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CHAPTER 21  
ATTACHMENT K  
Groundwater Sampling Report

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August 12, 2015

RE: Stresau Laboratory, Inc.  
2015 Groundwater Sampling Event  
SEH No. STRES 132556 1.0

Mr. Richard Hoff, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Mr. Hoff:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring and soil sampling event conducted during June 2015. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements.

Lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) concentration. Although the concentration of lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). The August 1, 2012 letter further indicates that Stresau anticipates analyzing groundwater samples for both total and dissolved metals at least until Stresau files a FPOR for renewal of Stresau's operating permit in 2016. Sampling requirements for 2016 and beyond will be addressed during the FPOR renewal process.

## GROUNDWATER MONITORING

On June 18, 2015, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities included pH, temperature and conductivity.

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550

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Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Test America Analytical Testing Corporation using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8310, and the following dissolved and total metals by EPA method 6020: barium, cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

## SOIL SAMPLING

On June 18, 2015, SEH collected three surface soil samples (North-1, North-3, and North-7) from the North site shown on Figure 1, "North Site Soil Sample Locations" (Appendix A). Dedicated plastic disposable spatulas were used to collect grab soil samples from the top three inches of soil at each of the sample locations. Soil Samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples were submitted to TestAmerica and analyzed for the following metals by various EPA Methods: barium, cadmium, chromium, lead, and zinc.

## RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the June 18, 2015 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected in June 2015 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (ten annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, no PAHs were detected in groundwater samples collected in June 2015 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in June 2015 at all monitoring wells were generally consistent with historical concentrations. Total lead concentrations appear generally stable or decreasing in MW-1, MW-2, and MW-3.

The groundwater sample collected from monitoring well MW-1 indicated a PAL exceedance for total Lead at a concentration of 2.8 ug/l; however, the detected concentration has declined from 21 ug/l in the groundwater sample collected during the June 2010 monitoring event. Total lead concentration in MW-8 increased from 1.6 µg/l in 2014 to 2.6 µg/l.

Multiple dissolved metals were detected in each of the groundwater samples collected in June 2015; however, the detected concentrations of dissolved metals were generally consistent with concentrations detected in 2011, 2012 and 2013 and were well below their respective PAL concentration standards.

Dissolved lead was not detected in groundwater samples collected from any of the monitoring wells. Soil analytical results are summarized in Table 4, "Soil Inorganic Analytical Results." Except for concentrations of lead in the North-1 and concentrations of Zinc in North-7 metals detected in samples collected during the June 2015 sampling event are within historical concentrations ranges. Concentrations of lead were detected at sample location North-1 at a concentration of 36 mg/kg. Sample location North-7 had concentrations of Zinc detected at 240 mg/kg. None of the metals were detected at concentrations exceeding their respective ch. NR720 Wis. Adm. Code Residual Contaminate Level (RCL) concentration for industrial sites.

The laboratory analytical report for the June 2015 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

## DISCUSSION

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs were detected in 2015. Lead and other inorganic compounds continue to be detected in each of the wells sampled, including MW-8 which is a background well. This indicates inorganic compounds are naturally occurring.

SEH does not believe additional actions or sampling, other than continued close monitoring of the operations and physical site setting near the TTU, are warranted at this time for the following primary reasons:

- One or more PAHs have been detected in samples collected from the monitoring wells during annual sampling events conducted since 1997, except for the June 2014 and June 2015 monitoring events.
- The total lead concentration in the sample collected from MW-1 in 2014 and 2015 are lower than any concentration detected since 2006.
- The concentrations of detected dissolved metals in samples collected from all four wells in 2015 were well below their respective PAL concentrations.
- Metals detected in the soil samples collected from the north site (Figure 1) during the 2015 sampling event are at concentrations below individual and cumulative NR 720 industrial direct contact limits.

The next groundwater monitoring event is scheduled to occur in June 2016. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Bruce K. Olson, PE  
Project Manager

MFR/ls/BKO

c: Mr. Steve Ashenbrucker, WDNR  
Mr. John Morris, WDNR

**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65

Notes:  
<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995  
<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005  
 Compiled by:  BKO  Checked by:  MJR  June 2015 Data Compiled by:  MFR  Checked by:  BKO   
 June 2010 Data Compiled by:  BKO  Checked by:  MFR   
 June 2014 Data Compiled by:  MS  Checked by:  BKO

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**Table 2  
Monitoring Well Groundwater Total Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																							
				MW-1										MW-2													
				ES	PAL	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	7/27/10	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15	
<b>Inorganics (µg/l)</b>																											
Barium	7440-39-3	2000	400																								
Cadmium	7440-43-9	5	0.5	<0.14	<0.14									<0.15	<0.19	<0.14	<0.14	<0.12	<0.12	<0.12	<0.12	<0.10	<0.10	<0.15	<0.19		
Chromium	7440-47-3	100	10																								
Copper	7440-50-8	1300	130	<18																							
Lead	7439-92-1	15	1.5	<0.44																							
Mercury	7439-97-6	2	0.2	<0.065	<0.065	<0.065	<0.065	<0.065		<0.051	<0.070	<0.064	<0.072	<0.061	<0.065	<0.065	<0.065	<0.065	<0.065	<0.051	<0.070	<0.064	<0.072	<0.061			
Nickel	7440-02-0	100	20	<4.0											<4.0	<4.0											
Silver	7440-22-4	50	10	<1.3	<1.3				<0.61			<0.069	<0.12	<0.062	<0.080	<1.3	<1.3		<0.12	<0.61	<0.11	<0.069	<0.12	<0.062	<0.080		
Zinc	7440-66-6	5000	2500	<2.8											<2.8												

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																							
				MW-3									MW-8														
				ES	PAL	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15		
<b>Inorganics (µg/l)</b>																											
Barium	7440-39-3	2000	400																								
Cadmium	7440-43-9	5	0.5	<0.14	<0.14	<0.12	<0.12	<0.12	<0.12	<0.10	<0.10	<0.15	<0.19	<0.14	<0.14	<0.12	<0.12	<0.12	<0.12	<0.10			<0.15				
Chromium	7440-47-3	100	10	<2.1																							
Copper	7440-50-8	1300	130	<18	<18										<18	<18											
Lead	7439-92-1	15	1.5	<0.44											<0.44												
Mercury	7439-97-6	2	0.2	<0.065	<0.065	<0.065	<0.065	<0.065	<0.051	<0.070	<0.064	<0.072	<0.061	<0.065	<0.065	<0.065	<0.065	<0.065	<0.051	<0.070	<0.064	<0.072	<0.061				
Nickel	7440-02-0	100	20	<4.0	<4.0										<4.0	<4.0											
Silver	7440-22-4	50	10	<1.3	<1.3			<0.12	<0.61	<0.11	<0.069	<0.12	<0.062	<0.080	<1.3	<1.3		<0.12	<0.61	<0.11	<0.069	<0.12	<0.062	<0.080			
Zinc	7440-66-6	5000	2500	<2.8										<4.6	<2.8												

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)  
Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)  
 Shaded = Parameter detected above laboratory limit of detection  
 Compiled by: BKO    Checked by: MJR

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**Table 3  
Monitoring Well Groundwater Dissolved Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date									
				MW-1				MW-2					
				ES	PAL	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/6/12	6/12/13	6/23/14
<b>Dissolved Inorganics (µg/l)</b>													
Barium	7440-39-3	2000	400										
Cadmium	7440-43-9	5	0.5	<0.12	<0.10	<0.10	<0.15	<0.19	<0.10	<0.10	<0.15	<0.19	
Chromium	7440-47-3	100	10										
Copper	7440-50-8	1300	130										
Lead	7439-92-1	15	1.5	<0.13	<0.16	<0.15	<0.091		<0.57	<0.16	<0.15		<0.96
Mercury	7439-97-6	2	0.2	<0.070	<0.070	<0.064	<0.072	<0.061	<0.070	<0.064	<0.072	<0.061	
Nickel	7440-02-0	100	20		<0.52		<0.69	<0.53	<0.52		<0.69	<0.53	
Silver	7440-22-4	50	10	<0.11	<0.069	<0.12	<0.062	<0.080	<0.069	<0.12	<0.062	<0.080	
Zinc	7440-66-6	5000	2500	<3.0	<6.3			<4.6	<6.3		<5.9	<4.6	

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date									
				MW-3				MW-8					
				ES	PAL	6/6/12	6/12/13	6/23/14	6/18/15	6/6/12	6/12/13	6/23/14	6/18/15
<b>Dissolved Inorganics (µg/l)</b>													
Barium	7440-39-3	2000	400										
Cadmium	7440-43-9	5	0.5	<0.10	<0.10	<0.15	0.36	<0.10	<0.10	<0.15	<0.19		
Chromium	7440-47-3	100	10							<0.63	<0.61		
Copper	7440-50-8	1300	130			0							
Lead	7439-92-1	15	1.5	<0.16	<0.15	<0.091	<0.14					<0.14	
Mercury	7439-97-6	2	0.2	<0.070	<0.064	<0.072	<0.061	<0.070	<0.064	<0.072	<0.061		
Nickel	7440-02-0	100	20	<0.52		<0.69				<0.69	<0.53		
Silver	7440-22-4	50	10	<0.069	<0.12	<0.062	<0.080	<0.069	<0.12	<0.062	<0.080		
Zinc	7440-66-6	5000	2500	<6.3		<5.9				<5.9	<4.6		

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)

Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)

