	9.4	13	5.3	
Mercury	mg/kg	-	150	23000	0.19	0.043 U	0.048 U	0.048 U	0.041 U	0.039 U	0.051 U	0.044 U	0.045 U	0.043 U	
Selenium	mg/kg	0.61	12000	1500000	-	0.32	0.72	0.32	0.39	0.37	0.48	0.27	0.14	0.36	
Silver	mg/kg	-	670	230000	-	0.074 U	0.072 U	0.065 U	0.073 U	0.080 U	0.075 U	0.076 U	0.065 U	0.078 U	
Zinc	mg/kg	39	100000	-	-	23	84	45	21	24	35	31	11	24	
PCBs															
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	0.056 U	0.06 U	0.057 U	0.055 U	0.054 U	0.056 U	0.056 U	0.056 U	0.054 U	
Pesticides															
4,4'-DDD	mg/kg	-	200	43000	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
4,4'-DDE	mg/kg	-	140	31000	290	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
4,4'-DDT	mg/kg	-	230	31000	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
Aldrin	mg/kg	-	2.8	610	6.3	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
alpha-BHC	mg/kg	-	5.3	1700	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
alpha-Chlordane	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
beta-BHC	mg/kg	-	18	5700	-	0.0059 U*	0.0062 U*	0.0058 U*	0.0056 U*	0.029 U*	0.0057 U*	0.0058 U*	0.0058 U*	0.0056 U	
delta-BHC	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
Dieldrin	mg/kg	-	3	650	6.9	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
Endosulfan I	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	
Endosulfan II	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U	

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

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

Stockpile-01-17
S-58502-121817-SSH-1001
12/18/2017
(0-1) ft BGS

Stockpile-02-17
S-58502-121817-SSH-1002
12/18/2017
(1-2) ft BGS

Stockpile-03-17
S-58502-121817-SSH-1003
12/18/2017
(2-3) ft BGS

Stockpile-04-17
S-58502-121817-SSH-1004
12/18/2017
(0-1) ft BGS

Stockpile-05-17
S-58502-121817-SSH-1005
12/18/2017
(1-2) ft BGS

Stockpile-06-17
S-58502-121817-SSH-1006
12/18/2017
(2-3) ft BGS

Stockpile-07-17
S-58502-121817-SSH-1007
12/18/2017
(0-1) ft BGS

Stockpile-08-17
S-58502-121817-SSH-1008
12/18/2017
(1-2) ft BGS

Stockpile-09-17
S-58502-121817-SSH-1009
12/18/2017
(2-3) ft BGS

Parameters	Units	Statewide Default Background	NONRES_Direct Contact Criteria	AA_NONRES_Partiate Soil Inhalation	AA_NONRES_Infinite Source Volatile Soil Inhalation Criteria									
Endosulfan sulfate	mg/kg	-	-	-	-	0.0059 U*	0.0062 U*	0.0058 U*	0.0056 U*	0.029 U*	0.0057 U*	0.0058 U*	0.0058 U*	0.0056 U*
Endrin	mg/kg	-	370	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
Endrin aldehyde	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
Endrin ketone	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
gamma-BHC (lindane)	mg/kg	-	39	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
gamma-Chlordane	mg/kg	-	-	-	-	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
Heptachlor	mg/kg	-	40	2300	38	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
Heptachlor epoxide	mg/kg	-	13	1200	4.8	0.0059 U	0.0062 U	0.0058 U	0.0056 U	0.029 U	0.0057 U	0.0058 U	0.0058 U	0.0056 U
Methoxychlor	mg/kg	-	3500	-	-	0.011 U	0.012 U	0.011 U	0.011 U	0.056 U	0.011 U	0.011 U	0.011 U	0.011 U
Toxaphene	mg/kg	-	44	9400	-	0.12 U	0.12 U	0.11 U	0.11 U	0.56 U	0.11 U	0.11 U	0.11 U	0.11 U
Herbicides														
2,4,5-T	mg/kg	-	-	-	-	0.0077 U	0.01 U	0.0075 U	0.013 U	0.0096 U	0.013 U	0.017 U	0.038 U	0.0073 U
2,4,5-TP (Silvex)	mg/kg	-	6800	-	-	0.0077 U	0.01 U	0.0075 U	0.013 U	0.0096 U	0.013 U	0.017 U	0.038 U	0.0073 U
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/kg	-	53000	13000000	-	0.0077 U	0.01 U	0.0075 U	0.013 U	0.0096 U	0.013 U	0.017 U	0.038 U	0.0073 U
Wet														
Total organic carbon (TOC)	mg/kg	-	-	-	-	3500	13000	3800	4000	4500	6000	3400	2900	4100

Footnotes:
U Not detected at the associated reporting limit.

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

Sample Location:	Stockpile-10-17	Stockpile-11-17	Stockpile-12-17	Stockpile-13-17	Stockpile-14-17	Stockpile-15-17	Stockpile-16-17	Stockpile-17-17	Stockpile-18-17	Stockpile-19-17	Stockpile-20-17	Stockpile-20-17	
Sample ID:	S-58502-121817-SSH-1010	S-58502-121817-SSH-1011	S-58502-121817-SSH-1012	S-58502-121817-SSH-1013	S-58502-121817-SSH-1014	S-58502-121817-SSH-1015	S-58502-121817-SSH-1016	S-58502-121817-SSH-1017	S-58502-121817-SSH-1018	S-58502-121817-SSH-1019	S-58502-121817-SSH-1020	S-58502-121817-SSH-1021	
Sample Date:	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	
Sample Depth:	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(1-2) ft BGS (Duplicate)	
Parameters	Units												
VOAs													
1,1,1-Trichloroethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,1,2,2-Tetrachloroethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,1,2-Trichloroethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,1-Dichloroethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,1-Dichloroethene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,2,4-Trichlorobenzene	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
1,2-Dichlorobenzene	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
1,2-Dichloroethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,2-Dichloropropane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
1,3-Dichlorobenzene	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
1,4-Dichlorobenzene	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.68 U	0.78 U	0.75 U	0.83 U	0.72 U	0.75 U	0.8 U	0.68 U	0.72 U	0.73 U	0.81 U	0.7 U*
2-Hexanone	mg/kg	2.3 U	2.6 U	2.5 U	2.8 U	2.4 U	2.5 U	2.7 U	2.3 U	2.4 U	2.4 U	2.7 U	2.3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	2.3 U	2.6 U	2.5 U	2.8 U	2.4 U	2.5 U	2.7 U	2.3 U	2.4 U	2.4 U	2.7 U	2.3 U
Acetone	mg/kg	0.68 U	0.78 U	0.75 U	0.83 U	0.72 U	0.75 U	0.8 U	0.68 U	0.72 U	0.73 U	0.81 U	0.7 U
Benzene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Bromodichloromethane	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
Bromoform	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
Bromomethane (Methyl bromide)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Carbon disulfide	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Carbon tetrachloride	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Chlorobenzene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Chloroethane	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Chloroform (Trichloromethane)	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Chloromethane (Methyl chloride)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
cis-1,2-Dichloroethene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
cis-1,3-Dichloropropene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Cyclohexane	mg/kg	1.1 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U	1.3 U	1.1 U	1.1 U	1.2 U	1.3 U	1.1 U
Dibromochloromethane	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
Ethylbenzene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Isopropyl benzene	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Methyl acetate	mg/kg	1.1 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U	1.3 U	1.1 U	1.1 U	1.2 U	1.3 U	1.1 U
Methyl cyclohexane	mg/kg	1.1 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U	1.3 U	1.1 U	1.1 U	1.2 U	1.3 U	1.1 U
Methyl tert butyl ether (MTBE)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Methylene chloride	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Styrene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Tetrachloroethene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Toluene	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
trans-1,2-Dichloroethene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
trans-1,3-Dichloropropene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Trichloroethene	mg/kg	0.045 U	0.052 U	0.05 U	0.055 U	0.048 U	0.05 U	0.054 U	0.046 U	0.048 U	0.049 U	0.054 U	0.047 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.09 U	0.1 U	0.099 U	0.11 U	0.095 U	0.1 U	0.11 U	0.091 U	0.096 U	0.097 U	0.11 U	0.093 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.23 U	0.26 U	0.25 U	0.28 U	0.24 U	0.25 U	0.27 U	0.23 U	0.24 U	0.24 U	0.27 U	0.23 U
Vinyl chloride	mg/kg	0.036 U	0.041 U	0.04 U	0.044 U	0.038 U	0.04 U	0.043 U	0.037 U	0.038 U	0.039 U	0.043 U	0.037 U
Xylenes (total)	mg/kg	0.14 U	0.16 U	0.15 U	0.17 U	0.14 U	0.15 U	0.16 U	0.14 U	0.14 U	0.15 U	0.16 U	0.14 U
SVOAs													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U	0.3 U
2,4,5-Trichlorophenol	mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U	0.3 U
2,4,6-Trichlorophenol	mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U	0.3 U
2,4-Dichlorophenol	mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U	0.3 U
2,4-Dimethylphenol	mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U				

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

Sample Location:		Stockpile-10-17	Stockpile-11-17	Stockpile-12-17	Stockpile-13-17	Stockpile-14-17	Stockpile-15-17	Stockpile-16-17	Stockpile-17-17	Stockpile-18-17	Stockpile-19-17	Stockpile-20-17	Stockpile-20-17
Sample ID:		S-58502-121817-SSH-1010	S-58502-121817-SSH-1011	S-58502-121817-SSH-1012	S-58502-121817-SSH-1013	S-58502-121817-SSH-1014	S-58502-121817-SSH-1015	S-58502-121817-SSH-1016	S-58502-121817-SSH-1017	S-58502-121817-SSH-1018	S-58502-121817-SSH-1019	S-58502-121817-SSH-1020	S-58502-121817-SSH-1021
Sample Date:		12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017
Sample Depth:		(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(1-2) ft BGS (Duplicate)
Parameters		Units											
Acenaphthene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Acenaphthylene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Acetophenone		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Anthracene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Atrazine		mg/kg	0.044 U*	0.047 U*	0.045 U*	0.048 U*	0.045 U*	0.045 U*	0.047 U*	0.042 U*	0.045 U*	0.044 U*	0.045 U*
Benzaldehyde		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Benzo(a)anthracene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.32	0.32 U
Benzo(a)pyrene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Benzo(b)fluoranthene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.43	0.32 U
Benzo(g,h,i)perylene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Benzo(k)fluoranthene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Biphenyl (1,1-Biphenyl)		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
bis(2-Chloroethoxy)methane		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
bis(2-Chloroethyl)ether		mg/kg	0.087 U	0.094 U	0.091 U	0.097 U	0.091 U	0.09 U	0.094 U	0.084 U	0.089 U	0.087 U	0.095 U
bis(2-Ethylhexyl)phthalate (DEHP)		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Butyl benzylphthalate (BBP)		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Caprolactam		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Carbazole		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Chrysene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.31	0.32 U
Dibenz(a,h)anthracene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Dibenzofuran		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Diethyl phthalate		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Dimethyl phthalate		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Di-n-butylphthalate (DBP)		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Di-n-octyl phthalate (DnOP)		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Fluoranthene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.87	0.32 U
Fluorene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Hexachlorobenzene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Hexachlorobutadiene		mg/kg	0.044 U	0.047 U	0.045 U	0.048 U	0.045 U	0.045 U	0.047 U	0.042 U	0.045 U	0.044 U	0.048 U
Hexachlorocyclopentadiene		mg/kg	0.29 U	0.31 UF1	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Hexachloroethane		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Indeno(1,2,3-cd)pyrene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Isophorone		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Naphthalene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Nitrobenzene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
N-Nitrosodi-n-propylamine		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
N-Nitrosodiphenylamine		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Pentachlorophenol		mg/kg	0.16 U	0.18 U	0.17 U	0.18 U	0.17 U	0.17 U	0.18 U	0.16 U	0.17 U	0.16 U	0.17 U
Phenanthrene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.55	0.32 U
Phenol		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.29 U	0.32 U
Pyrene		mg/kg	0.29 U	0.31 U	0.3 U	0.32 U	0.3 U	0.3 U	0.31 U	0.28 U	0.3 U	0.76	0.32 U
Metals													
Arsenic		mg/kg	2.3	2.3	2.1	3.3	3.3	3.1	2.4	1.7	2.8	2.4	3.7
Barium		mg/kg	21	29	47	35	30	22	23	8.0	27	21	28
Cadmium		mg/kg	0.10	0.12	0.12	0.14	0.15	0.12	0.097	0.058 U	0.13	0.11	0.24
Chromium		mg/kg	7.1	8.5	14	11	9.2	5.7	7.2	3.1	7.1	9.0	11
Copper		mg/kg	5.0	6.8	9.9	9.6	7.6	6.0	5.9	2.7	6.0	5.1	11
Lead		mg/kg	7.0	8.4	5.0	8.0	11	11	6.7	5.0	13	7.0	39
Mercury		mg/kg	0.048 U	0.045 U	0.045 U	0.050 U	0.051 U	0.051 U	0.050 U	0.046 U	0.048 U	0.043	0.050 U
Selenium		mg/kg	0.20	0.38	0.45	0.40	0.31	0.23	0.26	0.16	0.24	0.17	0.31
Silver		mg/kg	0.086 U	0.082 U	0.079 U	0.079 U	0.089 U	0.065 U	0.072 U	0.058 U	0.066 U	0.080 U	0.089 U
Zinc		mg/kg	18	24	25	36	36	26	17	9.5	27	25	47
PCBs													
Aroclor-1016 (PCB-1016)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1221 (PCB-1221)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1232 (PCB-1232)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1242 (PCB-1242)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1248 (PCB-1248)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1254 (PCB-1254)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Aroclor-1260 (PCB-1260)		mg/kg	0.055 U	0.059 U	0.054 U	0.06 U	0.055 U	0.056 U	0.058 U	0.053 U	0.055 U	0.055 U	0.059 U
Pesticides													
4,4'-DDD		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
4,4'-DDE		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
4,4'-DDT		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Aldrin		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
alpha-BHC		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
alpha-Chlordane		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
beta-BHC		mg/kg	0.0055 U*	0.03 U*	0.0056 U*	0.0061 U*	0.0059 U	0.0056 U*	0.0059 U*	0.0053 U*	0.0057 U*	0.0056 U*	0.03 U*
delta-BHC		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Dieldrin		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Endosulfan I		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Endosulfan II		mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U

Table 1

Summary of Soil Sampling Results from Stockpiled Material- December 2017
RACER Nodular Industrial Land
Saginaw, MI

Sample Location:	Stockpile-10-17	Stockpile-11-17	Stockpile-12-17	Stockpile-13-17	Stockpile-14-17	Stockpile-15-17	Stockpile-16-17	Stockpile-17-17	Stockpile-18-17	Stockpile-19-17	Stockpile-20-17	Stockpile-20-17
Sample ID:	S-58502-121817-SSH-1010	S-58502-121817-SSH-1011	S-58502-121817-SSH-1012	S-58502-121817-SSH-1013	S-58502-121817-SSH-1014	S-58502-121817-SSH-1015	S-58502-121817-SSH-1016	S-58502-121817-SSH-1017	S-58502-121817-SSH-1018	S-58502-121817-SSH-1019	S-58502-121817-SSH-1020	S-58502-121817-SSH-1021
Sample Date:	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017	12/18/2017
Sample Depth:	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(2-3) ft BGS	(0-1) ft BGS	(1-2) ft BGS	(1-2) ft BGS (Duplicate)
Parameters	Units											
Endosulfan sulfate	mg/kg	0.0055 U*	0.03 U*	0.0056 U*	0.0061 U*	0.0059 U*	0.0056 U*	0.0059 U*	0.0053 U*	0.0057 U*	0.0056 U*	0.03 U*
Endrin	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Endrin aldehyde	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Endrin ketone	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
gamma-BHC (lindane)	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
gamma-Chlordane	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Heptachlor	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Heptachlor epoxide	mg/kg	0.0055 U	0.03 U	0.0056 U	0.0061 U	0.0059 U	0.0056 U	0.0059 U	0.0053 U	0.0057 U	0.0056 U	0.03 U
Methoxychlor	mg/kg	0.011 U	0.058 U	0.011 U	0.012 U	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.058 U
Toxaphene	mg/kg	0.11 U	0.58 U	0.11 U	0.12 U	0.11 U	0.11 U	0.12 U	0.1 U	0.11 U	0.11 U	0.59 U
Herbicides												
2,4,5-T	mg/kg	0.014 U	0.0078 U	0.013 U	0.039 U	0.012 U	0.061 U	0.0083 U	0.0083 U	0.039 U	0.061 U	0.039 U
2,4,5-TP (Silvex)	mg/kg	0.014 U	0.0078 U	0.013 U	0.039 U	0.012 U	0.061 U	0.0083 U	0.0083 U	0.039 U	0.061 U	0.039 U
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/kg	0.014 U	0.0078 U	0.013 U	0.039 U	0.012 U	0.061 U	0.0083 U	0.0083 U	0.039 U	0.061 U	0.039 U
Wet												
Total organic carbon (TOC)	mg/kg	3500	3600	4500	7200	5400	3800	2700	2200	3100	4100	9600
Footnotes:												
U Not detected at the associated reporting limit.												

Attachment A

Laboratory Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-89576-1

Client Project/Site: 58502-019, RACER Nodular Iron

For:

GHD Services Inc.

26850 Haggerty Rd.

Farmington Hills, Michigan 48331

Attn: James Abston



Authorized for release by:

1/5/2018 2:02:21 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

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

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



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Case Narrative

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Job ID: 240-89576-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-89576-1

Comments

No additional comments.

Receipt

The samples were received on 12/19/2017 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.5° C and 5.5° C.

GC/MS VOA

Method(s) 5035: All samples were received in pre-weighed containers with a label that was added in the field, which would cause a slight low bias in the final results.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-308903 and analytical batch 240-309086.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-308903 and analytical batch 240-309377.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-308992 and analytical batch 240-309377.

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-308992 and analytical batch 240-309377 recovered outside control limits for 2-butanone. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The method blank for preparation batch 240-308992 contained Chlorobenzene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method(s) 5035: Insufficient sample volume was available to perform a client requested matrix spike/matrix spike duplicate (MS/MSD) for sample S-58502-121817-SSH-1011 (240-89576-11) associated with preparation batch 240-308903.

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

GC/MS Semi VOA

Method(s) 8270C: The laboratory control sample (LCS) for prep batch 309572 recovered outside control limits for the following analytes: Atrazine. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

GC Semi VOA

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: S-58502-121817-SSH-1001 (240-89576-1), S-58502-121817-SSH-1002 (240-89576-2), S-58502-121817-SSH-1003 (240-89576-3), S-58502-121817-SSH-1004 (240-89576-4), S-58502-121817-SSH-1005 (240-89576-5), S-58502-121817-SSH-1006 (240-89576-6), S-58502-121817-SSH-1007 (240-89576-7), S-58502-121817-SSH-1008 (240-89576-8), S-58502-121817-SSH-1009 (240-89576-9), S-58502-121817-SSH-1010 (240-89576-10), S-58502-121817-SSH-1011 (240-89576-11), S-58502-121817-SSH-1011 (240-89576-11[MS]), S-58502-121817-SSH-1011 (240-89576-11[MSD]), S-58502-121817-SSH-1012 (240-89576-12), S-58502-121817-SSH-1013 (240-89576-13), S-58502-121817-SSH-1014 (240-89576-14) and S-58502-121817-SSH-1015 (240-89576-15).3394463, 3154249, 3361889.

Method(s) 8082A: Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate

Case Narrative

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Job ID: 240-89576-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

compounds outside limits: S-58502-121817-SSH-1001 (240-89576-1). These results have been reported and qualified.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: S-58502-121817-SSH-1016 (240-89576-16) and S-58502-121817-SSH-1017 (240-89576-17).3414952, 3154249, 3361889.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: S-58502-121817-SSH-1019 (240-89576-19) and S-58502-121817-SSH-1020 (240-89576-20).3414952, 3154249, 3361889.

Method(s) 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: S-58502-121817-SSH-1021 (240-89576-21).3414952, 3154249, 3361889.

Method(s) 8081A: The laboratory control sample (LCS) for preparation batch 240-309456 and analytical batch 240-309735 recovered outside control limits for the following analytes Endosulfan sulfate and beta-BHC: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8081A: Surrogate Tetrachloro-m-xylene recovery for the following sample was outside the upper control limit: S-58502-121817-SSH-1005 (240-89576-5). This sample did not contain any target analytes; therefore, re-extraction and re-analysis was not performed.

Method(s) 8081A: The following samples were diluted due to the nature of the sample matrix : S-58502-121817-SSH-1020 (240-89576-20), S-58502-121817-SSH-1021 (240-89576-21) and (240-89578-E-4-G). As such, surrogate recoveries might be below the calibration range, and elevated reporting limits (RLs) are provided.

Method(s) 8081A: The laboratory control sample (LCS) for preparation batch 240-309456 and analytical batch 240-309842 recovered outside control limits for the following analytes: beta-BHC and Endosulfan sulfate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8081A: The following samples were diluted due to the nature of the sample matrix S-58502-121817-SSH-1005 (240-89576-5) and S-58502-121817-SSH-1011 (240-89576-11). As such, surrogate recoveries may be below the calibration range, and elevated reporting limits (RLs) are provided.

Method(s) 8151A: The continuing calibration verification (CCV) associated with batch 600-228778 recovered above the upper control limit for 2,4-D(19.9%), and DCAA(24.8%),. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 600-228778/27).

Method(s) 8151A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 600-228696 and analytical batch 600-228778 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8151A: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 600-228696 and analytical batch 600-228778 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method(s) 8151A: The continuing calibration verification (CCV) associated with batch 600-228778 recovered above the upper control limit for 2,4-D(37.3%), DCAA(38.8%),and 2,4,5-TP(26.6%) The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 600-228778/51) and (CCV 600-228778/52).

Method(s) 8151A: Surrogate recovery for the following samples was outside control limits: S-58502-121817-SSH-1009 (240-89576-9), S-58502-121817-SSH-1011 (240-89576-11), S-58502-121817-SSH-1012 (240-89576-12), S-58502-121817-SSH-1019 (240-89576-19) and S-58502-121817-SSH-1020 (240-89576-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8151A: The following samples was diluted due to dark color appearance: S-58502-121817-SSH-1008 (240-89576-8), S-58502-121817-SSH-1013 (240-89576-13), S-58502-121817-SSH-1015 (240-89576-15), S-58502-121817-SSH-1018 (240-89576-18) and S-58502-121817-SSH-1020 (240-89576-20). Elevated reporting limits (RL) are provided.

Case Narrative

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Job ID: 240-89576-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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

Metals

Method(s) 6010B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: S-58502-121817-SSH-1001 (240-89576-1), S-58502-121817-SSH-1002 (240-89576-2), S-58502-121817-SSH-1003 (240-89576-3), S-58502-121817-SSH-1004 (240-89576-4), S-58502-121817-SSH-1005 (240-89576-5), S-58502-121817-SSH-1006 (240-89576-6), S-58502-121817-SSH-1007 (240-89576-7), S-58502-121817-SSH-1008 (240-89576-8), S-58502-121817-SSH-1009 (240-89576-9), S-58502-121817-SSH-1010 (240-89576-10), S-58502-121817-SSH-1011 (240-89576-11), S-58502-121817-SSH-1012 (240-89576-12), S-58502-121817-SSH-1013 (240-89576-13), S-58502-121817-SSH-1014 (240-89576-14), S-58502-121817-SSH-1015 (240-89576-15), S-58502-121817-SSH-1016 (240-89576-16), S-58502-121817-SSH-1017 (240-89576-17), S-58502-121817-SSH-1018 (240-89576-18), S-58502-121817-SSH-1019 (240-89576-19) and S-58502-121817-SSH-1020 (240-89576-20). The continuing calibration blanks and method blanks may not support the lower PQL.

Method(s) 6020: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: S-58502-121817-SSH-1001 (240-89576-1), S-58502-121817-SSH-1002 (240-89576-2), S-58502-121817-SSH-1003 (240-89576-3), S-58502-121817-SSH-1004 (240-89576-4), S-58502-121817-SSH-1005 (240-89576-5), S-58502-121817-SSH-1006 (240-89576-6), S-58502-121817-SSH-1007 (240-89576-7), S-58502-121817-SSH-1008 (240-89576-8), S-58502-121817-SSH-1009 (240-89576-9), S-58502-121817-SSH-1010 (240-89576-10), S-58502-121817-SSH-1011 (240-89576-11), S-58502-121817-SSH-1012 (240-89576-12), S-58502-121817-SSH-1013 (240-89576-13), S-58502-121817-SSH-1014 (240-89576-14), S-58502-121817-SSH-1015 (240-89576-15), S-58502-121817-SSH-1016 (240-89576-16), S-58502-121817-SSH-1017 (240-89576-17), S-58502-121817-SSH-1018 (240-89576-18), S-58502-121817-SSH-1019 (240-89576-19) and S-58502-121817-SSH-1020 (240-89576-20). The continuing calibration blanks and method blanks may not support the lower PQL.

Method(s) 7471A, 7471B: The laboratory control sample (LCS) for preparation batch 240-308713 and analytical batch 240-308949 recovered outside control limits for the following analytes: mercury. These analytes were biased high in the LCS and were below the requested reporting limit in the associated samples; therefore, the data have been reported. S-58502-121817-SSH-1021 (240-89576-21)

Method(s) 200.7 Rev 4.4, 6010B, 6010C: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: S-58502-121817-SSH-1021 (240-89576-21). The continuing calibration blanks and method blanks may not support the lower PQL.

Method(s) 6020: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: S-58502-121817-SSH-1021 (240-89576-21). The continuing calibration blanks and method blanks may not support the lower PQL.

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

Method(s) 8151A: Elevated reporting limits are provided for the following samples due to insufficient sample provided for preparation: S-58502-121817-SSH-1002 (240-89576-2), S-58502-121817-SSH-1004 (240-89576-4), S-58502-121817-SSH-1005 (240-89576-5), S-58502-121817-SSH-1006 (240-89576-6), S-58502-121817-SSH-1007 (240-89576-7), S-58502-121817-SSH-1010 (240-89576-10), S-58502-121817-SSH-1012 (240-89576-12), S-58502-121817-SSH-1013 (240-89576-13), S-58502-121817-SSH-1014 (240-89576-14), S-58502-121817-SSH-1015 (240-89576-15), S-58502-121817-SSH-1016 (240-89576-16), S-58502-121817-SSH-1017 (240-89576-17), S-58502-121817-SSH-1018 (240-89576-18) and S-58502-121817-SSH-1019 (240-89576-19).

Method(s) 8151A: Due to the matrix, the following samples could not be concentrated to the final method required volume: S-58502-121817-SSH-1007 (240-89576-7), S-58502-121817-SSH-1013 (240-89576-13) and S-58502-121817-SSH-1019 (240-89576-19). The reporting limits (RLs) are elevated proportionately.

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

VOA 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: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD 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.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

TestAmerica Canton

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-89576-1	S-58502-121817-SSH-1001	Solid	12/18/17 09:30	12/19/17 10:30
240-89576-2	S-58502-121817-SSH-1002	Solid	12/18/17 09:40	12/19/17 10:30
240-89576-3	S-58502-121817-SSH-1003	Solid	12/18/17 09:55	12/19/17 10:30
240-89576-4	S-58502-121817-SSH-1004	Solid	12/18/17 10:05	12/19/17 10:30
240-89576-5	S-58502-121817-SSH-1005	Solid	12/18/17 10:15	12/19/17 10:30
240-89576-6	S-58502-121817-SSH-1006	Solid	12/18/17 10:30	12/19/17 10:30
240-89576-7	S-58502-121817-SSH-1007	Solid	12/18/17 10:40	12/19/17 10:30
240-89576-8	S-58502-121817-SSH-1008	Solid	12/18/17 10:50	12/19/17 10:30
240-89576-9	S-58502-121817-SSH-1009	Solid	12/18/17 11:05	12/19/17 10:30
240-89576-10	S-58502-121817-SSH-1010	Solid	12/18/17 11:20	12/19/17 10:30
240-89576-11	S-58502-121817-SSH-1011	Solid	12/18/17 11:30	12/19/17 10:30
240-89576-12	S-58502-121817-SSH-1012	Solid	12/18/17 11:45	12/19/17 10:30
240-89576-13	S-58502-121817-SSH-1013	Solid	12/18/17 12:15	12/19/17 10:30
240-89576-14	S-58502-121817-SSH-1014	Solid	12/18/17 12:25	12/19/17 10:30
240-89576-15	S-58502-121817-SSH-1015	Solid	12/18/17 12:40	12/19/17 10:30
240-89576-16	S-58502-121817-SSH-1016	Solid	12/18/17 12:50	12/19/17 10:30
240-89576-17	S-58502-121817-SSH-1017	Solid	12/18/17 13:00	12/19/17 10:30
240-89576-18	S-58502-121817-SSH-1018	Solid	12/18/17 13:15	12/19/17 10:30
240-89576-19	S-58502-121817-SSH-1019	Solid	12/18/17 13:25	12/19/17 10:30
240-89576-20	S-58502-121817-SSH-1020	Solid	12/18/17 13:40	12/19/17 10:30
240-89576-21	S-58502-121817-SSH-1021	Solid	12/18/17 13:41	12/19/17 10:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1001

Lab Sample ID: 240-89576-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	24		0.74	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.10		0.074	mg/Kg	1	✱	6010B	Total/NA
Chromium	8.5		0.74	mg/Kg	1	✱	6010B	Total/NA
Copper	6.9		0.74	mg/Kg	1	✱	6010B	Total/NA
Zinc	23		1.8	mg/Kg	1	✱	6010B	Total/NA
Lead	16		0.22	mg/Kg	1	✱	6010B	Total/NA
Arsenic	4.7		0.074	mg/Kg	2	✱	6020	Total/NA
Selenium	0.32		0.15	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3500		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1002

Lab Sample ID: 240-89576-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	63		0.72	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.25		0.072	mg/Kg	1	✱	6010B	Total/NA
Chromium	22		0.72	mg/Kg	1	✱	6010B	Total/NA
Copper	20		0.72	mg/Kg	1	✱	6010B	Total/NA
Zinc	84		1.8	mg/Kg	1	✱	6010B	Total/NA
Lead	16		0.22	mg/Kg	1	✱	6010B	Total/NA
Arsenic	3.1		0.072	mg/Kg	2	✱	6020	Total/NA
Selenium	0.72		0.14	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	13000		1200	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1003

Lab Sample ID: 240-89576-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	25		0.65	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.11		0.065	mg/Kg	1	✱	6010B	Total/NA
Chromium	10		0.65	mg/Kg	1	✱	6010B	Total/NA
Copper	7.3		0.65	mg/Kg	1	✱	6010B	Total/NA
Zinc	45		1.6	mg/Kg	1	✱	6010B	Total/NA
Lead	4.3		0.20	mg/Kg	1	✱	6010B	Total/NA
Arsenic	4.8		0.065	mg/Kg	2	✱	6020	Total/NA
Selenium	0.32		0.13	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3800		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1004

Lab Sample ID: 240-89576-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	25		0.73	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.12		0.073	mg/Kg	1	✱	6010B	Total/NA
Chromium	8.3		0.73	mg/Kg	1	✱	6010B	Total/NA
Copper	7.1		0.73	mg/Kg	1	✱	6010B	Total/NA
Zinc	21		1.8	mg/Kg	1	✱	6010B	Total/NA
Lead	3.6		0.22	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.0		0.073	mg/Kg	2	✱	6020	Total/NA
Selenium	0.39		0.15	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	4000		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1005

Lab Sample ID: 240-89576-5

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1005 (Continued)

Lab Sample ID: 240-89576-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	37		0.80	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.13		0.080	mg/Kg	1	✱	6010B	Total/NA
Chromium	11		0.80	mg/Kg	1	✱	6010B	Total/NA
Copper	8.7		0.80	mg/Kg	1	✱	6010B	Total/NA
Zinc	24		2.0	mg/Kg	1	✱	6010B	Total/NA
Lead	5.3		0.24	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.5		0.080	mg/Kg	2	✱	6020	Total/NA
Selenium	0.37		0.16	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	4500		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1006

Lab Sample ID: 240-89576-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	45		0.75	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.18		0.075	mg/Kg	1	✱	6010B	Total/NA
Chromium	14		0.75	mg/Kg	1	✱	6010B	Total/NA
Copper	11		0.75	mg/Kg	1	✱	6010B	Total/NA
Zinc	35		1.9	mg/Kg	1	✱	6010B	Total/NA
Lead	11		0.22	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.4		0.075	mg/Kg	2	✱	6020	Total/NA
Selenium	0.48		0.15	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	6000		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1007

Lab Sample ID: 240-89576-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	21		0.76	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.092		0.076	mg/Kg	1	✱	6010B	Total/NA
Chromium	7.1		0.76	mg/Kg	1	✱	6010B	Total/NA
Copper	6.1		0.76	mg/Kg	1	✱	6010B	Total/NA
Zinc	31		1.9	mg/Kg	1	✱	6010B	Total/NA
Lead	9.4		0.23	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.3		0.076	mg/Kg	2	✱	6020	Total/NA
Selenium	0.27		0.15	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3400		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1008

Lab Sample ID: 240-89576-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	8.7		0.65	mg/Kg	1	✱	6010B	Total/NA
Chromium	3.7		0.65	mg/Kg	1	✱	6010B	Total/NA
Copper	2.4		0.65	mg/Kg	1	✱	6010B	Total/NA
Zinc	11		1.6	mg/Kg	1	✱	6010B	Total/NA
Lead	13		0.20	mg/Kg	1	✱	6010B	Total/NA
Arsenic	1.4		0.065	mg/Kg	2	✱	6020	Total/NA
Selenium	0.14		0.13	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	2900		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1009

Lab Sample ID: 240-89576-9

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1009 (Continued)

Lab Sample ID: 240-89576-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	38		0.78	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.12		0.078	mg/Kg	1	✱	6010B	Total/NA
Chromium	12		0.78	mg/Kg	1	✱	6010B	Total/NA
Copper	8.0		0.78	mg/Kg	1	✱	6010B	Total/NA
Zinc	24		1.9	mg/Kg	1	✱	6010B	Total/NA
Lead	5.3		0.23	mg/Kg	1	✱	6010B	Total/NA
Arsenic	3.3		0.078	mg/Kg	2	✱	6020	Total/NA
Selenium	0.36		0.16	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	4100		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1010

Lab Sample ID: 240-89576-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	21		0.86	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.10		0.086	mg/Kg	1	✱	6010B	Total/NA
Chromium	7.1		0.86	mg/Kg	1	✱	6010B	Total/NA
Copper	5.0		0.86	mg/Kg	1	✱	6010B	Total/NA
Zinc	18		2.2	mg/Kg	1	✱	6010B	Total/NA
Lead	7.0		0.26	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.3		0.086	mg/Kg	2	✱	6020	Total/NA
Selenium	0.20		0.17	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3500		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1011

