October 12, 2018 Reference No. 058502

Mr. Nate Nemani **Transmitted Via Email**
U.S. Environmental Protection Agency, Region 5
Waste Management Division
77 West Jackson Blvd., LU 9J
Chicago, Illinois
U.S.A. 60604 3590

Dear Mr. Nemani:

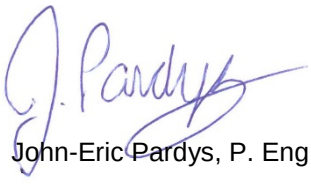
Re: Semi-Annual Progress Report (April 1 to September 30, 2018)
Performance Based Administrative Order on Consent
RCRA Corrective Action
Saginaw Nodular Iron, 2100 Veterans Memorial Parkway, Saginaw, MI
U.S. EPA ID No. MID 041 793 340

In accordance with the Performance-Based Administrative Order on Consent (Docket No. RCRA-05-2011-0023) between the U.S. Environmental Protection Agency Region 5 (U.S. EPA) and Revitalizing Auto Communities Environmental Response Trust (RACER), please find the attached semi-annual progress report for the period April 1 to September 30, 2018. Please note that on June 27, 2018, U.S. EPA approved the reduction in frequency of progress reporting from quarterly to semi-annually.

Please contact me if you would like to discuss this matter further.

Yours truly,

GHD



John-Eric Pardys, P. Eng.

JEP/ev/44

Encl. Attachment A – Semi-Annual Progress Report (April 1 to September 30, 2018)

cc: Rick Parson, MDEQ (via e-mail)
Saginaw Public Library (Public Information Repository)
David Favero, RACER (via e-mail)
Michael Tomka, GHD (via e-mail)

Attachment A

Attachment A

Work Performed this Quarter

The following work was performed during the semi-annual period April 1 to September 30, 2018 for the Nodular facility:

- Prepared and submitted the first quarter progress report for 2018 on April 12, 2018.
- Submitted a memorandum on April 20, 2018 evaluating soil data compared to current MDEQ (2013) Part 201 criteria and the DRAFT MDEQ (2017) Part 201 criteria.
- Conducted pore water sampling on April 17, 2018.
- Presented pore water sample results for the Secondary Pond to U.S. EPA on May 11, 2018.
- Submitted a memorandum on June 3, 2018 with the results of the pore water evaluation to U.S. EPA.
- Received comments from U.S. EPA on the pore water results on June 12, 2018 and submitted response to comments on July 3, 2018. U.S. EPA accepted the results in an email dated September 17, 2018.
- Received NPDES permit to discharge from Outfall 21, 22, and 24 effective July 1, 2018.
- Submitted a memorandum on August 1, 2018 documenting Secondary Pond Discharge Control Measures to MDEQ, as required by the NPDES permit.
- Submitted monthly electronic discharge monitoring reports for the NPDES permit. There was one discharge in April and one discharge in August from Outfall 022A (North Ditch). There were no exceedances of discharge limits.
- Began preparation of an evaluation of groundwater data compared to current MDEQ (2013) Part 201 criteria and the DRAFT MDEQ (2017) Part 201 criteria.
- Began preparation of an ecological screening assessment of the isolated wetland recently formed in IU G.
- Continued development of interim measures work plan for the removal of PCB-impacted sediment in the secondary pond.
- Completed periodic inspections for SWPPP and collected level measurements of secondary pond and North Ditch.

Data Available During this Quarter

- NPDES discharge sampling data was posted by May 20, 2018 and September 20, 2018 for discharges in April 2018 and August 2018, respectively. A copy of the electronic discharge monitoring reports is provided in Attachment A.1.
- Pore water sampling was completed in the Secondary Pond on April 17, 2018. The results were submitted under a separate cover.

Problems Encountered

None.

Summary of Problem Resolution

None.