Shaded = Parameter detected above laboratory limit of detection

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**Table 4  
Soil Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 720 RCLs in Soil	Sample Name/Sample Date																										
			North-1 (0-3 inches)												North-3 (0-3 inches)														
			5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/12/13	6/18/15	5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/18/15
<b>Inorganics (mg/kg)</b>																													
Barium	7440-39-3	100,000	44	33	34	46	29	28	34	47	36	31	33	32	40	34	86	56	68	120	72	86	33	39	27	54	37	32	38
Cadmium	7440-43-9	799	ND	NS	NS	NS	ND	ND	0.081	0.11	0.06	0.18	0.24	<0.024	0.14	<0.059	1	NS	NS	NS	ND	ND	0.081	0.072	ND	0.28	0.30	<0.024	<0.057
Chromium	7440-47-3	NSE	5	NS	NS	NS	4	3	7.5	7.7	9.5	4.6	6.4	6.4	6.6	11	6	NS	NS	NS	5	2	5.1	7.4	7.1	4.5	5.1	5.8	7.2
Lead	7439-92-1	800	52	ND	8	9	ND	11	3	7.2	32	28	19	21	16	36	233	ND	10	19	23	41	3	4.6	2.5	14	4.4	4.4	2.6
Zinc	7440-66-6	100,000	33	ND	13	23	11	7	17	21	27	15	23	20	17	25	980	ND	25	44	37	80	17	18	13	19	16	15	15

Analytical Parameters	CAS No.	NR 720 RCLs in Soil	Sample Name/Sample Date																										
			North-7 (0-3 inches)																										
			8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/12/13	6/18/15																	
<b>Inorganics (mg/kg)</b>																													
Barium	7440-39-3	100,000	28	20	23	31	16	16	16	15	15	14																	
Cadmium	7440-43-9	799	ND	ND	0.053	0.07	ND	0.12	<0.12	0.06	0.15	0.098																	
Chromium	7440-47-3	NSE	3	1	4.6	7.1	7.4	4.3	5.7	4.6	5.4	5.7																	
Lead	7439-92-1	800	ND	ND	4.6	4.2	13	77	18	150	120	100																	
Zinc	7440-66-6	100,000	11	5	17	18	32	26	32	60	54	240																	

Data prior to 8/16/07 from Table 1: Soil Chemistry Results-Metals From Annual Monitoring Report for the TTU and North Site Report (GME Consultants, Inc., December 15, 2005)  
 NR 720 Residual Contaminant Level (RCL) for industrial sites based on human health risk from direct contact  
 NSE = No standard established  
 ND = Not detected  
 NS = No sample result reported  
 Compiled by: BKO Checked by: MJR

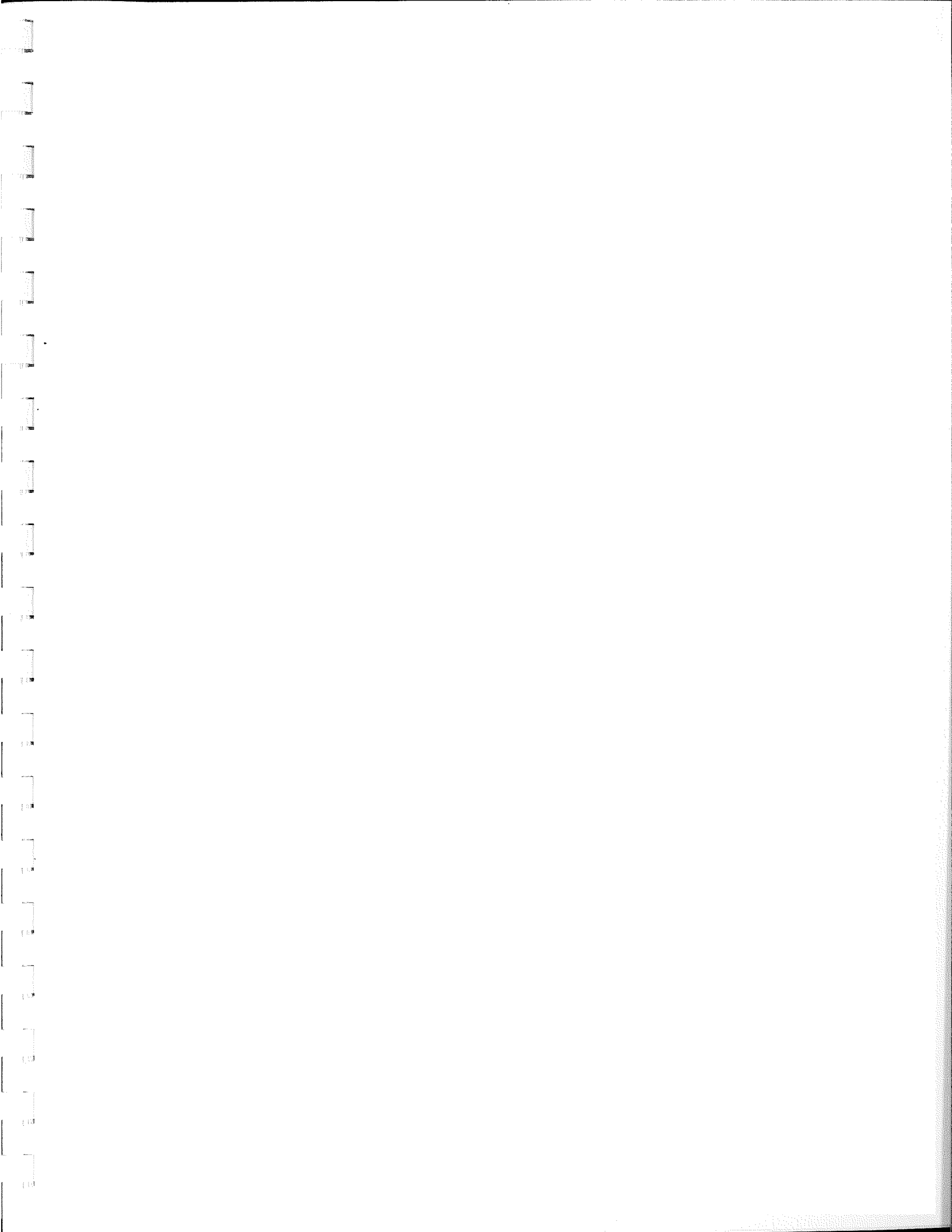
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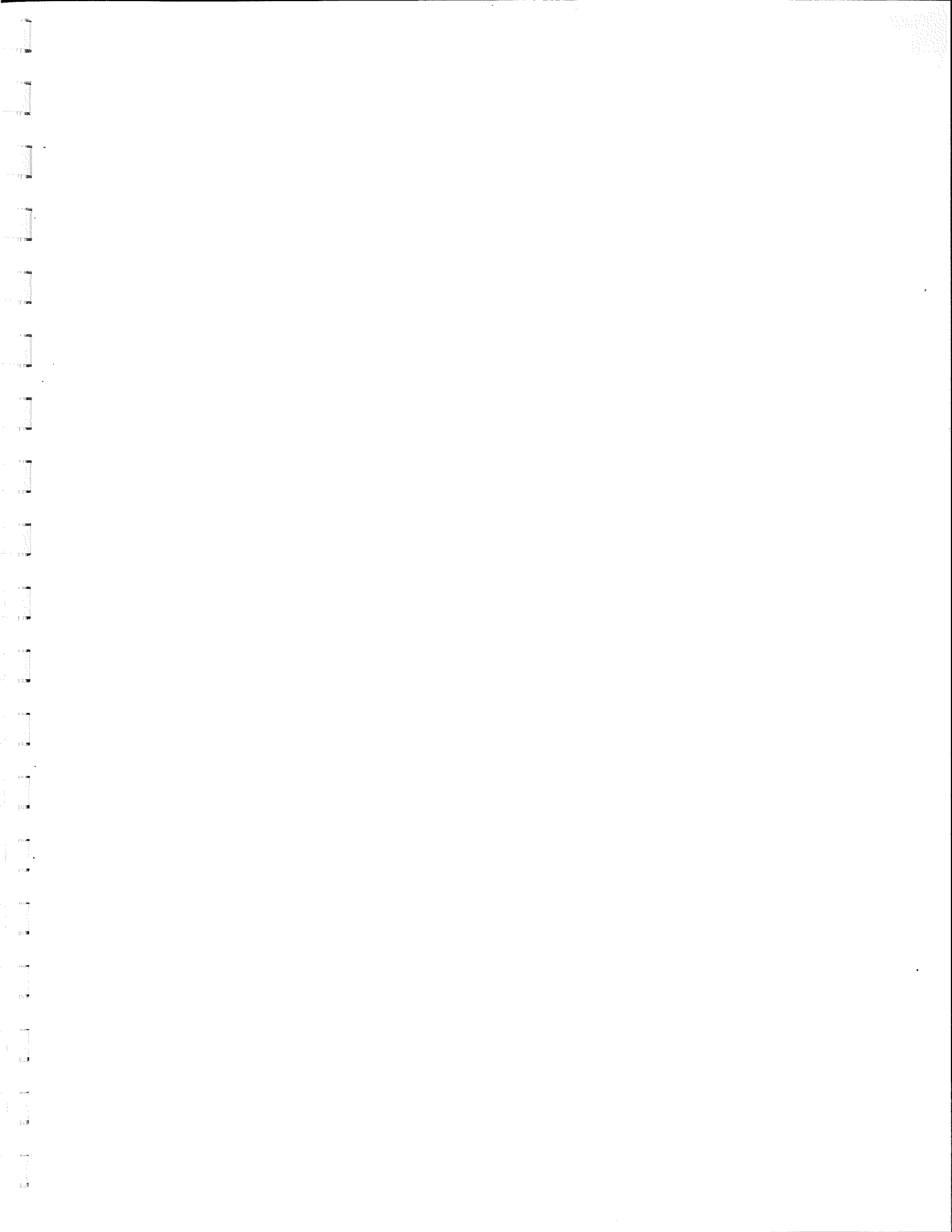


## Appendix A

### GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005





## **Appendix B**

June 2015 Analytical Report

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-97687-1

Client Project/Site: Stresau Lab - #06024 - 132556

For:

Short Elliott Hendrickson, Inc. dba SEH

10 North Bridge Street

Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:

7/1/2015 1:16:57 PM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

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results through  
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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Job ID: 500-97687-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-97687-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/23/2015 10:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -0.5° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

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

#### Metals

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

#### Field Service / Mobile Lab

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

#### Organic Prep

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



# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Client Sample ID: MW-8 (080)