Lab Sample ID: 240-89576-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	29		0.82	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.12		0.082	mg/Kg	1	✱	6010B	Total/NA
Chromium	8.5		0.82	mg/Kg	1	✱	6010B	Total/NA
Copper	6.8		0.82	mg/Kg	1	✱	6010B	Total/NA
Zinc	24		2.0	mg/Kg	1	✱	6010B	Total/NA
Lead	8.4		0.25	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.3		0.082	mg/Kg	2	✱	6020	Total/NA
Selenium	0.38		0.16	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3600		1200	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1012

Lab Sample ID: 240-89576-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	47		0.79	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.12		0.079	mg/Kg	1	✱	6010B	Total/NA
Chromium	14		0.79	mg/Kg	1	✱	6010B	Total/NA
Copper	9.9		0.79	mg/Kg	1	✱	6010B	Total/NA
Zinc	25		2.0	mg/Kg	1	✱	6010B	Total/NA
Lead	5.0		0.24	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.1		0.079	mg/Kg	2	✱	6020	Total/NA
Selenium	0.45		0.16	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	4500		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1013

Lab Sample ID: 240-89576-13

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1013 (Continued)

Lab Sample ID: 240-89576-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	35		0.79	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.14		0.079	mg/Kg	1	✱	6010B	Total/NA
Chromium	11		0.79	mg/Kg	1	✱	6010B	Total/NA
Copper	9.6		1.6	mg/Kg	2	✱	6010B	Total/NA
Zinc	36		2.0	mg/Kg	1	✱	6010B	Total/NA
Lead	8.0		0.24	mg/Kg	1	✱	6010B	Total/NA
Arsenic	3.3		0.079	mg/Kg	2	✱	6020	Total/NA
Selenium	0.40		0.16	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	7200		1200	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1014

Lab Sample ID: 240-89576-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	30		0.89	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.15		0.089	mg/Kg	1	✱	6010B	Total/NA
Chromium	9.2		0.89	mg/Kg	1	✱	6010B	Total/NA
Copper	7.6		0.89	mg/Kg	1	✱	6010B	Total/NA
Zinc	36		2.2	mg/Kg	1	✱	6010B	Total/NA
Lead	11		0.27	mg/Kg	1	✱	6010B	Total/NA
Arsenic	3.3		0.089	mg/Kg	2	✱	6020	Total/NA
Selenium	0.31		0.18	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	5400		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1015

Lab Sample ID: 240-89576-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	22		0.65	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.12		0.065	mg/Kg	1	✱	6010B	Total/NA
Chromium	5.7		0.65	mg/Kg	1	✱	6010B	Total/NA
Copper	6.0		0.65	mg/Kg	1	✱	6010B	Total/NA
Zinc	26		1.6	mg/Kg	1	✱	6010B	Total/NA
Lead	11		0.19	mg/Kg	1	✱	6010B	Total/NA
Arsenic	3.1		0.065	mg/Kg	2	✱	6020	Total/NA
Selenium	0.23		0.13	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	3800		1100	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1016

Lab Sample ID: 240-89576-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	23		0.72	mg/Kg	1	✱	6010B	Total/NA
Cadmium	0.097		0.072	mg/Kg	1	✱	6010B	Total/NA
Chromium	7.2		0.72	mg/Kg	1	✱	6010B	Total/NA
Copper	5.9		0.72	mg/Kg	1	✱	6010B	Total/NA
Zinc	17		1.8	mg/Kg	1	✱	6010B	Total/NA
Lead	6.7		0.22	mg/Kg	1	✱	6010B	Total/NA
Arsenic	2.4		0.072	mg/Kg	2	✱	6020	Total/NA
Selenium	0.26		0.14	mg/Kg	2	✱	6020	Total/NA
Total Organic Carbon	2700		1200	mg/Kg	1	✱	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1017

Lab Sample ID: 240-89576-17

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1017 (Continued)

Lab Sample ID: 240-89576-17

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	8.0		0.58	mg/Kg	1	☼	6010B	Total/NA
Chromium	3.1		0.58	mg/Kg	1	☼	6010B	Total/NA
Copper	2.7		0.58	mg/Kg	1	☼	6010B	Total/NA
Zinc	9.5		1.4	mg/Kg	1	☼	6010B	Total/NA
Lead	5.0		0.17	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.7		0.058	mg/Kg	2	☼	6020	Total/NA
Selenium	0.16		0.12	mg/Kg	2	☼	6020	Total/NA
Total Organic Carbon	2200		1100	mg/Kg	1	☼	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1018

Lab Sample ID: 240-89576-18

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	27		0.66	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13		0.066	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.1		0.66	mg/Kg	1	☼	6010B	Total/NA
Copper	6.0		0.66	mg/Kg	1	☼	6010B	Total/NA
Zinc	27		1.7	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.8		0.066	mg/Kg	2	☼	6020	Total/NA
Selenium	0.24		0.13	mg/Kg	2	☼	6020	Total/NA
Total Organic Carbon	3100		1100	mg/Kg	1	☼	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1019

Lab Sample ID: 240-89576-19

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	320		290	ug/Kg	1	☼	8270C	Total/NA
Benzo[b]fluoranthene	430		290	ug/Kg	1	☼	8270C	Total/NA
Chrysene	310		290	ug/Kg	1	☼	8270C	Total/NA
Fluoranthene	870		290	ug/Kg	1	☼	8270C	Total/NA
Phenanthrene	550		290	ug/Kg	1	☼	8270C	Total/NA
Pyrene	760		290	ug/Kg	1	☼	8270C	Total/NA
Barium	21		0.80	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11		0.080	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.1		0.80	mg/Kg	1	☼	6010B	Total/NA
Copper	5.1		0.80	mg/Kg	1	☼	6010B	Total/NA
Zinc	25		2.0	mg/Kg	1	☼	6010B	Total/NA
Lead	7.0		0.24	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.4		0.080	mg/Kg	2	☼	6020	Total/NA
Selenium	0.17		0.16	mg/Kg	2	☼	6020	Total/NA
Mercury	0.043		0.041	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon	4100		1100	mg/Kg	1	☼	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1020

Lab Sample ID: 240-89576-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	28		0.89	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24		0.089	mg/Kg	1	☼	6010B	Total/NA
Chromium	9.0		0.89	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.89	mg/Kg	1	☼	6010B	Total/NA
Zinc	47		2.2	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1020 (Continued)

Lab Sample ID: 240-89576-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lead	39		0.27	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.7		0.089	mg/Kg	2	☼	6020	Total/NA
Selenium	0.31		0.18	mg/Kg	2	☼	6020	Total/NA
Total Organic Carbon	9600		1200	mg/Kg	1	☼	Walkley Black	Total/NA

Client Sample ID: S-58502-121817-SSH-1021

Lab Sample ID: 240-89576-21

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	40		0.67	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.21		0.067	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.67	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.67	mg/Kg	1	☼	6010B	Total/NA
Zinc	67		1.7	mg/Kg	1	☼	6010B	Total/NA
Lead	37		0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.9		0.033	mg/Kg	1	☼	6020	Total/NA
Selenium	0.16		0.067	mg/Kg	1	☼	6020	Total/NA
Total Organic Carbon	8200		1100	mg/Kg	1	☼	Walkley Black	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
8081A	Organochlorine Pesticides (GC)	SW846	TAL CAN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
8151	Herbicides	SW846	TAL HOU
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
7471A	Mercury (CVAA)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
Walkley Black	Organic Carbon, Total (TOC)	MSA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MSA = "Methods Of Soil Analysis, Chemical And Microbiological Properties", Part 2, 2nd Ed., 1982 And Subsequent Revisions.

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

Laboratory References:

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

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	780	U	780	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Benzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Bromomethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
2-Butanone (MEK)	780	U	780	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Carbon disulfide	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Carbon tetrachloride	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Chlorobenzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Chloroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Chloroform	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Chloromethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1-Dichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2-Dichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2-Dichloropropane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
cis-1,3-Dichloropropene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
trans-1,3-Dichloropropene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Ethylbenzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
2-Hexanone	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Methylene Chloride	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
4-Methyl-2-pentanone (MIBK)	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Styrene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1,2,2-Tetrachloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Tetrachloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Trichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Vinyl chloride	42	U	42	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Xylenes, Total	160	U	160	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1,1-Trichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1,2-Trichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Cyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2-Dibromo-3-Chloropropane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2-Dibromoethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
cis-1,2-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
trans-1,2-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Isopropylbenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Methyl acetate	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Methyl tert-butyl ether	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2,4-Trichlorobenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Dibromochloromethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1
Methylcyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:33	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 144	12/22/17 11:39	12/26/17 15:33	1
4-Bromofluorobenzene (Surr)	93		58 - 142	12/22/17 11:39	12/26/17 15:33	1
Toluene-d8 (Surr)	96		61 - 137	12/22/17 11:39	12/26/17 15:33	1
Dibromofluoromethane (Surr)	105		31 - 155	12/22/17 11:39	12/26/17 15:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	800	U	800	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Benzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Bromodichloromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Bromoform	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Bromomethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
2-Butanone (MEK)	800	U	800	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Carbon disulfide	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Carbon tetrachloride	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Chlorobenzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Chloroethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Chloroform	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Chloromethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2-Dichloropropane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
cis-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
trans-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Ethylbenzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
2-Hexanone	2700	U	2700	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Methylene Chloride	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
4-Methyl-2-pentanone (MIBK)	2700	U	2700	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Styrene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1,2,2-Tetrachloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Tetrachloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Toluene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Trichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Vinyl chloride	43	U	43	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Xylenes, Total	160	U	160	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1,1-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1,2-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Cyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2-Dibromo-3-Chloropropane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2-Dibromoethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Dichlorodifluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
cis-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
trans-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Isopropylbenzene	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Methyl acetate	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Methyl tert-butyl ether	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2,4-Trichlorobenzene	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,2-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,3-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
1,4-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Trichlorofluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Dibromochloromethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1
Methylcyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 15:56	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		64 - 144	12/22/17 11:39	12/26/17 15:56	1
4-Bromofluorobenzene (Surr)	104		58 - 142	12/22/17 11:39	12/26/17 15:56	1
Toluene-d8 (Surr)	109		61 - 137	12/22/17 11:39	12/26/17 15:56	1
Dibromofluoromethane (Surr)	115		31 - 155	12/22/17 11:39	12/26/17 15:56	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Benzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
2-Butanone (MEK)	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Carbon tetrachloride	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Chlorobenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Chloroform	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2-Dichloropropane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
cis-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
trans-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Ethylbenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Styrene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1,2,2-Tetrachloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Tetrachloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Trichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Vinyl chloride	40	U	40	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1,1-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1,2-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
cis-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
trans-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Dibromochloromethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 144	12/22/17 11:39	12/26/17 16:19	1
4-Bromofluorobenzene (Surr)	97		58 - 142	12/22/17 11:39	12/26/17 16:19	1
Toluene-d8 (Surr)	103		61 - 137	12/22/17 11:39	12/26/17 16:19	1
Dibromofluoromethane (Surr)	107		31 - 155	12/22/17 11:39	12/26/17 16:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	740	U	740	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Benzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Bromodichloromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Bromoform	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
2-Butanone (MEK)	740	U	740	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Carbon tetrachloride	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Chlorobenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Chloroform	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2-Dichloropropane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
cis-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
trans-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Ethylbenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Styrene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1,2,2-Tetrachloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Tetrachloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Toluene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Trichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Vinyl chloride	40	U	40	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1,1-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1,2-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Dichlorodifluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
cis-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
trans-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,2-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,3-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
1,4-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Trichlorofluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Dibromochloromethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 16:41	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	101		64 - 144	12/22/17 11:39	12/26/17 16:41	1
4-Bromofluorobenzene (Surr)	101		58 - 142	12/22/17 11:39	12/26/17 16:41	1
Toluene-d8 (Surr)	106		61 - 137	12/22/17 11:39	12/26/17 16:41	1
Dibromofluoromethane (Surr)	107		31 - 155	12/22/17 11:39	12/26/17 16:41	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	740	U	740	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Benzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Bromodichloromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Bromoform	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
2-Butanone (MEK)	740	U	740	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Carbon tetrachloride	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Chlorobenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Chloroform	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2-Dichloropropane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
cis-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
trans-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Ethylbenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Styrene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1,2,2-Tetrachloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Tetrachloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Toluene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Trichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Vinyl chloride	39	U	39	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1,1-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1,2-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Dichlorodifluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
cis-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
trans-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,2-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,3-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
1,4-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Trichlorofluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Dibromochloromethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:03	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 144	12/22/17 11:39	12/26/17 17:03	1
4-Bromofluorobenzene (Surr)	95		58 - 142	12/22/17 11:39	12/26/17 17:03	1
Toluene-d8 (Surr)	101		61 - 137	12/22/17 11:39	12/26/17 17:03	1
Dibromofluoromethane (Surr)	104		31 - 155	12/22/17 11:39	12/26/17 17:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	770	U	770	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Benzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Bromomethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
2-Butanone (MEK)	770	U	770	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Carbon disulfide	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Carbon tetrachloride	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Chlorobenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Chloroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Chloroform	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Chloromethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2-Dichloropropane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
cis-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
trans-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Ethylbenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
2-Hexanone	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Methylene Chloride	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
4-Methyl-2-pentanone (MIBK)	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Styrene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1,2,2-Tetrachloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Tetrachloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Trichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Vinyl chloride	41	U	41	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1,1-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1,2-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2-Dibromo-3-Chloropropane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2-Dibromoethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
cis-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
trans-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Isopropylbenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Methyl tert-butyl ether	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2,4-Trichlorobenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Dibromochloromethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:26	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 144	12/22/17 11:39	12/26/17 17:26	1
4-Bromofluorobenzene (Surr)	101		58 - 142	12/22/17 11:39	12/26/17 17:26	1
Toluene-d8 (Surr)	108		61 - 137	12/22/17 11:39	12/26/17 17:26	1
Dibromofluoromethane (Surr)	109		31 - 155	12/22/17 11:39	12/26/17 17:26	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	770	U	770	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Benzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Bromomethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
2-Butanone (MEK)	770	U	770	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Carbon disulfide	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Carbon tetrachloride	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Chlorobenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Chloroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Chloroform	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Chloromethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2-Dichloropropane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
cis-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
trans-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Ethylbenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
2-Hexanone	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Methylene Chloride	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
4-Methyl-2-pentanone (MIBK)	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Styrene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1,2,2-Tetrachloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Tetrachloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Trichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Vinyl chloride	41	U	41	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1,1-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1,2-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2-Dibromo-3-Chloropropane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2-Dibromoethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
cis-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
trans-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Isopropylbenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Methyl tert-butyl ether	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2,4-Trichlorobenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Dibromochloromethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 17:49	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 144	12/22/17 11:39	12/26/17 17:49	1
4-Bromofluorobenzene (Surr)	98		58 - 142	12/22/17 11:39	12/26/17 17:49	1
Toluene-d8 (Surr)	103		61 - 137	12/22/17 11:39	12/26/17 17:49	1
Dibromofluoromethane (Surr)	106		31 - 155	12/22/17 11:39	12/26/17 17:49	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	760	U	760	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Benzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
2-Butanone (MEK)	760	U	760	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Carbon tetrachloride	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Chlorobenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Chloroform	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2-Dichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2-Dichloropropane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
cis-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
trans-1,3-Dichloropropene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Ethylbenzene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Styrene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1,2,2-Tetrachloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Tetrachloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Trichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Vinyl chloride	41	U	41	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1,1-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1,2-Trichloroethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
cis-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
trans-1,2-Dichloroethene	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Dibromochloromethane	51	U	51	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 144	12/22/17 11:39	12/26/17 18:11	1
4-Bromofluorobenzene (Surr)	97		58 - 142	12/22/17 11:39	12/26/17 18:11	1
Toluene-d8 (Surr)	100		61 - 137	12/22/17 11:39	12/26/17 18:11	1
Dibromofluoromethane (Surr)	99		31 - 155	12/22/17 11:39	12/26/17 18:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Benzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Bromodichloromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Bromoform	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Bromomethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
2-Butanone (MEK)	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Carbon disulfide	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Carbon tetrachloride	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Chlorobenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Chloroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Chloroform	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Chloromethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2-Dichloropropane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
cis-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
trans-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Ethylbenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
2-Hexanone	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Methylene Chloride	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
4-Methyl-2-pentanone (MIBK)	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Styrene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1,2,2-Tetrachloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Tetrachloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Toluene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Trichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Vinyl chloride	38	U	38	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1,1-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1,2-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2-Dibromo-3-Chloropropane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2-Dibromoethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Dichlorodifluoromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
cis-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
trans-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Isopropylbenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Methyl tert-butyl ether	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2,4-Trichlorobenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,2-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,3-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
1,4-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Trichlorofluoromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Dibromochloromethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 18:33	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 144	12/22/17 11:39	12/26/17 18:33	1
4-Bromofluorobenzene (Surr)	95		58 - 142	12/22/17 11:39	12/26/17 18:33	1
Toluene-d8 (Surr)	102		61 - 137	12/22/17 11:39	12/26/17 18:33	1
Dibromofluoromethane (Surr)	104		31 - 155	12/22/17 11:39	12/26/17 18:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	680	U	680	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Benzene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Bromodichloromethane	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Bromoform	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Bromomethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
2-Butanone (MEK)	680	U	680	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Carbon disulfide	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Carbon tetrachloride	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Chlorobenzene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Chloroethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Chloroform	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Chloromethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1-Dichloroethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2-Dichloroethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1-Dichloroethene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2-Dichloropropane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
cis-1,3-Dichloropropene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
trans-1,3-Dichloropropene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Ethylbenzene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
2-Hexanone	2300	U	2300	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Methylene Chloride	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
4-Methyl-2-pentanone (MIBK)	2300	U	2300	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Styrene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1,2,2-Tetrachloroethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Tetrachloroethene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Toluene	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Trichloroethene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Vinyl chloride	36	U	36	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1,1-Trichloroethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1,2-Trichloroethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Cyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2-Dibromo-3-Chloropropane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2-Dibromoethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Dichlorodifluoromethane	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
cis-1,2-Dichloroethene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
trans-1,2-Dichloroethene	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Isopropylbenzene	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Methyl acetate	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Methyl tert-butyl ether	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2,4-Trichlorobenzene	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,2-Dichlorobenzene	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,3-Dichlorobenzene	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
1,4-Dichlorobenzene	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Trichlorofluoromethane	90	U	90	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Dibromochloromethane	45	U	45	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1
Methylcyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 18:56	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 144	12/22/17 11:39	12/26/17 18:56	1
4-Bromofluorobenzene (Surr)	94		58 - 142	12/22/17 11:39	12/26/17 18:56	1
Toluene-d8 (Surr)	97		61 - 137	12/22/17 11:39	12/26/17 18:56	1
Dibromofluoromethane (Surr)	96		31 - 155	12/22/17 11:39	12/26/17 18:56	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	780	U	780	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Benzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Bromomethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
2-Butanone (MEK)	780	U	780	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Carbon disulfide	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Carbon tetrachloride	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Chlorobenzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Chloroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Chloroform	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Chloromethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1-Dichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2-Dichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2-Dichloropropane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
cis-1,3-Dichloropropene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
trans-1,3-Dichloropropene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Ethylbenzene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
2-Hexanone	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Methylene Chloride	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
4-Methyl-2-pentanone (MIBK)	2600	U	2600	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Styrene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1,2,2-Tetrachloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Tetrachloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Trichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Vinyl chloride	41	U	41	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Xylenes, Total	160	U	160	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1,1-Trichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1,2-Trichloroethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2-Dibromo-3-Chloropropane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2-Dibromoethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
cis-1,2-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
trans-1,2-Dichloroethene	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Isopropylbenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Methyl tert-butyl ether	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2,4-Trichlorobenzene	260	U	260	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Dibromochloromethane	52	U	52	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 144	12/22/17 11:39	12/26/17 19:19	1
4-Bromofluorobenzene (Surr)	105		58 - 142	12/22/17 11:39	12/26/17 19:19	1
Toluene-d8 (Surr)	109		61 - 137	12/22/17 11:39	12/26/17 19:19	1
Dibromofluoromethane (Surr)	106		31 - 155	12/22/17 11:39	12/26/17 19:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Benzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Bromodichloromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Bromoform	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
2-Butanone (MEK)	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Carbon tetrachloride	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Chlorobenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Chloroform	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2-Dichloropropane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
cis-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
trans-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Ethylbenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Styrene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1,2,2-Tetrachloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Tetrachloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Toluene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Trichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Vinyl chloride	40	U	40	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1,1-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1,2-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Dichlorodifluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
cis-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
trans-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,2-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,3-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
1,4-Dichlorobenzene	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Trichlorofluoromethane	99	U	99	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Dibromochloromethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 19:42	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 144	12/22/17 11:39	12/26/17 19:42	1
4-Bromofluorobenzene (Surr)	92		58 - 142	12/22/17 11:39	12/26/17 19:42	1
Toluene-d8 (Surr)	99		61 - 137	12/22/17 11:39	12/26/17 19:42	1
Dibromofluoromethane (Surr)	100		31 - 155	12/22/17 11:39	12/26/17 19:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	830	U	830	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Benzene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Bromodichloromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Bromoform	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Bromomethane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
2-Butanone (MEK)	830	U	830	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Carbon disulfide	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Carbon tetrachloride	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Chlorobenzene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Chloroethane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Chloroform	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Chloromethane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1-Dichloroethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2-Dichloroethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1-Dichloroethene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2-Dichloropropane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
cis-1,3-Dichloropropene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
trans-1,3-Dichloropropene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Ethylbenzene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
2-Hexanone	2800	U	2800	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Methylene Chloride	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
4-Methyl-2-pentanone (MIBK)	2800	U	2800	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Styrene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1,2,2-Tetrachloroethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Tetrachloroethene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Toluene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Trichloroethene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Vinyl chloride	44	U	44	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Xylenes, Total	170	U	170	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1,1-Trichloroethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1,2-Trichloroethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Cyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2-Dibromo-3-Chloropropane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2-Dibromoethane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Dichlorodifluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
cis-1,2-Dichloroethene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
trans-1,2-Dichloroethene	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Isopropylbenzene	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Methyl acetate	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Methyl tert-butyl ether	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2,4-Trichlorobenzene	280	U	280	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,2-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,3-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
1,4-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Trichlorofluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Dibromochloromethane	55	U	55	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1
Methylcyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 20:04	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		64 - 144	12/22/17 11:39	12/26/17 20:04	1
4-Bromofluorobenzene (Surr)	100		58 - 142	12/22/17 11:39	12/26/17 20:04	1
Toluene-d8 (Surr)	107		61 - 137	12/22/17 11:39	12/26/17 20:04	1
Dibromofluoromethane (Surr)	89		31 - 155	12/22/17 11:39	12/26/17 20:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Benzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Bromodichloromethane	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Bromoform	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Bromomethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
2-Butanone (MEK)	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Carbon disulfide	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Carbon tetrachloride	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Chlorobenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Chloroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Chloroform	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Chloromethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2-Dichloropropane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
cis-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
trans-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Ethylbenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
2-Hexanone	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Methylene Chloride	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
4-Methyl-2-pentanone (MIBK)	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Styrene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1,2,2-Tetrachloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Tetrachloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Toluene	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Trichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Vinyl chloride	38	U	38	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1,1-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1,2-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Cyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2-Dibromo-3-Chloropropane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2-Dibromoethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Dichlorodifluoromethane	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
cis-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
trans-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Isopropylbenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Methyl acetate	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Methyl tert-butyl ether	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2,4-Trichlorobenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,2-Dichlorobenzene	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,3-Dichlorobenzene	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
1,4-Dichlorobenzene	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Trichlorofluoromethane	95	U	95	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Dibromochloromethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1
Methylcyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:25	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 144	12/22/17 11:39	12/26/17 20:25	1
4-Bromofluorobenzene (Surr)	94		58 - 142	12/22/17 11:39	12/26/17 20:25	1
Toluene-d8 (Surr)	99		61 - 137	12/22/17 11:39	12/26/17 20:25	1
Dibromofluoromethane (Surr)	89		31 - 155	12/22/17 11:39	12/26/17 20:25	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Benzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Bromodichloromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Bromoform	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Bromomethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
2-Butanone (MEK)	750	U	750	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Carbon disulfide	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Carbon tetrachloride	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Chlorobenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Chloroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Chloroform	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Chloromethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2-Dichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2-Dichloropropane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
cis-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
trans-1,3-Dichloropropene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Ethylbenzene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
2-Hexanone	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Methylene Chloride	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
4-Methyl-2-pentanone (MIBK)	2500	U	2500	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Styrene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1,2,2-Tetrachloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Tetrachloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Toluene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Trichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Vinyl chloride	40	U	40	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1,1-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1,2-Trichloroethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2-Dibromo-3-Chloropropane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2-Dibromoethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Dichlorodifluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
cis-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
trans-1,2-Dichloroethene	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Isopropylbenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Methyl tert-butyl ether	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2,4-Trichlorobenzene	250	U	250	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,2-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,3-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
1,4-Dichlorobenzene	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Trichlorofluoromethane	100	U	100	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Dibromochloromethane	50	U	50	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/26/17 20:48	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 144	12/22/17 11:39	12/26/17 20:48	1
4-Bromofluorobenzene (Surr)	95		58 - 142	12/22/17 11:39	12/26/17 20:48	1
Toluene-d8 (Surr)	102		61 - 137	12/22/17 11:39	12/26/17 20:48	1
Dibromofluoromethane (Surr)	98		31 - 155	12/22/17 11:39	12/26/17 20:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	800	U	800	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Benzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Bromodichloromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Bromoform	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Bromomethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
2-Butanone (MEK)	800	U	800	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Carbon disulfide	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Carbon tetrachloride	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Chlorobenzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Chloroethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Chloroform	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Chloromethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2-Dichloropropane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
cis-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
trans-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Ethylbenzene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
2-Hexanone	2700	U	2700	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Methylene Chloride	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
4-Methyl-2-pentanone (MIBK)	2700	U	2700	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Styrene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1,2,2-Tetrachloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Tetrachloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Toluene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Trichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Vinyl chloride	43	U	43	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Xylenes, Total	160	U	160	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1,1-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1,2-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Cyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2-Dibromo-3-Chloropropane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2-Dibromoethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Dichlorodifluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
cis-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
trans-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Isopropylbenzene	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Methyl acetate	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Methyl tert-butyl ether	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2,4-Trichlorobenzene	270	U	270	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,2-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,3-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
1,4-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Trichlorofluoromethane	110	U	110	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Dibromochloromethane	54	U	54	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1
Methylcyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 11:39	12/26/17 21:18	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 144	12/22/17 11:39	12/26/17 21:18	1
4-Bromofluorobenzene (Surr)	91		58 - 142	12/22/17 11:39	12/26/17 21:18	1
Toluene-d8 (Surr)	96		61 - 137	12/22/17 11:39	12/26/17 21:18	1
Dibromofluoromethane (Surr)	94		31 - 155	12/22/17 11:39	12/26/17 21:18	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	680	U	680	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Benzene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Bromodichloromethane	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Bromoform	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Bromomethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
2-Butanone (MEK)	680	U	680	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Carbon disulfide	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Carbon tetrachloride	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Chlorobenzene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Chloroethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Chloroform	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Chloromethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1-Dichloroethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2-Dichloroethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1-Dichloroethene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2-Dichloropropane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
cis-1,3-Dichloropropene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
trans-1,3-Dichloropropene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Ethylbenzene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
2-Hexanone	2300	U	2300	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Methylene Chloride	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
4-Methyl-2-pentanone (MIBK)	2300	U	2300	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Styrene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1,2,2-Tetrachloroethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Tetrachloroethene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Toluene	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Trichloroethene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Vinyl chloride	37	U	37	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1,1-Trichloroethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1,2-Trichloroethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Cyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2-Dibromo-3-Chloropropane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2-Dibromoethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Dichlorodifluoromethane	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
cis-1,2-Dichloroethene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
trans-1,2-Dichloroethene	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Isopropylbenzene	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Methyl acetate	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Methyl tert-butyl ether	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2,4-Trichlorobenzene	230	U	230	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,2-Dichlorobenzene	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,3-Dichlorobenzene	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
1,4-Dichlorobenzene	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Trichlorofluoromethane	91	U	91	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Dibromochloromethane	46	U	46	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1
Methylcyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 21:41	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		64 - 144	12/22/17 11:39	12/26/17 21:41	1
4-Bromofluorobenzene (Surr)	97		58 - 142	12/22/17 11:39	12/26/17 21:41	1
Toluene-d8 (Surr)	102		61 - 137	12/22/17 11:39	12/26/17 21:41	1
Dibromofluoromethane (Surr)	100		31 - 155	12/22/17 11:39	12/26/17 21:41	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Benzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Bromodichloromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Bromoform	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Bromomethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
2-Butanone (MEK)	720	U	720	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Carbon disulfide	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Carbon tetrachloride	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Chlorobenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Chloroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Chloroform	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Chloromethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2-Dichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2-Dichloropropane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
cis-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
trans-1,3-Dichloropropene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Ethylbenzene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
2-Hexanone	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Methylene Chloride	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
4-Methyl-2-pentanone (MIBK)	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Styrene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1,2,2-Tetrachloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Tetrachloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Toluene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Trichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Vinyl chloride	38	U	38	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1,1-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1,2-Trichloroethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Cyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2-Dibromo-3-Chloropropane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2-Dibromoethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Dichlorodifluoromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
cis-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
trans-1,2-Dichloroethene	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Isopropylbenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Methyl acetate	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Methyl tert-butyl ether	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2,4-Trichlorobenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,2-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,3-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
1,4-Dichlorobenzene	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Trichlorofluoromethane	96	U	96	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Dibromochloromethane	48	U	48	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1
Methylcyclohexane	1100	U	1100	ug/Kg	☼	12/22/17 11:39	12/26/17 22:03	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 144	12/22/17 11:39	12/26/17 22:03	1
4-Bromofluorobenzene (Surr)	94		58 - 142	12/22/17 11:39	12/26/17 22:03	1
Toluene-d8 (Surr)	98		61 - 137	12/22/17 11:39	12/26/17 22:03	1
Dibromofluoromethane (Surr)	92		31 - 155	12/22/17 11:39	12/26/17 22:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	730	U	730	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Benzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Bromodichloromethane	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Bromoform	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Bromomethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
2-Butanone (MEK)	730	U	730	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Carbon disulfide	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Carbon tetrachloride	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Chlorobenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Chloroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Chloroform	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Chloromethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2-Dichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2-Dichloropropane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
cis-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
trans-1,3-Dichloropropene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Ethylbenzene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
2-Hexanone	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Methylene Chloride	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
4-Methyl-2-pentanone (MIBK)	2400	U	2400	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Styrene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1,2,2-Tetrachloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Tetrachloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Toluene	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Trichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Vinyl chloride	39	U	39	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Xylenes, Total	150	U	150	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1,1-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1,2-Trichloroethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Cyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2-Dibromo-3-Chloropropane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2-Dibromoethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Dichlorodifluoromethane	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
cis-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
trans-1,2-Dichloroethene	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Isopropylbenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Methyl acetate	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Methyl tert-butyl ether	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2,4-Trichlorobenzene	240	U	240	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,2-Dichlorobenzene	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,3-Dichlorobenzene	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
1,4-Dichlorobenzene	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Trichlorofluoromethane	97	U	97	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Dibromochloromethane	49	U	49	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1
Methylcyclohexane	1200	U	1200	ug/Kg	☼	12/22/17 11:39	12/28/17 11:22	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 144	12/22/17 11:39	12/28/17 11:22	1
4-Bromofluorobenzene (Surr)	97		58 - 142	12/22/17 11:39	12/28/17 11:22	1
Toluene-d8 (Surr)	102		61 - 137	12/22/17 11:39	12/28/17 11:22	1
Dibromofluoromethane (Surr)	75		31 - 155	12/22/17 11:39	12/28/17 11:22	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	810	U	810	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Benzene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Bromodichloromethane	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Bromoform	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Bromomethane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
2-Butanone (MEK)	810	U	810	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Carbon disulfide	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Carbon tetrachloride	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Chlorobenzene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Chloroethane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Chloroform	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Chloromethane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2-Dichloroethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2-Dichloropropane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
cis-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
trans-1,3-Dichloropropene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Ethylbenzene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
2-Hexanone	2700	U	2700	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Methylene Chloride	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
4-Methyl-2-pentanone (MIBK)	2700	U	2700	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Styrene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1,2,2-Tetrachloroethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Tetrachloroethene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Toluene	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Trichloroethene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Vinyl chloride	43	U	43	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Xylenes, Total	160	U	160	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1,1-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1,2-Trichloroethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Cyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2-Dibromo-3-Chloropropane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2-Dibromoethane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Dichlorodifluoromethane	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
cis-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
trans-1,2-Dichloroethene	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Isopropylbenzene	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Methyl acetate	1300	U	1300	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Methyl tert-butyl ether	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2,4-Trichlorobenzene	270	U	270	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,2-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,3-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
1,4-Dichlorobenzene	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Trichlorofluoromethane	110	U	110	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Dibromochloromethane	54	U	54	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1
Methylcyclohexane	1300	U	1300	ug/Kg	☼	12/22/17 12:01	12/28/17 11:45	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 144	12/22/17 12:01	12/28/17 11:45	1
4-Bromofluorobenzene (Surr)	92		58 - 142	12/22/17 12:01	12/28/17 11:45	1
Toluene-d8 (Surr)	97		61 - 137	12/22/17 12:01	12/28/17 11:45	1
Dibromofluoromethane (Surr)	99		31 - 155	12/22/17 12:01	12/28/17 11:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	700	U	700	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Benzene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Bromodichloromethane	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Bromoform	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Bromomethane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
2-Butanone (MEK)	700	U *	700	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Carbon disulfide	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Carbon tetrachloride	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Chlorobenzene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Chloroethane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Chloroform	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Chloromethane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1-Dichloroethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2-Dichloroethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1-Dichloroethene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2-Dichloropropane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
cis-1,3-Dichloropropene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
trans-1,3-Dichloropropene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Ethylbenzene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
2-Hexanone	2300	U	2300	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Methylene Chloride	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
4-Methyl-2-pentanone (MIBK)	2300	U	2300	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Styrene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1,2,2-Tetrachloroethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Tetrachloroethene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Toluene	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Trichloroethene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Vinyl chloride	37	U	37	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Xylenes, Total	140	U	140	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1,1-Trichloroethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1,2-Trichloroethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Cyclohexane	1100	U	1100	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2-Dibromo-3-Chloropropane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2-Dibromoethane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Dichlorodifluoromethane	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
cis-1,2-Dichloroethene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
trans-1,2-Dichloroethene	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Isopropylbenzene	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Methyl acetate	1100	U	1100	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Methyl tert-butyl ether	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2,4-Trichlorobenzene	230	U	230	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,2-Dichlorobenzene	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,3-Dichlorobenzene	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
1,4-Dichlorobenzene	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Trichlorofluoromethane	93	U	93	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Dibromochloromethane	47	U	47	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1
Methylcyclohexane	1100	U	1100	ug/Kg	☼	12/23/17 09:35	12/28/17 12:55	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		64 - 144	12/23/17 09:35	12/28/17 12:55	1
4-Bromofluorobenzene (Surr)	99		58 - 142	12/23/17 09:35	12/28/17 12:55	1
Toluene-d8 (Surr)	103		61 - 137	12/23/17 09:35	12/28/17 12:55	1
Dibromofluoromethane (Surr)	107		31 - 155	12/23/17 09:35	12/28/17 12:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
4-Nitrophenol	380	U	380	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Acenaphthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Acetophenone	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Atrazine	46	U	46	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Bis(2-chloroethyl)ether	91	U	91	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Caprolactam	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Carbazole	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Chrysene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Hexachlorobutadiene	46	U	46	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Isophorone	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Naphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Phenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Phenanthrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
Pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	91		32 - 120	12/28/17 09:41	01/02/18 18:58	1
2-Fluorophenol (Surr)	78		29 - 120	12/28/17 09:41	01/02/18 18:58	1
2,4,6-Tribromophenol (Surr)	60		10 - 120	12/28/17 09:41	01/02/18 18:58	1
Nitrobenzene-d5 (Surr)	72		30 - 120	12/28/17 09:41	01/02/18 18:58	1
Phenol-d5 (Surr)	86		29 - 120	12/28/17 09:41	01/02/18 18:58	1
Terphenyl-d14 (Surr)	105		41 - 120	12/28/17 09:41	01/02/18 18:58	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,2'-oxybis[1-chloropropane]	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4,5-Trichlorophenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4,6-Trichlorophenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4-Dichlorophenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4-Dimethylphenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4-Dinitrophenol	180	U	180	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,4-Dinitrotoluene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2,6-Dinitrotoluene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Chloronaphthalene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Chlorophenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Methylnaphthalene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Methylphenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Nitroaniline	240	U	240	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
2-Nitrophenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
3,3'-Dichlorobenzidine	1900	U	1900	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
3-Nitroaniline	240	U	240	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4,6-Dinitro-2-methylphenol	180	U	180	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Bromophenyl phenyl ether	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Chloro-3-methylphenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Chloroaniline	240	U	240	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Chlorophenyl phenyl ether	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Nitroaniline	240	U	240	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
4-Nitrophenol	400	U	400	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Acenaphthene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Acenaphthylene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Acetophenone	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Anthracene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Atrazine	48	U	48	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzaldehyde	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzo[a]anthracene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzo[a]pyrene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzo[b]fluoranthene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzo[g,h,i]perylene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Benzo[k]fluoranthene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Bis(2-chloroethoxy)methane	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Bis(2-chloroethyl)ether	96	U	96	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Bis(2-ethylhexyl) phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Butyl benzyl phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Caprolactam	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Carbazole	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Chrysene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Dibenz(a,h)anthracene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Dibenzofuran	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Diethyl phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Dimethyl phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Di-n-butyl phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Di-n-octyl phthalate	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Fluoranthene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Hexachlorobenzene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Hexachlorobutadiene	48	U	48	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Hexachlorocyclopentadiene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Hexachloroethane	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Indeno[1,2,3-cd]pyrene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Isophorone	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Naphthalene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Nitrobenzene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
N-Nitrosodi-n-propylamine	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
N-Nitrosodiphenylamine	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Pentachlorophenol	180	U	180	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Phenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Phenanthrene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
Pyrene	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1
3 & 4 Methylphenol	320	U	320	ug/Kg	☼	12/28/17 09:41	01/02/18 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	95		32 - 120	12/28/17 09:41	01/02/18 18:34	1
2-Fluorophenol (Surr)	76		29 - 120	12/28/17 09:41	01/02/18 18:34	1
2,4,6-Tribromophenol (Surr)	74		10 - 120	12/28/17 09:41	01/02/18 18:34	1
Nitrobenzene-d5 (Surr)	72		30 - 120	12/28/17 09:41	01/02/18 18:34	1
Phenol-d5 (Surr)	85		29 - 120	12/28/17 09:41	01/02/18 18:34	1
Terphenyl-d14 (Surr)	111		41 - 120	12/28/17 09:41	01/02/18 18:34	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Acenaphthene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Acetophenone	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Anthracene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Atrazine	45	U	45	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzo[a]anthracene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzo[b]fluoranthene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Bis(2-chloroethyl)ether	89	U	89	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Caprolactam	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Carbazole	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Chrysene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Fluoranthene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Isophorone	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Naphthalene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Phenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Phenanthrene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
Pyrene	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/28/17 09:41	01/02/18 18:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	87		32 - 120	12/28/17 09:41	01/02/18 18:10	1
2-Fluorophenol (Surr)	75		29 - 120	12/28/17 09:41	01/02/18 18:10	1
2,4,6-Tribromophenol (Surr)	51		10 - 120	12/28/17 09:41	01/02/18 18:10	1
Nitrobenzene-d5 (Surr)	70		30 - 120	12/28/17 09:41	01/02/18 18:10	1
Phenol-d5 (Surr)	79		29 - 120	12/28/17 09:41	01/02/18 18:10	1
Terphenyl-d14 (Surr)	99		41 - 120	12/28/17 09:41	01/02/18 18:10	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Acenaphthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Acetophenone	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Atrazine	45	U	45	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Bis(2-chloroethyl)ether	90	U	90	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Bis(2-ethylhexyl) phthalate	300	U F1	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Caprolactam	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Carbazole	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Chrysene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Fluoranthene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Hexachlorocyclopentadiene	300	U F2 F1	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Isophorone	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Naphthalene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Phenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Phenanthrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
Pyrene	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/28/17 09:41	01/02/18 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		32 - 120	12/28/17 09:41	01/02/18 16:59	1
2-Fluorophenol (Surr)	71		29 - 120	12/28/17 09:41	01/02/18 16:59	1
2,4,6-Tribromophenol (Surr)	52		10 - 120	12/28/17 09:41	01/02/18 16:59	1
Nitrobenzene-d5 (Surr)	67		30 - 120	12/28/17 09:41	01/02/18 16:59	1
Phenol-d5 (Surr)	80		29 - 120	12/28/17 09:41	01/02/18 16:59	1
Terphenyl-d14 (Surr)	98		41 - 120	12/28/17 09:41	01/02/18 16:59	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4-Dinitrophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4,6-Dinitro-2-methylphenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
4-Nitrophenol	360	U	360	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Acenaphthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Acetophenone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Atrazine	44	U *	44	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzo[a]anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzo[b]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Bis(2-chloroethyl)ether	88	U	88	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Caprolactam	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Carbazole	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Chrysene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Hexachlorobutadiene	44	U	44	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Isophorone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Naphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Pentachlorophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Phenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Phenanthrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
Pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	82		32 - 120	12/29/17 10:29	01/04/18 14:51	1
2-Fluorophenol (Surr)	72		29 - 120	12/29/17 10:29	01/04/18 14:51	1
2,4,6-Tribromophenol (Surr)	75		10 - 120	12/29/17 10:29	01/04/18 14:51	1
Nitrobenzene-d5 (Surr)	66		30 - 120	12/29/17 10:29	01/04/18 14:51	1
Phenol-d5 (Surr)	73		29 - 120	12/29/17 10:29	01/04/18 14:51	1
Terphenyl-d14 (Surr)	98		41 - 120	12/29/17 10:29	01/04/18 14:51	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
4-Nitrophenol	380	U	380	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Atrazine	46	U *	46	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Bis(2-chloroethyl)ether	92	U	92	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Hexachlorobutadiene	46	U	46	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	82		32 - 120	12/29/17 10:29	01/04/18 15:38	1
2-Fluorophenol (Surr)	64		29 - 120	12/29/17 10:29	01/04/18 15:38	1
2,4,6-Tribromophenol (Surr)	80		10 - 120	12/29/17 10:29	01/04/18 15:38	1
Nitrobenzene-d5 (Surr)	58		30 - 120	12/29/17 10:29	01/04/18 15:38	1
Phenol-d5 (Surr)	70		29 - 120	12/29/17 10:29	01/04/18 15:38	1
Terphenyl-d14 (Surr)	101		41 - 120	12/29/17 10:29	01/04/18 15:38	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Bis(2-chloroethyl)ether	90	U	90	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	80		32 - 120	12/29/17 10:29	01/04/18 15:15	1
2-Fluorophenol (Surr)	68		29 - 120	12/29/17 10:29	01/04/18 15:15	1
2,4,6-Tribromophenol (Surr)	58		10 - 120	12/29/17 10:29	01/04/18 15:15	1
Nitrobenzene-d5 (Surr)	60		30 - 120	12/29/17 10:29	01/04/18 15:15	1
Phenol-d5 (Surr)	69		29 - 120	12/29/17 10:29	01/04/18 15:15	1
Terphenyl-d14 (Surr)	101		41 - 120	12/29/17 10:29	01/04/18 15:15	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Acenaphthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Acetophenone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzo[a]anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzo[b]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Bis(2-chloroethyl)ether	89	U	89	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Caprolactam	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Carbazole	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Chrysene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Isophorone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Naphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Phenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Phenanthrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
Pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 18:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		32 - 120	12/29/17 10:29	01/04/18 18:48	1
2-Fluorophenol (Surr)	67		29 - 120	12/29/17 10:29	01/04/18 18:48	1
2,4,6-Tribromophenol (Surr)	56		10 - 120	12/29/17 10:29	01/04/18 18:48	1
Nitrobenzene-d5 (Surr)	59		30 - 120	12/29/17 10:29	01/04/18 18:48	1
Phenol-d5 (Surr)	69		29 - 120	12/29/17 10:29	01/04/18 18:48	1
Terphenyl-d14 (Surr)	94		41 - 120	12/29/17 10:29	01/04/18 18:48	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4-Dinitrophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4,6-Dinitro-2-methylphenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
4-Nitrophenol	360	U	360	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Acenaphthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Acetophenone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Atrazine	44	U *	44	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzo[a]anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzo[b]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Bis(2-chloroethyl)ether	88	U	88	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Caprolactam	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Carbazole	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Chrysene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Hexachlorobutadiene	44	U	44	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Isophorone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Naphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Pentachlorophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Phenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Phenanthrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
Pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	79		32 - 120	12/29/17 10:29	01/04/18 16:02	1
2-Fluorophenol (Surr)	64		29 - 120	12/29/17 10:29	01/04/18 16:02	1
2,4,6-Tribromophenol (Surr)	54		10 - 120	12/29/17 10:29	01/04/18 16:02	1
Nitrobenzene-d5 (Surr)	58		30 - 120	12/29/17 10:29	01/04/18 16:02	1
Phenol-d5 (Surr)	67		29 - 120	12/29/17 10:29	01/04/18 16:02	1
Terphenyl-d14 (Surr)	99		41 - 120	12/29/17 10:29	01/04/18 16:02	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4-Dinitrophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
3,3'-Dichlorobenzidine	1700	U	1700	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4,6-Dinitro-2-methylphenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
4-Nitrophenol	360	U	360	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Acenaphthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Acetophenone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Atrazine	44	U *	44	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzo[a]anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzo[b]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Bis(2-chloroethyl)ether	87	U	87	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Caprolactam	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Carbazole	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Chrysene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Hexachlorobutadiene	44	U	44	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Isophorone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Naphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Pentachlorophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Phenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Phenanthrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
Pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/04/18 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		32 - 120	12/29/17 10:29	01/04/18 16:26	1
2-Fluorophenol (Surr)	67		29 - 120	12/29/17 10:29	01/04/18 16:26	1
2,4,6-Tribromophenol (Surr)	51		10 - 120	12/29/17 10:29	01/04/18 16:26	1
Nitrobenzene-d5 (Surr)	62		30 - 120	12/29/17 10:29	01/04/18 16:26	1
Phenol-d5 (Surr)	69		29 - 120	12/29/17 10:29	01/04/18 16:26	1
Terphenyl-d14 (Surr)	91		41 - 120	12/29/17 10:29	01/04/18 16:26	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,2'-oxybis[1-chloropropane]	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4,5-Trichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4,6-Trichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4-Dichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4-Dimethylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4-Dinitrophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,4-Dinitrotoluene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2,6-Dinitrotoluene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Chloronaphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Chlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Methylnaphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
2-Nitrophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
3,3'-Dichlorobenzidine	1900	U	1900	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
3-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4,6-Dinitro-2-methylphenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Bromophenyl phenyl ether	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Chloro-3-methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Chloroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Chlorophenyl phenyl ether	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
4-Nitrophenol	390	U	390	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Acenaphthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Acenaphthylene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Acetophenone	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Atrazine	47	U *	47	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzaldehyde	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzo[a]anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzo[a]pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzo[b]fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzo[g,h,i]perylene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Benzo[k]fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Bis(2-chloroethoxy)methane	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Bis(2-chloroethyl)ether	94	U	94	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Bis(2-ethylhexyl) phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Butyl benzyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Caprolactam	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Carbazole	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Chrysene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Dibenz(a,h)anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Dibenzofuran	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Diethyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Dimethyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Di-n-butyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Di-n-octyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Hexachlorobenzene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Hexachlorobutadiene	47	U	47	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Hexachlorocyclopentadiene	310	U F1	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Hexachloroethane	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Indeno[1,2,3-cd]pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Isophorone	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Naphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Nitrobenzene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
N-Nitrosodi-n-propylamine	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
N-Nitrosodiphenylamine	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Pentachlorophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Phenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Phenanthrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
Pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1
3 & 4 Methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/04/18 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	71		32 - 120	12/29/17 10:29	01/04/18 16:49	1
2-Fluorophenol (Surr)	59		29 - 120	12/29/17 10:29	01/04/18 16:49	1
2,4,6-Tribromophenol (Surr)	63		10 - 120	12/29/17 10:29	01/04/18 16:49	1
Nitrobenzene-d5 (Surr)	55		30 - 120	12/29/17 10:29	01/04/18 16:49	1
Phenol-d5 (Surr)	61		29 - 120	12/29/17 10:29	01/04/18 16:49	1
Terphenyl-d14 (Surr)	86		41 - 120	12/29/17 10:29	01/04/18 16:49	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Bis(2-chloroethyl)ether	91	U	91	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/02/18 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	85		32 - 120	12/29/17 10:29	01/02/18 14:55	1
2-Fluorophenol (Surr)	75		29 - 120	12/29/17 10:29	01/02/18 14:55	1
2,4,6-Tribromophenol (Surr)	66		10 - 120	12/29/17 10:29	01/02/18 14:55	1
Nitrobenzene-d5 (Surr)	71		30 - 120	12/29/17 10:29	01/02/18 14:55	1
Phenol-d5 (Surr)	76		29 - 120	12/29/17 10:29	01/02/18 14:55	1
Terphenyl-d14 (Surr)	104		41 - 120	12/29/17 10:29	01/02/18 14:55	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,2'-oxybis[1-chloropropane]	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4,5-Trichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4,6-Trichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4-Dichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4-Dimethylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4-Dinitrophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,4-Dinitrotoluene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2,6-Dinitrotoluene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Chloronaphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Chlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Methylnaphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
2-Nitrophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
3,3'-Dichlorobenzidine	1900	U	1900	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
3-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4,6-Dinitro-2-methylphenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Bromophenyl phenyl ether	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Chloro-3-methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Chloroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Chlorophenyl phenyl ether	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
4-Nitrophenol	400	U	400	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Acenaphthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Acenaphthylene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Acetophenone	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Atrazine	48	U *	48	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzaldehyde	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzo[a]anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzo[a]pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzo[b]fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzo[g,h,i]perylene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Benzo[k]fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Bis(2-chloroethoxy)methane	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Bis(2-chloroethyl)ether	97	U	97	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Bis(2-ethylhexyl) phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Butyl benzyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Caprolactam	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Carbazole	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Chrysene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Dibenz(a,h)anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Dibenzofuran	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Diethyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Dimethyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Di-n-butyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Di-n-octyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Hexachlorobenzene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Hexachlorobutadiene	48	U	48	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Hexachlorocyclopentadiene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Hexachloroethane	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Indeno[1,2,3-cd]pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Isophorone	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Naphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Nitrobenzene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
N-Nitrosodi-n-propylamine	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
N-Nitrosodiphenylamine	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Pentachlorophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Phenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Phenanthrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
Pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1
3 & 4 Methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/04/18 18:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		32 - 120	12/29/17 10:29	01/04/18 18:24	1
2-Fluorophenol (Surr)	69		29 - 120	12/29/17 10:29	01/04/18 18:24	1
2,4,6-Tribromophenol (Surr)	56		10 - 120	12/29/17 10:29	01/04/18 18:24	1
Nitrobenzene-d5 (Surr)	61		30 - 120	12/29/17 10:29	01/04/18 18:24	1
Phenol-d5 (Surr)	72		29 - 120	12/29/17 10:29	01/04/18 18:24	1
Terphenyl-d14 (Surr)	96		41 - 120	12/29/17 10:29	01/04/18 18:24	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Bis(2-chloroethyl)ether	91	U	91	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	89		32 - 120	12/29/17 10:29	01/03/18 12:17	1
2-Fluorophenol (Surr)	80		29 - 120	12/29/17 10:29	01/03/18 12:17	1
2,4,6-Tribromophenol (Surr)	56		10 - 120	12/29/17 10:29	01/03/18 12:17	1
Nitrobenzene-d5 (Surr)	72		30 - 120	12/29/17 10:29	01/03/18 12:17	1
Phenol-d5 (Surr)	82		29 - 120	12/29/17 10:29	01/03/18 12:17	1
Terphenyl-d14 (Surr)	110		41 - 120	12/29/17 10:29	01/03/18 12:17	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Bis(2-chloroethyl)ether	90	U	90	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		32 - 120	12/29/17 10:29	01/04/18 18:00	1
2-Fluorophenol (Surr)	55		29 - 120	12/29/17 10:29	01/04/18 18:00	1
2,4,6-Tribromophenol (Surr)	56		10 - 120	12/29/17 10:29	01/04/18 18:00	1
Nitrobenzene-d5 (Surr)	48		30 - 120	12/29/17 10:29	01/04/18 18:00	1
Phenol-d5 (Surr)	59		29 - 120	12/29/17 10:29	01/04/18 18:00	1
Terphenyl-d14 (Surr)	82		41 - 120	12/29/17 10:29	01/04/18 18:00	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,2'-oxybis[1-chloropropane]	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4,5-Trichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4,6-Trichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4-Dichlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4-Dimethylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4-Dinitrophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,4-Dinitrotoluene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2,6-Dinitrotoluene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Chloronaphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Chlorophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Methylnaphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
2-Nitrophenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
3,3'-Dichlorobenzidine	1900	U	1900	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4,6-Dinitro-2-methylphenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Bromophenyl phenyl ether	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Chloro-3-methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Chlorophenyl phenyl ether	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
4-Nitrophenol	390	U	390	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Acenaphthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Acenaphthylene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Acetophenone	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Atrazine	47	U *	47	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzaldehyde	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzo[a]anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzo[a]pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzo[b]fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzo[g,h,i]perylene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Benzo[k]fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Bis(2-chloroethoxy)methane	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Bis(2-chloroethyl)ether	94	U	94	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Bis(2-ethylhexyl) phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Butyl benzyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Caprolactam	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Carbazole	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Chrysene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Dibenz(a,h)anthracene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Dibenzofuran	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Diethyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Dimethyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Di-n-butyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Di-n-octyl phthalate	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Fluoranthene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Hexachlorobenzene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Hexachlorobutadiene	47	U	47	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Hexachlorocyclopentadiene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Hexachloroethane	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Indeno[1,2,3-cd]pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Isophorone	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Naphthalene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Nitrobenzene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
N-Nitrosodi-n-propylamine	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
N-Nitrosodiphenylamine	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Pentachlorophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Phenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Phenanthrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
Pyrene	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1
3 & 4 Methylphenol	310	U	310	ug/Kg	☼	12/29/17 10:29	01/02/18 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	91		32 - 120	12/29/17 10:29	01/02/18 15:43	1
2-Fluorophenol (Surr)	78		29 - 120	12/29/17 10:29	01/02/18 15:43	1
2,4,6-Tribromophenol (Surr)	60		10 - 120	12/29/17 10:29	01/02/18 15:43	1
Nitrobenzene-d5 (Surr)	73		30 - 120	12/29/17 10:29	01/02/18 15:43	1
Phenol-d5 (Surr)	81		29 - 120	12/29/17 10:29	01/02/18 15:43	1
Terphenyl-d14 (Surr)	107		41 - 120	12/29/17 10:29	01/02/18 15:43	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,2'-oxybis[1-chloropropane]	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4,5-Trichlorophenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4,6-Trichlorophenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4-Dichlorophenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4-Dimethylphenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4-Dinitrophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,4-Dinitrotoluene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2,6-Dinitrotoluene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Chloronaphthalene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Chlorophenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Methylnaphthalene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Methylphenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Nitroaniline	210	U	210	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
2-Nitrophenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
3,3'-Dichlorobenzidine	1700	U	1700	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
3-Nitroaniline	210	U	210	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4,6-Dinitro-2-methylphenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Bromophenyl phenyl ether	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Chloro-3-methylphenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Chloroaniline	210	U	210	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Chlorophenyl phenyl ether	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Nitroaniline	210	U	210	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
4-Nitrophenol	350	U	350	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Acenaphthene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Acenaphthylene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Acetophenone	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Anthracene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Atrazine	42	U *	42	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzaldehyde	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzo[a]anthracene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzo[a]pyrene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzo[b]fluoranthene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzo[g,h,i]perylene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Benzo[k]fluoranthene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Bis(2-chloroethoxy)methane	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Bis(2-chloroethyl)ether	84	U	84	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Bis(2-ethylhexyl) phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Butyl benzyl phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Caprolactam	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Carbazole	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Chrysene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Dibenz(a,h)anthracene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Dibenzofuran	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Diethyl phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Dimethyl phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Di-n-butyl phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Di-n-octyl phthalate	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Fluoranthene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Hexachlorobenzene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Hexachlorobutadiene	42	U	42	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Hexachlorocyclopentadiene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Hexachloroethane	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Indeno[1,2,3-cd]pyrene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Isophorone	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Naphthalene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Nitrobenzene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
N-Nitrosodi-n-propylamine	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
N-Nitrosodiphenylamine	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Pentachlorophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Phenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Phenanthrene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
Pyrene	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1
3 & 4 Methylphenol	280	U	280	ug/Kg	☼	12/29/17 10:29	01/02/18 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	86		32 - 120	12/29/17 10:29	01/02/18 15:19	1
2-Fluorophenol (Surr)	77		29 - 120	12/29/17 10:29	01/02/18 15:19	1
2,4,6-Tribromophenol (Surr)	63		10 - 120	12/29/17 10:29	01/02/18 15:19	1
Nitrobenzene-d5 (Surr)	72		30 - 120	12/29/17 10:29	01/02/18 15:19	1
Phenol-d5 (Surr)	78		29 - 120	12/29/17 10:29	01/02/18 15:19	1
Terphenyl-d14 (Surr)	109		41 - 120	12/29/17 10:29	01/02/18 15:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Bis(2-chloroethyl)ether	89	U	89	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/04/18 19:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		32 - 120	12/29/17 10:29	01/04/18 19:11	1
2-Fluorophenol (Surr)	57		29 - 120	12/29/17 10:29	01/04/18 19:11	1
2,4,6-Tribromophenol (Surr)	41		10 - 120	12/29/17 10:29	01/04/18 19:11	1
Nitrobenzene-d5 (Surr)	52		30 - 120	12/29/17 10:29	01/04/18 19:11	1
Phenol-d5 (Surr)	59		29 - 120	12/29/17 10:29	01/04/18 19:11	1
Terphenyl-d14 (Surr)	87		41 - 120	12/29/17 10:29	01/04/18 19:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,2'-oxybis[1-chloropropane]	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4,5-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4,6-Trichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4-Dichlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4-Dimethylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4-Dinitrophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,4-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2,6-Dinitrotoluene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Chloronaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Chlorophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Methylnaphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
2-Nitrophenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
3,3'-Dichlorobenzidine	1700	U	1700	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
3-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4,6-Dinitro-2-methylphenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Bromophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Chloro-3-methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Chloroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Chlorophenyl phenyl ether	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Nitroaniline	220	U	220	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
4-Nitrophenol	360	U	360	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Acenaphthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Acenaphthylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Acetophenone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Atrazine	44	U *	44	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzaldehyde	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzo[a]anthracene	320		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzo[a]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzo[b]fluoranthene	430		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzo[g,h,i]perylene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Benzo[k]fluoranthene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Bis(2-chloroethoxy)methane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Bis(2-chloroethyl)ether	87	U	87	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Bis(2-ethylhexyl) phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Butyl benzyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Caprolactam	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Carbazole	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Chrysene	310		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Dibenz(a,h)anthracene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Dibenzofuran	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Diethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Dimethyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Di-n-butyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Di-n-octyl phthalate	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Fluoranthene	870		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Hexachlorobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Hexachlorobutadiene	44	U	44	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Hexachlorocyclopentadiene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Hexachloroethane	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Indeno[1,2,3-cd]pyrene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Isophorone	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Naphthalene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Nitrobenzene	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
N-Nitrosodi-n-propylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
N-Nitrosodiphenylamine	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Pentachlorophenol	160	U	160	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Phenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Phenanthrene	550		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
Pyrene	760		290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1
3 & 4 Methylphenol	290	U	290	ug/Kg	☼	12/29/17 10:29	01/03/18 11:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	91		32 - 120	12/29/17 10:29	01/03/18 11:06	1
2-Fluorophenol (Surr)	79		29 - 120	12/29/17 10:29	01/03/18 11:06	1
2,4,6-Tribromophenol (Surr)	54		10 - 120	12/29/17 10:29	01/03/18 11:06	1
Nitrobenzene-d5 (Surr)	71		30 - 120	12/29/17 10:29	01/03/18 11:06	1
Phenol-d5 (Surr)	81		29 - 120	12/29/17 10:29	01/03/18 11:06	1
Terphenyl-d14 (Surr)	108		41 - 120	12/29/17 10:29	01/03/18 11:06	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,2'-oxybis[1-chloropropane]	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4,5-Trichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4,6-Trichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4-Dichlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4-Dimethylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4-Dinitrophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,4-Dinitrotoluene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2,6-Dinitrotoluene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Chloronaphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Chlorophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Methylnaphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
2-Nitrophenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
3,3'-Dichlorobenzidine	1900	U	1900	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
3-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4,6-Dinitro-2-methylphenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Bromophenyl phenyl ether	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Chloro-3-methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Chloroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Chlorophenyl phenyl ether	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Nitroaniline	240	U	240	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
4-Nitrophenol	390	U	390	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Acenaphthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Acenaphthylene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Acetophenone	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Atrazine	48	U *	48	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzaldehyde	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzo[a]anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzo[a]pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzo[b]fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzo[g,h,i]perylene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Benzo[k]fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Bis(2-chloroethoxy)methane	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Bis(2-chloroethyl)ether	95	U	95	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Bis(2-ethylhexyl) phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Butyl benzyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Caprolactam	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Carbazole	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Chrysene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Dibenz(a,h)anthracene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Dibenzofuran	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Diethyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Dimethyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Di-n-butyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Di-n-octyl phthalate	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Fluoranthene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Hexachlorobenzene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Hexachlorobutadiene	48	U	48	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Hexachlorocyclopentadiene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Hexachloroethane	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Indeno[1,2,3-cd]pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Isophorone	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Naphthalene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Nitrobenzene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
N-Nitrosodi-n-propylamine	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
N-Nitrosodiphenylamine	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Pentachlorophenol	180	U	180	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Phenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Phenanthrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
Pyrene	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1
3 & 4 Methylphenol	320	U	320	ug/Kg	☼	12/29/17 10:29	01/03/18 10:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	95		32 - 120	12/29/17 10:29	01/03/18 10:43	1
2-Fluorophenol (Surr)	82		29 - 120	12/29/17 10:29	01/03/18 10:43	1
2,4,6-Tribromophenol (Surr)	82		10 - 120	12/29/17 10:29	01/03/18 10:43	1
Nitrobenzene-d5 (Surr)	74		30 - 120	12/29/17 10:29	01/03/18 10:43	1
Phenol-d5 (Surr)	86		29 - 120	12/29/17 10:29	01/03/18 10:43	1
Terphenyl-d14 (Surr)	111		41 - 120	12/29/17 10:29	01/03/18 10:43	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,2'-oxybis[1-chloropropane]	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4,5-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4,6-Trichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4-Dichlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4-Dimethylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4-Dinitrophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,4-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2,6-Dinitrotoluene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Chloronaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Chlorophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Methylnaphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
2-Nitrophenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
3,3'-Dichlorobenzidine	1800	U	1800	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
3-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4,6-Dinitro-2-methylphenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Bromophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Chloro-3-methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Chloroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Chlorophenyl phenyl ether	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Nitroaniline	230	U	230	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
4-Nitrophenol	370	U	370	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Acenaphthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Acenaphthylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Acetophenone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Atrazine	45	U *	45	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzaldehyde	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzo[a]anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzo[a]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzo[b]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzo[g,h,i]perylene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Benzo[k]fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Bis(2-chloroethoxy)methane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Bis(2-chloroethyl)ether	90	U	90	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Bis(2-ethylhexyl) phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Butyl benzyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Caprolactam	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Carbazole	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Chrysene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Dibenz(a,h)anthracene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Dibenzofuran	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Diethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Dimethyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Di-n-butyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Di-n-octyl phthalate	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Fluoranthene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Hexachlorobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Hexachlorobutadiene	45	U	45	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Hexachlorocyclopentadiene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Hexachloroethane	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Indeno[1,2,3-cd]pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Isophorone	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Naphthalene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Nitrobenzene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
N-Nitrosodi-n-propylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
N-Nitrosodiphenylamine	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Pentachlorophenol	170	U	170	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Phenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Phenanthrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
Pyrene	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1
3 & 4 Methylphenol	300	U	300	ug/Kg	☼	12/29/17 10:29	01/03/18 10:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	98		32 - 120	12/29/17 10:29	01/03/18 10:19	1
2-Fluorophenol (Surr)	84		29 - 120	12/29/17 10:29	01/03/18 10:19	1
2,4,6-Tribromophenol (Surr)	96		10 - 120	12/29/17 10:29	01/03/18 10:19	1
Nitrobenzene-d5 (Surr)	79		30 - 120	12/29/17 10:29	01/03/18 10:19	1
Phenol-d5 (Surr)	88		29 - 120	12/29/17 10:29	01/03/18 10:19	1
Terphenyl-d14 (Surr)	119		41 - 120	12/29/17 10:29	01/03/18 10:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
4,4'-DDE	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
4,4'-DDT	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Aldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
alpha-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
alpha-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
beta-BHC	5.9	U *	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
delta-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Dieldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endosulfan I	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endosulfan II	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endosulfan sulfate	5.9	U *	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endrin aldehyde	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Endrin ketone	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
gamma-BHC (Lindane)	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
gamma-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Heptachlor	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Heptachlor epoxide	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Toxaphene	120	U	120	ug/Kg	☼	12/28/17 12:15	01/02/18 11:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	72		13 - 135			12/28/17 12:15	01/02/18 11:31	1
Tetrachloro-m-xylene	74		30 - 120			12/28/17 12:15	01/02/18 11:31	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
4,4'-DDE	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
4,4'-DDT	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Aldrin	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
alpha-BHC	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
alpha-Chlordane	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
beta-BHC	6.2	U *	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
delta-BHC	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Dieldrin	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endosulfan I	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endosulfan II	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endosulfan sulfate	6.2	U *	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endrin	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endrin aldehyde	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Endrin ketone	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
gamma-BHC (Lindane)	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
gamma-Chlordane	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Heptachlor	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Heptachlor epoxide	6.2	U	6.2	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Methoxychlor	12	U	12	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1
Toxaphene	120	U	120	ug/Kg	☼	12/28/17 12:15	01/02/18 11:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	69		13 - 135	12/28/17 12:15	01/02/18 11:43	1
Tetrachloro-m-xylene	74		30 - 120	12/28/17 12:15	01/02/18 11:43	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
4,4'-DDE	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
4,4'-DDT	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Aldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
alpha-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
alpha-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
beta-BHC	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
delta-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Dieldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endosulfan I	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endosulfan II	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endosulfan sulfate	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endrin aldehyde	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Endrin ketone	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
gamma-BHC (Lindane)	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
gamma-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Heptachlor	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Heptachlor epoxide	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 11:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	73		13 - 135	12/28/17 12:15	01/02/18 11:56	1
Tetrachloro-m-xylene	75		30 - 120	12/28/17 12:15	01/02/18 11:56	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
4,4'-DDE	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
4,4'-DDT	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Aldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
alpha-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
alpha-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
beta-BHC	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
delta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Dieldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endosulfan I	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endosulfan II	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endosulfan sulfate	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endrin aldehyde	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Endrin ketone	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
gamma-BHC (Lindane)	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
gamma-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Heptachlor	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Heptachlor epoxide	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	78		13 - 135	12/28/17 12:15	01/02/18 12:08	1
Tetrachloro-m-xylene	83		30 - 120	12/28/17 12:15	01/02/18 12:08	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
4,4'-DDE	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
4,4'-DDT	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Aldrin	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
alpha-BHC	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
alpha-Chlordane	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
beta-BHC	29	U *	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
delta-BHC	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Dieldrin	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endosulfan I	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endosulfan II	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endosulfan sulfate	29	U *	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endrin	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endrin aldehyde	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Endrin ketone	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
gamma-BHC (Lindane)	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
gamma-Chlordane	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Heptachlor	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Heptachlor epoxide	29	U	29	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Methoxychlor	56	U	56	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Toxaphene	560	U	560	ug/Kg	☼	12/28/17 12:15	01/02/18 12:21	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	116		13 - 135			12/28/17 12:15	01/02/18 12:21	5
Tetrachloro-m-xylene	126	X	30 - 120			12/28/17 12:15	01/02/18 12:21	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
4,4'-DDE	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
4,4'-DDT	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Aldrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
alpha-BHC	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
alpha-Chlordane	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
beta-BHC	5.7	U *	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
delta-BHC	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Dieldrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endosulfan I	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endosulfan II	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endosulfan sulfate	5.7	U *	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endrin aldehyde	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Endrin ketone	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
gamma-BHC (Lindane)	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
gamma-Chlordane	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Heptachlor	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Heptachlor epoxide	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 12:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	73		13 - 135	12/28/17 12:15	01/02/18 12:33	1
Tetrachloro-m-xylene	73		30 - 120	12/28/17 12:15	01/02/18 12:33	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
4,4'-DDE	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
4,4'-DDT	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Aldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
alpha-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
alpha-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
beta-BHC	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
delta-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Dieldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endosulfan I	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endosulfan II	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endosulfan sulfate	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endrin aldehyde	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Endrin ketone	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
gamma-BHC (Lindane)	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
gamma-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Heptachlor	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Heptachlor epoxide	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 12:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	75		13 - 135	12/28/17 12:15	01/02/18 12:46	1
Tetrachloro-m-xylene	74		30 - 120	12/28/17 12:15	01/02/18 12:46	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
4,4'-DDE	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
4,4'-DDT	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Aldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
alpha-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
alpha-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
beta-BHC	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
delta-BHC	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Dieldrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endosulfan I	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endosulfan II	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endosulfan sulfate	5.8	U *	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endrin	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endrin aldehyde	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Endrin ketone	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
gamma-BHC (Lindane)	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
gamma-Chlordane	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Heptachlor	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Heptachlor epoxide	5.8	U	5.8	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 12:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	71		13 - 135	12/28/17 12:15	01/02/18 12:58	1
Tetrachloro-m-xylene	70		30 - 120	12/28/17 12:15	01/02/18 12:58	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
4,4'-DDE	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
4,4'-DDT	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Aldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
alpha-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
alpha-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
beta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
delta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Dieldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endosulfan I	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endosulfan II	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endosulfan sulfate	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endrin aldehyde	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Endrin ketone	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
gamma-BHC (Lindane)	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
gamma-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Heptachlor	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Heptachlor epoxide	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	71		13 - 135	12/28/17 12:15	01/02/18 13:11	1
Tetrachloro-m-xylene	80		30 - 120	12/28/17 12:15	01/02/18 13:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
4,4'-DDE	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
4,4'-DDT	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Aldrin	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
alpha-BHC	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
alpha-Chlordane	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
beta-BHC	5.5	U *	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
delta-BHC	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Dieldrin	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endosulfan I	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endosulfan II	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endosulfan sulfate	5.5	U *	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endrin	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endrin aldehyde	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Endrin ketone	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
gamma-BHC (Lindane)	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
gamma-Chlordane	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Heptachlor	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Heptachlor epoxide	5.5	U	5.5	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	76		13 - 135	12/28/17 12:15	01/02/18 13:23	1
Tetrachloro-m-xylene	73		30 - 120	12/28/17 12:15	01/02/18 13:23	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
4,4'-DDE	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
4,4'-DDT	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Aldrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
alpha-BHC	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
alpha-Chlordane	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
beta-BHC	30	U *	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
delta-BHC	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Dieldrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endosulfan I	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endosulfan II	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endosulfan sulfate	30	U *	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endrin aldehyde	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Endrin ketone	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
gamma-BHC (Lindane)	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
gamma-Chlordane	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Heptachlor	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Heptachlor epoxide	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Methoxychlor	58	U	58	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5
Toxaphene	580	U	580	ug/Kg	☼	12/28/17 12:15	01/02/18 13:36	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	76		13 - 135	12/28/17 12:15	01/02/18 13:36	5
Tetrachloro-m-xylene	79		30 - 120	12/28/17 12:15	01/02/18 13:36	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
4,4'-DDE	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
4,4'-DDT	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Aldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
alpha-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
alpha-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
beta-BHC	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
delta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Dieldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endosulfan I	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endosulfan II	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endosulfan sulfate	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endrin aldehyde	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Endrin ketone	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
gamma-BHC (Lindane)	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
gamma-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Heptachlor	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Heptachlor epoxide	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 13:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	69		13 - 135	12/28/17 12:15	01/02/18 13:48	1
Tetrachloro-m-xylene	82		30 - 120	12/28/17 12:15	01/02/18 13:48	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
4,4'-DDE	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
4,4'-DDT	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Aldrin	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
alpha-BHC	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
alpha-Chlordane	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
beta-BHC	6.1	U *	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
delta-BHC	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Dieldrin	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endosulfan I	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endosulfan II	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endosulfan sulfate	6.1	U *	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endrin	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endrin aldehyde	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Endrin ketone	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
gamma-BHC (Lindane)	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
gamma-Chlordane	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Heptachlor	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Heptachlor epoxide	6.1	U	6.1	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Methoxychlor	12	U	12	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1
Toxaphene	120	U	120	ug/Kg	☼	12/28/17 12:15	01/02/18 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	58		13 - 135	12/28/17 12:15	01/02/18 14:01	1
Tetrachloro-m-xylene	58		30 - 120	12/28/17 12:15	01/02/18 14:01	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
4,4'-DDE	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
4,4'-DDT	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Aldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
alpha-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
alpha-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
beta-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
delta-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Dieldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endosulfan I	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endosulfan II	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endosulfan sulfate	5.9	U *	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endrin aldehyde	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Endrin ketone	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
gamma-BHC (Lindane)	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
gamma-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Heptachlor	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Heptachlor epoxide	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		13 - 135	12/28/17 12:15	01/02/18 14:13	1
Tetrachloro-m-xylene	76		30 - 120	12/28/17 12:15	01/02/18 14:13	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
4,4'-DDE	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
4,4'-DDT	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Aldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
alpha-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
alpha-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
beta-BHC	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
delta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Dieldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endosulfan I	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endosulfan II	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endosulfan sulfate	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endrin aldehyde	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Endrin ketone	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
gamma-BHC (Lindane)	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
gamma-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Heptachlor	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Heptachlor epoxide	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	66		13 - 135	12/28/17 12:15	01/02/18 14:26	1
Tetrachloro-m-xylene	69		30 - 120	12/28/17 12:15	01/02/18 14:26	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
4,4'-DDE	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
4,4'-DDT	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Aldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
alpha-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
alpha-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
beta-BHC	5.9	U *	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
delta-BHC	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Dieldrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endosulfan I	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endosulfan II	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endosulfan sulfate	5.9	U *	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endrin	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endrin aldehyde	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Endrin ketone	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
gamma-BHC (Lindane)	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
gamma-Chlordane	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Heptachlor	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Heptachlor epoxide	5.9	U	5.9	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1
Toxaphene	120	U	120	ug/Kg	☼	12/28/17 12:15	01/02/18 14:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	75		13 - 135	12/28/17 12:15	01/02/18 14:38	1
Tetrachloro-m-xylene	79		30 - 120	12/28/17 12:15	01/02/18 14:38	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
4,4'-DDE	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
4,4'-DDT	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Aldrin	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
alpha-BHC	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
alpha-Chlordane	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
beta-BHC	5.3	U *	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
delta-BHC	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Dieldrin	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endosulfan I	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endosulfan II	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endosulfan sulfate	5.3	U *	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endrin	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endrin aldehyde	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Endrin ketone	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
gamma-BHC (Lindane)	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
gamma-Chlordane	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Heptachlor	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Heptachlor epoxide	5.3	U	5.3	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Methoxychlor	10	U	10	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1
Toxaphene	100	U	100	ug/Kg	☼	12/28/17 12:15	01/02/18 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	70		13 - 135	12/28/17 12:15	01/02/18 14:51	1
Tetrachloro-m-xylene	76		30 - 120	12/28/17 12:15	01/02/18 14:51	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
4,4'-DDE	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
4,4'-DDT	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Aldrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
alpha-BHC	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
alpha-Chlordane	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
beta-BHC	5.7	U *	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
delta-BHC	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Dieldrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endosulfan I	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endosulfan II	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endosulfan sulfate	5.7	U *	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endrin	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endrin aldehyde	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Endrin ketone	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
gamma-BHC (Lindane)	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
gamma-Chlordane	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Heptachlor	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Heptachlor epoxide	5.7	U	5.7	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 15:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	66		13 - 135	12/28/17 12:15	01/02/18 15:03	1
Tetrachloro-m-xylene	63		30 - 120	12/28/17 12:15	01/02/18 15:03	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
4,4'-DDE	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
4,4'-DDT	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Aldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
alpha-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
alpha-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
beta-BHC	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
delta-BHC	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Dieldrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endosulfan I	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endosulfan II	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endosulfan sulfate	5.6	U *	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endrin	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endrin aldehyde	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Endrin ketone	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
gamma-BHC (Lindane)	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
gamma-Chlordane	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Heptachlor	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Heptachlor epoxide	5.6	U	5.6	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Methoxychlor	11	U	11	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1
Toxaphene	110	U	110	ug/Kg	☼	12/28/17 12:15	01/02/18 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	106		13 - 135	12/28/17 12:15	01/02/18 18:02	1
Tetrachloro-m-xylene	90		30 - 120	12/28/17 12:15	01/02/18 18:02	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
4,4'-DDE	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
4,4'-DDT	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Aldrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
alpha-BHC	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
alpha-Chlordane	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
beta-BHC	30	U *	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
delta-BHC	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Dieldrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endosulfan I	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endosulfan II	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endosulfan sulfate	30	U *	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endrin	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endrin aldehyde	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Endrin ketone	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
gamma-BHC (Lindane)	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
gamma-Chlordane	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Heptachlor	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Heptachlor epoxide	30	U	30	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Methoxychlor	58	U	58	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5
Toxaphene	590	U	590	ug/Kg	☼	12/28/17 12:15	01/02/18 18:15	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	126		13 - 135	12/28/17 12:15	01/02/18 18:15	5
Tetrachloro-m-xylene	122	X	30 - 120	12/28/17 12:15	01/02/18 18:15	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
4,4'-DDE	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
4,4'-DDT	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Aldrin	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
alpha-BHC	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
alpha-Chlordane	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
beta-BHC	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
delta-BHC	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Dieldrin	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endosulfan I	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endosulfan II	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endosulfan sulfate	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endrin	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endrin aldehyde	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Endrin ketone	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
gamma-BHC (Lindane)	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
gamma-Chlordane	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Heptachlor	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Heptachlor epoxide	28	U	28	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Methoxychlor	55	U	55	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5
Toxaphene	560	U	560	ug/Kg	☼	12/29/17 10:04	01/02/18 19:18	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	130		13 - 135	12/29/17 10:04	01/02/18 19:18	5
Tetrachloro-m-xylene	88		30 - 120	12/29/17 10:04	01/02/18 19:18	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1221	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1232	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1242	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1248	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1254	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1
Aroclor-1260	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 12:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	124		14 - 128	12/21/17 09:03	12/22/17 12:04	1
DCB Decachlorobiphenyl	143	X	10 - 132	12/21/17 09:03	12/22/17 12:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1221	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1232	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1242	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1248	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1254	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1
Aroclor-1260	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		14 - 128	12/21/17 09:03	12/22/17 12:24	1
DCB Decachlorobiphenyl	112		10 - 132	12/21/17 09:03	12/22/17 12:24	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1221	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1232	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1242	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1248	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1254	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1
Aroclor-1260	57	U	57	ug/Kg	☼	12/21/17 09:03	12/22/17 12:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		14 - 128	12/21/17 09:03	12/22/17 12:44	1
DCB Decachlorobiphenyl	113		10 - 132	12/21/17 09:03	12/22/17 12:44	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1221	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1232	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1242	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1248	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1254	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1
Aroclor-1260	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 13:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	12/21/17 09:03	12/22/17 13:04	1
DCB Decachlorobiphenyl	108		10 - 132	12/21/17 09:03	12/22/17 13:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1221	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1232	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1242	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1248	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1254	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1
Aroclor-1260	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 13:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		14 - 128	12/21/17 09:03	12/22/17 13:24	1
DCB Decachlorobiphenyl	95		10 - 132	12/21/17 09:03	12/22/17 13:24	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1221	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1232	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1242	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1248	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1254	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1
Aroclor-1260	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	12/21/17 09:03	12/22/17 13:43	1
DCB Decachlorobiphenyl	96		10 - 132	12/21/17 09:03	12/22/17 13:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1221	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1232	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1242	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1248	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1254	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1
Aroclor-1260	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		14 - 128	12/21/17 09:03	12/22/17 14:03	1
DCB Decachlorobiphenyl	93		10 - 132	12/21/17 09:03	12/22/17 14:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1221	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1232	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1242	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1248	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1254	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1
Aroclor-1260	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	106		14 - 128	12/21/17 09:03	12/22/17 14:23	1
DCB Decachlorobiphenyl	102		10 - 132	12/21/17 09:03	12/22/17 14:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1221	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1232	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1242	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1248	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1254	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1
Aroclor-1260	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		14 - 128	12/21/17 09:03	12/22/17 14:42	1
DCB Decachlorobiphenyl	97		10 - 132	12/21/17 09:03	12/22/17 14:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1221	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1232	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1242	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1248	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1254	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1
Aroclor-1260	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 15:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	109		14 - 128	12/21/17 09:03	12/22/17 15:02	1
DCB Decachlorobiphenyl	115		10 - 132	12/21/17 09:03	12/22/17 15:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1221	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1232	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1242	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1248	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1254	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1
Aroclor-1260	59	U	59	ug/Kg	☼	12/21/17 09:03	12/22/17 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	96		14 - 128	12/21/17 09:03	12/22/17 15:21	1
DCB Decachlorobiphenyl	104		10 - 132	12/21/17 09:03	12/22/17 15:21	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1221	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1232	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1242	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1248	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1254	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1
Aroclor-1260	54	U	54	ug/Kg	☼	12/21/17 09:03	12/22/17 16:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	12/21/17 09:03	12/22/17 16:20	1
DCB Decachlorobiphenyl	87		10 - 132	12/21/17 09:03	12/22/17 16:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1221	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1232	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1242	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1248	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1254	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1
Aroclor-1260	60	U	60	ug/Kg	☼	12/21/17 09:03	12/22/17 16:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		14 - 128	12/21/17 09:03	12/22/17 16:40	1
DCB Decachlorobiphenyl	100		10 - 132	12/21/17 09:03	12/22/17 16:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1221	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1232	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1242	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1248	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1254	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1
Aroclor-1260	55	U	55	ug/Kg	☼	12/21/17 09:03	12/22/17 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		14 - 128	12/21/17 09:03	12/22/17 17:00	1
DCB Decachlorobiphenyl	88		10 - 132	12/21/17 09:03	12/22/17 17:00	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1221	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1232	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1242	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1248	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1254	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1
Aroclor-1260	56	U	56	ug/Kg	☼	12/21/17 09:03	12/22/17 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		14 - 128	12/21/17 09:03	12/22/17 17:19	1
DCB Decachlorobiphenyl	96		10 - 132	12/21/17 09:03	12/22/17 17:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1221	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1232	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1242	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1248	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1254	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1
Aroclor-1260	58	U	58	ug/Kg	☼	12/28/17 12:57	12/30/17 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	12/28/17 12:57	12/30/17 17:13	1
DCB Decachlorobiphenyl	75		10 - 132	12/28/17 12:57	12/30/17 17:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1221	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1232	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1242	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1248	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1254	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1
Aroclor-1260	53	U	53	ug/Kg	☼	12/28/17 12:57	12/30/17 17:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		14 - 128	12/28/17 12:57	12/30/17 17:32	1
DCB Decachlorobiphenyl	82		10 - 132	12/28/17 12:57	12/30/17 17:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1221	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1232	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1242	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1248	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1254	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1
Aroclor-1260	55	U	55	ug/Kg	☼	12/28/17 12:57	12/30/17 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	12/28/17 12:57	12/30/17 17:51	1
DCB Decachlorobiphenyl	71		10 - 132	12/28/17 12:57	12/30/17 17:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1221	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1232	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1242	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1248	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1254	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1
Aroclor-1260	55	U	55	ug/Kg	☼	12/29/17 09:08	01/02/18 23:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	12/29/17 09:08	01/02/18 23:54	1
DCB Decachlorobiphenyl	91		10 - 132	12/29/17 09:08	01/02/18 23:54	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1221	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1232	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1242	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1248	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1254	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1
Aroclor-1260	59	U	59	ug/Kg	☼	12/29/17 09:08	01/03/18 00:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	12/29/17 09:08	01/03/18 00:16	1
DCB Decachlorobiphenyl	87		10 - 132	12/29/17 09:08	01/03/18 00:16	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1221	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1232	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1242	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1248	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1254	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1
Aroclor-1260	57	U	57	ug/Kg	☼	12/29/17 09:08	01/03/18 09:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		14 - 128	12/29/17 09:08	01/03/18 09:59	1
DCB Decachlorobiphenyl	113		10 - 132	12/29/17 09:08	01/03/18 09:59	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	7.7	U	7.7	ug/Kg	☼	12/29/17 12:54	01/02/18 23:13	1
2,4,5-T	7.7	U	7.7	ug/Kg	☼	12/29/17 12:54	01/02/18 23:13	1
Silvex (2,4,5-TP)	7.7	U	7.7	ug/Kg	☼	12/29/17 12:54	01/02/18 23:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	36		22 - 130			12/29/17 12:54	01/02/18 23:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	10	U	10	ug/Kg	☼	12/29/17 12:54	01/02/18 23:37	1
2,4,5-T	10	U	10	ug/Kg	☼	12/29/17 12:54	01/02/18 23:37	1
Silvex (2,4,5-TP)	10	U	10	ug/Kg	☼	12/29/17 12:54	01/02/18 23:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	32		22 - 130			12/29/17 12:54	01/02/18 23:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	7.5	U	7.5	ug/Kg	☼	12/29/17 12:54	01/03/18 00:01	1
2,4,5-T	7.5	U	7.5	ug/Kg	☼	12/29/17 12:54	01/03/18 00:01	1
Silvex (2,4,5-TP)	7.5	U	7.5	ug/Kg	☼	12/29/17 12:54	01/03/18 00:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	92		22 - 130			12/29/17 12:54	01/03/18 00:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 00:26	1
2,4,5-T	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 00:26	1
Silvex (2,4,5-TP)	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 00:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	93		22 - 130			12/29/17 12:54	01/03/18 00:26	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	9.6	U	9.6	ug/Kg	☼	12/29/17 12:54	01/03/18 00:50	1
2,4,5-T	9.6	U	9.6	ug/Kg	☼	12/29/17 12:54	01/03/18 00:50	1
Silvex (2,4,5-TP)	9.6	U	9.6	ug/Kg	☼	12/29/17 12:54	01/03/18 00:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	91		22 - 130			12/29/17 12:54	01/03/18 00:50	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 01:14	1
2,4,5-T	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 01:14	1
Silvex (2,4,5-TP)	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 01:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	37		22 - 130			12/29/17 12:54	01/03/18 01:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	17	U	17	ug/Kg	☼	12/29/17 12:54	01/03/18 01:39	1
2,4,5-T	17	U	17	ug/Kg	☼	12/29/17 12:54	01/03/18 01:39	1
Silvex (2,4,5-TP)	17	U	17	ug/Kg	☼	12/29/17 12:54	01/03/18 01:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	63		22 - 130			12/29/17 12:54	01/03/18 01:39	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	38	U	38	ug/Kg	☼	12/29/17 12:54	01/03/18 02:03	5
2,4,5-T	38	U	38	ug/Kg	☼	12/29/17 12:54	01/03/18 02:03	5
Silvex (2,4,5-TP)	38	U	38	ug/Kg	☼	12/29/17 12:54	01/03/18 02:03	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	86		22 - 130			12/29/17 12:54	01/03/18 02:03	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	7.3	U	7.3	ug/Kg	☼	12/29/17 12:54	01/03/18 02:27	1
2,4,5-T	7.3	U	7.3	ug/Kg	☼	12/29/17 12:54	01/03/18 02:27	1
Silvex (2,4,5-TP)	7.3	U	7.3	ug/Kg	☼	12/29/17 12:54	01/03/18 02:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	289	X	22 - 130			12/29/17 12:54	01/03/18 02:27	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	14	U	14	ug/Kg	☼	12/29/17 12:54	01/03/18 02:52	1
2,4,5-T	14	U	14	ug/Kg	☼	12/29/17 12:54	01/03/18 02:52	1
Silvex (2,4,5-TP)	14	U	14	ug/Kg	☼	12/29/17 12:54	01/03/18 02:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	112		22 - 130			12/29/17 12:54	01/03/18 02:52	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	7.8	U	7.8	ug/Kg	☼	12/29/17 12:54	01/03/18 03:40	1
2,4,5-T	7.8	U	7.8	ug/Kg	☼	12/29/17 12:54	01/03/18 03:40	1
Silvex (2,4,5-TP)	7.8	U	7.8	ug/Kg	☼	12/29/17 12:54	01/03/18 03:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	137	X	22 - 130			12/29/17 12:54	01/03/18 03:40	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 04:05	1
2,4,5-T	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 04:05	1
Silvex (2,4,5-TP)	13	U	13	ug/Kg	☼	12/29/17 12:54	01/03/18 04:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	305	X	22 - 130			12/29/17 12:54	01/03/18 04:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 04:29	5
2,4,5-T	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 04:29	5
Silvex (2,4,5-TP)	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 04:29	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	85		22 - 130			12/29/17 12:54	01/03/18 04:29	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	12	U	12	ug/Kg	☼	12/29/17 12:54	01/03/18 04:54	1
2,4,5-T	12	U	12	ug/Kg	☼	12/29/17 12:54	01/03/18 04:54	1
Silvex (2,4,5-TP)	12	U	12	ug/Kg	☼	12/29/17 12:54	01/03/18 04:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	92		22 - 130			12/29/17 12:54	01/03/18 04:54	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 05:18	5
2,4,5-T	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 05:18	5
Silvex (2,4,5-TP)	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 05:18	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	81		22 - 130			12/29/17 12:54	01/03/18 05:18	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 05:42	1
2,4,5-T	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 05:42	1
Silvex (2,4,5-TP)	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 05:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	109		22 - 130			12/29/17 12:54	01/03/18 05:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 06:07	1
2,4,5-T	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 06:07	1
Silvex (2,4,5-TP)	8.3	U	8.3	ug/Kg	☼	12/29/17 12:54	01/03/18 06:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	59		22 - 130			12/29/17 12:54	01/03/18 06:07	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 06:31	5
2,4,5-T	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 06:31	5
Silvex (2,4,5-TP)	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 06:31	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	86		22 - 130			12/29/17 12:54	01/03/18 06:31	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 06:55	1
2,4,5-T	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 06:55	1
Silvex (2,4,5-TP)	61	U	61	ug/Kg	☼	12/29/17 12:54	01/03/18 06:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	138	X	22 - 130			12/29/17 12:54	01/03/18 06:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 07:20	5
2,4,5-T	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 07:20	5
Silvex (2,4,5-TP)	39	U	39	ug/Kg	☼	12/29/17 12:54	01/03/18 07:20	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	147	X	22 - 130			12/29/17 12:54	01/03/18 07:20	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	7.6	U	7.6	ug/Kg	☼	12/29/17 14:30	01/02/18 21:11	1
2,4,5-T	7.6	U	7.6	ug/Kg	☼	12/29/17 14:30	01/02/18 21:11	1
Silvex (2,4,5-TP)	7.6	U	7.6	ug/Kg	☼	12/29/17 14:30	01/02/18 21:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	105		22 - 130			12/29/17 14:30	01/02/18 21:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	24		0.74	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1
Cadmium	0.10		0.074	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1
Chromium	8.5		0.74	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1
Copper	6.9		0.74	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1
Zinc	23		1.8	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1
Lead	16		0.22	mg/Kg	☼	12/20/17 14:00	12/21/17 18:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	63		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1
Cadmium	0.25		0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1
Chromium	22		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1
Copper	20		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1
Zinc	84		1.8	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1
Lead	16		0.22	mg/Kg	☼	12/20/17 14:00	12/21/17 18:28	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	25		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1
Cadmium	0.11		0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1
Chromium	10		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1
Copper	7.3		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1
Zinc	45		1.6	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1
Lead	4.3		0.20	mg/Kg	☼	12/20/17 14:00	12/21/17 18:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	25		0.73	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1
Cadmium	0.12		0.073	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1
Chromium	8.3		0.73	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1
Copper	7.1		0.73	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1
Zinc	21		1.8	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1
Lead	3.6		0.22	mg/Kg	☼	12/20/17 14:00	12/21/17 18:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	37		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1
Cadmium	0.13		0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1
Chromium	11		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1
Copper	8.7		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1
Zinc	24		2.0	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1
Lead	5.3		0.24	mg/Kg	☼	12/20/17 14:00	12/21/17 18:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	45		0.75	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1
Cadmium	0.18		0.075	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1
Chromium	14		0.75	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1
Copper	11		0.75	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1
Zinc	35		1.9	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1
Lead	11		0.22	mg/Kg	☼	12/20/17 14:00	12/21/17 18:47	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	21		0.76	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1
Cadmium	0.092		0.076	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1
Chromium	7.1		0.76	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1
Copper	6.1		0.76	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1
Zinc	31		1.9	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1
Lead	9.4		0.23	mg/Kg	☼	12/20/17 14:00	12/21/17 19:00	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	8.7		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1
Cadmium	0.065	U	0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1
Chromium	3.7		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1
Copper	2.4		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1
Zinc	11		1.6	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1
Lead	13		0.20	mg/Kg	☼	12/20/17 14:00	12/21/17 19:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	38		0.78	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1
Cadmium	0.12		0.078	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1
Chromium	12		0.78	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1
Copper	8.0		0.78	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1
Zinc	24		1.9	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1
Lead	5.3		0.23	mg/Kg	☼	12/20/17 14:00	12/21/17 19:10	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	21		0.86	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1
Cadmium	0.10		0.086	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1
Chromium	7.1		0.86	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1
Copper	5.0		0.86	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1
Zinc	18		2.2	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1
Lead	7.0		0.26	mg/Kg	☼	12/20/17 14:00	12/21/17 19:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	29		0.82	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1
Cadmium	0.12		0.082	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1
Chromium	8.5		0.82	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1
Copper	6.8		0.82	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1
Zinc	24		2.0	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1
Lead	8.4		0.25	mg/Kg	☼	12/20/17 14:00	12/21/17 18:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	47		0.79	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1
Cadmium	0.12		0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1
Chromium	14		0.79	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1
Copper	9.9		0.79	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1
Zinc	25		2.0	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1
Lead	5.0		0.24	mg/Kg	☼	12/20/17 14:00	12/21/17 19:19	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	35		0.79	mg/Kg	☼	12/20/17 14:00	12/21/17 19:23	1
Cadmium	0.14		0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 19:23	1
Chromium	11		0.79	mg/Kg	☼	12/20/17 14:00	12/21/17 19:23	1
Copper	9.6		1.6	mg/Kg	☼	12/20/17 14:00	12/22/17 18:59	2
Zinc	36		2.0	mg/Kg	☼	12/20/17 14:00	12/21/17 19:23	1
Lead	8.0		0.24	mg/Kg	☼	12/20/17 14:00	12/21/17 19:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	30		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1
Cadmium	0.15		0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1
Chromium	9.2		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1
Copper	7.6		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1
Zinc	36		2.2	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1
Lead	11		0.27	mg/Kg	☼	12/20/17 14:00	12/21/17 19:28	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	22		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1
Cadmium	0.12		0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1
Chromium	5.7		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1
Copper	6.0		0.65	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1
Zinc	26		1.6	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1
Lead	11		0.19	mg/Kg	☼	12/20/17 14:00	12/21/17 19:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	23		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1
Cadmium	0.097		0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1
Chromium	7.2		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1
Copper	5.9		0.72	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1
Zinc	17		1.8	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1
Lead	6.7		0.22	mg/Kg	☼	12/20/17 14:00	12/21/17 19:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	8.0		0.58	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1
Cadmium	0.058	U	0.058	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1
Chromium	3.1		0.58	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1
Copper	2.7		0.58	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1
Zinc	9.5		1.4	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1
Lead	5.0		0.17	mg/Kg	☼	12/20/17 14:00	12/21/17 19:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	27		0.66	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1
Cadmium	0.13		0.066	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1
Chromium	7.1		0.66	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1
Copper	6.0		0.66	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1
Zinc	27		1.7	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1
Lead	13		0.20	mg/Kg	☼	12/20/17 14:00	12/21/17 19:56	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	21		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1
Cadmium	0.11		0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1
Chromium	7.1		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1
Copper	5.1		0.80	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1
Zinc	25		2.0	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1
Lead	7.0		0.24	mg/Kg	☼	12/20/17 14:00	12/21/17 20:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	28		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1
Cadmium	0.24		0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1
Chromium	9.0		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1
Copper	11		0.89	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1
Zinc	47		2.2	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1
Lead	39		0.27	mg/Kg	☼	12/20/17 14:00	12/21/17 20:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP)