Estimated Percent Complete and Information Summary for Selected Activities

Task		Estimated % Complete
1.	**IU G – Former Nodular Iron Plant OM&M**	
	Annual EI Sampling (6-years completed to date by RACER, 2-years completed by MLC, and 3-years completed by GMC). (Estimated percent complete assumes the EI monitoring program is replaced with a revised groundwater monitoring program upon approval of the CMS by U.S. EPA, anticipated to occur in 2019.) • 2011 EI sampling was completed in November 2011 and reporting was submitted to U.S. EPA April 18, 2012. • 2012 EI sampling was completed in November 2012 and reporting was submitted to U.S. EPA March 11, 2013. • 2013 EI Sampling was completed in November 2013 and reporting was submitted to U.S. EPA February 13, 2014. • 2014 EI sampling was completed in November 2014 and reporting was submitted to U.S. EPA February 10, 2015. • 2015 EI sampling was completed in November 2015 and reporting was submitted to U.S. EPA February 10, 2016. • 2016 EI sampling was completed in November 2016 and reporting was submitted to U.S. EPA January 4, 2017. • 2017 EI sampling was completed in May 2017 and reporting was submitted to U.S. EPA December 8, 2017.	88%
	Additional delineation of impacts in soil • Work plan for additional delineation of manganese and PCB impacts in soil in the south portion of IU G submitted to U.S. EPA on February 27, 2015 and approved by U.S. EPA on March 2, 2015. • Additional delineation of manganese and PCB impacts was completed during March and April 2015. A summary of the investigation was submitted to U.S. EPA on May 8, 2015. • Work plan for additional delineation of PCB impacts in soil above 10 mg/kg in the south portion of IU G submitted to U.S. EPA on July 15, 2015 and approved by U.S. EPA on July 30, 2015. • Additional delineation of PCB impacts above 10 mg/kg was completed in August 2015. A summary of the additional investigation of manganese and PCB impacts was submitted to U.S. EPA on February 15, 2017. U.S. EPA approved via a March 8, 2017 email the report and the recommendation to address the PCB impacts through deed restrictions as an interim measure. • A Site soil data evaluation was completed that compared Site soil data to current MDEQ (2013) Part 201 criteria and the DRAFT MDEQ (2017) Part 201 criteria to U.S. EPA. The evaluation was submitted to U.S. EPA on April 20, 2018. U.S. EPA provided comments on August 31, 2018. Responses to comments are currently being prepared.	95%
	Ammonia concentrations above MDEQ Groundwater Surface Water Interface Criteria	85%

Task		Estimated % Complete
	• Ammonia in groundwater evaluation was submitted to U.S. EPA on April 6, 2015 and to MDEQ on April 8, 2015.	
2.	**IU H – WWTP Closure**	
	<u>Secondary Pond</u> • Characterization Study on Secondary Pond completed in June of 2011. • Emergency overflow for secondary pond installed on March 13, 2012. The emergency overflow was lowered approximately 6 feet on June 23, 2016. • DEQ issued NPDES permit for the Site on August 24, 2012. • MDEQ modified NPDES sampling requirements with most of the requested changes in RACER's January 8, 2015 request. As a result of the lowering of the emergency overflow, the modification to the NPDES sampling requirements were rescinded. • Additional Characterization Studies for Secondary Pond and Lagoon 5 were completed in March 2016, May 2016, August 2016, and September 2017. A summary of the September 2017 investigation results were submitted to U.S. EPA on November 6, 2017. A sediment pore water sampling Work Plan was submitted to U.S. EPA on January 29, 2018 and was approved by U.S. EPA on March 2, 2018. Sampling was conducted on April 17, 2018. The results were presented to U.S. EPA on May 11, 2018 and a memorandum summarizing the results was submitted on June 3, 2018. U.S. EPA provided comments on the pore water sample results on June 13, 2018 and responses to comments were provided to U.S. EPA on July 3, 2018, U.S. EPA provided email approval on September 17, 2018 to proceed with removal of PCBs >50 ppm in Secondary Pond sediments and following the removal, to allow the Secondary Ponds to naturalize, and to implement appropriate institutional controls to prevent hydrologic connection between the pond and on the pond and nearby surface water. • NPDES renewal application was prepared and submitted April 2, 2016. Comments on the application were received and responded to on July 12 and 29, 2016. A modification to the application (addition of new outfall through the eastern portion of the northern Secondary Pond berm, referred to as outfall 24) was submitted December 22, 2016. A draft of the permit was provided on July 14, 2017. Comments on the permit were provided to MDEQ on July 24, 2017. Comments were reviewed with MDEQ and a revised submission was made on September 20, 2017. MDEQ requested additional information on November 6, 2017, which was provided on November 6 and December 18, 2017. MDEQ requested on February 8, 2018 that a sample of the secondary pond be collected and submitted for analysis. The results were submitted to MDEQ on March 12, 2018. After a public review period, a new NPDES permit was issued and then became effective July 1, 2018. • Discharge of water under NPDES permit to facilitate expected work in the Secondary Pond. • Obtain approval for interim measure work plan for the removal of PCB-impacted sediment from the secondary pond.	50%