## Lab Sample ID: 500-97687-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	43		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Cadmium	0.59		0.50	0.19	ug/L	1		6020	Total
									Recoverable
Chromium	7.7		5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	25		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	2.6		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	8.4		2.0	0.53	ug/L	1		6020	Total
									Recoverable
Zinc	33		20	4.6	ug/L	1		6020	Total
									Recoverable
Barium	7.8		2.5	0.84	ug/L	1		6020	Dissolved
Copper	1.3	J	2.0	0.96	ug/L	1		6020	Dissolved

## Client Sample ID: MW-3 (030)

## Lab Sample ID: 500-97687-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	18		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Chromium	3.2	J	5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	10		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	0.53		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	3.0		2.0	0.53	ug/L	1		6020	Total
									Recoverable
Barium	8.1		2.5	0.84	ug/L	1		6020	Dissolved
Cadmium	0.36	J	0.50	0.19	ug/L	1		6020	Dissolved
Chromium	0.88	J	5.0	0.61	ug/L	1		6020	Dissolved
Copper	1.4	J	2.0	0.96	ug/L	1		6020	Dissolved
Nickel	0.78	J	2.0	0.53	ug/L	1		6020	Dissolved
Zinc	8.2	J	20	4.6	ug/L	1		6020	Dissolved

## Client Sample ID: MW-2 (020)

## Lab Sample ID: 500-97687-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	20		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Chromium	3.5	J	5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	11		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	1.2		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	3.3		2.0	0.53	ug/L	1		6020	Total
									Recoverable
Zinc	4.8	J	20	4.6	ug/L	1		6020	Total
									Recoverable
Barium	9.6		2.5	0.84	ug/L	1		6020	Dissolved
Chromium	0.85	J	5.0	0.61	ug/L	1		6020	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Client Sample ID: MW-1 (010)

## Lab Sample ID: 500-97687-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	37		2.5	0.84	ug/L	1		6020	Total
Chromium	6.8		5.0	0.61	ug/L	1		6020	Recoverable Total
Copper	31		2.0	0.96	ug/L	1		6020	Recoverable Total
Lead	2.8		0.50	0.14	ug/L	1		6020	Recoverable Total
Nickel	7.7		2.0	0.53	ug/L	1		6020	Recoverable Total
Zinc	8.9	J	20	4.6	ug/L	1		6020	Recoverable Total
Barium	11		2.5	0.84	ug/L	1		6020	Dissolved
Chromium	1.1	J	5.0	0.61	ug/L	1		6020	Dissolved
Copper	2.0		2.0	0.96	ug/L	1		6020	Dissolved
Lead	0.18	J	0.50	0.14	ug/L	1		6020	Dissolved

## Client Sample ID: Field Blank

## Lab Sample ID: 500-97687-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.30	J	0.50	0.11	ug/L	1		8260B	Total/NA

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-97687-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	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 = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-97687-1	MW-8 (080)	Ground Water	06/18/15 10:00	06/23/15 10:25
500-97687-2	MW-3 (030)	Ground Water	06/18/15 10:40	06/23/15 10:25
500-97687-3	MW-2 (020)	Ground Water	06/18/15 11:25	06/23/15 10:25
500-97687-4	MW-1 (010)	Ground Water	06/18/15 12:00	06/23/15 10:25
500-97687-5	Field Blank	Water	06/18/15 00:00	06/23/15 10:25
500-97687-6	Trip Blank	Water	06/18/15 00:00	06/23/15 10:25

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

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-97687-1**

**Date Collected: 06/18/15 10:00**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 20:36	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 20:36	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 20:36	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 20:36	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 20:36	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 20:36	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 20:36	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 20:36	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 20:36	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 20:36	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:36	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 20:36	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 20:36	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 20:36	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 20:36	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 20:36	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 20:36	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:36	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 20:36	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:36	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 20:36	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 20:36	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 20:36	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 20:36	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 20:36	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 20:36	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 20:36	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 20:36	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 20:36	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 20:36	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:36	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 20:36	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 20:36	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 20:36	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 20:36	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 20:36	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 20:36	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 20:36	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 20:36	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 20:36	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 20:36	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 20:36	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:36	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 20:36	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 20:36	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 20:36	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 20:36	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 20:36	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 20:36	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-97687-1**

**Date Collected: 06/18/15 10:00**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:36	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 20:36	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:36	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 20:36	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 20:36	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 20:36	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 20:36	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 20:36	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 20:36	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 20:36	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		75 - 125		06/30/15 20:36	1
4-Bromofluorobenzene (Surr)	91		75 - 120		06/30/15 20:36	1
Dibromofluoromethane	95		75 - 120		06/30/15 20:36	1
Toluene-d8 (Surr)	97		75 - 120		06/30/15 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:16	1
2-Methylnaphthalene	<0.050		0.38	0.050	ug/L		06/24/15 16:36	06/25/15 00:16	1
Acenaphthene	<0.24		0.76	0.24	ug/L		06/24/15 16:36	06/25/15 00:16	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/24/15 16:36	06/25/15 00:16	1
Anthracene	<0.25		0.76	0.25	ug/L		06/24/15 16:36	06/25/15 00:16	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/24/15 16:36	06/25/15 00:16	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/24/15 16:36	06/25/15 00:16	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/24/15 16:36	06/25/15 00:16	1
Benzo[g,h,i]perylene	<0.29		0.76	0.29	ug/L		06/24/15 16:36	06/25/15 00:16	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/24/15 16:36	06/25/15 00:16	1
Chrysene	<0.052		0.38	0.052	ug/L		06/24/15 16:36	06/25/15 00:16	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/24/15 16:36	06/25/15 00:16	1
Fluoranthene	<0.35		0.76	0.35	ug/L		06/24/15 16:36	06/25/15 00:16	1
Fluorene	<0.19		0.76	0.19	ug/L		06/24/15 16:36	06/25/15 00:16	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/24/15 16:36	06/25/15 00:16	1
Naphthalene	<0.24		0.76	0.24	ug/L		06/24/15 16:36	06/25/15 00:16	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:16	1
Pyrene	<0.33		0.76	0.33	ug/L		06/24/15 16:36	06/25/15 00:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	78		41 - 132	06/24/15 16:36	06/25/15 00:16	1
Nitrobenzene-d5 (Surr)	63		47 - 134	06/24/15 16:36	06/25/15 00:16	1
Terphenyl-d14 (Surr)	94		59 - 150	06/24/15 16:36	06/25/15 00:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	43		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:21	1
Cadmium	0.59		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:21	1
Chromium	7.7		5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:21	1
Copper	25		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:21	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-97687-1**

**Date Collected: 06/18/15 10:00**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.6		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:21	1
Nickel	8.4		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:21	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:21	1
Zinc	33		20	4.6	ug/L		06/23/15 19:00	06/24/15 13:21	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	7.8		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:26	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:26	1
Chromium	<0.61		5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:26	1
Copper	1.3	J	2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:26	1
Lead	<0.14		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:26	1
Nickel	<0.53		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:26	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:26	1
Zinc	<4.6		20	4.6	ug/L		06/23/15 19:00	06/24/15 13:26	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:28	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:30	1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-97687-2**

**Date Collected: 06/18/15 10:40**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 21:03	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 21:03	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 21:03	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:03	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 21:03	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 21:03	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 21:03	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 21:03	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 21:03	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 21:03	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:03	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 21:03	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 21:03	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 21:03	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:03	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 21:03	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 21:03	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:03	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 21:03	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:03	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-97687-2**

**Date Collected: 06/18/15 10:40**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 21:03	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 21:03	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 21:03	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 21:03	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 21:03	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 21:03	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 21:03	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 21:03	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 21:03	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 21:03	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:03	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 21:03	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 21:03	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 21:03	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 21:03	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 21:03	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 21:03	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 21:03	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 21:03	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 21:03	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 21:03	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 21:03	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:03	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 21:03	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 21:03	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 21:03	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:03	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:03	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 21:03	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:03	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 21:03	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:03	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 21:03	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 21:03	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 21:03	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 21:03	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 21:03	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 21:03	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 21:03	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 21:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		75 - 125		06/30/15 21:03	1
4-Bromofluorobenzene (Surr)	95		75 - 120		06/30/15 21:03	1
Dibromofluoromethane	95		75 - 120		06/30/15 21:03	1
Toluene-d8 (Surr)	99		75 - 120		06/30/15 21:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:45	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-97687-2**

**Date Collected: 06/18/15 10:40**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	<0.049		0.38	0.049	ug/L		06/24/15 16:36	06/25/15 00:45	1
Acenaphthene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:45	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/24/15 16:36	06/25/15 00:45	1
Anthracene	<0.25		0.76	0.25	ug/L		06/24/15 16:36	06/25/15 00:45	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/24/15 16:36	06/25/15 00:45	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/24/15 16:36	06/25/15 00:45	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/24/15 16:36	06/25/15 00:45	1
Benzo[g,h,i]perylene	<0.28		0.76	0.28	ug/L		06/24/15 16:36	06/25/15 00:45	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/24/15 16:36	06/25/15 00:45	1
Chrysene	<0.051		0.38	0.051	ug/L		06/24/15 16:36	06/25/15 00:45	1
Dibenz(a,h)anthracene	<0.038		0.23	0.038	ug/L		06/24/15 16:36	06/25/15 00:45	1
Fluoranthene	<0.34		0.76	0.34	ug/L		06/24/15 16:36	06/25/15 00:45	1
Fluorene	<0.18		0.76	0.18	ug/L		06/24/15 16:36	06/25/15 00:45	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/24/15 16:36	06/25/15 00:45	1
Naphthalene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:45	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 00:45	1
Pyrene	<0.32		0.76	0.32	ug/L		06/24/15 16:36	06/25/15 00:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	102		41 - 132	06/24/15 16:36	06/25/15 00:45	1
Nitrobenzene-d5 (Surr)	81		47 - 134	06/24/15 16:36	06/25/15 00:45	1
Terphenyl-d14 (Surr)	120		59 - 150	06/24/15 16:36	06/25/15 00:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	18		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:31	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:31	1
Chromium	3.2	J	5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:31	1
Copper	10		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:31	1
Lead	0.53		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:31	1
Nickel	3.0		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:31	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:31	1
Zinc	<4.6		20	4.6	ug/L		06/23/15 19:00	06/24/15 13:31	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	8.1		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:35	1
Cadmium	0.36	J	0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:35	1
Chromium	0.88	J	5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:35	1
Copper	1.4	J	2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:35	1
Lead	<0.14		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:35	1
Nickel	0.78	J	2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:35	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:35	1
Zinc	8.2	J	20	4.6	ug/L		06/23/15 19:00	06/24/15 13:35	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:32	1