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	40		0.67	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1
Cadmium	0.21		0.067	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1
Chromium	11		0.67	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1
Copper	14		0.67	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1
Zinc	67		1.7	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1
Lead	37		0.20	mg/Kg	☼	12/21/17 14:00	12/27/17 00:26	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.7		0.074	mg/Kg	☼	12/20/17 14:00	12/21/17 13:23	2
Selenium	0.32		0.15	mg/Kg	☼	12/20/17 14:00	12/21/17 13:23	2
Silver	0.074	U	0.074	mg/Kg	☼	12/20/17 14:00	12/21/17 13:23	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 13:28	2
Selenium	0.72		0.14	mg/Kg	☼	12/20/17 14:00	12/21/17 13:28	2
Silver	0.072	U	0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 13:28	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.8		0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 13:32	2
Selenium	0.32		0.13	mg/Kg	☼	12/20/17 14:00	12/21/17 13:32	2
Silver	0.065	U	0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 13:32	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.073	mg/Kg	☼	12/20/17 14:00	12/21/17 13:37	2
Selenium	0.39		0.15	mg/Kg	☼	12/20/17 14:00	12/21/17 13:37	2
Silver	0.073	U	0.073	mg/Kg	☼	12/20/17 14:00	12/21/17 13:37	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 13:41	2
Selenium	0.37		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 13:41	2
Silver	0.080	U	0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 13:41	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.075	mg/Kg	☼	12/20/17 14:00	12/21/17 13:46	2
Selenium	0.48		0.15	mg/Kg	☼	12/20/17 14:00	12/21/17 13:46	2
Silver	0.075	U	0.075	mg/Kg	☼	12/20/17 14:00	12/21/17 13:46	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.076	mg/Kg	☼	12/20/17 14:00	12/21/17 13:59	2
Selenium	0.27		0.15	mg/Kg	☼	12/20/17 14:00	12/21/17 13:59	2
Silver	0.076	U	0.076	mg/Kg	☼	12/20/17 14:00	12/21/17 13:59	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 14:04	2
Selenium	0.14		0.13	mg/Kg	☼	12/20/17 14:00	12/21/17 14:04	2
Silver	0.065	U	0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 14:04	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		0.078	mg/Kg	☼	12/20/17 14:00	12/21/17 14:08	2
Selenium	0.36		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 14:08	2
Silver	0.078	U	0.078	mg/Kg	☼	12/20/17 14:00	12/21/17 14:08	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.086	mg/Kg	☼	12/20/17 14:00	12/21/17 14:13	2
Selenium	0.20		0.17	mg/Kg	☼	12/20/17 14:00	12/21/17 14:13	2
Silver	0.086	U	0.086	mg/Kg	☼	12/20/17 14:00	12/21/17 14:13	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.082	mg/Kg	☼	12/20/17 14:00	12/21/17 12:52	2
Selenium	0.38		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 12:52	2
Silver	0.082	U	0.082	mg/Kg	☼	12/20/17 14:00	12/21/17 12:52	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 14:17	2
Selenium	0.45		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 14:17	2
Silver	0.079	U	0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 14:17	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 14:21	2
Selenium	0.40		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 14:21	2
Silver	0.079	U	0.079	mg/Kg	☼	12/20/17 14:00	12/21/17 14:21	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3		0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 14:26	2
Selenium	0.31		0.18	mg/Kg	☼	12/20/17 14:00	12/21/17 14:26	2
Silver	0.089	U	0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 14:26	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 14:30	2
Selenium	0.23		0.13	mg/Kg	☼	12/20/17 14:00	12/21/17 14:30	2
Silver	0.065	U	0.065	mg/Kg	☼	12/20/17 14:00	12/21/17 14:30	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 14:35	2
Selenium	0.26		0.14	mg/Kg	☼	12/20/17 14:00	12/21/17 14:35	2
Silver	0.072	U	0.072	mg/Kg	☼	12/20/17 14:00	12/21/17 14:35	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.058	mg/Kg	☼	12/20/17 14:00	12/21/17 14:39	2
Selenium	0.16		0.12	mg/Kg	☼	12/20/17 14:00	12/21/17 14:39	2
Silver	0.058	U	0.058	mg/Kg	☼	12/20/17 14:00	12/21/17 14:39	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.8		0.066	mg/Kg	☼	12/20/17 14:00	12/21/17 14:53	2
Selenium	0.24		0.13	mg/Kg	☼	12/20/17 14:00	12/21/17 14:53	2
Silver	0.066	U	0.066	mg/Kg	☼	12/20/17 14:00	12/21/17 14:53	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 14:57	2
Selenium	0.17		0.16	mg/Kg	☼	12/20/17 14:00	12/21/17 14:57	2
Silver	0.080	U	0.080	mg/Kg	☼	12/20/17 14:00	12/21/17 14:57	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 15:02	2
Selenium	0.31		0.18	mg/Kg	☼	12/20/17 14:00	12/21/17 15:02	2
Silver	0.089	U	0.089	mg/Kg	☼	12/20/17 14:00	12/21/17 15:02	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.033	mg/Kg	☼	12/21/17 14:00	12/26/17 21:06	1
Selenium	0.16		0.067	mg/Kg	☼	12/21/17 14:00	12/26/17 21:06	1
Silver	0.033	U	0.033	mg/Kg	☼	12/21/17 14:00	12/26/17 21:06	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.043	U	0.043	mg/Kg	☼	12/20/17 16:00	12/21/17 10:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048	U	0.048	mg/Kg	☼	12/20/17 16:00	12/21/17 10:31	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048	U	0.048	mg/Kg	☼	12/20/17 16:00	12/21/17 10:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.041	U	0.041	mg/Kg	☼	12/20/17 16:00	12/21/17 10:35	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.039	U	0.039	mg/Kg	☼	12/20/17 16:00	12/21/17 10:37	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051	U	0.051	mg/Kg	☼	12/20/17 16:00	12/21/17 10:39	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.044	U	0.044	mg/Kg	☼	12/20/17 16:00	12/21/17 10:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.045	U	0.045	mg/Kg	☼	12/20/17 16:00	12/21/17 10:47	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.043	U	0.043	mg/Kg	☼	12/20/17 16:00	12/21/17 10:49	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048	U	0.048	mg/Kg	☼	12/20/17 16:00	12/21/17 10:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.045	U	0.045	mg/Kg	☼	12/20/17 16:00	12/21/17 10:23	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.045	U	0.045	mg/Kg	☼	12/20/17 16:00	12/21/17 10:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050	U	0.050	mg/Kg	☼	12/20/17 16:00	12/21/17 10:55	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051	U	0.051	mg/Kg	☼	12/20/17 16:00	12/21/17 10:57	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051	U	0.051	mg/Kg	☼	12/20/17 16:00	12/21/17 10:59	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050	U	0.050	mg/Kg	☼	12/20/17 16:00	12/21/17 11:01	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.046	U	0.046	mg/Kg	☼	12/20/17 16:00	12/21/17 11:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048	U	0.048	mg/Kg	☼	12/20/17 16:00	12/21/17 11:09	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.043		0.041	mg/Kg	☼	12/20/17 16:00	12/21/17 11:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050	U	0.050	mg/Kg	☼	12/20/17 16:00	12/21/17 11:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042	U *	0.042	mg/Kg	☼	12/21/17 16:00	12/22/17 13:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.8		0.1	%			12/20/17 08:23	1
Percent Moisture	13.2		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3500		1100	mg/Kg	☼		12/20/17 09:25	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.2		0.1	%			12/20/17 08:23	1
Percent Moisture	17.8		0.1	%			12/20/17 08:23	1
Total Organic Carbon	13000		1200	mg/Kg	⚠		12/20/17 09:28	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1003