Task		Estimated % Complete
	Primary Basins • Work plan for stabilizing primary settling basins submitted to U.S. EPA on July 31, 2012 and Work Plan approved by U.S. EPA on September 18, 2012. • Primary settling basin stabilization work was completed June 20, 2013. A construction completion report was submitted to U.S. EPA on September 4, 2013.	100%
	North Ditch • Sampling and Analysis Plan for the North Ditch submitted to U.S. EPA on April 26, 2013 and was approved by U.S. EPA on July 8, 2013. • North Ditch Investigation and additional monitoring completed the week of July 15, 2013. The results of the investigation were submitted to U.S. EPA on October 23, 2013. • Stabilization Alternative Evaluation and Recommendation for the North Ditch was submitted to U.S. EPA on February 26, 2014. • Obtain necessary permits/agreements to perform work – Joint permit was received on August 19, 2015. – Floodplain permit application was prepared and submitted to the City of Saginaw on May 4, 2015. – Other permits needed include: County of Saginaw soil erosion and sedimentation control permit. – Other agreements: access from adjacent property owners. • Implement approved plan (pending).	45%
3.	**IU I- Area Closure**	
	• An evaluation of available soil data relative to currently applicable and draft MDEQ criteria was completed for the entire Site and was submitted to U.S. EPA on April 20, 2018. U.S. EPA provided comments on August 31, 2018. Responses to comments are currently being prepared.	95%
	Classified Sand Pile • Removed all classified sand pile as part of the primary basin stabilization work in 2013.	100%
4.	**IU I – Staging Area OM&M**	**NA**
	• No activities proposed or pending at this time.	
5.	**Other – RCRA Corrective Action Reporting and Other Related Reporting**	
	Administrative Order on Consent • Signed by U.S. EPA and effective September 29, 2011.	100%

Task		Estimated % Complete
	Budget Process • U.S. EPA approved the 2012 EA Budget Authorization Request on December 22, 2011. • U.S. EPA approved the 2012 Annual EA Budget Amendment No. 1 on September 19, 2012. • U.S. EPA approved the 2013 EA Budget Authorization Request on January 3, 2013. • U.S. EPA approved the 2014 EA Budget Authorization Request on November 22, 2013 • U.S. EPA approved the 2015 EA Budget Authorization Request on November 20, 2014 • U.S. EPA approved the 2015 Annual EA Budget Amendment No. 1 on March 20, 2015 • U.S. EPA approved the 2016 EA Budget Authorization Request on November 20, 2015. • U.S. EPA approved the 2016 Annual EA Budget Amendment No. 1 on April 28, 2016. • U.S. EPA approved the 2017 EA Budget Authorization Request on December 7, 2016. • U.S. EPA approved the 2018 EA Budget Authorization Request on December 12, 2017. • Began preparing 2019 EA Budget Authorization Request.	On-going
	• RCRA Corrective Action Reporting • Submitted CCR documentation to U.S. EPA on November 18, 2011. • Submitted Supplemental RFI Report on September 28, 2012. • Submit updated RFI Summary Report to U.S. EPA - TBD • Submitted Draft Corrective Measures Proposal to U.S. EPA on April 1, 2013 • Submit revised Corrective Measures Proposal – TBD. • Submitted Summary of WMU status to U.S. EPA on January 22, 2015 and to MDEQ on January 26, 2015. MDEQ approved the closure of Nodular Iron Oil House RCRA Hazardous Waste Area in a letter dated May 8, 2016. • Respond to comments from U.S. EPA (when received) on the Supplemental RFI and CMP – To be determined (TBD). • Prepare and Record Declaration of Restrictive Covenant – TBD. • Prepare Corrective Measures Implementation Plan – TBD. • Prepare Final Remedy Construction Completion Report – TBD. • Prepare Request for RCRA Corrective Action Complete with Controls – TBD.	60%
	Other Related Reporting • Submit monthly DMRs.	On-going