TestAmerica Chicago



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Client Sample ID: MW-3 (030)

Date Collected: 06/18/15 10:40

Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-2

Matrix: Ground Water

### Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:34	1

## Client Sample ID: MW-2 (020)

Date Collected: 06/18/15 11:25

Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-3

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 21:29	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 21:29	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 21:29	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:29	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 21:29	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 21:29	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 21:29	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 21:29	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 21:29	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 21:29	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:29	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 21:29	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 21:29	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 21:29	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:29	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 21:29	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 21:29	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:29	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 21:29	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:29	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 21:29	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 21:29	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 21:29	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 21:29	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 21:29	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 21:29	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 21:29	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 21:29	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 21:29	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 21:29	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:29	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 21:29	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 21:29	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 21:29	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 21:29	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 21:29	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 21:29	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 21:29	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 21:29	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 21:29	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 21:29	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 21:29	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-97687-3**

**Date Collected: 06/18/15 11:25**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:29	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 21:29	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 21:29	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 21:29	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:29	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:29	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 21:29	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:29	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 21:29	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:29	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 21:29	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 21:29	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 21:29	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 21:29	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 21:29	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 21:29	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 21:29	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		75 - 125		06/30/15 21:29	1
4-Bromofluorobenzene (Surr)	90		75 - 120		06/30/15 21:29	1
Dibromofluoromethane	95		75 - 120		06/30/15 21:29	1
Toluene-d8 (Surr)	97		75 - 120		06/30/15 21:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 01:14	1
2-Methylnaphthalene	<0.049		0.38	0.049	ug/L		06/24/15 16:36	06/25/15 01:14	1
Acenaphthene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 01:14	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/24/15 16:36	06/25/15 01:14	1
Anthracene	<0.25		0.76	0.25	ug/L		06/24/15 16:36	06/25/15 01:14	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/24/15 16:36	06/25/15 01:14	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/24/15 16:36	06/25/15 01:14	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/24/15 16:36	06/25/15 01:14	1
Benzo[g,h,i]perylene	<0.28		0.76	0.28	ug/L		06/24/15 16:36	06/25/15 01:14	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/24/15 16:36	06/25/15 01:14	1
Chrysene	<0.051		0.38	0.051	ug/L		06/24/15 16:36	06/25/15 01:14	1
Dibenz(a,h)anthracene	<0.038		0.23	0.038	ug/L		06/24/15 16:36	06/25/15 01:14	1
Fluoranthene	<0.34		0.76	0.34	ug/L		06/24/15 16:36	06/25/15 01:14	1
Fluorene	<0.18		0.76	0.18	ug/L		06/24/15 16:36	06/25/15 01:14	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/24/15 16:36	06/25/15 01:14	1
Naphthalene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 01:14	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/24/15 16:36	06/25/15 01:14	1
Pyrene	<0.32		0.76	0.32	ug/L		06/24/15 16:36	06/25/15 01:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	94		41 - 132	06/24/15 16:36	06/25/15 01:14	1
Nitrobenzene-d5 (Surr)	129		47 - 134	06/24/15 16:36	06/25/15 01:14	1
Terphenyl-d14 (Surr)	119		59 - 150	06/24/15 16:36	06/25/15 01:14	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-97687-3**

**Date Collected: 06/18/15 11:25**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	20		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:40	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:40	1
Chromium	3.5	J	5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:40	1
Copper	11		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:40	1
Lead	1.2		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:40	1
Nickel	3.3		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:40	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:40	1
Zinc	4.8	J	20	4.6	ug/L		06/23/15 19:00	06/24/15 13:40	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	9.6		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:45	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:45	1
Chromium	0.85	J	5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:45	1
Copper	<0.96		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:45	1
Lead	<0.14		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:45	1
Nickel	<0.53		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:45	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:45	1
Zinc	<4.6		20	4.6	ug/L		06/23/15 19:00	06/24/15 13:45	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:36	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:38	1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-97687-4**

**Date Collected: 06/18/15 12:00**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 21:55	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 21:55	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 21:55	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:55	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 21:55	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 21:55	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 21:55	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 21:55	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 21:55	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 21:55	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:55	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 21:55	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 21:55	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 21:55	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 21:55	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 21:55	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-97687-4**

**Date Collected: 06/18/15 12:00**

**Matrix: Ground Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 21:55	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:55	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 21:55	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:55	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 21:55	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 21:55	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 21:55	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 21:55	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 21:55	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 21:55	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 21:55	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 21:55	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 21:55	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 21:55	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:55	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 21:55	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 21:55	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 21:55	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 21:55	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 21:55	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 21:55	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 21:55	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 21:55	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 21:55	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 21:55	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 21:55	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:55	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 21:55	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 21:55	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 21:55	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:55	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 21:55	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 21:55	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 21:55	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 21:55	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 21:55	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 21:55	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 21:55	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 21:55	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 21:55	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 21:55	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 21:55	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 21:55	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		75 - 125		06/30/15 21:55	1
4-Bromofluorobenzene (Surr)	92		75 - 120		06/30/15 21:55	1
Dibromofluoromethane	94		75 - 120		06/30/15 21:55	1
Toluene-d8 (Surr)	98		75 - 120		06/30/15 21:55	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		0.77	0.23	ug/L		06/24/15 16:36	06/25/15 01:43	1
2-Methylnaphthalene	<0.050		0.39	0.050	ug/L		06/24/15 16:36	06/25/15 01:43	1
Acenaphthene	<0.24		0.77	0.24	ug/L		06/24/15 16:36	06/25/15 01:43	1
Acenaphthylene	<0.21		0.77	0.21	ug/L		06/24/15 16:36	06/25/15 01:43	1
Anthracene	<0.26		0.77	0.26	ug/L		06/24/15 16:36	06/25/15 01:43	1
Benzo[a]anthracene	<0.044		0.15	0.044	ug/L		06/24/15 16:36	06/25/15 01:43	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		06/24/15 16:36	06/25/15 01:43	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		06/24/15 16:36	06/25/15 01:43	1
Benzo[g,h,i]perylene	<0.29		0.77	0.29	ug/L		06/24/15 16:36	06/25/15 01:43	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/24/15 16:36	06/25/15 01:43	1
Chrysene	<0.053		0.39	0.053	ug/L		06/24/15 16:36	06/25/15 01:43	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/24/15 16:36	06/25/15 01:43	1
Fluoranthene	<0.35		0.77	0.35	ug/L		06/24/15 16:36	06/25/15 01:43	1
Fluorene	<0.19		0.77	0.19	ug/L		06/24/15 16:36	06/25/15 01:43	1
Indeno[1,2,3-cd]pyrene	<0.058		0.15	0.058	ug/L		06/24/15 16:36	06/25/15 01:43	1
Naphthalene	<0.24		0.77	0.24	ug/L		06/24/15 16:36	06/25/15 01:43	1
Phenanthrene	<0.23		0.77	0.23	ug/L		06/24/15 16:36	06/25/15 01:43	1
Pyrene	<0.33		0.77	0.33	ug/L		06/24/15 16:36	06/25/15 01:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		41 - 132	06/24/15 16:36	06/25/15 01:43	1
Nitrobenzene-d5 (Surr)	65		47 - 134	06/24/15 16:36	06/25/15 01:43	1
Terphenyl-d14 (Surr)	113		59 - 150	06/24/15 16:36	06/25/15 01:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>37</b>		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:59	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:59	1
<b>Chromium</b>	<b>6.8</b>		5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:59	1
<b>Copper</b>	<b>31</b>		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:59	1
<b>Lead</b>	<b>2.8</b>		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:59	1
<b>Nickel</b>	<b>7.7</b>		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:59	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:59	1
<b>Zinc</b>	<b>8.9</b>	<b>J</b>	20	4.6	ug/L		06/23/15 19:00	06/24/15 13:59	1

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>11</b>		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 14:03	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 14:03	1
<b>Chromium</b>	<b>1.1</b>	<b>J</b>	5.0	0.61	ug/L		06/23/15 19:00	06/24/15 14:03	1
<b>Copper</b>	<b>2.0</b>		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 14:03	1
<b>Lead</b>	<b>0.18</b>	<b>J</b>	0.50	0.14	ug/L		06/23/15 19:00	06/24/15 14:03	1
Nickel	<0.53		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 14:03	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 14:03	1
Zinc	<4.6		20	4.6	ug/L		06/23/15 19:00	06/24/15 14:03	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:40	1

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:41	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 500-97687-5**

**Date Collected: 06/18/15 00:00**

**Matrix: Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 22:22	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 22:22	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 22:22	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 22:22	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 22:22	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 22:22	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 22:22	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 22:22	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 22:22	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 22:22	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 22:22	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 22:22	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 22:22	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 22:22	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 22:22	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 22:22	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 22:22	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 22:22	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 22:22	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 22:22	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 22:22	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 22:22	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 22:22	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 22:22	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 22:22	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 22:22	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 22:22	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 22:22	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 22:22	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 22:22	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 22:22	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 22:22	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 22:22	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 22:22	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 22:22	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 22:22	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 22:22	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 22:22	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 22:22	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 22:22	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 22:22	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 22:22	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 22:22	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 22:22	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 22:22	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 22:22	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 22:22	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 22:22	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 22:22	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Client Sample ID: Field Blank

Date Collected: 06/18/15 00:00

Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 22:22	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 22:22	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 22:22	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 22:22	1
<b>Toluene</b>	<b>0.30</b>	<b>J</b>	0.50	0.11	ug/L			06/30/15 22:22	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 22:22	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 22:22	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 22:22	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 22:22	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 22:22	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 22:22	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	87		75 - 125					06/30/15 22:22	1
4-Bromofluorobenzene (Surr)	90		75 - 120					06/30/15 22:22	1
Dibromofluoromethane	95		75 - 120					06/30/15 22:22	1
Toluene-d8 (Surr)	97		75 - 120					06/30/15 22:22	1