Date Collected: 12/18/17 09:55

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-3

Matrix: Solid

Percent Solids: 88.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.7		0.1	%			12/20/17 08:23	1
Percent Moisture	11.3		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3800		1100	mg/Kg	⚠		12/20/17 09:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1004

Date Collected: 12/18/17 10:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-4

Matrix: Solid

Percent Solids: 89.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.3		0.1	%			12/20/17 08:23	1
Percent Moisture	10.7		0.1	%			12/20/17 08:23	1
Total Organic Carbon	4000		1100	mg/Kg	⚠		12/20/17 09:33	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1005

Date Collected: 12/18/17 10:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-5

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.6		0.1	%			12/20/17 08:23	1
Percent Moisture	10.4		0.1	%			12/20/17 08:23	1
Total Organic Carbon	4500		1100	mg/Kg	⚠		12/20/17 09:36	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1006

Date Collected: 12/18/17 10:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-6

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	%			12/20/17 08:23	1
Percent Moisture	12.1		0.1	%			12/20/17 08:23	1
Total Organic Carbon	6000		1100	mg/Kg	⚠		12/20/17 09:39	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1007

Date Collected: 12/18/17 10:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-7

Matrix: Solid

Percent Solids: 87.7

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1	%			12/20/17 08:23	1
Percent Moisture	12.3		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3400		1100	mg/Kg	⚠		12/20/17 09:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1008

Date Collected: 12/18/17 10:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-8

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.3		0.1	%			12/20/17 08:23	1
Percent Moisture	11.7		0.1	%			12/20/17 08:23	1
Total Organic Carbon	2900		1100	mg/Kg	⚠		12/20/17 09:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1009

Date Collected: 12/18/17 11:05

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-9

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.1		0.1	%			12/20/17 08:23	1
Percent Moisture	8.9		0.1	%			12/20/17 08:23	1
Total Organic Carbon	4100		1100	mg/Kg	⚠		12/20/17 09:54	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1010

Date Collected: 12/18/17 11:20

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-10

Matrix: Solid

Percent Solids: 91.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.2		0.1	%			12/20/17 08:23	1
Percent Moisture	8.8		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3500		1100	mg/Kg	⚠		12/20/17 09:57	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1011

Date Collected: 12/18/17 11:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-11

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	%			12/20/17 08:23	1
Percent Moisture	14.9		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3600		1200	mg/Kg	⚠		12/20/17 09:16	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1012

Date Collected: 12/18/17 11:45

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-12

Matrix: Solid

Percent Solids: 89.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.1		0.1	%			12/20/17 08:23	1
Percent Moisture	10.9		0.1	%			12/20/17 08:23	1
Total Organic Carbon	4500		1100	mg/Kg	⚠		12/20/17 09:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1013

Date Collected: 12/18/17 12:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-13

Matrix: Solid

Percent Solids: 82.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.9		0.1	%			12/20/17 08:23	1
Percent Moisture	17.1		0.1	%			12/20/17 08:23	1
Total Organic Carbon	7200		1200	mg/Kg	⚠		12/20/17 10:00	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1014

Date Collected: 12/18/17 12:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-14

Matrix: Solid

Percent Solids: 87.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	%			12/20/17 08:23	1
Percent Moisture	12.1		0.1	%			12/20/17 08:23	1
Total Organic Carbon	5400		1100	mg/Kg	⚠		12/20/17 10:02	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1015

Date Collected: 12/18/17 12:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-15

Matrix: Solid

Percent Solids: 88.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.9		0.1	%			12/20/17 08:23	1
Percent Moisture	11.1		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3800		1100	mg/Kg	⚠		12/20/17 10:05	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1016

Date Collected: 12/18/17 12:50

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-16

Matrix: Solid

Percent Solids: 85.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.6		0.1	%			12/20/17 08:23	1
Percent Moisture	14.4		0.1	%			12/20/17 08:23	1
Total Organic Carbon	2700		1200	mg/Kg	⚠		12/20/17 10:08	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1017

Date Collected: 12/18/17 13:00

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-17

Matrix: Solid

Percent Solids: 93.9

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.9		0.1	%			12/20/17 08:23	1
Percent Moisture	6.1		0.1	%			12/20/17 08:23	1
Total Organic Carbon	2200		1100	mg/Kg	⚠		12/20/17 10:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1018

Date Collected: 12/18/17 13:15

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-18

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.8		0.1	%			12/20/17 08:23	1
Percent Moisture	9.2		0.1	%			12/20/17 08:23	1
Total Organic Carbon	3100		1100	mg/Kg	⚠		12/20/17 10:14	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1019

Date Collected: 12/18/17 13:25

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-19

Matrix: Solid

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.6		0.1	%			12/20/17 08:23	1
Percent Moisture	9.4		0.1	%			12/20/17 08:23	1
Total Organic Carbon	4100		1100	mg/Kg	⚠		12/20/17 10:29	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1020

Date Collected: 12/18/17 13:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-20

Matrix: Solid

Percent Solids: 85.1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	%			12/20/17 08:23	1
Percent Moisture	14.9		0.1	%			12/20/17 08:23	1
Total Organic Carbon	9600		1200	mg/Kg	⚠		12/20/17 10:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry

Client Sample ID: S-58502-121817-SSH-1021

Date Collected: 12/18/17 13:41

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-21

Matrix: Solid

Percent Solids: 88.0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.0		0.1	%			12/20/17 08:23	1
Percent Moisture	12.0		0.1	%			12/20/17 08:23	1
Total Organic Carbon	8200		1100	mg/Kg	⚠		12/20/17 10:26	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC/MS VOA

Prep Batch: 308903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	5035	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	5035	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	5035	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	5035	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	5035	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	5035	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	5035	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	5035	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	5035	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	5035	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	5035	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	5035	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	5035	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	5035	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	5035	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	5035	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	5035	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	5035	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	5035	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	5035	
MB 240-308903/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-308903/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 308992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	5035	
MB 240-308992/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-308992/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 309086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8260B	308903
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8260B	308903
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8260B	308903
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8260B	308903
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8260B	308903
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8260B	308903
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8260B	308903
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8260B	308903
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8260B	308903
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8260B	308903
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8260B	308903
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8260B	308903
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8260B	308903
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8260B	308903
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8260B	308903
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8260B	308903
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8260B	308903
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8260B	308903
MB 240-308903/1-A	Method Blank	Total/NA	Solid	8260B	308903
LCS 240-308903/2-A	Lab Control Sample	Total/NA	Solid	8260B	308903

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Analysis Batch: 309377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8260B	308903
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8260B	308903
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8260B	308992
MB 240-308992/1-A	Method Blank	Total/NA	Solid	8260B	308992
LCS 240-308992/2-A	Lab Control Sample	Total/NA	Solid	8260B	308992

GC/MS Semi VOA

Prep Batch: 309410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	3540C	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	3540C	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	3540C	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	3540C	
MB 240-309410/22-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309410/23-A	Lab Control Sample	Total/NA	Solid	3540C	
240-89576-4 MS	S-58502-121817-SSH-1004	Total/NA	Solid	3540C	
240-89576-4 MSD	S-58502-121817-SSH-1004	Total/NA	Solid	3540C	

Prep Batch: 309572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	3540C	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	3540C	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	3540C	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	3540C	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	3540C	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	3540C	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	3540C	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	3540C	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	3540C	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	3540C	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	3540C	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	3540C	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	3540C	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	3540C	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	3540C	
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	3540C	
MB 240-309572/22-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309572/23-A	Lab Control Sample	Total/NA	Solid	3540C	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	

Analysis Batch: 309732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8270C	309572
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8270C	309572
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8270C	309572
MB 240-309572/22-A	Method Blank	Total/NA	Solid	8270C	309572
LCS 240-309572/23-A	Lab Control Sample	Total/NA	Solid	8270C	309572

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC/MS Semi VOA (Continued)

Analysis Batch: 309741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8270C	309410
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8270C	309410
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8270C	309410
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8270C	309410
MB 240-309410/22-A	Method Blank	Total/NA	Solid	8270C	309410
LCS 240-309410/23-A	Lab Control Sample	Total/NA	Solid	8270C	309410
240-89576-4 MS	S-58502-121817-SSH-1004	Total/NA	Solid	8270C	309410
240-89576-4 MSD	S-58502-121817-SSH-1004	Total/NA	Solid	8270C	309410

Analysis Batch: 309871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8270C	309572
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8270C	309572
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8270C	309572
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8270C	309572

Analysis Batch: 310043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8270C	309572
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8270C	309572
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8270C	309572
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8270C	309572
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8270C	309572
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8270C	309572
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8270C	309572
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8270C	309572
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8270C	309572
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8270C	309572
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	8270C	309572
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	8270C	309572

GC Semi VOA

Prep Batch: 228694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8151A	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8151A	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8151A	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8151A	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8151A	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8151A	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8151A	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8151A	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8151A	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8151A	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8151A	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8151A	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8151A	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8151A	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8151A	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC Semi VOA (Continued)

Prep Batch: 228694 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8151A	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8151A	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8151A	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8151A	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8151A	
MB 600-228694/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 600-228694/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 600-228694/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Prep Batch: 228696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8151A	
MB 600-228696/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 600-228696/2-A	Lab Control Sample	Total/NA	Solid	8151A	

Analysis Batch: 228778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8151	228694
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8151	228694
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8151	228694
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8151	228694
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8151	228694
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8151	228694
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8151	228694
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8151	228694
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8151	228694
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8151	228694
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8151	228694
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8151	228694
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8151	228694
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8151	228694
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8151	228694
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8151	228694
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8151	228694
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8151	228694
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8151	228694
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8151	228694
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8151	228696
MB 600-228694/1-A	Method Blank	Total/NA	Solid	8151	228694
MB 600-228696/1-A	Method Blank	Total/NA	Solid	8151	228696
LCS 600-228694/2-A	Lab Control Sample	Total/NA	Solid	8151	228694
LCS 600-228696/2-A	Lab Control Sample	Total/NA	Solid	8151	228696
LCSD 600-228694/3-A	Lab Control Sample Dup	Total/NA	Solid	8151	228694

Prep Batch: 308659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	3540C	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	3540C	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	3540C	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	3540C	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC Semi VOA (Continued)

Prep Batch: 308659 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	3540C	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	3540C	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	3540C	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	3540C	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	3540C	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	3540C	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	3540C	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	3540C	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	3540C	
MB 240-308659/22-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-308659/23-A	Lab Control Sample	Total/NA	Solid	3540C	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	

Analysis Batch: 308794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8082A	308659
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8082A	308659
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8082A	308659
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8082A	308659
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8082A	308659
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8082A	308659
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8082A	308659
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8082A	308659
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8082A	308659
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8082A	308659
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8082A	308659
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8082A	308659
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8082A	308659
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8082A	308659
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8082A	308659
MB 240-308659/22-A	Method Blank	Total/NA	Solid	8082A	308659
LCS 240-308659/23-A	Lab Control Sample	Total/NA	Solid	8082A	308659
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	8082A	308659
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	8082A	308659

Prep Batch: 309456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	3540C	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	3540C	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	3540C	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	3540C	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	3540C	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	3540C	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	3540C	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	3540C	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	3540C	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	3540C	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC Semi VOA (Continued)

Prep Batch: 309456 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	3540C	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	3540C	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	3540C	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	3540C	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	3540C	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	3540C	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	3540C	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	3540C	
MB 240-309456/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309456/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	3540C	

Prep Batch: 309467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	3540C	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	3540C	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	3540C	
MB 240-309467/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309467/24-A	Lab Control Sample	Total/NA	Solid	3540C	

Prep Batch: 309549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	3540C	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	3540C	
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	3540C	
MB 240-309549/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309549/24-A	Lab Control Sample	Total/NA	Solid	3540C	
LCSD 240-309549/25-A	Lab Control Sample Dup	Total/NA	Solid	3540C	

Prep Batch: 309571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	3540C	
MB 240-309571/6-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-309571/7-A	Lab Control Sample	Total/NA	Solid	3540C	

Analysis Batch: 309653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8082A	309467
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8082A	309467
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8082A	309467
MB 240-309467/23-A	Method Blank	Total/NA	Solid	8082A	309467
LCS 240-309467/24-A	Lab Control Sample	Total/NA	Solid	8082A	309467

Analysis Batch: 309735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	8081A	309456
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	8081A	309456
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	8081A	309456
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	8081A	309456
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	8081A	309456

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

GC Semi VOA (Continued)

Analysis Batch: 309735 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	8081A	309456
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	8081A	309456
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	8081A	309456
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	8081A	309456
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	8081A	309456
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	8081A	309456
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	8081A	309456
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	8081A	309456
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	8081A	309456
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	8081A	309456
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	8081A	309456
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	8081A	309456
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	8081A	309456
MB 240-309456/23-A	Method Blank	Total/NA	Solid	8081A	309456
LCS 240-309456/24-A	Lab Control Sample	Total/NA	Solid	8081A	309456

Analysis Batch: 309793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8082A	309549
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8082A	309549
MB 240-309549/23-A	Method Blank	Total/NA	Solid	8082A	309549
LCS 240-309549/24-A	Lab Control Sample	Total/NA	Solid	8082A	309549
LCSD 240-309549/25-A	Lab Control Sample Dup	Total/NA	Solid	8082A	309549

Analysis Batch: 309842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	8081A	309456
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	8081A	309456
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8081A	309571
MB 240-309571/6-A	Method Blank	Total/NA	Solid	8081A	309571
LCS 240-309571/7-A	Lab Control Sample	Total/NA	Solid	8081A	309571
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	8081A	309456
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	8081A	309456

Analysis Batch: 309863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	8082A	309549

Metals

Prep Batch: 308519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	3050B	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	3050B	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	3050B	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	3050B	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	3050B	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	3050B	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	3050B	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	3050B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Metals (Continued)

Prep Batch: 308519 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	3050B	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	3050B	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	3050B	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	3050B	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	3050B	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	3050B	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	3050B	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	3050B	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	3050B	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	3050B	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	3050B	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	3050B	
MB 240-308519/1-A	Method Blank	Total/NA	Solid	3050B	
MB 240-308519/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-308519/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-308519/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	3050B	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	3050B	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	3050B	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	3050B	

Prep Batch: 308537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	7471A	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	7471A	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	7471A	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	7471A	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	7471A	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	7471A	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	7471A	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	7471A	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	7471A	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	7471A	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	7471A	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	7471A	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	7471A	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	7471A	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	7471A	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	7471A	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	7471A	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	7471A	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	7471A	
MB 240-308537/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 240-308537/2-A	Lab Control Sample	Total/NA	Solid	7471A	
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	

Prep Batch: 308692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	3050B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Metals (Continued)

Prep Batch: 308692 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-308692/1-A	Method Blank	Total/NA	Solid	3050B	
MB 240-308692/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 240-308692/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 240-308692/3-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 308705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	6010B	308519
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	6010B	308519
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	6010B	308519
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	6010B	308519
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	6010B	308519
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	6010B	308519
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	6010B	308519
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	6010B	308519
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	6010B	308519
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	6010B	308519
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	6010B	308519
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	6010B	308519
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	6010B	308519
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	6010B	308519
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	6010B	308519
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	6010B	308519
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	6010B	308519
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	6010B	308519
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	6010B	308519
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	6010B	308519
MB 240-308519/1-A	Method Blank	Total/NA	Solid	6010B	308519
LCS 240-308519/2-A	Lab Control Sample	Total/NA	Solid	6010B	308519
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	6010B	308519
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	6010B	308519

Prep Batch: 308713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	7471A	
MB 240-308713/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 240-308713/2-A	Lab Control Sample	Total/NA	Solid	7471A	

Analysis Batch: 308742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	7471A	308537
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	7471A	308537
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	7471A	308537
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	7471A	308537
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	7471A	308537
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	7471A	308537
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	7471A	308537
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	7471A	308537
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	7471A	308537
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	7471A	308537
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	308537

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Metals (Continued)

Analysis Batch: 308742 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	7471A	308537
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	7471A	308537
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	7471A	308537
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	7471A	308537
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	7471A	308537
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	7471A	308537
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	7471A	308537
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	7471A	308537
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	7471A	308537
MB 240-308537/1-A	Method Blank	Total/NA	Solid	7471A	308537
LCS 240-308537/2-A	Lab Control Sample	Total/NA	Solid	7471A	308537
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	308537
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	7471A	308537

Analysis Batch: 308823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	6020	308519
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	6020	308519
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	6020	308519
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	6020	308519
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	6020	308519
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	6020	308519
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	6020	308519
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	6020	308519
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	6020	308519
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	6020	308519
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	6020	308519
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	6020	308519
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	6020	308519
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	6020	308519
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	6020	308519
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	6020	308519
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	6020	308519
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	6020	308519
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	6020	308519
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	6020	308519
MB 240-308519/1-A ^2	Method Blank	Total/NA	Solid	6020	308519
LCS 240-308519/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	308519
240-89576-11 MS	S-58502-121817-SSH-1011	Total/NA	Solid	6020	308519
240-89576-11 MSD	S-58502-121817-SSH-1011	Total/NA	Solid	6020	308519

Analysis Batch: 308900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	6010B	308519
MB 240-308692/1-A	Method Blank	Total/NA	Solid	6010B	308692
LCS 240-308692/2-A	Lab Control Sample	Total/NA	Solid	6010B	308692

Analysis Batch: 308949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	7471A	308713
MB 240-308713/1-A	Method Blank	Total/NA	Solid	7471A	308713

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Metals (Continued)

Analysis Batch: 308949 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-308713/2-A	Lab Control Sample	Total/NA	Solid	7471A	308713

Analysis Batch: 309038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-308692/1-A ^2	Method Blank	Total/NA	Solid	6020	308692
LCS 240-308692/3-A ^2	Lab Control Sample	Total/NA	Solid	6020	308692

Analysis Batch: 309207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	6020	308692

Analysis Batch: 309208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	6010B	308692

General Chemistry

Analysis Batch: 308463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	Moisture	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	Moisture	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	Moisture	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	Moisture	
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	Moisture	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	Moisture	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	Moisture	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	Moisture	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	Moisture	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	Moisture	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	Moisture	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	Moisture	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	Moisture	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	Moisture	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	Moisture	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	Moisture	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	Moisture	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	Moisture	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	Moisture	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	Moisture	
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	Moisture	
240-89576-1 DU	S-58502-121817-SSH-1001	Total/NA	Solid	Moisture	
240-89576-11 DU	S-58502-121817-SSH-1011	Total/NA	Solid	Moisture	
240-89576-20 DU	S-58502-121817-SSH-1020	Total/NA	Solid	Moisture	

Analysis Batch: 308469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-1	S-58502-121817-SSH-1001	Total/NA	Solid	Walkley Black	
240-89576-2	S-58502-121817-SSH-1002	Total/NA	Solid	Walkley Black	
240-89576-3	S-58502-121817-SSH-1003	Total/NA	Solid	Walkley Black	
240-89576-4	S-58502-121817-SSH-1004	Total/NA	Solid	Walkley Black	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

General Chemistry (Continued)

Analysis Batch: 308469 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-89576-5	S-58502-121817-SSH-1005	Total/NA	Solid	Walkley Black	
240-89576-6	S-58502-121817-SSH-1006	Total/NA	Solid	Walkley Black	
240-89576-7	S-58502-121817-SSH-1007	Total/NA	Solid	Walkley Black	
240-89576-8	S-58502-121817-SSH-1008	Total/NA	Solid	Walkley Black	
240-89576-9	S-58502-121817-SSH-1009	Total/NA	Solid	Walkley Black	
240-89576-10	S-58502-121817-SSH-1010	Total/NA	Solid	Walkley Black	
240-89576-11	S-58502-121817-SSH-1011	Total/NA	Solid	Walkley Black	
240-89576-12	S-58502-121817-SSH-1012	Total/NA	Solid	Walkley Black	
240-89576-13	S-58502-121817-SSH-1013	Total/NA	Solid	Walkley Black	
240-89576-14	S-58502-121817-SSH-1014	Total/NA	Solid	Walkley Black	
240-89576-15	S-58502-121817-SSH-1015	Total/NA	Solid	Walkley Black	
240-89576-16	S-58502-121817-SSH-1016	Total/NA	Solid	Walkley Black	
240-89576-17	S-58502-121817-SSH-1017	Total/NA	Solid	Walkley Black	
240-89576-18	S-58502-121817-SSH-1018	Total/NA	Solid	Walkley Black	
240-89576-19	S-58502-121817-SSH-1019	Total/NA	Solid	Walkley Black	
240-89576-20	S-58502-121817-SSH-1020	Total/NA	Solid	Walkley Black	
240-89576-21	S-58502-121817-SSH-1021	Total/NA	Solid	Walkley Black	
MB 240-308469/28	Method Blank	Total/NA	Solid	Walkley Black	
MB 240-308469/4	Method Blank	Total/NA	Solid	Walkley Black	
LCS 240-308469/29	Lab Control Sample	Total/NA	Solid	Walkley Black	
LCS 240-308469/5	Lab Control Sample	Total/NA	Solid	Walkley Black	
240-89576-11 DU	S-58502-121817-SSH-1011	Total/NA	Solid	Walkley Black	
240-89576-12 DU	S-58502-121817-SSH-1012	Total/NA	Solid	Walkley Black	
240-89576-21 DU	S-58502-121817-SSH-1021	Total/NA	Solid	Walkley Black	

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-308903/1-A

Matrix: Solid

Analysis Batch: 309086

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308903

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	600	U	600	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Benzene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Bromodichloromethane	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Bromoform	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Bromomethane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
2-Butanone (MEK)	600	U	600	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Carbon disulfide	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Carbon tetrachloride	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Chlorobenzene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Chloroethane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Chloroform	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Chloromethane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1-Dichloroethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2-Dichloroethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1-Dichloroethene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2-Dichloropropane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
cis-1,3-Dichloropropene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
trans-1,3-Dichloropropene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Ethylbenzene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
2-Hexanone	2000	U	2000	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Methylene Chloride	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
4-Methyl-2-pentanone (MIBK)	2000	U	2000	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Styrene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1,2,2-Tetrachloroethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Tetrachloroethene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Toluene	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Trichloroethene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Vinyl chloride	32	U	32	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Xylenes, Total	120	U	120	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1,1-Trichloroethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1,2-Trichloroethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Cyclohexane	960	U	960	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2-Dibromo-3-Chloropropane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2-Dibromoethane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Dichlorodifluoromethane	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
cis-1,2-Dichloroethene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
trans-1,2-Dichloroethene	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Isopropylbenzene	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Methyl acetate	960	U	960	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Methyl tert-butyl ether	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2,4-Trichlorobenzene	200	U	200	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,2-Dichlorobenzene	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,3-Dichlorobenzene	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
1,4-Dichlorobenzene	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Trichlorofluoromethane	80	U	80	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Dibromochloromethane	40	U	40	ug/Kg		12/22/17 11:39	12/26/17 14:44	1
Methylcyclohexane	960	U	960	ug/Kg		12/22/17 11:39	12/26/17 14:44	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		64 - 144	12/22/17 11:39	12/26/17 14:44	1
4-Bromofluorobenzene (Surr)	87		58 - 142	12/22/17 11:39	12/26/17 14:44	1
Toluene-d8 (Surr)	93		61 - 137	12/22/17 11:39	12/26/17 14:44	1
Dibromofluoromethane (Surr)	99		31 - 155	12/22/17 11:39	12/26/17 14:44	1

Lab Sample ID: LCS 240-308903/2-A

Matrix: Solid

Analysis Batch: 309086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	2000	1860		ug/Kg		93	24 - 125
Benzene	1000	992		ug/Kg		99	77 - 120
Bromodichloromethane	1000	953		ug/Kg		95	61 - 132
Bromoform	1000	720		ug/Kg		72	40 - 140
Bromomethane	1000	649		ug/Kg		65	10 - 153
2-Butanone (MEK)	2000	2290		ug/Kg		114	51 - 120
Carbon disulfide	1000	818		ug/Kg		82	17 - 163
Carbon tetrachloride	1000	844		ug/Kg		84	43 - 144
Chlorobenzene	1000	1100		ug/Kg		110	76 - 120
Chloroethane	1000	658		ug/Kg		66	10 - 166
Chloroform	1000	961		ug/Kg		96	74 - 120
Chloromethane	1000	748		ug/Kg		75	41 - 124
1,1-Dichloroethane	1000	1030		ug/Kg		103	72 - 120
1,2-Dichloroethane	1000	1020		ug/Kg		102	71 - 120
1,1-Dichloroethene	1000	937		ug/Kg		94	58 - 130
1,2-Dichloropropane	1000	1060		ug/Kg		106	78 - 122
cis-1,3-Dichloropropene	1000	892		ug/Kg		89	66 - 126
trans-1,3-Dichloropropene	1000	698		ug/Kg		70	55 - 121
Ethylbenzene	1000	944		ug/Kg		94	76 - 120
2-Hexanone	2000	2020		ug/Kg		101	52 - 129
Methylene Chloride	1000	1000		ug/Kg		100	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	2040		ug/Kg		102	65 - 131
Styrene	1000	939		ug/Kg		94	80 - 120
1,1,2,2-Tetrachloroethane	1000	920		ug/Kg		92	78 - 120
Tetrachloroethene	1000	991		ug/Kg		99	68 - 122
Toluene	1000	986		ug/Kg		99	74 - 120
Trichloroethene	1000	949		ug/Kg		95	73 - 123
Vinyl chloride	1000	814		ug/Kg		81	49 - 131
Xylenes, Total	2000	1930		ug/Kg		96	78 - 120
1,1,1-Trichloroethane	1000	901		ug/Kg		90	60 - 136
1,1,2-Trichloroethane	1000	998		ug/Kg		100	80 - 120
Cyclohexane	1000	870	J	ug/Kg		87	66 - 129
1,2-Dibromo-3-Chloropropane	1000	779		ug/Kg		78	40 - 133
1,2-Dibromoethane	1000	902		ug/Kg		90	80 - 120
Dichlorodifluoromethane	1000	524		ug/Kg		52	15 - 127
cis-1,2-Dichloroethene	1000	967		ug/Kg		97	78 - 120
trans-1,2-Dichloroethene	1000	967		ug/Kg		97	74 - 124
Isopropylbenzene	1000	957		ug/Kg		96	76 - 124
Methyl acetate	2000	2170		ug/Kg		109	63 - 126
Methyl tert-butyl ether	1000	1050		ug/Kg		105	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	928		ug/Kg		93	64 - 125
1,2,4-Trichlorobenzene	1000	999		ug/Kg		100	60 - 124
1,2-Dichlorobenzene	1000	947		ug/Kg		95	75 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-308903/2-A

Matrix: Solid

Analysis Batch: 309086

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	1000	934		ug/Kg		93	72 - 120
1,4-Dichlorobenzene	1000	909		ug/Kg		91	71 - 120
Trichlorofluoromethane	1000	830		ug/Kg		83	28 - 152
Dibromochloromethane	1000	914		ug/Kg		91	46 - 125
Methylcyclohexane	1000	848	J	ug/Kg		85	71 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		64 - 144
4-Bromofluorobenzene (Surr)	89		58 - 142
Toluene-d8 (Surr)	90		61 - 137
Dibromofluoromethane (Surr)	98		31 - 155

Lab Sample ID: MB 240-308992/1-A

Matrix: Solid

Analysis Batch: 309377

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308992

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	600	U	600	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Benzene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Bromodichloromethane	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Bromoform	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Bromomethane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
2-Butanone (MEK)	600	U	600	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Carbon disulfide	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Carbon tetrachloride	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Chlorobenzene	41.7		40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Chloroethane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Chloroform	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Chloromethane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1-Dichloroethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2-Dichloroethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1-Dichloroethene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2-Dichloropropane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
cis-1,3-Dichloropropene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
trans-1,3-Dichloropropene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Ethylbenzene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
2-Hexanone	2000	U	2000	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Methylene Chloride	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
4-Methyl-2-pentanone (MIBK)	2000	U	2000	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Styrene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1,2,2-Tetrachloroethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Tetrachloroethene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Toluene	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Trichloroethene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Vinyl chloride	32	U	32	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Xylenes, Total	120	U	120	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1,1-Trichloroethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1,2-Trichloroethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-308992/1-A

Matrix: Solid

Analysis Batch: 309377

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308992

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	960	U	960	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2-Dibromo-3-Chloropropane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2-Dibromoethane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Dichlorodifluoromethane	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
cis-1,2-Dichloroethene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
trans-1,2-Dichloroethene	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Isopropylbenzene	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Methyl acetate	960	U	960	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Methyl tert-butyl ether	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2,4-Trichlorobenzene	200	U	200	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,2-Dichlorobenzene	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,3-Dichlorobenzene	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
1,4-Dichlorobenzene	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Trichlorofluoromethane	80	U	80	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Dibromochloromethane	40	U	40	ug/Kg		12/23/17 09:35	12/28/17 12:09	1
Methylcyclohexane	960	U	960	ug/Kg		12/23/17 09:35	12/28/17 12:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		64 - 144	12/23/17 09:35	12/28/17 12:09	1
4-Bromofluorobenzene (Surr)	87		58 - 142	12/23/17 09:35	12/28/17 12:09	1
Toluene-d8 (Surr)	91		61 - 137	12/23/17 09:35	12/28/17 12:09	1
Dibromofluoromethane (Surr)	94		31 - 155	12/23/17 09:35	12/28/17 12:09	1

Lab Sample ID: LCS 240-308992/2-A

Matrix: Solid

Analysis Batch: 309377

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	2450		ug/Kg		122	24 - 125
Benzene	1000	1030		ug/Kg		103	77 - 120
Bromodichloromethane	1000	774		ug/Kg		77	61 - 132
Bromoform	1000	471		ug/Kg		47	40 - 140
Bromomethane	1000	598		ug/Kg		60	10 - 153
2-Butanone (MEK)	2000	2840	*	ug/Kg		142	51 - 120
Carbon disulfide	1000	835		ug/Kg		83	17 - 163
Carbon tetrachloride	1000	629		ug/Kg		63	43 - 144
Chlorobenzene	1000	1120		ug/Kg		112	76 - 120
Chloroethane	1000	608		ug/Kg		61	10 - 166
Chloroform	1000	961		ug/Kg		96	74 - 120
Chloromethane	1000	785		ug/Kg		79	41 - 124
1,1-Dichloroethane	1000	1050		ug/Kg		105	72 - 120
1,2-Dichloroethane	1000	1020		ug/Kg		102	71 - 120
1,1-Dichloroethene	1000	943		ug/Kg		94	58 - 130
1,2-Dichloropropane	1000	1080		ug/Kg		108	78 - 122
cis-1,3-Dichloropropene	1000	738		ug/Kg		74	66 - 126
trans-1,3-Dichloropropene	1000	582		ug/Kg		58	55 - 121
Ethylbenzene	1000	964		ug/Kg		96	76 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-308992/2-A

Matrix: Solid

Analysis Batch: 309377

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	2000	2150		ug/Kg		108	52 - 129
Methylene Chloride	1000	1030		ug/Kg		103	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	2170		ug/Kg		109	65 - 131
Styrene	1000	942		ug/Kg		94	80 - 120
1,1,2,2-Tetrachloroethane	1000	896		ug/Kg		90	78 - 120
Tetrachloroethene	1000	1020		ug/Kg		102	68 - 122
Toluene	1000	1040		ug/Kg		104	74 - 120
Trichloroethene	1000	959		ug/Kg		96	73 - 123
Vinyl chloride	1000	887		ug/Kg		89	49 - 131
Xylenes, Total	2000	1970		ug/Kg		99	78 - 120
1,1,1-Trichloroethane	1000	791		ug/Kg		79	60 - 136
1,1,2-Trichloroethane	1000	1020		ug/Kg		102	80 - 120
Cyclohexane	1000	1030		ug/Kg		103	66 - 129
1,2-Dibromo-3-Chloropropane	1000	547		ug/Kg		55	40 - 133
1,2-Dibromoethane	1000	817		ug/Kg		82	80 - 120
Dichlorodifluoromethane	1000	697		ug/Kg		70	15 - 127
cis-1,2-Dichloroethene	1000	995		ug/Kg		99	78 - 120
trans-1,2-Dichloroethene	1000	988		ug/Kg		99	74 - 124
Isopropylbenzene	1000	979		ug/Kg		98	76 - 124
Methyl acetate	2000	2440		ug/Kg		122	63 - 126
Methyl tert-butyl ether	1000	1100		ug/Kg		110	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1070		ug/Kg		107	64 - 125
1,2,4-Trichlorobenzene	1000	983		ug/Kg		98	60 - 124
1,2-Dichlorobenzene	1000	942		ug/Kg		94	75 - 120
1,3-Dichlorobenzene	1000	936		ug/Kg		94	72 - 120
1,4-Dichlorobenzene	1000	930		ug/Kg		93	71 - 120
Trichlorofluoromethane	1000	921		ug/Kg		92	28 - 152
Dibromochloromethane	1000	634		ug/Kg		63	46 - 125
Methylcyclohexane	1000	1010		ug/Kg		101	71 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		64 - 144
4-Bromofluorobenzene (Surr)	86		58 - 142
Toluene-d8 (Surr)	89		61 - 137
Dibromofluoromethane (Surr)	93		31 - 155

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

Lab Sample ID: MB 240-309410/22-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309410

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,2'-oxybis[1-chloropropane]	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,4,5-Trichlorophenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,4,6-Trichlorophenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-309410/22-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309410