Summary of Contacts with Interested Parties

- There are periodic discussions with local representatives regarding the status of remediation at the Site and potential redevelopment possibilities and options.

Projected Work for Next Reporting Period (October 1, 2018 through March 31, 2019)

- Finalize response to U.S. EPA comments on Site soil evaluation
- Finalize groundwater evaluation and submit to U.S. EPA.
- Finalize wetland evaluation and submit to U.S. EPA.
- Finalize the interim measures work plan for PCB-impacted sediments (>50 ppm) and review with U.S. EPA. Upon approval of the work plan, procure a contractor to implement the work.
- Reinstall EI monitoring wells that were previously abandoned to facilitate development.
- Conduct annual EI monitoring and collect additional groundwater samples to evaluate current conditions.
- Re-evaluate the need for implementing the North-Ditch interim measure
- Prepare responses to or meet with U.S. EPA to discuss any comments received on submittals, including previously submitted Supplemental RFI Report and Draft CMP.
- Finalize 2019 Annual Environmental Action Budget Request.
- Evaluate the appropriate time to update and submit a revised CMP.
- Begin preparation of an updated RFI Summary Report.
- Complete periodic Site inspections per the SWPPP and measure water levels in the Secondary Pond.
- Perform discharge events from secondary pond, if necessary, and complete any necessary monitoring required by the NPDES permit.

Attachment A.1
NPDES Reporting

☐ No Discharge

Show Columns: 4 5

First () Previous () 1 () Next () Last ()

Parameter	Flow 50050	Total Suspended Solids 00530	pH 00400	pH 00400	Turbidity 00070
Stage	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)
Limit	(Report) MGD	70 mg/L	6.5 SU	9.0 SU	160 NTU
Stat Base	Maximum Daily	Maximum Daily	Minimum Daily	Maximum Daily	Maximum Daily
4/1/2018					
4/2/2018					
4/3/2018					
4/4/2018					
4/5/2018					
4/6/2018					
4/7/2018					
4/8/2018					
4/9/2018					
4/10/2018					
4/11/2018					
4/12/2018					
4/13/2018					

Parameter	Flow 50050	Total Suspended Solids 00530	pH 00400	pH 00400	Turbidity 00070
Stage	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)
Limit	(Report) MGD	70 mg/L	6.5 SU	9.0 SU	160 NTU
Stat Base	Maximum Daily	Maximum Daily	Minimum Daily	Maximum Daily	Maximum Daily
4/14/2018					
4/15/2018					
4/16/2018					
4/17/2018	0.0799	4.0	7.6	7.6	*G
4/18/2018					
4/19/2018					
4/20/2018					
4/21/2018					
4/22/2018					
4/23/2018					
4/24/2018					
4/25/2018					
4/26/2018					
4/27/2018					
4/28/2018					
4/29/2018					
4/30/2018					