## Client Sample ID: Trip Blank

Date Collected: 06/18/15 00:00

Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 20:09	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 20:09	1
1,1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 20:09	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 20:09	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 20:09	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 20:09	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 20:09	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 20:09	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 20:09	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 20:09	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:09	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 20:09	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 20:09	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 20:09	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 20:09	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 20:09	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 20:09	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:09	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 20:09	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:09	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 20:09	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 20:09	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 20:09	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 20:09	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 20:09	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 20:09	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-97687-6**

**Date Collected: 06/18/15 00:00**

**Matrix: Water**

**Date Received: 06/23/15 10:25**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 20:09	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 20:09	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 20:09	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 20:09	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:09	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 20:09	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 20:09	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 20:09	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 20:09	1
cis-1,3-Dichloropropene	<0.18		1.0	0.18	ug/L			06/30/15 20:09	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 20:09	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 20:09	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 20:09	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 20:09	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 20:09	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 20:09	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:09	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 20:09	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 20:09	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 20:09	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 20:09	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 20:09	1
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 20:09	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 20:09	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 20:09	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 20:09	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 20:09	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 20:09	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 20:09	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 20:09	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 20:09	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 20:09	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 20:09	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 20:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		75 - 125		06/30/15 20:09	1
4-Bromofluorobenzene (Surr)	94		75 - 120		06/30/15 20:09	1
Dibromofluoromethane	96		75 - 120		06/30/15 20:09	1
Toluene-d8 (Surr)	99		75 - 120		06/30/15 20:09	1



# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## GC/MS VOA

### Analysis Batch: 293871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Total/NA	Ground Water	8260B	
500-97687-2	MW-3 (030)	Total/NA	Ground Water	8260B	
500-97687-3	MW-2 (020)	Total/NA	Ground Water	8260B	
500-97687-4	MW-1 (010)	Total/NA	Ground Water	8260B	
500-97687-4 MS	MW-1 (010)	Total/NA	Ground Water	8260B	
500-97687-4 MSD	MW-1 (010)	Total/NA	Ground Water	8260B	
500-97687-5	Field Blank	Total/NA	Water	8260B	
500-97687-6	Trip Blank	Total/NA	Water	8260B	
LCS 500-293871/4	Lab Control Sample	Total/NA	Water	8260B	
MB 500-293871/31	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 293206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Total/NA	Ground Water	3510C	
500-97687-2	MW-3 (030)	Total/NA	Ground Water	3510C	
500-97687-3	MW-2 (020)	Total/NA	Ground Water	3510C	
500-97687-4	MW-1 (010)	Total/NA	Ground Water	3510C	
LCS 500-293206/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 500-293206/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 293231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Total/NA	Ground Water	8270D	293206
500-97687-2	MW-3 (030)	Total/NA	Ground Water	8270D	293206
500-97687-3	MW-2 (020)	Total/NA	Ground Water	8270D	293206
500-97687-4	MW-1 (010)	Total/NA	Ground Water	8270D	293206
LCS 500-293206/2-A	Lab Control Sample	Total/NA	Water	8270D	293206
MB 500-293206/1-A	Method Blank	Total/NA	Water	8270D	293206

## Metals

### Prep Batch: 293030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Dissolved	Ground Water	7470A	
500-97687-1	MW-8 (080)	Total/NA	Ground Water	7470A	
500-97687-2	MW-3 (030)	Dissolved	Ground Water	7470A	
500-97687-2	MW-3 (030)	Total/NA	Ground Water	7470A	
500-97687-3	MW-2 (020)	Dissolved	Ground Water	7470A	
500-97687-3	MW-2 (020)	Total/NA	Ground Water	7470A	
500-97687-4	MW-1 (010)	Dissolved	Ground Water	7470A	
500-97687-4	MW-1 (010)	Total/NA	Ground Water	7470A	
LCS 500-293030/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-293030/12-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 293059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Dissolved	Ground Water	3005A	
500-97687-1	MW-8 (080)	Total Recoverable	Ground Water	3005A	

TestAmerica Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Metals (Continued)

### Prep Batch: 293059 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-2	MW-3 (030)	Dissolved	Ground Water	3005A	
500-97687-2	MW-3 (030)	Total Recoverable	Ground Water	3005A	
500-97687-3	MW-2 (020)	Dissolved	Ground Water	3005A	
500-97687-3	MW-2 (020)	Total Recoverable	Ground Water	3005A	
500-97687-4	MW-1 (010)	Dissolved	Ground Water	3005A	
500-97687-4	MW-1 (010)	Total Recoverable	Ground Water	3005A	
LCS 500-293059/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 500-293059/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 293146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Dissolved	Ground Water	7470A	293030
500-97687-1	MW-8 (080)	Total/NA	Ground Water	7470A	293030
500-97687-2	MW-3 (030)	Dissolved	Ground Water	7470A	293030
500-97687-2	MW-3 (030)	Total/NA	Ground Water	7470A	293030
500-97687-3	MW-2 (020)	Dissolved	Ground Water	7470A	293030
500-97687-3	MW-2 (020)	Total/NA	Ground Water	7470A	293030
500-97687-4	MW-1 (010)	Dissolved	Ground Water	7470A	293030
500-97687-4	MW-1 (010)	Total/NA	Ground Water	7470A	293030
LCS 500-293030/13-A	Lab Control Sample	Total/NA	Water	7470A	293030
MB 500-293030/12-A	Method Blank	Total/NA	Water	7470A	293030

### Analysis Batch: 293194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-1	MW-8 (080)	Dissolved	Ground Water	6020	293059
500-97687-1	MW-8 (080)	Total Recoverable	Ground Water	6020	293059
500-97687-2	MW-3 (030)	Dissolved	Ground Water	6020	293059
500-97687-2	MW-3 (030)	Total Recoverable	Ground Water	6020	293059
500-97687-3	MW-2 (020)	Dissolved	Ground Water	6020	293059
500-97687-3	MW-2 (020)	Total Recoverable	Ground Water	6020	293059
500-97687-4	MW-1 (010)	Dissolved	Ground Water	6020	293059
500-97687-4	MW-1 (010)	Total Recoverable	Ground Water	6020	293059
LCS 500-293059/2-A	Lab Control Sample	Total Recoverable	Water	6020	293059
MB 500-293059/1-A	Method Blank	Total Recoverable	Water	6020	293059

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	DBFM	TOL
		(75-125)	(75-120)	(75-120)	(75-120)
500-97687-1	MW-8 (080)	90	91	95	97
500-97687-2	MW-3 (030)	88	95	95	99
500-97687-3	MW-2 (020)	88	90	95	97
500-97687-4	MW-1 (010)	88	92	94	98
500-97687-4 MS	MW-1 (010)	87	92	99	97
500-97687-4 MSD	MW-1 (010)	88	91	99	98

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane  
 TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	DBFM	TOL
		(75-125)	(75-120)	(75-120)	(75-120)
500-97687-5	Field Blank	87	90	95	97
500-97687-6	Trip Blank	86	94	96	99
LCS 500-293871/4	Lab Control Sample	87	90	99	99
MB 500-293871/31	Method Blank	88	91	93	97

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane  
 TOL = Toluene-d8 (Surr)

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP	NBZ	TPH
		(41-132)	(47-134)	(59-150)
500-97687-1	MW-8 (080)	78	63	94
500-97687-2	MW-3 (030)	102	81	120
500-97687-3	MW-2 (020)	94	129	119
500-97687-4	MW-1 (010)	88	65	113

### Surrogate Legend

FBP = 2-Fluorobiphenyl  
 NBZ = Nitrobenzene-d5 (Surr)  
 TPH = Terphenyl-d14 (Surr)

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP (41-132)	NBZ (47-134)	TPH (59-150)
LCS 500-293206/2-A	Lab Control Sample	95	98	113
MB 500-293206/1-A	Method Blank	90	65	112

#### Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: MB 500-293871/31**

**Matrix: Water**

**Analysis Batch: 293871**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.25		1.0	0.25	ug/L			06/30/15 14:51	1
1,1,1-Trichloroethane	<0.20		1.0	0.20	ug/L			06/30/15 14:51	1
1,1,2,2-Tetrachloroethane	<0.23		1.0	0.23	ug/L			06/30/15 14:51	1
1,1,2-Trichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 14:51	1
1,1-Dichloroethane	<0.19		1.0	0.19	ug/L			06/30/15 14:51	1
1,1-Dichloroethene	<0.31		1.0	0.31	ug/L			06/30/15 14:51	1
1,1-Dichloropropene	<0.34		1.0	0.34	ug/L			06/30/15 14:51	1
1,2,3-Trichlorobenzene	<0.24		1.0	0.24	ug/L			06/30/15 14:51	1
1,2,3-Trichloropropane	<0.45		1.0	0.45	ug/L			06/30/15 14:51	1
1,2,4-Trichlorobenzene	<0.31		1.0	0.31	ug/L			06/30/15 14:51	1
1,2,4-Trimethylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 14:51	1
1,2-Dibromo-3-Chloropropane	<0.87		2.0	0.87	ug/L			06/30/15 14:51	1
1,2-Dibromoethane	<0.36		1.0	0.36	ug/L			06/30/15 14:51	1
1,2-Dichlorobenzene	<0.27		1.0	0.27	ug/L			06/30/15 14:51	1
1,2-Dichloroethane	<0.28		1.0	0.28	ug/L			06/30/15 14:51	1
1,2-Dichloropropane	<0.20		1.0	0.20	ug/L			06/30/15 14:51	1
1,3,5-Trimethylbenzene	<0.18		1.0	0.18	ug/L			06/30/15 14:51	1
1,3-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 14:51	1
1,3-Dichloropropane	<0.13		1.0	0.13	ug/L			06/30/15 14:51	1
1,4-Dichlorobenzene	<0.15		1.0	0.15	ug/L			06/30/15 14:51	1
2,2-Dichloropropane	<0.32		1.0	0.32	ug/L			06/30/15 14:51	1
2-Chlorotoluene	<0.21		1.0	0.21	ug/L			06/30/15 14:51	1
4-Chlorotoluene	<0.20		1.0	0.20	ug/L			06/30/15 14:51	1
Benzene	<0.074		0.50	0.074	ug/L			06/30/15 14:51	1
Bromobenzene	<0.25		1.0	0.25	ug/L			06/30/15 14:51	1
Bromochloromethane	<0.40		1.0	0.40	ug/L			06/30/15 14:51	1
Bromodichloromethane	<0.17		1.0	0.17	ug/L			06/30/15 14:51	1
Bromoform	<0.28		1.0	0.28	ug/L			06/30/15 14:51	1
Bromomethane	<0.31		1.0	0.31	ug/L			06/30/15 14:51	1
Carbon tetrachloride	<0.26		1.0	0.26	ug/L			06/30/15 14:51	1
Chlorobenzene	<0.14		1.0	0.14	ug/L			06/30/15 14:51	1
Chloroethane	<0.34		1.0	0.34	ug/L			06/30/15 14:51	1
Chloroform	<0.20		1.0	0.20	ug/L			06/30/15 14:51	1
Chloromethane	<0.18		1.0	0.18	ug/L			06/30/15 14:51	1
cis-1,2-Dichloroethene	<0.12		1.0	0.12	ug/L			06/30/15 14:51	1
cis-1,3-Dichloropropane	<0.18		1.0	0.18	ug/L			06/30/15 14:51	1
Dibromochloromethane	<0.32		1.0	0.32	ug/L			06/30/15 14:51	1
Dibromomethane	<0.33		1.0	0.33	ug/L			06/30/15 14:51	1
Dichlorodifluoromethane	<0.20		1.0	0.20	ug/L			06/30/15 14:51	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			06/30/15 14:51	1
Hexachlorobutadiene	<0.26		1.0	0.26	ug/L			06/30/15 14:51	1
Isopropyl ether	<0.15		1.0	0.15	ug/L			06/30/15 14:51	1
Isopropylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 14:51	1
Methyl tert-butyl ether	<0.24		1.0	0.24	ug/L			06/30/15 14:51	1
Methylene Chloride	<0.68		5.0	0.68	ug/L			06/30/15 14:51	1
Naphthalene	<0.16		1.0	0.16	ug/L			06/30/15 14:51	1
n-Butylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 14:51	1
N-Propylbenzene	<0.13		1.0	0.13	ug/L			06/30/15 14:51	1

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: MB 500-293871/31**  
**Matrix: Water**  
**Analysis Batch: 293871**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.17		1.0	0.17	ug/L			06/30/15 14:51	1
sec-Butylbenzene	<0.15		1.0	0.15	ug/L			06/30/15 14:51	1
Styrene	<0.10		1.0	0.10	ug/L			06/30/15 14:51	1
tert-Butylbenzene	<0.14		1.0	0.14	ug/L			06/30/15 14:51	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			06/30/15 14:51	1
Toluene	<0.11		0.50	0.11	ug/L			06/30/15 14:51	1
trans-1,2-Dichloroethene	<0.25		1.0	0.25	ug/L			06/30/15 14:51	1
trans-1,3-Dichloropropene	<0.21		1.0	0.21	ug/L			06/30/15 14:51	1
Trichloroethene	<0.19		0.50	0.19	ug/L			06/30/15 14:51	1
Trichlorofluoromethane	<0.19		1.0	0.19	ug/L			06/30/15 14:51	1
Vinyl chloride	<0.10		0.50	0.10	ug/L			06/30/15 14:51	1
Xylenes, Total	<0.068		1.0	0.068	ug/L			06/30/15 14:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		75 - 125		06/30/15 14:51	1
4-Bromofluorobenzene (Surr)	91		75 - 120		06/30/15 14:51	1
Dibromofluoromethane	93		75 - 120		06/30/15 14:51	1
Toluene-d8 (Surr)	97		75 - 120		06/30/15 14:51	1

**Lab Sample ID: LCS 500-293871/4**  
**Matrix: Water**  
**Analysis Batch: 293871**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	46.5		ug/L		93	70 - 124
1,1,1-Trichloroethane	50.0	47.0		ug/L		94	70 - 125
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	68 - 133
1,1,2-Trichloroethane	50.0	50.6		ug/L		101	70 - 125
1,1-Dichloroethane	50.0	44.5		ug/L		89	70 - 127
1,1-Dichloroethene	50.0	45.6		ug/L		91	68 - 121
1,1-Dichloropropene	50.0	47.5		ug/L		95	70 - 126
1,2,3-Trichlorobenzene	50.0	52.0		ug/L		104	70 - 133
1,2,3-Trichloropropane	50.0	43.1		ug/L		86	53 - 139
1,2,4-Trichlorobenzene	50.0	50.6		ug/L		101	70 - 125
1,2,4-Trimethylbenzene	50.0	48.7		ug/L		97	70 - 127
1,2-Dibromo-3-Chloropropane	50.0	43.8		ug/L		88	59 - 139
1,2-Dibromoethane	50.0	50.6		ug/L		101	70 - 124
1,2-Dichlorobenzene	50.0	50.0		ug/L		100	70 - 123
1,2-Dichloroethane	50.0	46.6		ug/L		93	66 - 132
1,2-Dichloropropane	50.0	45.5		ug/L		91	70 - 127
1,3,5-Trimethylbenzene	50.0	49.1		ug/L		98	70 - 129
1,3-Dichlorobenzene	50.0	50.2		ug/L		100	70 - 122
1,3-Dichloropropane	50.0	47.2		ug/L		94	70 - 127
1,4-Dichlorobenzene	50.0	50.1		ug/L		100	70 - 120
2,2-Dichloropropane	50.0	45.2		ug/L		90	68 - 120
2-Chlorotoluene	50.0	47.4		ug/L		95	70 - 128
4-Chlorotoluene	50.0	48.4		ug/L		97	70 - 127
Benzene	50.0	47.8		ug/L		96	70 - 120

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: LCS 500-293871/4**

**Matrix: Water**

**Analysis Batch: 293871**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	51.8		ug/L		104	70 - 129
Bromochloromethane	50.0	52.3		ug/L		105	70 - 121
Bromodichloromethane	50.0	43.2		ug/L		86	70 - 127
Bromoform	50.0	45.7		ug/L		91	70 - 135
Bromomethane	50.0	46.2		ug/L		92	30 - 170
Carbon tetrachloride	50.0	47.9		ug/L		96	70 - 136
Chlorobenzene	50.0	50.3		ug/L		101	70 - 120
Chloroethane	50.0	48.3		ug/L		97	40 - 150
Chloroform	50.0	47.0		ug/L		94	70 - 120
Chloromethane	50.0	33.5		ug/L		67	45 - 140
cis-1,2-Dichloroethene	50.0	47.7		ug/L		95	70 - 120
cis-1,3-Dichloropropene	50.0	45.6		ug/L		91	70 - 122
Dibromochloromethane	50.0	50.1		ug/L		100	70 - 120
Dibromomethane	50.0	49.5		ug/L		99	70 - 120
Dichlorodifluoromethane	50.0	41.8		ug/L		84	30 - 150
Ethylbenzene	50.0	49.3		ug/L		99	70 - 125
Hexachlorobutadiene	50.0	47.8		ug/L		96	70 - 138
Isopropylbenzene	50.0	49.0		ug/L		98	70 - 132
Methyl tert-butyl ether	50.0	44.8		ug/L		90	65 - 120
Methylene Chloride	50.0	44.0		ug/L		88	70 - 120
Naphthalene	50.0	48.6		ug/L		97	59 - 143
n-Butylbenzene	50.0	49.2		ug/L		98	70 - 129
N-Propylbenzene	50.0	49.5		ug/L		99	70 - 132
p-Isopropyltoluene	50.0	51.5		ug/L		103	70 - 133
sec-Butylbenzene	50.0	50.0		ug/L		100	70 - 134
Styrene	50.0	50.4		ug/L		101	70 - 120
tert-Butylbenzene	50.0	50.7		ug/L		101	70 - 137
Tetrachloroethene	50.0	49.7		ug/L		99	70 - 129
Toluene	50.0	47.7		ug/L		95	70 - 120
trans-1,2-Dichloroethene	50.0	46.7		ug/L		93	70 - 120
trans-1,3-Dichloropropene	50.0	45.0		ug/L		90	70 - 123
Trichloroethene	50.0	54.5		ug/L		109	70 - 122
Trichlorofluoromethane	50.0	45.7		ug/L		91	65 - 134
Vinyl chloride	50.0	40.9		ug/L		82	63 - 127
Xylenes, Total	100	94.9		ug/L		95	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		75 - 125
4-Bromofluorobenzene (Surr)	90		75 - 120
Dibromofluoromethane	99		75 - 120
Toluene-d8 (Surr)	99		75 - 120

