July 14, 2020 Reference No. 003978

Sheri Bianchin
Remedial Project Manager
EPA Region 5
77 West Jackson Blvd.
Chicago, IL 60604-3590

Matt Thompson
Hydrogeologist
Wisconsin Department of Natural Resources
1300 W. Clairemont Avenue
Eau Claire, Wisconsin 54701

Dear Ms. Bianchin and Mr. Thompson:

Re: Documentation of Monitoring Well Sealing and Abandonment
Wausau Water Supply NPL Site
Wausau, Wisconsin

Two monitoring wells at the Wausau Water Supply NPL Site were sealed and abandoned on May 27, 2020. The abandonments R3S and FVD-5 were approved by USEPA in their May 19, 2020 email. An additional four monitoring wells that were approved for abandonment (IWD, WC3, WC4, WC5) will be abandoned later this year by a different contractor.

Prior to abandonment, FVD-5 was monitored for water level elevation and a groundwater sample was collected for VOC analysis. R3S was dry.

1. Well Abandonment

The abandonment of R3S and FVD-5 was conducted by Geiss Soil and Samples of Merrill, Wisconsin, in accordance with Wisconsin NR 141.25. Abandonment reports were filed with the WDNR on June 8, 2020. Copies of the abandonment forms are enclosed.

2. Groundwater Sampling

Prior to the sealing and abandonment of FVD-5, a groundwater sample was collected for VOC analysis in accordance with the procedures outlined in the existing Site Monitoring Plan. The lab report is also enclosed. FVD-5 was on the former Bulk Oil Site property and the results are consistent with previous results, as shown in the summary provided as Table 1.

GHD
1801 Old Highway 8 Northwest Suite 114 St Paul Minnesota 55112 USA
T 651 639 0913 **F** 651 639 0923 **W** www.ghd.com

Additional abandonment documentation will be provided after the second round of abandonments have been completed. Please contact me if you have any questions or comments.

Sincerely,

GHD

Charles Ahrens

CA/md/3

Encl.

Table 1

FVD-5 Historical Analytical Results - 2013 - 2020
Wausau Water Supply NPL Site
Wausau, Wisconsin

	Cleanup Standard or MCL	Unit	FVD-5 11/12/2013	FVD-5 11/3/2014	FVD-5 10/12/2015	FVD-5 10/24/2016	FVD-5 5/27/2020
Volatile Organic Compounds							
1,1,2-Trichloroethane		µg/L	5.0 U	25 U	18 U	13 U	<0.35
1,1-Dichloroethene		µg/L	5.0 U	25 U	18 U	13 U	<0.39
Acetone		µg/L	50 U	250 U	180 U	130 U	**10**
Benzene	5	µg/L	**19**	**23 J**	**14 J**	**19**	**6.8**
Carbon tetrachloride		µg/L	5.0 U	25 U	18 U	13 U	<0.38
Chloroform (Trichloromethane)		µg/L	5.0 U	25 U	18 U	13 U	<0.37
cis-1,2-Dichloroethene	70	µg/L	5.0 U	25 U	18 U	13 U	<0.41
Ethylbenzene	700	µg/L	**210**	**370**	**210**	**270**	**200**
Methylene chloride		µg/L	5.0 U	25 U	18 U	13 U	<1.6
Tetrachloroethene	5	µg/L	5.0 U	25 U	18 U	13 U	<0.37
Toluene	1000	µg/L	**9.5**	**23 J**	**10 J**	**14**	**25**
Trichloroethene	5	µg/L	5.0 U	**5.7 J**	18 U	13 U	<0.16
Vinyl chloride	2	µg/L	5.0 U	25 U	18 U	13 U	<0.20
Xylenes (total)	10,000	µg/L	**440**	**980**	**720**	**720**	**670**

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
MCL -EPA Maximum Contaminant Level for Drinking Water

Attachment A
Abandonment Forms

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to DNR Bureau:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Marathon	_ _ _ _ _	

Latitude / Longitude (see instructions): _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address:

Well City, Village or Town	Well ZIP Code
Wausau	

Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
site closure	_ _ _ _ _

2. Facility / Owner Information

Facility Name: Wausau Water Supply
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☒ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy):
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug ☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
20	2