General Report Comments

☐ No Discharge

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type
Flow 50050 Final Effluent (1)	Sample Measurement	0.0799	0.0799	MGD	****	****	****	****	Weekly when Discharging	Recorded Daily Flow
	Permit Requirement	(Report) Maximum Monthly Average	(Report) Maximum Daily		****	****	****		Weekly when Discharging	Recorded Daily Flow
Total Suspended Solids 00530 Final Effluent (1)	Sample Measurement	****	****	****	****	4.0	4.0	mg/L	Weekly when Discharging	3-Portion Composite
	Permit Requirement	****	****		****	35 Maximum Monthly Average	70 Maximum Daily		Weekly when Discharging	3-Portion Composite
pH 00400 Final Effluent (1)	Sample Measurement	****	****	****	7.6	****	7.6	SU	Weekly when Discharging	Grab
	Permit Requirement	****	****		6.5 Minimum Daily	****	9.0 Maximum Daily		Weekly when Discharging	Grab
Turbidity 00070 Final Effluent (1)	Sample Measurement	****	****	****	****	*G	*G	NTU	Weekly when Discharging	Grab
	Permit Requirement	****	****		****	80 Maximum Monthly Average	160 Maximum Daily		Weekly when Discharging	Grab

General Report Comments

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: 240-94224-1
Client Project/Site: 58502-002, RACER Nodular Iron

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

Attn: James Abston

Denise D Heckler

Authorized for release by:
4/23/2018 1:13:14 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Job ID: 240-94224-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-94224-1

Comments
No additional comments.

Receipt
The sample was received on 4/18/2018 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 2.9º C.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Qualifiers

General Chemistry

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

Glossary

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

Sample Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-94224-1	W-58502-041718-SSH-1806	Water	04/17/18 07:30	04/18/18 09:15

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Client Sample ID: W-58502-041718-SSH-1806 — Lab Sample ID: 240-94224-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
pH	7.6		0.1		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Method	Method Description	Protocol	Laboratory
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 H+ B	pH	SM	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

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

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

General Chemistry

Client Sample ID: W-58502-041718-SSH-1806
Date Collected: 04/17/18 07:30
Date Received: 04/18/18 09:15

Lab Sample ID: 240-94224-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0		mg/L			04/20/18 11:36	1
pH	**7.6**		0.1		SU			04/18/18 09:08	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

General Chemistry

Analysis Batch: 322953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94224-1	W-58502-041718-SSH-1806	Total/NA	Water	SM 4500 H+ B	
LCS 240-322953/2	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
240-94224-1 DU	W-58502-041718-SSH-1806	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 323404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94224-1	W-58502-041718-SSH-1806	Total/NA	Water	SM 2540D	
MB 240-323404/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-323404/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-323404/1
Matrix: Water
Analysis Batch: 323404

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0		mg/L			04/20/18 11:36	1

Lab Sample ID: LCS 240-323404/2
Matrix: Water
Analysis Batch: 323404

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			82.0	80.0		mg/L		98	64 - 120		

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 240-322953/2
Matrix: Water
Analysis Batch: 322953

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			9.19	9.1		SU		99	97 - 103		

Lab Sample ID: 240-94224-1 DU
Matrix: Water
Analysis Batch: 322953

Client Sample ID: W-58502-041718-SSH-1806
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.6			7.5		SU				1	20

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-94224-1

Client Sample ID: W-58502-041718-SSH-1806
Date Collected: 04/17/18 07:30
Date Received: 04/18/18 09:15

Lab Sample ID: 240-94224-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	323404	04/20/18 11:36	MMM	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	322953	04/18/18 09:08	BLW	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc. TestAmerica Job ID: 240-94224-1
Project/Site: 58502-002, RACER Nodular Iron

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	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18 *
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
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	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
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	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