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,4-Dimethylphenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,4-Dinitrophenol	150	U	150	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,4-Dinitrotoluene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2,6-Dinitrotoluene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Chloronaphthalene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Chlorophenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Methylnaphthalene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Methylphenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Nitroaniline	200	U	200	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
2-Nitrophenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
3,3'-Dichlorobenzidine	1600	U	1600	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
3-Nitroaniline	200	U	200	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4,6-Dinitro-2-methylphenol	150	U	150	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Bromophenyl phenyl ether	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Chloro-3-methylphenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Chloroaniline	200	U	200	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Chlorophenyl phenyl ether	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Nitroaniline	200	U	200	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
4-Nitrophenol	330	U	330	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Acenaphthene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Acenaphthylene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Acetophenone	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Anthracene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Atrazine	40	U	40	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzaldehyde	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzo[a]anthracene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzo[a]pyrene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzo[b]fluoranthene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzo[g,h,i]perylene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Benzo[k]fluoranthene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Bis(2-chloroethoxy)methane	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Bis(2-chloroethyl)ether	80	U	80	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Bis(2-ethylhexyl) phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Butyl benzyl phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Caprolactam	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Carbazole	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Chrysene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Dibenz(a,h)anthracene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Dibenzofuran	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Diethyl phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Dimethyl phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Di-n-butyl phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Di-n-octyl phthalate	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Fluoranthene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Fluorene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Hexachlorobenzene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Hexachlorobutadiene	40	U	40	ug/Kg		12/28/17 09:41	01/02/18 10:02	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-309410/22-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309410

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Hexachloroethane	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Indeno[1,2,3-cd]pyrene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Isophorone	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Naphthalene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Nitrobenzene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
N-Nitrosodi-n-propylamine	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
N-Nitrosodiphenylamine	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Pentachlorophenol	150	U	150	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Phenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Phenanthrene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
Pyrene	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1
3 & 4 Methylphenol	260	U	260	ug/Kg		12/28/17 09:41	01/02/18 10:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	97		32 - 120	12/28/17 09:41	01/02/18 10:02	1
2-Fluorophenol (Surr)	76		29 - 120	12/28/17 09:41	01/02/18 10:02	1
2,4,6-Tribromophenol (Surr)	55		10 - 120	12/28/17 09:41	01/02/18 10:02	1
Nitrobenzene-d5 (Surr)	79		30 - 120	12/28/17 09:41	01/02/18 10:02	1
Phenol-d5 (Surr)	86		29 - 120	12/28/17 09:41	01/02/18 10:02	1
Terphenyl-d14 (Surr)	109		41 - 120	12/28/17 09:41	01/02/18 10:02	1

Lab Sample ID: LCS 240-309410/23-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	667	587		ug/Kg		88	48 - 120
2,2'-oxybis[1-chloropropane]	667	569		ug/Kg		85	37 - 120
2,4,5-Trichlorophenol	667	552		ug/Kg		83	34 - 120
2,4,6-Trichlorophenol	667	483		ug/Kg		72	19 - 120
2,4-Dichlorophenol	667	532		ug/Kg		80	48 - 120
2,4-Dimethylphenol	667	429		ug/Kg		64	37 - 120
2,4-Dinitrophenol	1330	550		ug/Kg		41	10 - 120
2,4-Dinitrotoluene	667	678		ug/Kg		102	53 - 120
2,6-Dinitrotoluene	667	641		ug/Kg		96	54 - 120
2-Chloronaphthalene	667	578		ug/Kg		87	49 - 120
2-Chlorophenol	667	518		ug/Kg		78	50 - 120
2-Methylnaphthalene	667	520		ug/Kg		78	49 - 120
2-Methylphenol	667	514		ug/Kg		77	49 - 120
2-Nitroaniline	667	683		ug/Kg		103	46 - 120
2-Nitrophenol	667	575		ug/Kg		86	46 - 120
3,3'-Dichlorobenzidine	1330	1200	J	ug/Kg		90	40 - 120
3-Nitroaniline	667	634		ug/Kg		95	48 - 120
4,6-Dinitro-2-methylphenol	1330	840		ug/Kg		63	18 - 120
4-Bromophenyl phenyl ether	667	541		ug/Kg		81	51 - 120
4-Chloro-3-methylphenol	667	579		ug/Kg		87	47 - 120
4-Chloroaniline	667	414		ug/Kg		62	37 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: LCS 240-309410/23-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorophenyl phenyl ether	667	577		ug/Kg		87	49 - 120
4-Nitroaniline	667	678		ug/Kg		102	49 - 120
4-Nitrophenol	1330	1220		ug/Kg		91	42 - 120
Acenaphthene	667	588		ug/Kg		88	48 - 120
Acenaphthylene	667	562		ug/Kg		84	46 - 120
Acetophenone	667	500		ug/Kg		75	46 - 120
Anthracene	667	586		ug/Kg		88	51 - 120
Atrazine	1330	1390		ug/Kg		104	57 - 120
Benzaldehyde	1330	1080		ug/Kg		81	48 - 120
Benzo[a]anthracene	667	623		ug/Kg		93	53 - 120
Benzo[a]pyrene	667	629		ug/Kg		94	50 - 120
Benzo[b]fluoranthene	667	657		ug/Kg		99	48 - 120
Benzo[g,h,i]perylene	667	629		ug/Kg		94	50 - 120
Benzo[k]fluoranthene	667	628		ug/Kg		94	51 - 120
Bis(2-chloroethoxy)methane	667	539		ug/Kg		81	50 - 120
Bis(2-chloroethyl)ether	667	525		ug/Kg		79	48 - 120
Bis(2-ethylhexyl) phthalate	667	769		ug/Kg		115	52 - 120
Butyl benzyl phthalate	667	730		ug/Kg		109	53 - 120
Caprolactam	1330	1160		ug/Kg		87	59 - 120
Carbazole	667	624		ug/Kg		94	56 - 120
Chrysene	667	604		ug/Kg		91	54 - 120
Dibenz(a,h)anthracene	667	586		ug/Kg		88	48 - 120
Dibenzofuran	667	573		ug/Kg		86	49 - 120
Diethyl phthalate	667	634		ug/Kg		95	52 - 120
Dimethyl phthalate	667	626		ug/Kg		94	53 - 120
Di-n-butyl phthalate	667	659		ug/Kg		99	56 - 120
Di-n-octyl phthalate	667	667		ug/Kg		100	42 - 120
Fluoranthene	667	598		ug/Kg		90	53 - 120
Fluorene	667	587		ug/Kg		88	50 - 120
Hexachlorobenzene	667	493		ug/Kg		74	46 - 120
Hexachlorobutadiene	667	465		ug/Kg		70	44 - 120
Hexachlorocyclopentadiene	667	405		ug/Kg		61	14 - 120
Hexachloroethane	667	458		ug/Kg		69	45 - 120
Indeno[1,2,3-cd]pyrene	667	631		ug/Kg		95	49 - 120
Isophorone	667	527		ug/Kg		79	47 - 120
Naphthalene	667	515		ug/Kg		77	48 - 120
Nitrobenzene	667	521		ug/Kg		78	48 - 120
N-Nitrosodi-n-propylamine	667	555		ug/Kg		83	49 - 120
N-Nitrosodiphenylamine	667	568		ug/Kg		85	53 - 120
Pentachlorophenol	1330	760		ug/Kg		57	14 - 120
Phenol	667	533		ug/Kg		80	49 - 120
Phenanthrene	667	555		ug/Kg		83	52 - 120
Pyrene	667	650		ug/Kg		98	55 - 120
3 & 4 Methylphenol	667	516		ug/Kg		77	50 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	94		32 - 120
2-Fluorophenol (Surr)	82		29 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: LCS 240-309410/23-A

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309410

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	60		10 - 120
Nitrobenzene-d5 (Surr)	79		30 - 120
Phenol-d5 (Surr)	87		29 - 120
Terphenyl-d14 (Surr)	105		41 - 120

Lab Sample ID: 240-89576-4 MS

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: S-58502-121817-SSH-1004

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	300	U	745	636		ug/Kg	☼	85	33 - 120
2,2'-oxybis[1-chloropropane]	300	U	745	551		ug/Kg	☼	74	26 - 120
2,4,5-Trichlorophenol	300	U	745	706		ug/Kg	☼	95	20 - 120
2,4,6-Trichlorophenol	300	U	745	622		ug/Kg	☼	83	19 - 120
2,4-Dichlorophenol	300	U	745	579		ug/Kg	☼	78	32 - 120
2,4-Dimethylphenol	300	U	745	580		ug/Kg	☼	78	28 - 120
2,4-Dinitrophenol	170	U	1490	1090		ug/Kg	☼	73	10 - 120
2,4-Dinitrotoluene	300	U	745	765		ug/Kg	☼	103	38 - 120
2,6-Dinitrotoluene	300	U	745	732		ug/Kg	☼	98	43 - 120
2-Chloronaphthalene	300	U	745	630		ug/Kg	☼	85	35 - 120
2-Chlorophenol	300	U	745	510		ug/Kg	☼	68	30 - 120
2-Methylnaphthalene	300	U	745	526		ug/Kg	☼	71	31 - 120
2-Methylphenol	300	U	745	560		ug/Kg	☼	75	31 - 120
2-Nitroaniline	220	U	745	788		ug/Kg	☼	106	29 - 120
2-Nitrophenol	300	U	745	561		ug/Kg	☼	75	26 - 120
3,3'-Dichlorobenzidine	1800	U	1490	1800	U	ug/Kg	☼	93	10 - 120
3-Nitroaniline	220	U	745	652		ug/Kg	☼	87	21 - 120
4,6-Dinitro-2-methylphenol	170	U	1490	1110		ug/Kg	☼	75	10 - 120
4-Bromophenyl phenyl ether	300	U	745	662		ug/Kg	☼	89	44 - 120
4-Chloro-3-methylphenol	300	U	745	658		ug/Kg	☼	88	31 - 120
4-Chloroaniline	220	U	745	368		ug/Kg	☼	49	15 - 120
4-Chlorophenyl phenyl ether	300	U	745	669		ug/Kg	☼	90	41 - 120
4-Nitroaniline	220	U	745	684		ug/Kg	☼	92	23 - 120
4-Nitrophenol	370	U	1490	1440		ug/Kg	☼	97	32 - 120
Acenaphthene	300	U	745	646		ug/Kg	☼	87	36 - 120
Acenaphthylene	300	U	745	635		ug/Kg	☼	85	35 - 120
Acetophenone	300	U	745	480		ug/Kg	☼	64	31 - 120
Anthracene	300	U	745	687		ug/Kg	☼	92	42 - 120
Atrazine	45	U	1490	1660		ug/Kg	☼	111	41 - 120
Benzaldehyde	300	U	1490	1070		ug/Kg	☼	71	28 - 120
Benzo[a]anthracene	300	U	745	716		ug/Kg	☼	96	35 - 120
Benzo[a]pyrene	300	U	745	717		ug/Kg	☼	96	33 - 120
Benzo[b]fluoranthene	300	U	745	706		ug/Kg	☼	94	26 - 120
Benzo[g,h,i]perylene	300	U	745	744		ug/Kg	☼	99	16 - 120
Benzo[k]fluoranthene	300	U	745	672		ug/Kg	☼	90	33 - 120
Bis(2-chloroethoxy)methane	300	U	745	509		ug/Kg	☼	68	36 - 120
Bis(2-chloroethyl)ether	90	U	745	521		ug/Kg	☼	70	33 - 120
Bis(2-ethylhexyl) phthalate	300	U F1	745	942	F1	ug/Kg	☼	126	40 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-4 MS

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: S-58502-121817-SSH-1004

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Butyl benzyl phthalate	300	U	745	851		ug/Kg	☼	114	46 - 120
Caprolactam	300	U	1490	1330		ug/Kg	☼	89	33 - 128
Carbazole	300	U	745	725		ug/Kg	☼	97	35 - 120
Chrysene	300	U	745	691		ug/Kg	☼	93	33 - 120
Dibenz(a,h)anthracene	300	U	745	687		ug/Kg	☼	92	30 - 120
Dibenzofuran	300	U	745	652		ug/Kg	☼	88	37 - 120
Diethyl phthalate	300	U	745	740		ug/Kg	☼	99	44 - 120
Dimethyl phthalate	300	U	745	717		ug/Kg	☼	96	42 - 120
Di-n-butyl phthalate	300	U	745	776		ug/Kg	☼	104	45 - 120
Di-n-octyl phthalate	300	U	745	750		ug/Kg	☼	101	35 - 120
Fluoranthene	300	U	745	699		ug/Kg	☼	93	26 - 121
Fluorene	300	U	745	669		ug/Kg	☼	90	36 - 120
Hexachlorobenzene	300	U	745	590		ug/Kg	☼	79	36 - 120
Hexachlorobutadiene	45	U	745	460		ug/Kg	☼	60	31 - 120
Hexachlorocyclopentadiene	300	U F2 F1	745	300	U F1	ug/Kg	☼	1	10 - 120
Hexachloroethane	300	U	745	451		ug/Kg	☼	61	15 - 120
Indeno[1,2,3-cd]pyrene	300	U	745	730		ug/Kg	☼	98	24 - 120
Isophorone	300	U	745	511		ug/Kg	☼	69	34 - 120
Naphthalene	300	U	745	497		ug/Kg	☼	67	29 - 120
Nitrobenzene	300	U	745	501		ug/Kg	☼	67	33 - 120
N-Nitrosodi-n-propylamine	300	U	745	540		ug/Kg	☼	72	32 - 120
N-Nitrosodiphenylamine	300	U	745	675		ug/Kg	☼	91	29 - 120
Pentachlorophenol	170	U	1490	723		ug/Kg	☼	48	10 - 120
Phenol	300	U	745	556		ug/Kg	☼	75	21 - 120
Phenanthrene	300	U	745	660		ug/Kg	☼	88	28 - 120
Pyrene	300	U	745	732		ug/Kg	☼	98	28 - 120
3 & 4 Methylphenol	300	U	745	558		ug/Kg	☼	75	33 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	92		32 - 120
2-Fluorophenol (Surr)	73		29 - 120
2,4,6-Tribromophenol (Surr)	75		10 - 120
Nitrobenzene-d5 (Surr)	68		30 - 120
Phenol-d5 (Surr)	80		29 - 120
Terphenyl-d14 (Surr)	108		41 - 120

Lab Sample ID: 240-89576-4 MSD

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: S-58502-121817-SSH-1004

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1'-Biphenyl	300	U	752	711		ug/Kg	☼	95	33 - 120	11	33
2,2'-oxybis[1-chloropropane]	300	U	752	636		ug/Kg	☼	85	26 - 120	14	31
2,4,5-Trichlorophenol	300	U	752	695		ug/Kg	☼	92	20 - 120	2	38
2,4,6-Trichlorophenol	300	U	752	654		ug/Kg	☼	87	19 - 120	5	36
2,4-Dichlorophenol	300	U	752	637		ug/Kg	☼	85	32 - 120	10	32
2,4-Dimethylphenol	300	U	752	649		ug/Kg	☼	86	28 - 120	11	35
2,4-Dinitrophenol	170	U	1500	1160		ug/Kg	☼	77	10 - 120	7	40

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-4 MSD

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: S-58502-121817-SSH-1004

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene	300	U	752	807		ug/Kg	☼	107	38 - 120	5	27
2,6-Dinitrotoluene	300	U	752	760		ug/Kg	☼	101	43 - 120	4	31
2-Chloronaphthalene	300	U	752	692		ug/Kg	☼	92	35 - 120	9	30
2-Chlorophenol	300	U	752	578		ug/Kg	☼	77	30 - 120	13	37
2-Methylnaphthalene	300	U	752	593		ug/Kg	☼	79	31 - 120	12	33
2-Methylphenol	300	U	752	604		ug/Kg	☼	80	31 - 120	8	36
2-Nitroaniline	220	U	752	838		ug/Kg	☼	111	29 - 120	6	31
2-Nitrophenol	300	U	752	654		ug/Kg	☼	87	26 - 120	15	38
3,3'-Dichlorobenzidine	1800	U	1500	1800	U	ug/Kg	☼	96	10 - 120	4	40
3-Nitroaniline	220	U	752	693		ug/Kg	☼	92	21 - 120	6	40
4,6-Dinitro-2-methylphenol	170	U	1500	1170		ug/Kg	☼	78	10 - 120	5	40
4-Bromophenyl phenyl ether	300	U	752	681		ug/Kg	☼	91	44 - 120	3	40
4-Chloro-3-methylphenol	300	U	752	698		ug/Kg	☼	93	31 - 120	6	25
4-Chloroaniline	220	U	752	447		ug/Kg	☼	59	15 - 120	19	36
4-Chlorophenyl phenyl ether	300	U	752	688		ug/Kg	☼	91	41 - 120	3	40
4-Nitroaniline	220	U	752	701		ug/Kg	☼	93	23 - 120	3	40
4-Nitrophenol	370	U	1500	1520		ug/Kg	☼	101	32 - 120	5	31
Acenaphthene	300	U	752	687		ug/Kg	☼	91	36 - 120	6	28
Acenaphthylene	300	U	752	666		ug/Kg	☼	89	35 - 120	5	26
Acetophenone	300	U	752	557		ug/Kg	☼	74	31 - 120	15	40
Anthracene	300	U	752	708		ug/Kg	☼	94	42 - 120	3	32
Atrazine	45	U	1500	1680		ug/Kg	☼	111	41 - 120	1	26
Benzaldehyde	300	U	1500	1220		ug/Kg	☼	81	28 - 120	14	40
Benzo[a]anthracene	300	U	752	749		ug/Kg	☼	100	35 - 120	5	40
Benzo[a]pyrene	300	U	752	737		ug/Kg	☼	97	33 - 120	3	40
Benzo[b]fluoranthene	300	U	752	732		ug/Kg	☼	97	26 - 120	4	40
Benzo[g,h,i]perylene	300	U	752	776		ug/Kg	☼	102	16 - 120	4	40
Benzo[k]fluoranthene	300	U	752	698		ug/Kg	☼	93	33 - 120	4	40
Bis(2-chloroethoxy)methane	300	U	752	602		ug/Kg	☼	80	36 - 120	17	33
Bis(2-chloroethyl)ether	90	U	752	582		ug/Kg	☼	77	33 - 120	11	36
Bis(2-ethylhexyl) phthalate	300	U F1	752	961	F1	ug/Kg	☼	128	40 - 120	2	28
Butyl benzyl phthalate	300	U	752	904		ug/Kg	☼	120	46 - 120	6	39
Caprolactam	300	U	1500	1440		ug/Kg	☼	95	33 - 128	8	40
Carbazole	300	U	752	739		ug/Kg	☼	98	35 - 120	2	34
Chrysene	300	U	752	724		ug/Kg	☼	96	33 - 120	5	40
Dibenz(a,h)anthracene	300	U	752	733		ug/Kg	☼	97	30 - 120	7	40
Dibenzofuran	300	U	752	687		ug/Kg	☼	91	37 - 120	5	28
Diethyl phthalate	300	U	752	751		ug/Kg	☼	100	44 - 120	2	26
Dimethyl phthalate	300	U	752	756		ug/Kg	☼	100	42 - 120	5	35
Di-n-butyl phthalate	300	U	752	798		ug/Kg	☼	106	45 - 120	3	28
Di-n-octyl phthalate	300	U	752	763		ug/Kg	☼	101	35 - 120	2	33
Fluoranthene	300	U	752	723		ug/Kg	☼	96	26 - 121	3	40
Fluorene	300	U	752	701		ug/Kg	☼	93	36 - 120	5	28
Hexachlorobenzene	300	U	752	608		ug/Kg	☼	81	36 - 120	3	25
Hexachlorobutadiene	45	U	752	547		ug/Kg	☼	71	31 - 120	17	35
Hexachlorocyclopentadiene	300	U F2 F1	752	300	U F1 F2	ug/Kg	☼	2	10 - 120	46	40
Hexachloroethane	300	U	752	518		ug/Kg	☼	69	15 - 120	14	40
Indeno[1,2,3-cd]pyrene	300	U	752	786		ug/Kg	☼	105	24 - 120	7	40

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-4 MSD

Matrix: Solid

Analysis Batch: 309741

Client Sample ID: S-58502-121817-SSH-1004

Prep Type: Total/NA

Prep Batch: 309410

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isophorone	300	U	752	596		ug/Kg	☼	79	34 - 120	15	32
Naphthalene	300	U	752	573		ug/Kg	☼	76	29 - 120	14	34
Nitrobenzene	300	U	752	596		ug/Kg	☼	79	33 - 120	17	40
N-Nitrosodi-n-propylamine	300	U	752	623		ug/Kg	☼	83	32 - 120	14	32
N-Nitrosodiphenylamine	300	U	752	690		ug/Kg	☼	92	29 - 120	2	30
Pentachlorophenol	170	U	1500	612		ug/Kg	☼	41	10 - 120	17	40
Phenol	300	U	752	625		ug/Kg	☼	83	21 - 120	12	40
Phenanthrene	300	U	752	668		ug/Kg	☼	88	28 - 120	1	40
Pyrene	300	U	752	789		ug/Kg	☼	104	28 - 120	7	40
3 & 4 Methylphenol	300	U	752	601		ug/Kg	☼	80	33 - 120	7	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	100		32 - 120
2-Fluorophenol (Surr)	82		29 - 120
2,4,6-Tribromophenol (Surr)	77		10 - 120
Nitrobenzene-d5 (Surr)	79		30 - 120
Phenol-d5 (Surr)	88		29 - 120
Terphenyl-d14 (Surr)	115		41 - 120

Lab Sample ID: MB 240-309572/22-A

Matrix: Solid

Analysis Batch: 309732

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309572

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,2'-oxybis[1-chloropropane]	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4,5-Trichlorophenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4,6-Trichlorophenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4-Dichlorophenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4-Dimethylphenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4-Dinitrophenol	150	U	150	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,4-Dinitrotoluene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2,6-Dinitrotoluene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Chloronaphthalene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Chlorophenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Methylnaphthalene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Methylphenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Nitroaniline	200	U	200	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
2-Nitrophenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
3,3'-Dichlorobenzidine	1600	U	1600	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
3-Nitroaniline	200	U	200	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4,6-Dinitro-2-methylphenol	150	U	150	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Bromophenyl phenyl ether	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Chloro-3-methylphenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Chloroaniline	200	U	200	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Chlorophenyl phenyl ether	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Nitroaniline	200	U	200	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
4-Nitrophenol	330	U	330	ug/Kg		12/29/17 10:29	01/02/18 13:21	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-309572/22-A

Matrix: Solid

Analysis Batch: 309732

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309572

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Acenaphthylene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Acetophenone	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Anthracene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Atrazine	40	U	40	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzaldehyde	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzo[a]anthracene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzo[a]pyrene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzo[b]fluoranthene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzo[g,h,i]perylene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Benzo[k]fluoranthene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Bis(2-chloroethoxy)methane	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Bis(2-chloroethyl)ether	80	U	80	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Bis(2-ethylhexyl) phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Butyl benzyl phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Caprolactam	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Carbazole	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Chrysene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Dibenz(a,h)anthracene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Dibenzofuran	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Diethyl phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Dimethyl phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Di-n-butyl phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Di-n-octyl phthalate	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Fluoranthene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Fluorene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Hexachlorobenzene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Hexachlorobutadiene	40	U	40	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Hexachlorocyclopentadiene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Hexachloroethane	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Indeno[1,2,3-cd]pyrene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Isophorone	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Naphthalene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Nitrobenzene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
N-Nitrosodi-n-propylamine	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
N-Nitrosodiphenylamine	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Pentachlorophenol	150	U	150	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Phenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Phenanthrene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
Pyrene	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1
3 & 4 Methylphenol	260	U	260	ug/Kg		12/29/17 10:29	01/02/18 13:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	83		32 - 120	12/29/17 10:29	01/02/18 13:21	1
2-Fluorophenol (Surr)	58		29 - 120	12/29/17 10:29	01/02/18 13:21	1
2,4,6-Tribromophenol (Surr)	33		10 - 120	12/29/17 10:29	01/02/18 13:21	1
Nitrobenzene-d5 (Surr)	67		30 - 120	12/29/17 10:29	01/02/18 13:21	1
Phenol-d5 (Surr)	66		29 - 120	12/29/17 10:29	01/02/18 13:21	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-309572/22-A

Matrix: Solid

Analysis Batch: 309732

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309572

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	100		41 - 120	12/29/17 10:29	01/02/18 13:21	1

Lab Sample ID: LCS 240-309572/23-A

Matrix: Solid

Analysis Batch: 309732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	667	583		ug/Kg		87	48 - 120
2,2'-oxybis[1-chloropropane]	667	502		ug/Kg		75	37 - 120
2,4,5-Trichlorophenol	667	551		ug/Kg		83	34 - 120
2,4,6-Trichlorophenol	667	433		ug/Kg		65	19 - 120
2,4-Dichlorophenol	667	510		ug/Kg		77	48 - 120
2,4-Dimethylphenol	667	389		ug/Kg		58	37 - 120
2,4-Dinitrophenol	1330	488		ug/Kg		37	10 - 120
2,4-Dinitrotoluene	667	645		ug/Kg		97	53 - 120
2,6-Dinitrotoluene	667	650		ug/Kg		97	54 - 120
2-Chloronaphthalene	667	573		ug/Kg		86	49 - 120
2-Chlorophenol	667	506		ug/Kg		76	50 - 120
2-Methylnaphthalene	667	517		ug/Kg		78	49 - 120
2-Methylphenol	667	499		ug/Kg		75	49 - 120
2-Nitroaniline	667	675		ug/Kg		101	46 - 120
2-Nitrophenol	667	509		ug/Kg		76	46 - 120
3,3'-Dichlorobenzidine	1330	988	J	ug/Kg		74	40 - 120
3-Nitroaniline	667	566		ug/Kg		85	48 - 120
4,6-Dinitro-2-methylphenol	1330	719		ug/Kg		54	18 - 120
4-Bromophenyl phenyl ether	667	660		ug/Kg		99	51 - 120
4-Chloro-3-methylphenol	667	550		ug/Kg		82	47 - 120
4-Chloroaniline	667	377		ug/Kg		56	37 - 120
4-Chlorophenyl phenyl ether	667	618		ug/Kg		93	49 - 120
4-Nitroaniline	667	657		ug/Kg		99	49 - 120
4-Nitrophenol	1330	1180		ug/Kg		88	42 - 120
Acenaphthene	667	593		ug/Kg		89	48 - 120
Acenaphthylene	667	543		ug/Kg		81	46 - 120
Acetophenone	667	479		ug/Kg		72	46 - 120
Anthracene	667	613		ug/Kg		92	51 - 120
Atrazine	1330	1650	*	ug/Kg		124	57 - 120
Benzaldehyde	1330	1080		ug/Kg		81	48 - 120
Benzo[a]anthracene	667	631		ug/Kg		95	53 - 120
Benzo[a]pyrene	667	620		ug/Kg		93	50 - 120
Benzo[b]fluoranthene	667	648		ug/Kg		97	48 - 120
Benzo[g,h,i]perylene	667	617		ug/Kg		93	50 - 120
Benzo[k]fluoranthene	667	625		ug/Kg		94	51 - 120
Bis(2-chloroethoxy)methane	667	514		ug/Kg		77	50 - 120
Bis(2-chloroethyl)ether	667	471		ug/Kg		71	48 - 120
Bis(2-ethylhexyl) phthalate	667	661		ug/Kg		99	52 - 120
Butyl benzyl phthalate	667	676		ug/Kg		101	53 - 120
Caprolactam	1330	1160		ug/Kg		87	59 - 120
Carbazole	667	676		ug/Kg		101	56 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: LCS 240-309572/23-A

Matrix: Solid

Analysis Batch: 309732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	667	638		ug/Kg		96	54 - 120
Dibenz(a,h)anthracene	667	619		ug/Kg		93	48 - 120
Dibenzofuran	667	593		ug/Kg		89	49 - 120
Diethyl phthalate	667	643		ug/Kg		96	52 - 120
Dimethyl phthalate	667	635		ug/Kg		95	53 - 120
Di-n-butyl phthalate	667	734		ug/Kg		110	56 - 120
Di-n-octyl phthalate	667	547		ug/Kg		82	42 - 120
Fluoranthene	667	714		ug/Kg		107	53 - 120
Fluorene	667	626		ug/Kg		94	50 - 120
Hexachlorobenzene	667	685		ug/Kg		103	46 - 120
Hexachlorobutadiene	667	478		ug/Kg		72	44 - 120
Hexachlorocyclopentadiene	667	424		ug/Kg		64	14 - 120
Hexachloroethane	667	465		ug/Kg		70	45 - 120
Indeno[1,2,3-cd]pyrene	667	624		ug/Kg		94	49 - 120
Isophorone	667	512		ug/Kg		77	47 - 120
Naphthalene	667	494		ug/Kg		74	48 - 120
Nitrobenzene	667	509		ug/Kg		76	48 - 120
N-Nitrosodi-n-propylamine	667	520		ug/Kg		78	49 - 120
N-Nitrosodiphenylamine	667	648		ug/Kg		97	53 - 120
Pentachlorophenol	1330	752		ug/Kg		56	14 - 120
Phenol	667	512		ug/Kg		77	49 - 120
Phenanthrene	667	589		ug/Kg		88	52 - 120
Pyrene	667	656		ug/Kg		98	55 - 120
3 & 4 Methylphenol	667	514		ug/Kg		77	50 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	95		32 - 120
2-Fluorophenol (Surr)	84		29 - 120
2,4,6-Tribromophenol (Surr)	62		10 - 120
Nitrobenzene-d5 (Surr)	84		30 - 120
Phenol-d5 (Surr)	84		29 - 120
Terphenyl-d14 (Surr)	112		41 - 120

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 310043

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	310	U	782	563		ug/Kg	☼	72	33 - 120
2,2'-oxybis[1-chloropropane]	310	U	782	403		ug/Kg	☼	51	26 - 120
2,4,5-Trichlorophenol	310	U	782	582		ug/Kg	☼	74	20 - 120
2,4,6-Trichlorophenol	310	U	782	520		ug/Kg	☼	67	19 - 120
2,4-Dichlorophenol	310	U	782	543		ug/Kg	☼	69	32 - 120
2,4-Dimethylphenol	310	U	782	506		ug/Kg	☼	65	28 - 120
2,4-Dinitrophenol	180	U	1560	403		ug/Kg	☼	26	10 - 120
2,4-Dinitrotoluene	310	U	782	652		ug/Kg	☼	83	38 - 120
2,6-Dinitrotoluene	310	U	782	654		ug/Kg	☼	84	43 - 120
2-Chloronaphthalene	310	U	782	567		ug/Kg	☼	72	35 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 310043

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2-Chlorophenol	310	U	782	450		ug/Kg	☼	58	30 - 120
2-Methylnaphthalene	310	U	782	496		ug/Kg	☼	63	31 - 120
2-Methylphenol	310	U	782	462		ug/Kg	☼	59	31 - 120
2-Nitroaniline	240	U	782	628		ug/Kg	☼	80	29 - 120
2-Nitrophenol	310	U	782	462		ug/Kg	☼	59	26 - 120
3,3'-Dichlorobenzidine	1900	U	1560	1900	U	ug/Kg	☼	62	10 - 120
3-Nitroaniline	240	U	782	488		ug/Kg	☼	62	21 - 120
4,6-Dinitro-2-methylphenol	180	U	1560	445		ug/Kg	☼	28	10 - 120
4-Bromophenyl phenyl ether	310	U	782	608		ug/Kg	☼	78	44 - 120
4-Chloro-3-methylphenol	310	U	782	586		ug/Kg	☼	75	31 - 120
4-Chloroaniline	240	U	782	324		ug/Kg	☼	41	15 - 120
4-Chlorophenyl phenyl ether	310	U	782	621		ug/Kg	☼	79	41 - 120
4-Nitroaniline	240	U	782	570		ug/Kg	☼	73	23 - 120
4-Nitrophenol	390	U	1560	1090		ug/Kg	☼	70	32 - 120
Acenaphthene	310	U	782	586		ug/Kg	☼	75	36 - 120
Acenaphthylene	310	U	782	556		ug/Kg	☼	71	35 - 120
Acetophenone	310	U	782	422		ug/Kg	☼	54	31 - 120
Anthracene	310	U	782	608		ug/Kg	☼	78	42 - 120
Atrazine	47	U *	1560	1450		ug/Kg	☼	93	41 - 120
Benzaldehyde	310	U	1560	927		ug/Kg	☼	59	28 - 120
Benzo[a]anthracene	310	U	782	624		ug/Kg	☼	79	35 - 120
Benzo[a]pyrene	310	U	782	618		ug/Kg	☼	78	33 - 120
Benzo[b]fluoranthene	310	U	782	654		ug/Kg	☼	82	26 - 120
Benzo[g,h,i]perylene	310	U	782	408		ug/Kg	☼	51	16 - 120
Benzo[k]fluoranthene	310	U	782	632		ug/Kg	☼	80	33 - 120
Bis(2-chloroethoxy)methane	310	U	782	466		ug/Kg	☼	60	36 - 120
Bis(2-chloroethyl)ether	94	U	782	403		ug/Kg	☼	52	33 - 120
Bis(2-ethylhexyl) phthalate	310	U	782	706		ug/Kg	☼	90	40 - 120
Butyl benzyl phthalate	310	U	782	675		ug/Kg	☼	86	46 - 120
Caprolactam	310	U	1560	1180		ug/Kg	☼	75	33 - 128
Carbazole	310	U	782	608		ug/Kg	☼	78	35 - 120
Chrysene	310	U	782	623		ug/Kg	☼	78	33 - 120
Dibenz(a,h)anthracene	310	U	782	471		ug/Kg	☼	60	30 - 120
Dibenzofuran	310	U	782	596		ug/Kg	☼	76	37 - 120
Diethyl phthalate	310	U	782	640		ug/Kg	☼	79	44 - 120
Dimethyl phthalate	310	U	782	625		ug/Kg	☼	80	42 - 120
Di-n-butyl phthalate	310	U	782	702		ug/Kg	☼	90	45 - 120
Di-n-octyl phthalate	310	U	782	653		ug/Kg	☼	84	35 - 120
Fluoranthene	310	U	782	685		ug/Kg	☼	85	26 - 121
Fluorene	310	U	782	623		ug/Kg	☼	80	36 - 120
Hexachlorobenzene	310	U	782	617		ug/Kg	☼	79	36 - 120
Hexachlorobutadiene	47	U	782	451		ug/Kg	☼	58	31 - 120
Hexachlorocyclopentadiene	310	U F1	782	310	U F1	ug/Kg	☼	0	10 - 120
Hexachloroethane	310	U	782	320		ug/Kg	☼	41	15 - 120
Indeno[1,2,3-cd]pyrene	310	U	782	464		ug/Kg	☼	59	24 - 120
Isophorone	310	U	782	461		ug/Kg	☼	59	34 - 120
Naphthalene	310	U	782	446		ug/Kg	☼	57	29 - 120
Nitrobenzene	310	U	782	452		ug/Kg	☼	58	33 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 310043