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
8.25	20

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☒ Yes	☐ No	☐ N/A
Liner(s) perforated?	☒ Yes	☐ No	☐ N/A
Screen removed?	☒ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☒ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☒ No	☐ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☒ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	20	2 1	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Geiss Soil Samples LLC		06/07/2020

Street or Route	Telephone Number
W4490 Pope Rd	(715) 539-3928

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Merrill	WI	54452	Darrin Prentice	6/7/20

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing Report

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☐ **Verification Only of Fill and Seal**

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1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Marathon	_ _ _ _ _ _	

Latitude / Longitude (see instructions) _____ N _____ W
Format Code: ☐ DD ☐ DDM
Method Code: ☐ GPS008 ☐ SCR002 ☐ OTH001

¼ / ¼	¼	Section	Township	Range
or Gov't Lot #			N	☐ E ☐ W

Well Street Address

Well City, Village or Town	Well ZIP Code
Wausau	
Subdivision Name	Lot #

Reason for Removal from Service	WI Unique Well # of Replacement Well
site closure	_ _ _ _ _ _

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Facility Name: Wausau Water Supply
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner:
Mailing Address of Present Owner:

City of Present Owner	State	ZIP Code

3. Filled & Sealed Well / Drillhole / Borehole Information

☒ Monitoring Well ☐ Water Well ☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy):
If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug ☐ Other (specify): _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.)	Casing Diameter (in.)
34	2
Lower Drillhole Diameter (in.)	**Casing Depth (ft.)**
8.25	34

Was well annular space grouted? ☐ Yes ☒ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☒ No	☐ N/A
Liner(s) perforated?	☐ Yes	☒ No	☐ N/A
Screen removed?	☐ Yes	☒ No	☐ N/A
Casing left in place?	☒ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☒ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☒ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☒ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☒ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	34	2	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy)
Geiss Soil Samples LLC		06/07/2020

Street or Route	Telephone Number
W4490 Pope Rd	(715)539-3928

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
Merrill	WI	54452	Darrin Prentice	6/7/20

DNR Use Only

Date Received	Noted By
Comments	

Attachment B
Laboratory Data

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-182734-1
Client Project/Site: Wausau Superfund Site - 003978

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson

Authorized for release by:
6/5/2020 3:02:06 PM

Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

Table of Contents

Case Narrative

Client: GHD Services Inc.
Project/Site: Wausau Superfund Site - 003978

Job ID: 500-182734-1

Job ID: 500-182734-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-182734-1

Receipt
The sample was received on 5/29/2020 9:30 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8° C.

GC/MS VOA
Method 8260B: Acetone was detected in the following samples: W-200527-RA-01 (500-182734-1). The method blank associated with these samples was non-detect for Acetone. Acetone is a known lab contaminant; therefore all low level detects for this compound could be suspected as lab contamination.

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

Detection Summary

Client: GHD Services Inc.
Project/Site: Wausau Superfund Site - 003978

Job ID: 500-182734-1

Client Sample ID: W-200527-RA-01

Lab Sample ID: 500-182734-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
Acetone	10		10	1.7	ug/L	1		8260B	Total/NA
Benzene	6.8		0.50	0.15	ug/L	1		8260B	Total/NA
Toluene	25		0.50	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene - DL	200		5.0	1.8	ug/L	10		8260B	Total/NA
Xylenes, Total - DL	670		10	2.2	ug/L	10		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 500-182734-1
Project/Site: Wausau Superfund Site - 003978

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI

Protocol References:

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

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: GHD Services Inc.
Project/Site: Wausau Superfund Site - 003978

Job ID: 500-182734-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-182734-1	W-200527-RA-01	Water	05/27/20 09:40	05/29/20 09:30	

Client Sample ID: W-200527-RA-01
Date Collected: 05/27/20 09:40
Date Received: 05/29/20 09:30