**Lab Sample ID: 500-97687-4 MS**

**Matrix: Ground Water**

**Analysis Batch: 293871**

**Client Sample ID: MW-1 (010)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	<0.25		50.0	43.9		ug/L		88	70 - 124

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: 500-97687-4 MS**

**Matrix: Ground Water**

**Analysis Batch: 293871**

**Client Sample ID: MW-1 (010)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	<0.20		50.0	41.3		ug/L		83	70 - 125
1,1,2,2-Tetrachloroethane	<0.23		50.0	49.1		ug/L		98	68 - 133
1,1,2-Trichloroethane	<0.28		50.0	49.9		ug/L		100	70 - 125
1,1-Dichloroethane	<0.19		50.0	40.8		ug/L		82	70 - 127
1,1-Dichloroethene	<0.31		50.0	40.8		ug/L		82	68 - 121
1,1-Dichloropropene	<0.34		50.0	40.8		ug/L		82	70 - 126
1,2,3-Trichlorobenzene	<0.24		50.0	43.3		ug/L		87	70 - 133
1,2,3-Trichloropropane	<0.45		50.0	42.8		ug/L		86	53 - 139
1,2,4-Trichlorobenzene	<0.31		50.0	41.6		ug/L		83	70 - 125
1,2,4-Trimethylbenzene	<0.14		50.0	44.7		ug/L		89	70 - 127
1,2-Dibromo-3-Chloropropane	<0.87		50.0	35.7		ug/L		71	59 - 139
1,2-Dibromoethane	<0.36		50.0	47.6		ug/L		95	70 - 124
1,2-Dichlorobenzene	<0.27		50.0	46.8		ug/L		94	70 - 123
1,2-Dichloroethane	<0.28		50.0	42.8		ug/L		86	66 - 132
1,2-Dichloropropane	<0.20		50.0	43.0		ug/L		86	70 - 127
1,3,5-Trimethylbenzene	<0.18		50.0	45.3		ug/L		91	70 - 129
1,3-Dichlorobenzene	<0.15		50.0	46.4		ug/L		93	70 - 122
1,3-Dichloropropane	<0.13		50.0	45.3		ug/L		91	70 - 127
1,4-Dichlorobenzene	<0.15		50.0	46.7		ug/L		93	70 - 120
2,2-Dichloropropane	<0.32		50.0	37.0		ug/L		74	68 - 120
2-Chlorotoluene	<0.21		50.0	44.2		ug/L		88	70 - 128
4-Chlorotoluene	<0.20		50.0	45.0		ug/L		90	70 - 127
Benzene	<0.074		50.0	44.1		ug/L		88	70 - 120
Bromobenzene	<0.25		50.0	50.3		ug/L		101	70 - 129
Bromochloromethane	<0.40		50.0	48.5		ug/L		97	70 - 121
Bromodichloromethane	<0.17		50.0	39.9		ug/L		80	70 - 127
Bromoform	<0.28		50.0	42.1		ug/L		84	70 - 135
Bromomethane	<0.31		50.0	44.5		ug/L		89	30 - 170
Carbon tetrachloride	<0.26		50.0	40.3		ug/L		81	70 - 136
Chlorobenzene	<0.14		50.0	47.4		ug/L		95	70 - 120
Chloroethane	<0.34		50.0	44.6		ug/L		89	40 - 150
Chloroform	<0.20		50.0	43.8		ug/L		88	70 - 120
Chloromethane	<0.18		50.0	30.9		ug/L		62	45 - 140
cis-1,2-Dichloroethene	<0.12		50.0	44.5		ug/L		89	70 - 120
cis-1,3-Dichloropropene	<0.18		50.0	40.2		ug/L		80	70 - 122
Dibromochloromethane	<0.32		50.0	44.9		ug/L		90	70 - 120
Dibromomethane	<0.33		50.0	46.0		ug/L		92	70 - 120
Dichlorodifluoromethane	<0.20		50.0	37.4		ug/L		75	30 - 150
Ethylbenzene	<0.13		50.0	45.0		ug/L		90	70 - 125
Hexachlorobutadiene	<0.26		50.0	41.5		ug/L		83	70 - 138
Isopropylbenzene	<0.14		50.0	45.4		ug/L		91	70 - 132
Methyl tert-butyl ether	<0.24		50.0	41.6		ug/L		83	65 - 120
Methylene Chloride	<0.68		50.0	40.9		ug/L		82	70 - 120
Naphthalene	<0.16		50.0	40.9		ug/L		82	59 - 143
n-Butylbenzene	<0.13		50.0	42.9		ug/L		86	70 - 129
N-Propylbenzene	<0.13		50.0	44.5		ug/L		89	70 - 132
p-Isopropyltoluene	<0.17		50.0	46.5		ug/L		93	70 - 133
sec-Butylbenzene	<0.15		50.0	45.5		ug/L		91	70 - 134

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: 500-97687-4 MS**

**Matrix: Ground Water**

**Analysis Batch: 293871**

**Client Sample ID: MW-1 (010)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Styrene	<0.10		50.0	47.9		ug/L		96	70 - 120
tert-Butylbenzene	<0.14		50.0	47.4		ug/L		95	70 - 137
Tetrachloroethene	<0.17		50.0	43.5		ug/L		87	70 - 129
Toluene	<0.11		50.0	43.0		ug/L		86	70 - 120
trans-1,2-Dichloroethene	<0.25		50.0	42.2		ug/L		84	70 - 120
trans-1,3-Dichloropropene	<0.21		50.0	40.8		ug/L		82	70 - 123
Trichloroethene	<0.19		50.0	48.5		ug/L		97	70 - 122
Trichlorofluoromethane	<0.19		50.0	42.6		ug/L		85	65 - 134
Vinyl chloride	<0.10		50.0	38.9		ug/L		78	63 - 127
Xylenes, Total	<0.068		100	87.3		ug/L		87	70 - 120
		<b>MS</b>	<b>MS</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	87		75 - 125						
4-Bromofluorobenzene (Surr)	92		75 - 120						
Dibromofluoromethane	99		75 - 120						
Toluene-d8 (Surr)	97		75 - 120						

**Lab Sample ID: 500-97687-4 MSD**

**Matrix: Ground Water**

**Analysis Batch: 293871**

**Client Sample ID: MW-1 (010)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<0.25		50.0	46.2		ug/L		92	70 - 124	5	20
1,1,1-Trichloroethane	<0.20		50.0	44.1		ug/L		88	70 - 125	7	20
1,1,1,2,2-Tetrachloroethane	<0.23		50.0	49.2		ug/L		98	68 - 133	0	20
1,1,1,2-Trichloroethane	<0.28		50.0	50.7		ug/L		101	70 - 125	1	20
1,1-Dichloroethane	<0.19		50.0	43.2		ug/L		86	70 - 127	6	20
1,1-Dichloroethene	<0.31		50.0	43.1		ug/L		86	68 - 121	6	20
1,1-Dichloropropene	<0.34		50.0	44.5		ug/L		89	70 - 126	9	20
1,2,3-Trichlorobenzene	<0.24		50.0	50.3		ug/L		101	70 - 133	15	20
1,2,3-Trichloropropane	<0.45		50.0	46.5		ug/L		93	53 - 139	8	20
1,2,4-Trichlorobenzene	<0.31		50.0	48.0		ug/L		96	70 - 125	14	20
1,2,4-Trimethylbenzene	<0.14		50.0	48.4		ug/L		97	70 - 127	8	20
1,2-Dibromo-3-Chloropropane	<0.87		50.0	42.1		ug/L		84	59 - 139	16	20
1,2-Dibromoethane	<0.36		50.0	51.0		ug/L		102	70 - 124	7	20
1,2-Dichlorobenzene	<0.27		50.0	49.5		ug/L		99	70 - 123	6	20
1,2-Dichloroethane	<0.28		50.0	46.2		ug/L		92	66 - 132	8	20
1,2-Dichloropropane	<0.20		50.0	46.5		ug/L		93	70 - 127	8	20
1,3,5-Trimethylbenzene	<0.18		50.0	47.6		ug/L		95	70 - 129	5	20
1,3-Dichlorobenzene	<0.15		50.0	49.2		ug/L		98	70 - 122	6	20
1,3-Dichloropropane	<0.13		50.0	48.8		ug/L		98	70 - 127	7	20
1,4-Dichlorobenzene	<0.15		50.0	49.2		ug/L		98	70 - 120	5	20
2,2-Dichloropropane	<0.32		50.0	39.9		ug/L		80	68 - 120	8	20
2-Chlorotoluene	<0.21		50.0	46.1		ug/L		92	70 - 128	4	20
4-Chlorotoluene	<0.20		50.0	47.3		ug/L		95	70 - 127	5	20
Benzene	<0.074		50.0	47.3		ug/L		95	70 - 120	7	20
Bromobenzene	<0.25		50.0	52.4		ug/L		105	70 - 129	4	20
Bromochloromethane	<0.40		50.0	51.6		ug/L		103	70 - 121	6	20

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: 500-97687-4 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 293871**

**Client Sample ID: MW-1 (010)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromodichloromethane	<0.17		50.0	43.4		ug/L		87	70 - 127	8	20
Bromoform	<0.28		50.0	43.4		ug/L		87	70 - 135	3	20
Bromomethane	<0.31		50.0	46.8		ug/L		94	30 - 170	5	20
Carbon tetrachloride	<0.26		50.0	44.3		ug/L		89	70 - 136	9	20
Chlorobenzene	<0.14		50.0	50.4		ug/L		101	70 - 120	6	20
Chloroethane	<0.34		50.0	44.4		ug/L		89	40 - 150	0	20
Chloroform	<0.20		50.0	46.7		ug/L		93	70 - 120	6	20
Chloromethane	<0.18		50.0	32.7		ug/L		65	45 - 140	6	20
cis-1,2-Dichloroethene	<0.12		50.0	48.0		ug/L		96	70 - 120	7	20
cis-1,3-Dichloropropene	<0.18		50.0	44.8		ug/L		90	70 - 122	11	20
Dibromochloromethane	<0.32		50.0	48.1		ug/L		96	70 - 120	7	20
Dibromomethane	<0.33		50.0	50.3		ug/L		101	70 - 120	9	20
Dichlorodifluoromethane	<0.20		50.0	39.0		ug/L		78	30 - 150	4	20
Ethylbenzene	<0.13		50.0	48.4		ug/L		97	70 - 125	7	20
Hexachlorobutadiene	<0.26		50.0	47.0		ug/L		94	70 - 138	12	20
Isopropylbenzene	<0.14		50.0	48.0		ug/L		96	70 - 132	5	20
Methyl tert-butyl ether	<0.24		50.0	45.6		ug/L		91	65 - 120	9	20
Methylene Chloride	<0.68		50.0	43.3		ug/L		87	70 - 120	6	20
Naphthalene	<0.16		50.0	47.7		ug/L		95	59 - 143	15	20
n-Butylbenzene	<0.13		50.0	46.4		ug/L		93	70 - 129	8	20
N-Propylbenzene	<0.13		50.0	47.5		ug/L		95	70 - 132	6	20
p-Isopropyltoluene	<0.17		50.0	49.7		ug/L		99	70 - 133	7	20
sec-Butylbenzene	<0.15		50.0	48.3		ug/L		97	70 - 134	6	20
Styrene	<0.10		50.0	49.6		ug/L		99	70 - 120	4	20
tert-Butylbenzene	<0.14		50.0	50.0		ug/L		100	70 - 137	5	20
Tetrachloroethene	<0.17		50.0	48.3		ug/L		97	70 - 129	11	20
Toluene	<0.11		50.0	47.0		ug/L		94	70 - 120	9	20
trans-1,2-Dichloroethene	<0.25		50.0	44.7		ug/L		89	70 - 120	6	20
trans-1,3-Dichloropropene	<0.21		50.0	43.0		ug/L		86	70 - 123	5	20
Trichloroethene	<0.19		50.0	52.8		ug/L		106	70 - 122	8	20
Trichlorofluoromethane	<0.19		50.0	43.9		ug/L		88	65 - 134	3	20
Vinyl chloride	<0.10		50.0	39.5		ug/L		79	63 - 127	2	20
Xylenes, Total	<0.068		100	92.2		ug/L		92	70 - 120	6	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	88		75 - 125
4-Bromofluorobenzene (Surr)	91		75 - 120
Dibromofluoromethane	99		75 - 120
Toluene-d8 (Surr)	98		75 - 120