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
N-Nitrosodi-n-propylamine	310	U	782	440		ug/Kg	☼	56	32 - 120
N-Nitrosodiphenylamine	310	U	782	591		ug/Kg	☼	76	29 - 120
Pentachlorophenol	180	U	1560	528		ug/Kg	☼	34	10 - 120
Phenol	310	U	782	448		ug/Kg	☼	57	21 - 120
Phenanthrene	310	U	782	588		ug/Kg	☼	74	28 - 120
Pyrene	310	U	782	653		ug/Kg	☼	81	28 - 120
3 & 4 Methylphenol	310	U	782	475		ug/Kg	☼	61	33 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	77		32 - 120
2-Fluorophenol (Surr)	61		29 - 120
2,4,6-Tribromophenol (Surr)	67		10 - 120
Nitrobenzene-d5 (Surr)	62		30 - 120
Phenol-d5 (Surr)	64		29 - 120
Terphenyl-d14 (Surr)	91		41 - 120

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 310043

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1'-Biphenyl	310	U	773	577		ug/Kg	☼	75	33 - 120	3	33
2,2'-oxybis[1-chloropropane]	310	U	773	454		ug/Kg	☼	59	26 - 120	12	31
2,4,5-Trichlorophenol	310	U	773	564		ug/Kg	☼	73	20 - 120	3	38
2,4,6-Trichlorophenol	310	U	773	531		ug/Kg	☼	69	19 - 120	2	36
2,4-Dichlorophenol	310	U	773	548		ug/Kg	☼	71	32 - 120	1	32
2,4-Dimethylphenol	310	U	773	518		ug/Kg	☼	67	28 - 120	2	35
2,4-Dinitrophenol	180	U	1550	368		ug/Kg	☼	24	10 - 120	9	40
2,4-Dinitrotoluene	310	U	773	644		ug/Kg	☼	83	38 - 120	1	27
2,6-Dinitrotoluene	310	U	773	628		ug/Kg	☼	81	43 - 120	4	31
2-Chloronaphthalene	310	U	773	574		ug/Kg	☼	74	35 - 120	1	30
2-Chlorophenol	310	U	773	506		ug/Kg	☼	66	30 - 120	12	37
2-Methylnaphthalene	310	U	773	531		ug/Kg	☼	69	31 - 120	7	33
2-Methylphenol	310	U	773	503		ug/Kg	☼	65	31 - 120	9	36
2-Nitroaniline	240	U	773	619		ug/Kg	☼	80	29 - 120	1	31
2-Nitrophenol	310	U	773	501		ug/Kg	☼	65	26 - 120	8	38
3,3'-Dichlorobenzidine	1900	U	1550	1900	U	ug/Kg	☼	62	10 - 120	1	40
3-Nitroaniline	240	U	773	478		ug/Kg	☼	62	21 - 120	2	40
4,6-Dinitro-2-methylphenol	180	U	1550	414		ug/Kg	☼	27	10 - 120	7	40
4-Bromophenyl phenyl ether	310	U	773	612		ug/Kg	☼	79	44 - 120	1	40
4-Chloro-3-methylphenol	310	U	773	574		ug/Kg	☼	74	31 - 120	2	25
4-Chloroaniline	240	U	773	320		ug/Kg	☼	41	15 - 120	1	36
4-Chlorophenyl phenyl ether	310	U	773	627		ug/Kg	☼	81	41 - 120	1	40
4-Nitroaniline	240	U	773	552		ug/Kg	☼	71	23 - 120	3	40
4-Nitrophenol	390	U	1550	1110		ug/Kg	☼	72	32 - 120	2	31
Acenaphthene	310	U	773	585		ug/Kg	☼	76	36 - 120	0	28
Acenaphthylene	310	U	773	551		ug/Kg	☼	71	35 - 120	1	26
Acetophenone	310	U	773	477		ug/Kg	☼	62	31 - 120	12	40

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 310043

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309572

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Anthracene	310	U	773	597		ug/Kg	☼	77	42 - 120	2	32
Atrazine	47	U *	1550	1390		ug/Kg	☼	90	41 - 120	4	26
Benzaldehyde	310	U	1550	1030		ug/Kg	☼	67	28 - 120	10	40
Benzo[a]anthracene	310	U	773	621		ug/Kg	☼	79	35 - 120	1	40
Benzo[a]pyrene	310	U	773	616		ug/Kg	☼	79	33 - 120	0	40
Benzo[b]fluoranthene	310	U	773	658		ug/Kg	☼	83	26 - 120	1	40
Benzo[g,h,i]perylene	310	U	773	390		ug/Kg	☼	50	16 - 120	5	40
Benzo[k]fluoranthene	310	U	773	629		ug/Kg	☼	81	33 - 120	0	40
Bis(2-chloroethoxy)methane	310	U	773	509		ug/Kg	☼	66	36 - 120	9	33
Bis(2-chloroethyl)ether	94	U	773	453		ug/Kg	☼	59	33 - 120	12	36
Bis(2-ethylhexyl) phthalate	310	U	773	684		ug/Kg	☼	89	40 - 120	3	28
Butyl benzyl phthalate	310	U	773	678		ug/Kg	☼	88	46 - 120	0	39
Caprolactam	310	U	1550	1150		ug/Kg	☼	74	33 - 128	2	40
Carbazole	310	U	773	597		ug/Kg	☼	77	35 - 120	2	34
Chrysene	310	U	773	607		ug/Kg	☼	77	33 - 120	3	40
Dibenz(a,h)anthracene	310	U	773	461		ug/Kg	☼	60	30 - 120	2	40
Dibenzofuran	310	U	773	593		ug/Kg	☼	77	37 - 120	1	28
Diethyl phthalate	310	U	773	636		ug/Kg	☼	79	44 - 120	1	26
Dimethyl phthalate	310	U	773	612		ug/Kg	☼	79	42 - 120	2	35
Di-n-butyl phthalate	310	U	773	690		ug/Kg	☼	89	45 - 120	2	28
Di-n-octyl phthalate	310	U	773	662		ug/Kg	☼	86	35 - 120	1	33
Fluoranthene	310	U	773	681		ug/Kg	☼	85	26 - 121	1	40
Fluorene	310	U	773	618		ug/Kg	☼	80	36 - 120	1	28
Hexachlorobenzene	310	U	773	608		ug/Kg	☼	79	36 - 120	1	25
Hexachlorobutadiene	47	U	773	498		ug/Kg	☼	64	31 - 120	10	35
Hexachlorocyclopentadiene	310	U F1	773	310	U F1	ug/Kg	☼	0	10 - 120	NC	40
Hexachloroethane	310	U	773	351		ug/Kg	☼	45	15 - 120	9	40
Indeno[1,2,3-cd]pyrene	310	U	773	446		ug/Kg	☼	57	24 - 120	4	40
Isophorone	310	U	773	497		ug/Kg	☼	64	34 - 120	7	32
Naphthalene	310	U	773	486		ug/Kg	☼	63	29 - 120	9	34
Nitrobenzene	310	U	773	490		ug/Kg	☼	63	33 - 120	8	40
N-Nitrosodi-n-propylamine	310	U	773	506		ug/Kg	☼	66	32 - 120	14	32
N-Nitrosodiphenylamine	310	U	773	581		ug/Kg	☼	75	29 - 120	2	30
Pentachlorophenol	180	U	1550	571		ug/Kg	☼	37	10 - 120	8	40
Phenol	310	U	773	498		ug/Kg	☼	65	21 - 120	11	40
Phenanthrene	310	U	773	585		ug/Kg	☼	75	28 - 120	0	40
Pyrene	310	U	773	648		ug/Kg	☼	81	28 - 120	1	40
3 & 4 Methylphenol	310	U	773	533		ug/Kg	☼	69	33 - 120	11	29

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		32 - 120
2-Fluorophenol (Surr)	70		29 - 120
2,4,6-Tribromophenol (Surr)	70		10 - 120
Nitrobenzene-d5 (Surr)	69		30 - 120
Phenol-d5 (Surr)	72		29 - 120
Terphenyl-d14 (Surr)	89		41 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 240-309456/23-A

Matrix: Solid

Analysis Batch: 309735

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309456

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
4,4'-DDE	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
4,4'-DDT	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Aldrin	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
alpha-BHC	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
alpha-Chlordane	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
beta-BHC	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
delta-BHC	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Dieldrin	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endosulfan I	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endosulfan II	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endosulfan sulfate	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endrin	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endrin aldehyde	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Endrin ketone	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
gamma-BHC (Lindane)	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
gamma-Chlordane	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Heptachlor	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Heptachlor epoxide	5.1	U	5.1	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Methoxychlor	9.9	U	9.9	ug/Kg		12/28/17 12:15	01/02/18 11:06	1
Toxaphene	100	U	100	ug/Kg		12/28/17 12:15	01/02/18 11:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		13 - 135	12/28/17 12:15	01/02/18 11:06	1
Tetrachloro-m-xylene	90		30 - 120	12/28/17 12:15	01/02/18 11:06	1

Lab Sample ID: LCS 240-309456/24-A

Matrix: Solid

Analysis Batch: 309735

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	100	109		ug/Kg		109	48 - 120
4,4'-DDE	100	108		ug/Kg		108	46 - 120
4,4'-DDT	100	110		ug/Kg		110	48 - 120
Aldrin	100	104		ug/Kg		104	36 - 120
alpha-BHC	100	109		ug/Kg		109	48 - 120
alpha-Chlordane	100	99.7		ug/Kg		100	44 - 120
beta-BHC	100	131	*	ug/Kg		131	45 - 120
delta-BHC	100	112		ug/Kg		112	33 - 120
Dieldrin	100	101		ug/Kg		101	47 - 120
Endosulfan I	100	81.9		ug/Kg		82	28 - 120
Endosulfan II	100	91.7		ug/Kg		92	39 - 120
Endosulfan sulfate	100	129	*	ug/Kg		129	46 - 120
Endrin	100	113		ug/Kg		113	28 - 136
Endrin aldehyde	100	118		ug/Kg		118	38 - 120
Endrin ketone	100	103		ug/Kg		103	44 - 120
gamma-BHC (Lindane)	100	95.3		ug/Kg		95	39 - 120
gamma-Chlordane	100	93.0		ug/Kg		93	46 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 240-309456/24-A

Matrix: Solid

Analysis Batch: 309735

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor	100	97.5		ug/Kg		98	48 - 120
Heptachlor epoxide	100	101		ug/Kg		101	51 - 120
Methoxychlor	100	105		ug/Kg		105	38 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	114		13 - 135
Tetrachloro-m-xylene	100		30 - 120

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	30	U	115	92.4		ug/Kg	☼	80	27 - 120
4,4'-DDE	30	U	115	93.3		ug/Kg	☼	81	25 - 120
4,4'-DDT	30	U	115	85.5		ug/Kg	☼	74	19 - 125
Aldrin	30	U	115	96.6		ug/Kg	☼	84	15 - 120
alpha-BHC	30	U	115	108		ug/Kg	☼	93	30 - 120
alpha-Chlordane	30	U	115	87.2		ug/Kg	☼	76	28 - 120
beta-BHC	30	U *	115	137		ug/Kg	☼	118	20 - 120
delta-BHC	30	U	115	112		ug/Kg	☼	97	20 - 120
Dieldrin	30	U	115	91.5		ug/Kg	☼	79	29 - 120
Endosulfan I	30	U	115	73.0		ug/Kg	☼	63	10 - 120
Endosulfan II	30	U	115	75.9		ug/Kg	☼	66	21 - 120
Endosulfan sulfate	30	U *	115	106		ug/Kg	☼	92	27 - 120
Endrin	30	U	115	103		ug/Kg	☼	89	26 - 129
Endrin aldehyde	30	U	115	88.1		ug/Kg	☼	76	18 - 120
Endrin ketone	30	U	115	83.6		ug/Kg	☼	72	28 - 120
gamma-BHC (Lindane)	30	U	115	94.6		ug/Kg	☼	82	27 - 120
gamma-Chlordane	30	U	115	82.0	p	ug/Kg	☼	71	29 - 120
Heptachlor	30	U	115	111		ug/Kg	☼	96	35 - 120
Heptachlor epoxide	30	U	115	95.1		ug/Kg	☼	82	32 - 120
Methoxychlor	58	U	115	94.8	p	ug/Kg	☼	82	26 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	83		13 - 135
Tetrachloro-m-xylene	110		30 - 120

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309456

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
4,4'-DDD	30	U	116	129		ug/Kg	☼	112	27 - 120	33	40
4,4'-DDE	30	U	116	124		ug/Kg	☼	107	25 - 120	28	40
4,4'-DDT	30	U	116	121		ug/Kg	☼	104	19 - 125	34	40
Aldrin	30	U	116	122		ug/Kg	☼	105	15 - 120	23	40
alpha-BHC	30	U	116	137		ug/Kg	☼	118	30 - 120	24	40

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 309456

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-Chlordane	30	U	116	116		ug/Kg	☼	100	28 - 120	28	40
beta-BHC	30	U *	116	161	F1	ug/Kg	☼	139	20 - 120	17	40
delta-BHC	30	U	116	138		ug/Kg	☼	119	20 - 120	21	40
Dieldrin	30	U	116	123		ug/Kg	☼	106	29 - 120	29	40
Endosulfan I	30	U	116	97.2		ug/Kg	☼	84	10 - 120	28	40
Endosulfan II	30	U	116	106		ug/Kg	☼	91	21 - 120	33	40
Endosulfan sulfate	30	U *	116	148	F1	ug/Kg	☼	128	27 - 120	33	40
Endrin	30	U	116	142		ug/Kg	☼	122	26 - 129	32	40
Endrin aldehyde	30	U	116	135	F2	ug/Kg	☼	116	18 - 120	42	40
Endrin ketone	30	U	116	121		ug/Kg	☼	104	28 - 120	36	40
gamma-BHC (Lindane)	30	U	116	119		ug/Kg	☼	102	27 - 120	23	40
gamma-Chlordane	30	U	116	106	p	ug/Kg	☼	91	29 - 120	25	40
Heptachlor	30	U	116	148	F1	ug/Kg	☼	127	35 - 120	28	40
Heptachlor epoxide	30	U	116	123		ug/Kg	☼	106	32 - 120	26	40
Methoxychlor	58	U	116	129	p	ug/Kg	☼	111	26 - 120	30	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	113		13 - 135
Tetrachloro-m-xylene	116		30 - 120

Lab Sample ID: MB 240-309571/6-A

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309571

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
4,4'-DDE	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
4,4'-DDT	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Aldrin	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
alpha-BHC	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
alpha-Chlordane	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
beta-BHC	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
delta-BHC	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Dieldrin	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endosulfan I	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endosulfan II	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endosulfan sulfate	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endrin	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endrin aldehyde	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Endrin ketone	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
gamma-BHC (Lindane)	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
gamma-Chlordane	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Heptachlor	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Heptachlor epoxide	5.1	U	5.1	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Methoxychlor	9.9	U	9.9	ug/Kg		12/29/17 10:04	01/02/18 18:52	1
Toxaphene	100	U	100	ug/Kg		12/29/17 10:04	01/02/18 18:52	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 240-309571/6-A

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309571

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		13 - 135	12/29/17 10:04	01/02/18 18:52	1
Tetrachloro-m-xylene	81		30 - 120	12/29/17 10:04	01/02/18 18:52	1

Lab Sample ID: LCS 240-309571/7-A

Matrix: Solid

Analysis Batch: 309842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309571

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	100	96.1		ug/Kg		96	48 - 120
4,4'-DDE	100	92.3		ug/Kg		92	46 - 120
4,4'-DDT	100	95.4		ug/Kg		95	48 - 120
Aldrin	100	88.9		ug/Kg		89	36 - 120
alpha-BHC	100	96.7		ug/Kg		97	48 - 120
alpha-Chlordane	100	85.8		ug/Kg		86	44 - 120
beta-BHC	100	99.9		ug/Kg		100	45 - 120
delta-BHC	100	98.8		ug/Kg		99	33 - 120
Dieldrin	100	89.5		ug/Kg		90	47 - 120
Endosulfan I	100	70.4		ug/Kg		70	28 - 120
Endosulfan II	100	78.5		ug/Kg		79	39 - 120
Endosulfan sulfate	100	114		ug/Kg		114	46 - 120
Endrin	100	104		ug/Kg		104	28 - 136
Endrin aldehyde	100	94.4		ug/Kg		94	38 - 120
Endrin ketone	100	92.2		ug/Kg		92	44 - 120
gamma-BHC (Lindane)	100	88.5		ug/Kg		89	39 - 120
gamma-Chlordane	100	77.4		ug/Kg		77	46 - 120
Heptachlor	100	92.7		ug/Kg		93	48 - 120
Heptachlor epoxide	100	89.5		ug/Kg		90	51 - 120
Methoxychlor	100	96.0		ug/Kg		96	38 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	96		13 - 135
Tetrachloro-m-xylene	90		30 - 120

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

Lab Sample ID: MB 240-308659/22-A

Matrix: Solid

Analysis Batch: 308794

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308659

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1221	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1232	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1242	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1248	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1254	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1
Aroclor-1260	50	U	50	ug/Kg		12/21/17 09:03	12/22/17 17:39	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-308659/22-A
Matrix: Solid
Analysis Batch: 308794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308659

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		14 - 128	12/21/17 09:03	12/22/17 17:39	1
DCB Decachlorobiphenyl	93		10 - 132	12/21/17 09:03	12/22/17 17:39	1

Lab Sample ID: LCS 240-308659/23-A
Matrix: Solid
Analysis Batch: 308794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	741		ug/Kg		74	47 - 120
Aroclor-1260	1000	973		ug/Kg		97	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	80		14 - 128
DCB Decachlorobiphenyl	97		10 - 132

Lab Sample ID: 240-89576-11 MS
Matrix: Solid
Analysis Batch: 308794

Client Sample ID: S-58502-121817-SSH-1011
Prep Type: Total/NA
Prep Batch: 308659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	59	U	1160	922		ug/Kg	☼	80	31 - 120
Aroclor-1260	59	U	1160	1050		ug/Kg	☼	91	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	92		14 - 128
DCB Decachlorobiphenyl	106		10 - 132

Lab Sample ID: 240-89576-11 MSD
Matrix: Solid
Analysis Batch: 308794

Client Sample ID: S-58502-121817-SSH-1011
Prep Type: Total/NA
Prep Batch: 308659

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	59	U	1180	986		ug/Kg	☼	83	31 - 120	7	30
Aroclor-1260	59	U	1180	1210		ug/Kg	☼	102	21 - 122	14	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	100		14 - 128
DCB Decachlorobiphenyl	92		10 - 132

Lab Sample ID: MB 240-309467/23-A
Matrix: Solid
Analysis Batch: 309653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309467

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1
Aroclor-1221	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1
Aroclor-1232	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-309467/23-A

Matrix: Solid

Analysis Batch: 309653

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309467

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1242	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1
Aroclor-1248	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1
Aroclor-1254	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1
Aroclor-1260	50	U	50	ug/Kg		12/28/17 12:57	12/30/17 15:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		14 - 128	12/28/17 12:57	12/30/17 15:56	1
DCB Decachlorobiphenyl	72		10 - 132	12/28/17 12:57	12/30/17 15:56	1

Lab Sample ID: LCS 240-309467/24-A

Matrix: Solid

Analysis Batch: 309653

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	1000	732		ug/Kg		73	47 - 120
Aroclor-1260	1000	816		ug/Kg		82	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	88		14 - 128
DCB Decachlorobiphenyl	82		10 - 132

Lab Sample ID: MB 240-309549/23-A

Matrix: Solid

Analysis Batch: 309793

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309549

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1221	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1232	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1242	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1248	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1254	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1
Aroclor-1260	50	U	50	ug/Kg		12/29/17 09:08	01/02/18 22:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		14 - 128	12/29/17 09:08	01/02/18 22:06	1
DCB Decachlorobiphenyl	104		10 - 132	12/29/17 09:08	01/02/18 22:06	1

Lab Sample ID: LCS 240-309549/24-A

Matrix: Solid

Analysis Batch: 309793

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309549

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	1000	752		ug/Kg		75	47 - 120
Aroclor-1260	1000	816		ug/Kg		82	46 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: LCS 240-309549/24-A
Matrix: Solid
Analysis Batch: 309793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309549

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	77		14 - 128
DCB Decachlorobiphenyl	80		10 - 132

Lab Sample ID: LCSD 240-309549/25-A
Matrix: Solid
Analysis Batch: 309793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309549

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	1000	813		ug/Kg		81	47 - 120	8	30
Aroclor-1260	1000	916		ug/Kg		92	46 - 120	12	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	86		14 - 128
DCB Decachlorobiphenyl	94		10 - 132

Method: 8151 - Herbicides

Lab Sample ID: MB 600-228694/1-A
Matrix: Solid
Analysis Batch: 228778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228694

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	6.7	U	6.7	ug/Kg		12/29/17 12:54	01/02/18 21:35	1
2,4,5-T	6.7	U	6.7	ug/Kg		12/29/17 12:54	01/02/18 21:35	1
Silvex (2,4,5-TP)	6.7	U	6.7	ug/Kg		12/29/17 12:54	01/02/18 21:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	106		22 - 130	12/29/17 12:54	01/02/18 21:35	1

Lab Sample ID: LCS 600-228694/2-A
Matrix: Solid
Analysis Batch: 228778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	13.3	11.8		ug/Kg		88	33 - 159
2,4,5-T	13.3	16.1		ug/Kg		121	24 - 165
Silvex (2,4,5-TP)	13.3	12.4		ug/Kg		93	32 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	95		22 - 130

Lab Sample ID: LCSD 600-228694/3-A
Matrix: Solid
Analysis Batch: 228778

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 228694

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	13.3	9.62		ug/Kg		72	33 - 159	20	40

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8151 - Herbicides (Continued)

Lab Sample ID: LCSD 600-228694/3-A

Matrix: Solid

Analysis Batch: 228778

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 228694

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	13.3	12.4		ug/Kg		93	24 - 165	26	40
Silvex (2,4,5-TP)	13.3	12.0		ug/Kg		90	32 - 160	4	40

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	96		22 - 130

Lab Sample ID: MB 600-228696/1-A

Matrix: Solid

Analysis Batch: 228778

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 228696

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	6.7	U	6.7	ug/Kg		12/29/17 13:02	01/02/18 11:20	1
2,4,5-T	6.7	U	6.7	ug/Kg		12/29/17 13:02	01/02/18 11:20	1
Silvex (2,4,5-TP)	6.7	U	6.7	ug/Kg		12/29/17 13:02	01/02/18 11:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	40		22 - 130	12/29/17 13:02	01/02/18 11:20	1

Lab Sample ID: LCS 600-228696/2-A

Matrix: Solid

Analysis Batch: 228778

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 228696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	13.3	5.42	J	ug/Kg		41	33 - 159
2,4,5-T	13.3	4.21	J	ug/Kg		32	24 - 165
Silvex (2,4,5-TP)	13.3	6.98		ug/Kg		52	32 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	24		22 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-308519/1-A

Matrix: Solid

Analysis Batch: 308705

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308519

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.80	U	0.80	mg/Kg		12/20/17 14:00	12/21/17 17:47	1
Cadmium	0.080	U	0.080	mg/Kg		12/20/17 14:00	12/21/17 17:47	1
Chromium	0.80	U	0.80	mg/Kg		12/20/17 14:00	12/21/17 17:47	1
Copper	0.80	U	0.80	mg/Kg		12/20/17 14:00	12/21/17 17:47	1
Zinc	2.0	U	2.0	mg/Kg		12/20/17 14:00	12/21/17 17:47	1
Lead	0.24	U	0.24	mg/Kg		12/20/17 14:00	12/21/17 17:47	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-308519/2-A

Matrix: Solid

Analysis Batch: 308705

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	200	184		mg/Kg		92	80 - 120
Cadmium	5.00	4.64		mg/Kg		93	80 - 120
Chromium	20.0	18.3		mg/Kg		92	80 - 120
Copper	25.0	22.4		mg/Kg		90	80 - 120
Zinc	50.0	46.8		mg/Kg		94	80 - 120
Lead	50.0	46.1		mg/Kg		92	80 - 120

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 308705

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 308519

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	29		208	213		mg/Kg	☼	89	75 - 125
Cadmium	0.12		5.20	4.65		mg/Kg	☼	87	75 - 125
Chromium	8.5		20.8	28.5		mg/Kg	☼	96	75 - 125
Copper	6.8		26.0	29.8		mg/Kg	☼	88	75 - 125
Zinc	24		52.0	72.0		mg/Kg	☼	91	75 - 125
Lead	8.4		52.0	48.9		mg/Kg	☼	78	75 - 125

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 308705

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 308519

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	29		208	217		mg/Kg	☼	91	75 - 125	2	20
Cadmium	0.12		5.20	4.74		mg/Kg	☼	89	75 - 125	2	20
Chromium	8.5		20.8	28.3		mg/Kg	☼	95	75 - 125	1	20
Copper	6.8		26.0	29.8		mg/Kg	☼	88	75 - 125	0	20
Zinc	24		52.0	72.9		mg/Kg	☼	93	75 - 125	1	20
Lead	8.4		52.0	49.6		mg/Kg	☼	79	75 - 125	1	20

Lab Sample ID: MB 240-308692/1-A

Matrix: Solid

Analysis Batch: 308900

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308692

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.80	U	0.80	mg/Kg		12/21/17 14:00	12/22/17 13:38	1
Cadmium	0.080	U	0.080	mg/Kg		12/21/17 14:00	12/22/17 13:38	1
Chromium	0.80	U	0.80	mg/Kg		12/21/17 14:00	12/22/17 13:38	1
Copper	0.80	U	0.80	mg/Kg		12/21/17 14:00	12/22/17 13:38	1
Zinc	2.0	U	2.0	mg/Kg		12/21/17 14:00	12/22/17 13:38	1
Lead	0.24	U	0.24	mg/Kg		12/21/17 14:00	12/22/17 13:38	1

Lab Sample ID: LCS 240-308692/2-A

Matrix: Solid

Analysis Batch: 308900

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	200	194		mg/Kg		97	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-308692/2-A
Matrix: Solid
Analysis Batch: 308900

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	5.00	4.83		mg/Kg		97	80 - 120
Chromium	20.0	19.0		mg/Kg		95	80 - 120
Copper	25.0	23.9		mg/Kg		95	80 - 120
Zinc	50.0	47.0		mg/Kg		94	80 - 120
Lead	50.0	45.6		mg/Kg		91	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-308519/1-A ^2
Matrix: Solid
Analysis Batch: 308823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308519

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.080	U	0.080	mg/Kg		12/20/17 14:00	12/21/17 12:43	2
Selenium	0.16	U	0.16	mg/Kg		12/20/17 14:00	12/21/17 12:43	2
Silver	0.080	U	0.080	mg/Kg		12/20/17 14:00	12/21/17 12:43	2

Lab Sample ID: LCS 240-308519/3-A ^2
Matrix: Solid
Analysis Batch: 308823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308519

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	95.3		mg/Kg		95	80 - 120
Selenium	100	88.5		mg/Kg		88	80 - 120
Silver	10.0	9.90		mg/Kg		99	80 - 120

Lab Sample ID: 240-89576-11 MS
Matrix: Solid
Analysis Batch: 308823

Client Sample ID: S-58502-121817-SSH-1011
Prep Type: Total/NA
Prep Batch: 308519

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.3		108	103		mg/Kg	☼	94	75 - 125
Selenium	0.38		108	92.7		mg/Kg	☼	86	75 - 125
Silver	0.082	U	10.8	10.2		mg/Kg	☼	95	75 - 125

Lab Sample ID: 240-89576-11 MSD
Matrix: Solid
Analysis Batch: 308823

Client Sample ID: S-58502-121817-SSH-1011
Prep Type: Total/NA
Prep Batch: 308519

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	2.3		108	105		mg/Kg	☼	95	75 - 125	1	20
Selenium	0.38		108	92.2		mg/Kg	☼	85	75 - 125	1	20
Silver	0.082	U	10.8	10.3		mg/Kg	☼	95	75 - 125	0	20

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: MB 240-308692/1-A ^2

Matrix: Solid

Analysis Batch: 309038

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308692

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.080	U	0.080	mg/Kg		12/21/17 14:00	12/22/17 18:03	2
Selenium	0.16	U	0.16	mg/Kg		12/21/17 14:00	12/22/17 18:03	2
Silver	0.080	U	0.080	mg/Kg		12/21/17 14:00	12/22/17 18:03	2

Lab Sample ID: LCS 240-308692/3-A ^2

Matrix: Solid

Analysis Batch: 309038

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	100	101		mg/Kg		101	80 - 120
Selenium	100	83.6		mg/Kg		84	80 - 120
Silver	10.0	10.0		mg/Kg		100	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-308537/1-A

Matrix: Solid

Analysis Batch: 308742

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308537

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040	U	0.040	mg/Kg		12/20/17 16:00	12/21/17 10:15	1

Lab Sample ID: LCS 240-308537/2-A

Matrix: Solid

Analysis Batch: 308742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 308537

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.833	0.812		mg/Kg		97	80 - 120

Lab Sample ID: 240-89576-11 MS

Matrix: Solid

Analysis Batch: 308742

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 308537

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.045	U	0.218	0.219		mg/Kg	☼	101	80 - 120

Lab Sample ID: 240-89576-11 MSD

Matrix: Solid

Analysis Batch: 308742

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Prep Batch: 308537

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.045	U	0.218	0.216		mg/Kg	☼	99	80 - 120	1	20

Lab Sample ID: MB 240-308713/1-A

Matrix: Solid

Analysis Batch: 308949

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 308713

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040	U	0.040	mg/Kg		12/21/17 16:00	12/22/17 13:17	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Lab Sample ID: LCS 240-308713/2-A
Matrix: Solid
Analysis Batch: 308949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	1.08	*	mg/Kg		130	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 240-89576-1 DU
Matrix: Solid
Analysis Batch: 308463

Client Sample ID: S-58502-121817-SSH-1001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	86.8		87.1		%		0.4	20
Percent Moisture	13.2		12.9		%		2	20

Lab Sample ID: 240-89576-11 DU
Matrix: Solid
Analysis Batch: 308463

Client Sample ID: S-58502-121817-SSH-1011
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	85.1		90.2		%		6	20
Percent Moisture	14.9		9.8	F3	%		42	20

Lab Sample ID: 240-89576-20 DU
Matrix: Solid
Analysis Batch: 308463

Client Sample ID: S-58502-121817-SSH-1020
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	85.1		86.1		%		1	20
Percent Moisture	14.9		13.9		%		7	20

Method: Walkley Black - Organic Carbon, Total (TOC)

Lab Sample ID: MB 240-308469/28
Matrix: Solid
Analysis Batch: 308469

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1000	U	1000	mg/Kg			12/20/17 10:17	1

Lab Sample ID: MB 240-308469/4
Matrix: Solid
Analysis Batch: 308469

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	990	U	990	mg/Kg			12/20/17 09:07	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: Walkley Black - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 240-308469/29

Matrix: Solid

Analysis Batch: 308469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1920	1890		mg/Kg		99	51 - 126

Lab Sample ID: LCS 240-308469/5

Matrix: Solid

Analysis Batch: 308469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1920	1690		mg/Kg		88	51 - 126

Lab Sample ID: 240-89576-11 DU

Matrix: Solid

Analysis Batch: 308469

Client Sample ID: S-58502-121817-SSH-1011

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	3600		3490		mg/Kg	✱	2	20

Lab Sample ID: 240-89576-12 DU

Matrix: Solid

Analysis Batch: 308469

Client Sample ID: S-58502-121817-SSH-1012

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	4500		4510		mg/Kg	✱	1	20

Lab Sample ID: 240-89576-21 DU

Matrix: Solid

Analysis Batch: 308469

Client Sample ID: S-58502-121817-SSH-1021

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	8200		8400		mg/Kg	✱	3	20

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (64-144)	BFB (58-142)	TOL (61-137)	DBFM (31-155)
240-89576-1	S-58502-121817-SSH-1001	99	93	96	105
240-89576-2	S-58502-121817-SSH-1002	109	104	109	115
240-89576-3	S-58502-121817-SSH-1003	101	97	103	107
240-89576-4	S-58502-121817-SSH-1004	101	101	106	107
240-89576-5	S-58502-121817-SSH-1005	97	95	101	104
240-89576-6	S-58502-121817-SSH-1006	105	101	108	109
240-89576-7	S-58502-121817-SSH-1007	108	98	103	106
240-89576-8	S-58502-121817-SSH-1008	99	97	100	99
240-89576-9	S-58502-121817-SSH-1009	105	95	102	104
240-89576-10	S-58502-121817-SSH-1010	96	94	97	96
240-89576-11	S-58502-121817-SSH-1011	105	105	109	106
240-89576-12	S-58502-121817-SSH-1012	95	92	99	100
240-89576-13	S-58502-121817-SSH-1013	106	100	107	89
240-89576-14	S-58502-121817-SSH-1014	97	94	99	89
240-89576-15	S-58502-121817-SSH-1015	100	95	102	98
240-89576-16	S-58502-121817-SSH-1016	95	91	96	94
240-89576-17	S-58502-121817-SSH-1017	102	97	102	100
240-89576-18	S-58502-121817-SSH-1018	96	94	98	92
240-89576-19	S-58502-121817-SSH-1019	99	97	102	75
240-89576-20	S-58502-121817-SSH-1020	92	92	97	99
240-89576-21	S-58502-121817-SSH-1021	105	99	103	107
LCS 240-308903/2-A	Lab Control Sample	93	89	90	98
LCS 240-308992/2-A	Lab Control Sample	94	86	89	93
MB 240-308903/1-A	Method Blank	92	87	93	99
MB 240-308992/1-A	Method Blank	90	87	91	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (32-120)	2FP (29-120)	TBP (10-120)	NBZ (30-120)	PHL (29-120)	TPHL (41-120)
240-89576-1	S-58502-121817-SSH-1001	91	78	60	72	86	105
240-89576-2	S-58502-121817-SSH-1002	95	76	74	72	85	111
240-89576-3	S-58502-121817-SSH-1003	87	75	51	70	79	99
240-89576-4	S-58502-121817-SSH-1004	84	71	52	67	80	98
240-89576-4 MS	S-58502-121817-SSH-1004	92	73	75	68	80	108
240-89576-4 MSD	S-58502-121817-SSH-1004	100	82	77	79	88	115
240-89576-5	S-58502-121817-SSH-1005	82	72	75	66	73	98
240-89576-6	S-58502-121817-SSH-1006	82	64	80	58	70	101
240-89576-7	S-58502-121817-SSH-1007	80	68	58	60	69	101
240-89576-8	S-58502-121817-SSH-1008	78	67	56	59	69	94
240-89576-9	S-58502-121817-SSH-1009	79	64	54	58	67	99