FVD-5

Lab Sample ID: 500-182734-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**10**		10	1.7	ug/L			06/04/20 05:25	1
Benzene	**6.8**		0.50	0.15	ug/L			06/04/20 05:25	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/04/20 05:25	1
Chloroform	<0.37		2.0	0.37	ug/L			06/04/20 05:25	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/04/20 05:25	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/04/20 05:25	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/04/20 05:25	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/04/20 05:25	1
Toluene	**25**		0.50	0.15	ug/L			06/04/20 05:25	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/04/20 05:25	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/04/20 05:25	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/04/20 05:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*		*06/04/20 05:25*	*1*
Dibromofluoromethane	*96*		*75 - 120*		*06/04/20 05:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 126*		*06/04/20 05:25*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*06/04/20 05:25*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**200**		5.0	1.8	ug/L			06/04/20 15:02	10
Xylenes, Total	**670**		10	2.2	ug/L			06/04/20 15:02	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*72 - 124*		*06/04/20 15:02*	*10*
Dibromofluoromethane	*97*		*75 - 120*		*06/04/20 15:02*	*10*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 126*		*06/04/20 15:02*	*10*
Toluene-d8 (Surr)	*95*		*75 - 120*		*06/04/20 15:02*	*10*

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 500-182734-1
Project/Site: Wausau Superfund Site - 003978

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)
MQL	Method Quantitation Limit
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)

QC Association Summary

Client: GHD Services Inc.
Job ID: 500-182734-1
Project/Site: Wausau Superfund Site - 003978

GC/MS VOA

Analysis Batch: 545798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-182734-1	W-200527-RA-01	Total/NA	Water	8260B	
MB 500-545798/6	Method Blank	Total/NA	Water	8260B	
LCS 500-545798/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 545874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-182734-1 - DL	W-200527-RA-01	Total/NA	Water	8260B	
MB 500-545874/7	Method Blank	Total/NA	Water	8260B	
LCS 500-545874/5	Lab Control Sample	Total/NA	Water	8260B	

Surrogate Summary

Client: GHD Services Inc.
Project/Site: Wausau Superfund Site - 003978

Job ID: 500-182734-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(72-124)	(75-120)	(75-126)	(75-120)
500-182734-1	W-200527-RA-01	99	96	94	99
500-182734-1 - DL	W-200527-RA-01	104	97	91	95
LCS 500-545798/4	Lab Control Sample	100	98	90	95
LCS 500-545874/5	Lab Control Sample	101	99	91	95
MB 500-545798/6	Method Blank	108	98	93	95
MB 500-545874/7	Method Blank	111	96	91	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

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

Lab Sample ID: MB 500-545798/6
Matrix: Water
Analysis Batch: 545798

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<1.7		10	1.7	ug/L			06/03/20 22:40	1
Benzene	<0.15		0.50	0.15	ug/L			06/03/20 22:40	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/03/20 22:40	1
Chloroform	<0.37		2.0	0.37	ug/L			06/03/20 22:40	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/03/20 22:40	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/03/20 22:40	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/03/20 22:40	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/03/20 22:40	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/03/20 22:40	1
Toluene	<0.15		0.50	0.15	ug/L			06/03/20 22:40	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/03/20 22:40	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/03/20 22:40	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/03/20 22:40	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/03/20 22:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*72 - 124*		*06/03/20 22:40*	*1*
Dibromofluoromethane	*98*		*75 - 120*		*06/03/20 22:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 126*		*06/03/20 22:40*	*1*
Toluene-d8 (Surr)	*95*		*75 - 120*		*06/03/20 22:40*	*1*

Lab Sample ID: LCS 500-545798/4
Matrix: Water
Analysis Batch: 545798

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	39.0		ug/L		78	40 - 143
Benzene	50.0	42.4		ug/L		85	70 - 120
Carbon tetrachloride	50.0	41.2		ug/L		82	59 - 133
Chloroform	50.0	42.1		ug/L		84	70 - 120
cis-1,2-Dichloroethene	50.0	44.2		ug/L		88	70 - 125
1,1-Dichloroethene	50.0	41.2		ug/L		82	67 - 122
Ethylbenzene	50.0	44.7		ug/L		89	70 - 123
Methylene Chloride	50.0	41.1		ug/L		82	69 - 125
Tetrachloroethene	50.0	47.8		ug/L		96	70 - 128
Toluene	50.0	42.3		ug/L		85	70 - 125
1,1,2-Trichloroethane	50.0	42.5		ug/L		85	71 - 130
Trichloroethene	50.0	48.0		ug/L		96	70 - 125
Vinyl chloride	50.0	41.0		ug/L		82	64 - 126
Xylenes, Total	100	84.2		ug/L		84	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*72 - 124*
Dibromofluoromethane	*98*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 126*
Toluene-d8 (Surr)	*95*		*75 - 120*