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

MICHIGAN 190

Chain of Custody Record

230639

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

2.8/C2.9

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: M. Tomka	Site Contact: Reardys	Date: 4/17/18	COC No: 230639
Company Name: GHD	Tel/Fax: 519 340 3823	Lab Contact: D Heckler	Carrier: FedEx	1 of 1 COCs
Address: 26850 Haggerty Rd	Analysis Turnaround Time			Sampler: S Huesemeyer
City/State/Zip: Farmington Hills, MI 48331	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 248-893-3400	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: RawTrust Nodular	☐ 1 week			
Site: SSW 58502-007-T02-2018	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TSS	Hg	Sample Specific Notes:
W-58502-041718-SSH-1806	4/17/18	0730	C	SW	2	N	N	X	X	

240-94224 Chain of Custody

SSH

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 793755 | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	4/17/18 1500	POP	TAL	4-18-18 915
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

4/23/2018

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 94724**
Canton Facility

Client GHD Site Name — Cooler unpacked by: RP

Cooler Received on 4-18-18 Opened on 4-18-18

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

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

TestAmerica Cooler # TA 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 **+0.1** °C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.9 °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# **HC732776**
13. Were VOAs on the COC?	Yes (No)	
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ 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)	

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

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

Concerning ____

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

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____

WI-NC-099

☐ No Discharge

Show Columns: 4 6

First () Previous () 1 () Next () Last ()

Parameter	Flow 50050	Total Suspended Solids 00530	Outfall Observation 84130	pH 00400	pH 00400	Turbidity 00070
Stage	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)
Limit	(Report) MGD	70 mg/L	(Report) yes/no	6.5 SU	9.0 SU	160 NTU
Stat Base	Maximum Daily	Maximum Daily	Yes/No	Minimum Daily	Maximum Daily	Maximum Daily
8/1/2018						
8/2/2018						
8/3/2018						
8/4/2018						
8/5/2018						
8/6/2018						
8/7/2018						
8/8/2018						
8/9/2018						
8/10/2018						
8/11/2018						
8/12/2018						
8/13/2018						
8/14/2018						
8/15/2018						
8/16/2018						
8/17/2018						
8/18/2018						

Parameter	Flow 50050	Total Suspended Solids 00530	Outfall Observation 84130	pH 00400	pH 00400	Turbidity 00070
Stage	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)
Limit	(Report) MGD	70 mg/L	(Report) yes/no	6.5 SU	9.0 SU	160 NTU
Stat Base	Maximum Daily	Maximum Daily	Yes/No	Minimum Daily	Maximum Daily	Maximum Daily
8/19/2018						
8/20/2018						
8/21/2018						
8/22/2018						
8/23/2018						
8/24/2018						
8/25/2018						
8/26/2018						
8/27/2018						
8/28/2018						
8/29/2018						
8/30/2018	0.0697	4	yes	7.6	7.6	*G
8/31/2018						

General Report Comments

☐ No Discharge

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type
Flow 50050 Final Effluent (1)	Sample Measurement	0.0697	0.0697	MGD	****	****	****	****	Intermittent	Calculation
	Permit Requirement	(Report) Maximum Monthly Average	(Report) Maximum Daily		****	****	****		Weekly	Report Total Daily Flow
Total Suspended Solids 00530 Final Effluent (1)	Sample Measurement	****	****	****	****	4	4	mg/L	See Permit Requirements	3-Portion Composite
	Permit Requirement	****	****		****	35 Maximum Monthly Average	70 Maximum Daily		See Permit Requirements	3-Portion Composite
Outfall Observation 84130 Final Effluent (1)	Sample Measurement	yes	****	yes/no	****	****	****	****	Weekly	Visual
	Permit Requirement	(Report) Yes/No	****		****	****	****		Weekly	Visual
pH 00400 Final Effluent (1)	Sample Measurement	****	****	****	7.6	****	7.6	SU	Weekly	Grab
	Permit Requirement	****	****		6.5 Minimum Daily	****	9.0 Maximum Daily		Weekly	Grab
Turbidity 00070 Final Effluent (1)	Sample Measurement	****	****	****	****	*G	*G	NTU	See Permit Requirements	Grab
	Permit Requirement	****	****		****	80 Maximum Monthly Average	160 Maximum Daily		See Permit Requirements	Grab

General Report Comments

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: 240-100624-1
Client Project/Site: 58502-002, RACER Nodular Iron

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

Attn: James Abston

Denise D Heckler

Authorized for release by:
9/5/2018 12:56:51 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Job ID: 240-100624-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative
240-100624-1

Comments
No additional comments.