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (32-120)	2FP (29-120)	TBP (10-120)	NBZ (30-120)	PHL (29-120)	TPHL (41-120)
240-89576-10	S-58502-121817-SSH-1010	78	67	51	62	69	91
240-89576-11	S-58502-121817-SSH-1011	71	59	63	55	61	86
240-89576-11 MS	S-58502-121817-SSH-1011	77	61	67	62	64	91
240-89576-11 MSD	S-58502-121817-SSH-1011	80	70	70	69	72	89
240-89576-12	S-58502-121817-SSH-1012	85	75	66	71	76	104
240-89576-13	S-58502-121817-SSH-1013	84	69	56	61	72	96
240-89576-14	S-58502-121817-SSH-1014	89	80	56	72	82	110
240-89576-15	S-58502-121817-SSH-1015	68	55	56	48	59	82
240-89576-16	S-58502-121817-SSH-1016	91	78	60	73	81	107
240-89576-17	S-58502-121817-SSH-1017	86	77	63	72	78	109
240-89576-18	S-58502-121817-SSH-1018	69	57	41	52	59	87
240-89576-19	S-58502-121817-SSH-1019	91	79	54	71	81	108
240-89576-20	S-58502-121817-SSH-1020	95	82	82	74	86	111
240-89576-21	S-58502-121817-SSH-1021	98	84	96	79	88	119
LCS 240-309410/23-A	Lab Control Sample	94	82	60	79	87	105
LCS 240-309572/23-A	Lab Control Sample	95	84	62	84	84	112
MB 240-309410/22-A	Method Blank	97	76	55	79	86	109
MB 240-309572/22-A	Method Blank	83	58	33	67	66	100

Surrogate Legend

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

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1 (13-135)	DCBP2 (13-135)	TCX1 (30-120)	TCX2 (30-120)
240-89576-1	S-58502-121817-SSH-1001	72	82	74	72
240-89576-2	S-58502-121817-SSH-1002	69	81	74	69
240-89576-3	S-58502-121817-SSH-1003	73	81	75	71
240-89576-4	S-58502-121817-SSH-1004	78	85	83	74
240-89576-5	S-58502-121817-SSH-1005	116	139 X	126 X	120
240-89576-6	S-58502-121817-SSH-1006	73	85	73	69
240-89576-7	S-58502-121817-SSH-1007	75	85	74	72
240-89576-8	S-58502-121817-SSH-1008	71	79	70	69
240-89576-9	S-58502-121817-SSH-1009	71	80	80	72
240-89576-10	S-58502-121817-SSH-1010	76	81	73	70
240-89576-11	S-58502-121817-SSH-1011	76	95	79	79
240-89576-11 MS	S-58502-121817-SSH-1011	83	97	110	86
240-89576-11 MSD	S-58502-121817-SSH-1011	113	125	116	115
240-89576-12	S-58502-121817-SSH-1012	69	79	82	70
240-89576-13	S-58502-121817-SSH-1013	58	78	58	59
240-89576-14	S-58502-121817-SSH-1014	67	73	76	70

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1 (13-135)	DCBP2 (13-135)	TCX1 (30-120)	TCX2 (30-120)
240-89576-15	S-58502-121817-SSH-1015	66	70	69	66
240-89576-16	S-58502-121817-SSH-1016	75	76	79	70
240-89576-17	S-58502-121817-SSH-1017	70	78	76	69
240-89576-18	S-58502-121817-SSH-1018	66	75	63	67
240-89576-19	S-58502-121817-SSH-1019	106	81	90	67
240-89576-20	S-58502-121817-SSH-1020	126	136 X	122 X	112
240-89576-21	S-58502-121817-SSH-1021	130	99	88	84
LCS 240-309456/24-A	Lab Control Sample	114	100	100	81
LCS 240-309571/7-A	Lab Control Sample	96	91	90	71
MB 240-309456/23-A	Method Blank	97	96	90	77
MB 240-309571/6-A	Method Blank	85	84	81	70

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (14-128)	DCBP1 (10-132)
240-89576-1	S-58502-121817-SSH-1001	124	143 X
240-89576-2	S-58502-121817-SSH-1002	97	112
240-89576-3	S-58502-121817-SSH-1003	93	113
240-89576-4	S-58502-121817-SSH-1004	83	108
240-89576-5	S-58502-121817-SSH-1005	90	95
240-89576-6	S-58502-121817-SSH-1006	80	96
240-89576-7	S-58502-121817-SSH-1007	91	93
240-89576-8	S-58502-121817-SSH-1008	106	102
240-89576-9	S-58502-121817-SSH-1009	94	97
240-89576-10	S-58502-121817-SSH-1010	109	115
240-89576-11	S-58502-121817-SSH-1011	96	104
240-89576-11 MS	S-58502-121817-SSH-1011	92	106
240-89576-11 MSD	S-58502-121817-SSH-1011	100	92
240-89576-12	S-58502-121817-SSH-1012	77	87
240-89576-13	S-58502-121817-SSH-1013	92	100
240-89576-14	S-58502-121817-SSH-1014	90	88
240-89576-15	S-58502-121817-SSH-1015	93	96
240-89576-16	S-58502-121817-SSH-1016	83	75
240-89576-17	S-58502-121817-SSH-1017	84	82
240-89576-18	S-58502-121817-SSH-1018	88	71
LCS 240-308659/23-A	Lab Control Sample	80	97
LCS 240-309467/24-A	Lab Control Sample	88	82
MB 240-308659/22-A	Method Blank	66	93
MB 240-309467/23-A	Method Blank	81	72

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX2 (14-128)	DCBP2 (10-132)
240-89576-19	S-58502-121817-SSH-1019	85	91
240-89576-20	S-58502-121817-SSH-1020	85	87
240-89576-21	S-58502-121817-SSH-1021	95	113
LCS 240-309549/24-A	Lab Control Sample	77	80
LCSD 240-309549/25-A	Lab Control Sample Dup	86	94
MB 240-309549/23-A	Method Blank	89	104

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8151 - Herbicides

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPAA1 (22-130)
240-89576-1	S-58502-121817-SSH-1001	36
240-89576-2	S-58502-121817-SSH-1002	32
240-89576-3	S-58502-121817-SSH-1003	92
240-89576-4	S-58502-121817-SSH-1004	93
240-89576-5	S-58502-121817-SSH-1005	91
240-89576-6	S-58502-121817-SSH-1006	37
240-89576-7	S-58502-121817-SSH-1007	63
240-89576-8	S-58502-121817-SSH-1008	86
240-89576-9	S-58502-121817-SSH-1009	289 X
240-89576-10	S-58502-121817-SSH-1010	112
240-89576-11	S-58502-121817-SSH-1011	137 X
240-89576-12	S-58502-121817-SSH-1012	305 X
240-89576-13	S-58502-121817-SSH-1013	85
240-89576-14	S-58502-121817-SSH-1014	92
240-89576-15	S-58502-121817-SSH-1015	81
240-89576-16	S-58502-121817-SSH-1016	109
240-89576-17	S-58502-121817-SSH-1017	59
240-89576-18	S-58502-121817-SSH-1018	86
240-89576-19	S-58502-121817-SSH-1019	138 X
240-89576-20	S-58502-121817-SSH-1020	147 X
240-89576-21	S-58502-121817-SSH-1021	105
LCS 600-228694/2-A	Lab Control Sample	95
LCS 600-228696/2-A	Lab Control Sample	24
LCSD 600-228694/3-A	Lab Control Sample Dup	96
MB 600-228694/1-A	Method Blank	106
MB 600-228696/1-A	Method Blank	40

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1001

Date Collected: 12/18/17 09:30

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-1

Matrix: Solid

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 15:33	HMB	TAL CAN
Total/NA	Prep	3540C			309410	12/28/17 09:41	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309741	01/02/18 18:58	JMG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 11:31	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 12:04	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/02/18 23:13	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:23	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:23	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:29	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:25	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1002

Date Collected: 12/18/17 09:40

Date Received: 12/19/17 10:30

Lab Sample ID: 240-89576-2

Matrix: Solid

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 15:56	HMB	TAL CAN
Total/NA	Prep	3540C			309410	12/28/17 09:41	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309741	01/02/18 18:34	JMG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 11:43	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 12:24	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/02/18 23:37	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:28	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:28	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:31	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:28	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1003

Lab Sample ID: 240-89576-3

Date Collected: 12/18/17 09:55

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1003

Lab Sample ID: 240-89576-3

Date Collected: 12/18/17 09:55

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 16:19	HMB	TAL CAN
Total/NA	Prep	3540C			309410	12/28/17 09:41	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309741	01/02/18 18:10	JMG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 11:56	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 12:44	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 00:01	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:33	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:32	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:33	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:30	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1004

Lab Sample ID: 240-89576-4

Date Collected: 12/18/17 10:05

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1004

Lab Sample ID: 240-89576-4

Date Collected: 12/18/17 10:05

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 16:41	HMB	TAL CAN
Total/NA	Prep	3540C			309410	12/28/17 09:41	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309741	01/02/18 16:59	JMG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 12:08	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 13:04	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 00:26	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:37	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:37	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:35	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:33	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1005

Lab Sample ID: 240-89576-5

Date Collected: 12/18/17 10:15

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1005

Lab Sample ID: 240-89576-5

Date Collected: 12/18/17 10:15

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 17:03	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 14:51	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		5	309735	01/02/18 12:21	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1005

Lab Sample ID: 240-89576-5

Date Collected: 12/18/17 10:15

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 13:24	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 00:50	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:42	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:41	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:37	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:36	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1006

Lab Sample ID: 240-89576-6

Date Collected: 12/18/17 10:30

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1006

Lab Sample ID: 240-89576-6

Date Collected: 12/18/17 10:30

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 17:26	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 15:38	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 12:33	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 13:43	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 01:14	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:47	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:46	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:39	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:39	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1007

Lab Sample ID: 240-89576-7

Date Collected: 12/18/17 10:40

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1007

Lab Sample ID: 240-89576-7

Date Collected: 12/18/17 10:40

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 17:49	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 15:15	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 12:46	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 14:03	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 01:39	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:00	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 13:59	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:45	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:42	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1008

Lab Sample ID: 240-89576-8

Date Collected: 12/18/17 10:50

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1008

Lab Sample ID: 240-89576-8

Date Collected: 12/18/17 10:50

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 18:11	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 18:48	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 12:58	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1008

Lab Sample ID: 240-89576-8

Date Collected: 12/18/17 10:50

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 14:23	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		5	228778	01/03/18 02:03	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:05	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:04	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:47	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:51	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1009

Lab Sample ID: 240-89576-9

Date Collected: 12/18/17 11:05

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1009

Lab Sample ID: 240-89576-9

Date Collected: 12/18/17 11:05

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 18:33	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 16:02	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 13:11	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 14:42	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 02:27	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:10	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:08	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:49	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:54	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1010

Lab Sample ID: 240-89576-10

Date Collected: 12/18/17 11:20

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1010

Lab Sample ID: 240-89576-10

Date Collected: 12/18/17 11:20

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 18:56	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 16:26	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 13:23	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 15:02	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 02:52	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:14	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:13	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:51	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:57	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1011

Lab Sample ID: 240-89576-11

Date Collected: 12/18/17 11:30

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1011

Lab Sample ID: 240-89576-11

Date Collected: 12/18/17 11:30

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 19:19	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 16:49	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		5	309735	01/02/18 13:36	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1011

Lab Sample ID: 240-89576-11

Date Collected: 12/18/17 11:30

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 15:21	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 03:40	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 18:05	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 12:52	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:23	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:16	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1012

Lab Sample ID: 240-89576-12

Date Collected: 12/18/17 11:45

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1012

Lab Sample ID: 240-89576-12

Date Collected: 12/18/17 11:45

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 19:42	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309732	01/02/18 14:55	TMH	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 13:48	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 16:20	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 04:05	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:19	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:17	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:53	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 09:48	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1013

Lab Sample ID: 240-89576-13

Date Collected: 12/18/17 12:15

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1013

Lab Sample ID: 240-89576-13

Date Collected: 12/18/17 12:15

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 20:04	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 18:24	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 14:01	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 16:40	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		5	228778	01/03/18 04:29	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:23	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		2	308900	12/22/17 18:59	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:21	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:55	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:00	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1014

Lab Sample ID: 240-89576-14

Date Collected: 12/18/17 12:25

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1014

Lab Sample ID: 240-89576-14

Date Collected: 12/18/17 12:25

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 20:25	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309871	01/03/18 12:17	TMH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1014

Lab Sample ID: 240-89576-14

Date Collected: 12/18/17 12:25

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 14:13	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 17:00	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 04:54	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:28	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:26	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:57	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:02	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1015

Lab Sample ID: 240-89576-15

Date Collected: 12/18/17 12:40

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1015

Lab Sample ID: 240-89576-15

Date Collected: 12/18/17 12:40

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 88.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 20:48	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 18:00	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 14:26	OCR	TAL CAN
Total/NA	Prep	3540C			308659	12/21/17 09:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	308794	12/22/17 17:19	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		5	228778	01/03/18 05:18	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:33	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:30	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 10:59	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:05	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1016

Lab Sample ID: 240-89576-16

Date Collected: 12/18/17 12:50

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1016

Lab Sample ID: 240-89576-16

Date Collected: 12/18/17 12:50

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 21:18	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309732	01/02/18 15:43	TMH	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 14:38	OCR	TAL CAN
Total/NA	Prep	3540C			309467	12/28/17 12:57	DVT	TAL CAN
Total/NA	Analysis	8082A		1	309653	12/30/17 17:13	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 05:42	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:37	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:35	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 11:01	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:08	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1017

Lab Sample ID: 240-89576-17

Date Collected: 12/18/17 13:00

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1017

Lab Sample ID: 240-89576-17

Date Collected: 12/18/17 13:00

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 21:41	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309732	01/02/18 15:19	TMH	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 14:51	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1017

Lab Sample ID: 240-89576-17

Date Collected: 12/18/17 13:00

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			309467	12/28/17 12:57	DVT	TAL CAN
Total/NA	Analysis	8082A		1	309653	12/30/17 17:32	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 06:07	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:42	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:39	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 11:03	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:11	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1018

Lab Sample ID: 240-89576-18

Date Collected: 12/18/17 13:15

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1018

Lab Sample ID: 240-89576-18

Date Collected: 12/18/17 13:15

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309086	12/26/17 22:03	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	310043	01/04/18 19:11	KHG	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309735	01/02/18 15:03	OCR	TAL CAN
Total/NA	Prep	3540C			309467	12/28/17 12:57	DVT	TAL CAN
Total/NA	Analysis	8082A		1	309653	12/30/17 17:51	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		5	228778	01/03/18 06:31	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 19:56	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:53	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 11:09	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:14	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1019

Lab Sample ID: 240-89576-19

Date Collected: 12/18/17 13:25

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1019

Lab Sample ID: 240-89576-19

Date Collected: 12/18/17 13:25

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309377	12/28/17 11:22	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309871	01/03/18 11:06	TMH	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		1	309842	01/02/18 18:02	OCR	TAL CAN
Total/NA	Prep	3540C			309549	12/29/17 09:08	JMT	TAL CAN
Total/NA	Analysis	8082A		1	309793	01/02/18 23:54	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		1	228778	01/03/18 06:55	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 20:01	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 14:57	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 11:11	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:29	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1020

Lab Sample ID: 240-89576-20

Date Collected: 12/18/17 13:40

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1020

Lab Sample ID: 240-89576-20

Date Collected: 12/18/17 13:40

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308903	12/22/17 12:01	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309377	12/28/17 11:45	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309871	01/03/18 10:43	TMH	TAL CAN
Total/NA	Prep	3540C			309456	12/28/17 12:15	DVT	TAL CAN
Total/NA	Analysis	8081A		5	309842	01/02/18 18:15	OCR	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Client Sample ID: S-58502-121817-SSH-1020

Lab Sample ID: 240-89576-20

Date Collected: 12/18/17 13:40

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			309549	12/29/17 09:08	JMT	TAL CAN
Total/NA	Analysis	8082A		1	309793	01/03/18 00:16	LSH	TAL CAN
Total/NA	Prep	8151A			228694	12/29/17 12:54	RLK	TAL HOU
Total/NA	Analysis	8151		5	228778	01/03/18 07:20	JAL	TAL HOU
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	308705	12/21/17 20:05	KLC	TAL CAN
Total/NA	Prep	3050B			308519	12/20/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		2	308823	12/21/17 15:02	AS1	TAL CAN
Total/NA	Prep	7471A			308537	12/20/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308742	12/21/17 11:13	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:32	TPH	TAL CAN

Client Sample ID: S-58502-121817-SSH-1021

Lab Sample ID: 240-89576-21

Date Collected: 12/18/17 13:41

Matrix: Solid

Date Received: 12/19/17 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	308463	12/20/17 08:23	MBR	TAL CAN

Client Sample ID: S-58502-121817-SSH-1021

Lab Sample ID: 240-89576-21

Date Collected: 12/18/17 13:41

Matrix: Solid

Date Received: 12/19/17 10:30

Percent Solids: 88.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			308992	12/23/17 09:35	LAM	TAL CAN
Total/NA	Analysis	8260B		1	309377	12/28/17 12:55	HMB	TAL CAN
Total/NA	Prep	3540C			309572	12/29/17 10:29	JMT	TAL CAN
Total/NA	Analysis	8270C		1	309871	01/03/18 10:19	TMH	TAL CAN
Total/NA	Prep	3540C			309571	12/29/17 10:04	DVT	TAL CAN
Total/NA	Analysis	8081A		5	309842	01/02/18 19:18	OCR	TAL CAN
Total/NA	Prep	3540C			309549	12/29/17 09:08	JMT	TAL CAN
Total/NA	Analysis	8082A		1	309863	01/03/18 09:59	LSH	TAL CAN
Total/NA	Prep	8151A			228696	12/29/17 14:30	SMB	TAL HOU
Total/NA	Analysis	8151		1	228778	01/02/18 21:11	JAL	TAL HOU
Total/NA	Prep	3050B			308692	12/21/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6010B		1	309208	12/27/17 00:26	KLC	TAL CAN
Total/NA	Prep	3050B			308692	12/21/17 14:00	DEE	TAL CAN
Total/NA	Analysis	6020		1	309207	12/26/17 21:06	AS1	TAL CAN
Total/NA	Prep	7471A			308713	12/21/17 16:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	308949	12/22/17 13:42	DSH	TAL CAN
Total/NA	Analysis	Walkley Black		1	308469	12/20/17 10:26	TPH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 58502-019, RACER Nodular Iron

TestAmerica Job ID: 240-89576-1

Laboratory: TestAmerica Canton

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

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

Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	17-051-0	08-04-18
Louisiana	NELAP	6	01967	06-30-18
Oklahoma	State Program	6	2017-138	08-31-18
Texas	NELAP	6	T104704223-17-22	10-31-18
USDA	Federal		P330-17-00132	04-20-20

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

TestAmerica Canton

Login # : 89576

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Client GHD Site Name _____ Cooler unpacked by: ROP
 Cooler Received on 12-19-17 Opened on 12-19-17

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____
 Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None _____ Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None _____

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 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

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

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

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

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

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

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

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

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

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC730269

13. Were VOAs on the COC? Yes No NA

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

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

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

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

Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

17. SAMPLE CONDITION

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

18. SAMPLE PRESERVATION

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

Tests that are not
checked for pH by
Receiving:

VOAs
Oil and Grease
TOC

89576

X:\X-Drive Document Control\SOPs\Work Instructions\Word Version Work Instructions\WI-NC-099H-071615 Cooler Receipt Form_page 2 - Multiple Coolers.doc xls

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:		Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:		Phone:		Heckler, Denise D		240-81189.2
Shipping/Receiving				E-Mail:	State of Origin:	Page:
Company:				denise.heckler@testamerica.com	Michigan	Page 2 of 3
TestAmerica Laboratories, Inc.				Accreditations Required (See note):		
Address:		Due Date Requested:		Preservation Codes:		
6310 Rohway Street,		1/2/2018		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
City:		TAT Requested (days):		Analysis Requested		
Houston						
State, Zip:		PO #:		Total Number of containers		
TX, 77040						
Phone:		WO #:		8151A/8151A_SP (MOD) Herbicides		
713-690-4444(Tel) 713-690-5646(Fax)				Perform MS/MSD (Yes or No)		
Email:		Project #:		Field Filtered Sample (Yes or No)		
		24006032		X		
Site:		SSOW#:		Special Instructions/Note:		
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (We=water, S=solid, O=waste/oil, BT=tissue, AA=air)	Preservation Code
S-58502-121817-SSH-1010 (240-89576-10)	12/18/17	11:20 Eastern		Solid		
S-58502-121817-SSH-1011 (240-89576-11)	12/18/17	11:30 Eastern		Solid		
S-58502-121817-SSH-1011 (240-89576-11MS)	12/18/17	11:30 Eastern	MS	Solid		
S-58502-121817-SSH-1011 (240-89576-11MSD)	12/18/17	11:30 Eastern	MSD	Solid		
S-58502-121817-SSH-1012 (240-89576-12)	12/18/17	11:45 Eastern		Solid		
S-58502-121817-SSH-1013 (240-89576-13)	12/18/17	12:15 Eastern		Solid		
S-58502-121817-SSH-1014 (240-89576-14)	12/18/17	12:25 Eastern		Solid		
S-58502-121817-SSH-1015 (240-89576-15)	12/18/17	12:40 Eastern		Solid		
S-58502-121817-SSH-1016 (240-89576-16)	12/18/17	12:50 Eastern		Solid		

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. 1

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2			
Empty Kit Relinquished by:		Time:	
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

17DEC22 11:09

JOB NUMBER: Date/Time Received: CLIENT: TA CenterUNPACKED BY: CARRIER/DRIVER: FCSCustody Seal Present: ☐ YES ☒ NONumber of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
<u>2</u>	Y / N	Y / N	<u>3.5</u>	<u>60</u>	<u>-3</u>	<u>3.5</u>
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N	<u>122271</u>			
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☐ YES ☒ NOLABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YESBase samples are >pH 12: ☐ YES ☒ NO Acid preserved are <pH 2: ☐ YES ☒ NOpH paper Lot # VOA headspace acceptable (5-6mm): ☐ YES ☒ NO ☐ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-89576-1

Login Number: 89576

List Number: 2

Creator: Crafton, Tommie S

List Source: TestAmerica Houston

List Creation: 12/22/17 01:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 240-89576-1

Login Number: 89576

List Number: 3

Creator: Crafton, Tommie S

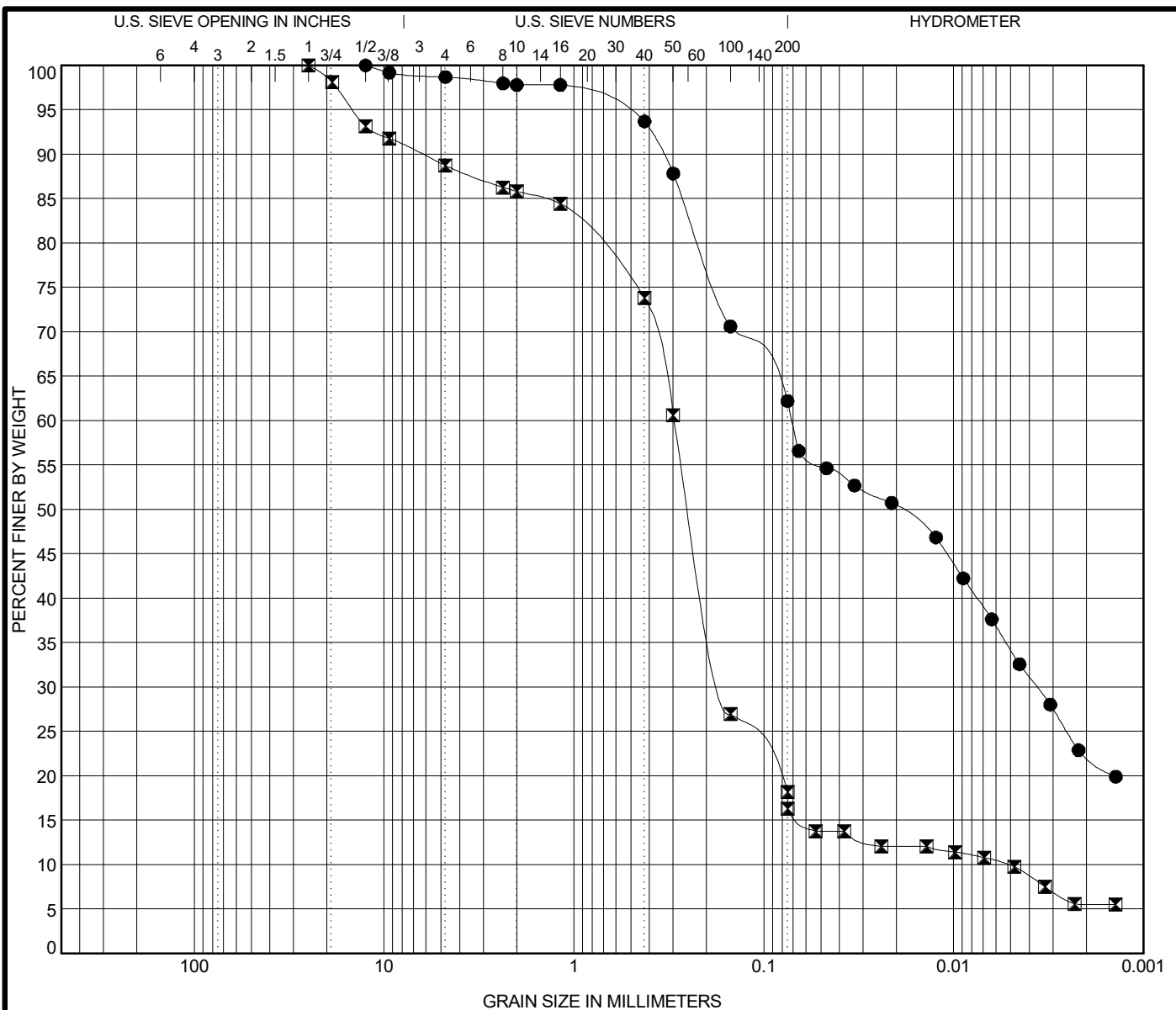
List Source: TestAmerica Houston

List Creation: 12/22/17 01:23 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Attachment B

Geotechnical Analysis Results



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification			LL	PL	PI	Cc	Cu
●	1	0	(ML) Clayey SILT and SAND, trace gravel			32	19	13		
☒	2	0	(SM) SAND with silt and gravel, trace clay						16.52	56.89

Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	1	0	12.5	0.071	0.004		1.3	36.5	39.9	22.3
☒	2	0	25	0.296	0.16	0.005	11.3	70.5	12.7	5.5

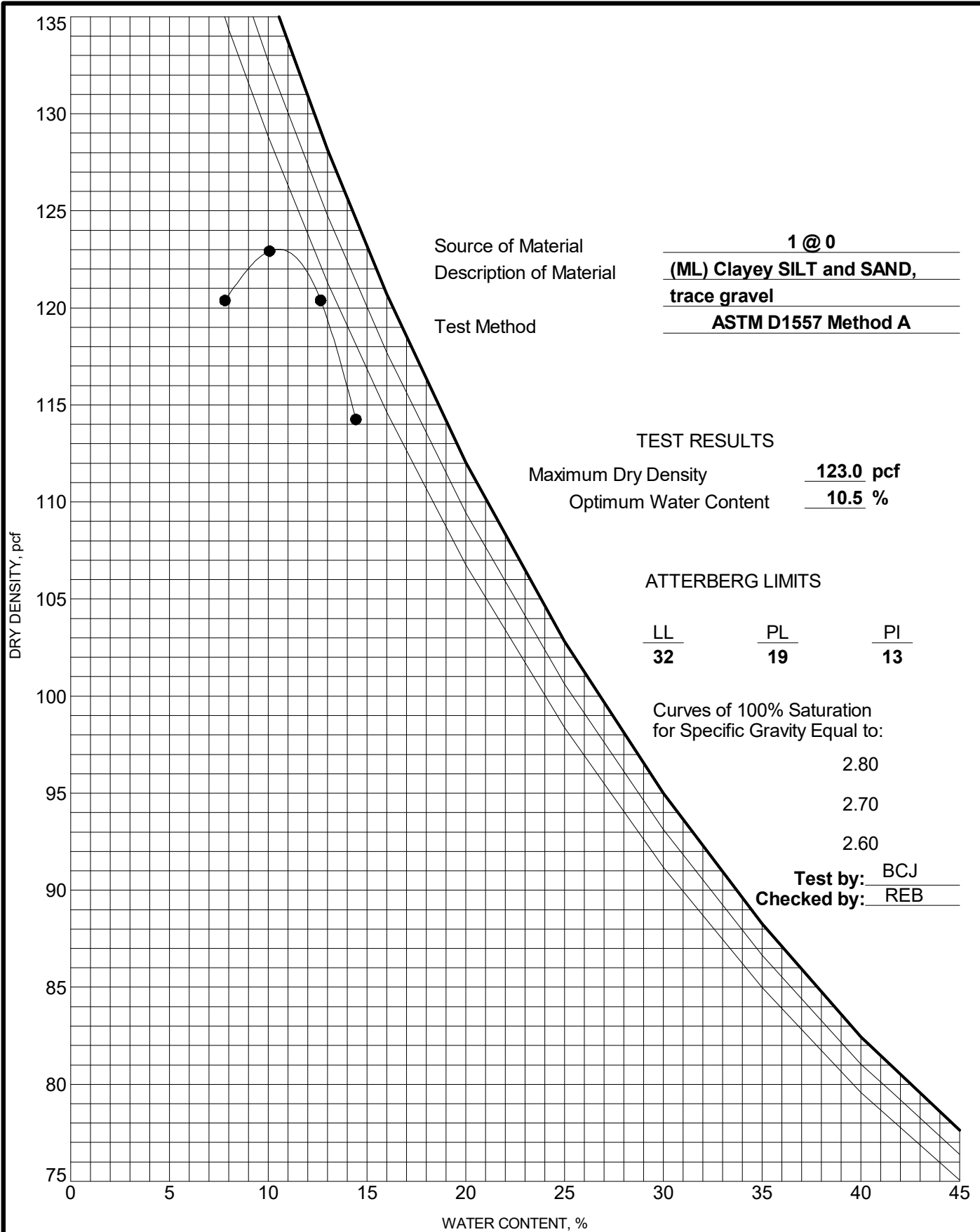


GRAIN SIZE DISTRIBUTION

Project Name: Nodular Soil
 Project Number: 058502-T01-001Y17
 Client: RACER Trust
 Location: Saginaw, Michigan

Test by: BCJ Checked by: REB

GRAIN SIZE 058502-T03-001Y17 NODULAR SOIL.GPJ CRA PLYMOUTH.GDT 9/1/18

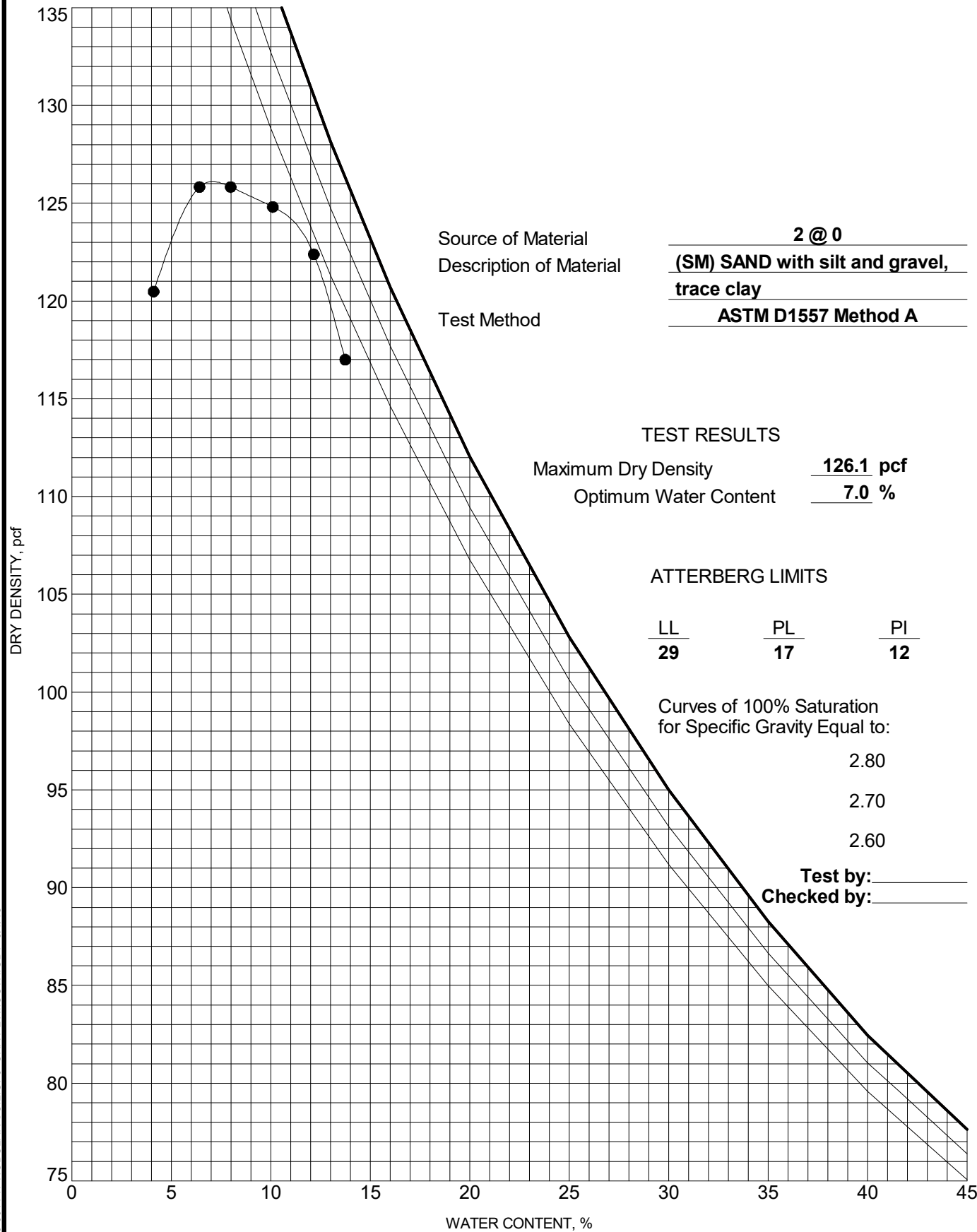


COMPACTION 058502-T03-001Y17 NODULAR SOIL.GPJ CRA.PLYMOUTH.GDT 9/1/18



MOISTURE-DENSITY RELATIONSHIP

Project Name: Nodular Soil
Project Number: 058502-T01-001Y17
Client: RACER Trust
Location: Saginaw, Michigan



MOISTURE-DENSITY RELATIONSHIP

Project Name: Nodular Soil
 Project Number: 058502-T01-001Y17
 Client: RACER Trust
 Location: Saginaw, Michigan

Attachment H



Photo 1 – Proposed Wetland Excavation Area



Site Photographs



Photo 2 – Proposed Wetland Excavation Area



Site Photographs



Photo 3 – Proposed Wetland Excavation Area



Site Photographs