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

Lab Sample ID: MB 500-545874/7
Matrix: Water
Analysis Batch: 545874

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<1.7		10	1.7	ug/L			06/04/20 11:12	1
Benzene	<0.15		0.50	0.15	ug/L			06/04/20 11:12	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/04/20 11:12	1
Chloroform	<0.37		2.0	0.37	ug/L			06/04/20 11:12	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/04/20 11:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/04/20 11:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/04/20 11:12	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/04/20 11:12	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/04/20 11:12	1
Toluene	<0.15		0.50	0.15	ug/L			06/04/20 11:12	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/04/20 11:12	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/04/20 11:12	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/04/20 11:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/04/20 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*72 - 124*		*06/04/20 11:12*	*1*
Dibromofluoromethane	*96*		*75 - 120*		*06/04/20 11:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 126*		*06/04/20 11:12*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*06/04/20 11:12*	*1*

Lab Sample ID: LCS 500-545874/5
Matrix: Water
Analysis Batch: 545874

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	41.5		ug/L		83	40 - 143
Benzene	50.0	47.8		ug/L		96	70 - 120
Carbon tetrachloride	50.0	46.1		ug/L		92	59 - 133
Chloroform	50.0	47.1		ug/L		94	70 - 120
cis-1,2-Dichloroethene	50.0	49.2		ug/L		98	70 - 125
1,1-Dichloroethene	50.0	46.1		ug/L		92	67 - 122
Ethylbenzene	50.0	50.7		ug/L		101	70 - 123
Methylene Chloride	50.0	46.8		ug/L		94	69 - 125
Tetrachloroethene	50.0	52.4		ug/L		105	70 - 128
Toluene	50.0	47.0		ug/L		94	70 - 125
1,1,2-Trichloroethane	50.0	48.3		ug/L		97	71 - 130
Trichloroethene	50.0	54.1		ug/L		108	70 - 125
Vinyl chloride	50.0	42.5		ug/L		85	64 - 126
Xylenes, Total	100	94.1		ug/L		94	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*72 - 124*
Dibromofluoromethane	*99*		*75 - 120*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 126*
Toluene-d8 (Surr)	*95*		*75 - 120*

Lab Chronicle

Client: GHD Services Inc.
Job ID: 500-182734-1
Project/Site: Wausau Superfund Site - 003978

Client Sample ID: W-200527-RA-01
Lab Sample ID: 500-182734-1

Date Collected: 05/27/20 09:40
Matrix: Water
Date Received: 05/29/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	545798	06/04/20 05:25	JDD	TAL CHI
Total/NA	Analysis	8260B	DL	10	545874	06/04/20 15:02	JDD	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 500-182734-1
Project/Site: Wausau Superfund Site - 003978

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-20

CHAIN OF CUSTODY RECORD

COC NO.: SP - 02953

PAGE 1 OF 1

(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES
1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

500-182734

Project No/ Phase/Task Code: 003978	**Laboratory Name:** Test America	**Lab Location:**	**SSOW ID:**
Project Name: Wausau	**Lab Contact:**	**Lab Quote No:**	**Cooler No:**
Project Location: Wausau WI			**Carrier:**
Chemistry Contact: G. Anderson			**Airbill No:**
Sampler(s): Ryan Aamot			**Date Shipped:**

500-182734 COC

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd//yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Analysis Requested: VOCs	MS/MSD Request	Comments/ Special Instructions:
1	W-200527-RA-01	5/27/20	940	WG	G		3							3	X		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Total Number of Containers:

All Samples in Cooler must be on COC

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	GRD	5/28/20	1600	1.	TA	5/29/20	0930
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10 (5/11/2020)

6/5/2020

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 500-182734-1

Login Number: 182734
List Number: 1
Creator: James, Jeff A

List Source: Eurofins TestAmerica, Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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	5.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the 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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	