Receipt
The sample was received on 8/31/2018 9:30 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 3.6º C.

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

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-100624-1	W-58502-083018-SSH-1850	Water	08/30/18 08:00	08/31/18 09:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Client Sample ID: W-58502-083018-SSH-1850 — Lab Sample ID: 240-100624-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
pH	7.6	HF	0.1		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Method	Method Description	Protocol	Laboratory
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN
SM 4500 H+ B	pH	SM	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

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

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

General Chemistry

Client Sample ID: W-58502-083018-SSH-1850
Date Collected: 08/30/18 08:00
Date Received: 08/31/18 09:30

Lab Sample ID: 240-100624-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0		mg/L			09/04/18 08:49	1
pH	**7.6**	**HF**	0.1		SU			08/31/18 14:09	1

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

General Chemistry

Analysis Batch: 343479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-100624-1	W-58502-083018-SSH-1850	Total/NA	Water	SM 4500 H+ B	
LCS 240-343479/2	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 343661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-100624-1	W-58502-083018-SSH-1850	Total/NA	Water	SM 2540D	
MB 240-343661/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-343661/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-343661/1
Matrix: Water
Analysis Batch: 343661

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.0	U	4.0		mg/L			09/04/18 08:49	1

Lab Sample ID: LCS 240-343661/2
Matrix: Water
Analysis Batch: 343661

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			90.9	84.0		mg/L		92	64 - 120		

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 240-343479/2
Matrix: Water
Analysis Batch: 343479

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			6.29	6.3		SU		100	97 - 103		

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58502-002, RACER Nodular Iron

TestAmerica Job ID: 240-100624-1

Client Sample ID: W-58502-083018-SSH-1850
Date Collected: 08/30/18 08:00
Date Received: 08/31/18 09:30

Lab Sample ID: 240-100624-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	343661	09/04/18 08:49	MAC	TAL CAN
Total/NA	Analysis	SM 4500 H+ B		1	343479	08/31/18 14:09	JWW	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: GHD Services Inc. TestAmerica Job ID: 240-100624-1
Project/Site: 58502-002, RACER Nodular Iron

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	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-17-9	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

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

MICHIGAN
190

Chain of Custody Record

3.6/3.6

264675

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210 (0713)

Client Contact	Project Manager: M Tomlia	Site Contact: JE Pardys	Date: 8/30/18	COC No: 264675
Company Name: GHD	Tel/Fax: 519 340 3823	Lab Contact: D Hickler	Carrier: FedEx	1 of 1 COCs
Address: 26350 Haggerty Rd	Analysis Turnaround Time			Sampler: S. Hornemeyer
City/State/Zip: Farmington Hills MI	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: RaceTrust Nodular	☐ 1 week			
Site: 58502	☐ 2 days			Job / SDG No.:
PO# 24006032	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TSS	pH	Sample Specific Notes:
W-58502-083018-SSH-1850	8/30/18	0800	C	SW	2	N	N	X	X	

240-100624 Chain of Custody

ASM

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 215846 | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	GHD	8/30/18 1530	[signature]	TAC	8-31-18 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 100624**
Canton Facility

Client GHD Site Name ~

Cooler Received on 8-31-18 Opened on 8-31-18

Cooler unpacked by: BOP

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

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

TestAmerica Cooler # TA 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 °C) Observed Cooler Temp. 3.6 °C Corrected Cooler Temp. 3.6 °C
   IR GUN #36 (CF -0.3°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# HC849151
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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

Concerning ____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: BOP

18. SAMPLE CONDITION

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

19. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____