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

**Lab Sample ID: MB 500-293206/1-A**  
**Matrix: Water**  
**Analysis Batch: 293231**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 293206**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		0.80	0.24	ug/L		06/24/15 16:36	06/24/15 21:50	1

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: MB 500-293206/1-A**  
**Matrix: Water**  
**Analysis Batch: 293231**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 293206**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Methylnaphthalene	<0.052		0.40	0.052	ug/L		06/24/15 16:36	06/24/15 21:50	1
Acenaphthene	<0.25		0.80	0.25	ug/L		06/24/15 16:36	06/24/15 21:50	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		06/24/15 16:36	06/24/15 21:50	1
Anthracene	<0.27		0.80	0.27	ug/L		06/24/15 16:36	06/24/15 21:50	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		06/24/15 16:36	06/24/15 21:50	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		06/24/15 16:36	06/24/15 21:50	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		06/24/15 16:36	06/24/15 21:50	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		06/24/15 16:36	06/24/15 21:50	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		06/24/15 16:36	06/24/15 21:50	1
Chrysene	<0.055		0.40	0.055	ug/L		06/24/15 16:36	06/24/15 21:50	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		06/24/15 16:36	06/24/15 21:50	1
Fluoranthene	<0.36		0.80	0.36	ug/L		06/24/15 16:36	06/24/15 21:50	1
Fluorene	<0.20		0.80	0.20	ug/L		06/24/15 16:36	06/24/15 21:50	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		06/24/15 16:36	06/24/15 21:50	1
Naphthalene	<0.25		0.80	0.25	ug/L		06/24/15 16:36	06/24/15 21:50	1
Phenanthrene	<0.24		0.80	0.24	ug/L		06/24/15 16:36	06/24/15 21:50	1
Pyrene	<0.34		0.80	0.34	ug/L		06/24/15 16:36	06/24/15 21:50	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	90		41 - 132	06/24/15 16:36	06/24/15 21:50	1
Nitrobenzene-d5 (Surr)	65		47 - 134	06/24/15 16:36	06/24/15 21:50	1
Terphenyl-d14 (Surr)	112		59 - 150	06/24/15 16:36	06/24/15 21:50	1

**Lab Sample ID: LCS 500-293206/2-A**  
**Matrix: Water**  
**Analysis Batch: 293231**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 293206**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Methylnaphthalene	32.0	26.2		ug/L		82	37 - 110
Acenaphthene	32.0	26.6		ug/L		83	47 - 110
Acenaphthylene	32.0	28.6		ug/L		89	50 - 110
Anthracene	32.0	30.1		ug/L		94	58 - 113
Benzo[a]anthracene	32.0	32.8		ug/L		103	65 - 110
Benzo[a]pyrene	32.0	33.2		ug/L		104	66 - 112
Benzo[b]fluoranthene	32.0	31.3		ug/L		98	67 - 117
Benzo[g,h,i]perylene	32.0	33.0		ug/L		103	51 - 124
Benzo[k]fluoranthene	32.0	32.2		ug/L		100	63 - 116
Chrysene	32.0	31.7		ug/L		99	60 - 110
Dibenz(a,h)anthracene	32.0	33.2		ug/L		104	56 - 122
Fluoranthene	32.0	32.8		ug/L		102	60 - 114
Fluorene	32.0	29.1		ug/L		91	53 - 110
Indeno[1,2,3-cd]pyrene	32.0	32.9		ug/L		103	56 - 120
Naphthalene	32.0	26.4		ug/L		83	39 - 110
Phenanthrene	32.0	30.7		ug/L		96	58 - 110
Pyrene	32.0	31.4		ug/L		98	61 - 115

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

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

**Lab Sample ID: LCS 500-293206/2-A**  
**Matrix: Water**  
**Analysis Batch: 293231**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 293206**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	95		41 - 132
Nitrobenzene-d5 (Surr)	98		47 - 134
Terphenyl-d14 (Surr)	113		59 - 150

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

**Lab Sample ID: MB 500-293059/1-A**  
**Matrix: Water**  
**Analysis Batch: 293194**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 293059**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.84		2.5	0.84	ug/L		06/23/15 19:00	06/24/15 13:03	1
Cadmium	<0.19		0.50	0.19	ug/L		06/23/15 19:00	06/24/15 13:03	1
Chromium	<0.61		5.0	0.61	ug/L		06/23/15 19:00	06/24/15 13:03	1
Copper	<0.96		2.0	0.96	ug/L		06/23/15 19:00	06/24/15 13:03	1
Lead	<0.14		0.50	0.14	ug/L		06/23/15 19:00	06/24/15 13:03	1
Nickel	<0.53		2.0	0.53	ug/L		06/23/15 19:00	06/24/15 13:03	1
Silver	<0.080		0.50	0.080	ug/L		06/23/15 19:00	06/24/15 13:03	1
Zinc	<4.6		20	4.6	ug/L		06/23/15 19:00	06/24/15 13:03	1

**Lab Sample ID: LCS 500-293059/2-A**  
**Matrix: Water**  
**Analysis Batch: 293194**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 293059**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Barium	500	504		ug/L		101		80 - 120
Cadmium	50.0	49.7		ug/L		99		80 - 120
Chromium	200	197		ug/L		99		80 - 120
Copper	250	256		ug/L		103		80 - 120
Lead	100	97.0		ug/L		97		80 - 120
Nickel	500	521		ug/L		104		80 - 120
Silver	50.0	53.2		ug/L		106		80 - 120
Zinc	500	522		ug/L		104		80 - 120

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-293030/12-A**  
**Matrix: Water**  
**Analysis Batch: 293146**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 293030**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.061		0.20	0.061	ug/L		06/23/15 14:30	06/24/15 10:24	1

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 500-293030/13-A  
Matrix: Water  
Analysis Batch: 293146

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 293030

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	2.00	2.08		ug/L		104	80 - 120

- 1
- 2
- 3
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- 14
- 15

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

**Client Sample ID: MW-8 (080)**

**Date Collected: 06/18/15 10:00**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-1**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 20:36	EMA	TAL CHI
Total/NA	Prep	3510C			293206	06/24/15 16:36	JP1	TAL CHI
Total/NA	Analysis	8270D		1	293231	06/25/15 00:16	TNW	TAL CHI
Dissolved	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Dissolved	Analysis	6020		1	293194	06/24/15 13:26	PFK	TAL CHI
Total Recoverable	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Total Recoverable	Analysis	6020		1	293194	06/24/15 13:21	PFK	TAL CHI
Dissolved	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Dissolved	Analysis	7470A		1	293146	06/24/15 10:30	MJD	TAL CHI
Total/NA	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	293146	06/24/15 10:28	MJD	TAL CHI

**Client Sample ID: MW-3 (030)**

**Date Collected: 06/18/15 10:40**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-2**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 21:03	EMA	TAL CHI
Total/NA	Prep	3510C			293206	06/24/15 16:36	JP1	TAL CHI
Total/NA	Analysis	8270D		1	293231	06/25/15 00:45	TNW	TAL CHI
Dissolved	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Dissolved	Analysis	6020		1	293194	06/24/15 13:35	PFK	TAL CHI
Total Recoverable	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Total Recoverable	Analysis	6020		1	293194	06/24/15 13:31	PFK	TAL CHI
Dissolved	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Dissolved	Analysis	7470A		1	293146	06/24/15 10:34	MJD	TAL CHI
Total/NA	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	293146	06/24/15 10:32	MJD	TAL CHI

**Client Sample ID: MW-2 (020)**

**Date Collected: 06/18/15 11:25**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-3**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 21:29	EMA	TAL CHI
Total/NA	Prep	3510C			293206	06/24/15 16:36	JP1	TAL CHI
Total/NA	Analysis	8270D		1	293231	06/25/15 01:14	TNW	TAL CHI
Dissolved	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Dissolved	Analysis	6020		1	293194	06/24/15 13:45	PFK	TAL CHI
Total Recoverable	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Total Recoverable	Analysis	6020		1	293194	06/24/15 13:40	PFK	TAL CHI
Dissolved	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Dissolved	Analysis	7470A		1	293146	06/24/15 10:38	MJD	TAL CHI

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Client Sample ID: MW-2 (020)

Date Collected: 06/18/15 11:25  
 Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	293146	06/24/15 10:36	MJD	TAL CHI

## Client Sample ID: MW-1 (010)

Date Collected: 06/18/15 12:00  
 Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 21:55	EMA	TAL CHI
Total/NA	Prep	3510C			293206	06/24/15 16:36	JP1	TAL CHI
Total/NA	Analysis	8270D		1	293231	06/25/15 01:43	TNW	TAL CHI
Dissolved	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Dissolved	Analysis	6020		1	293194	06/24/15 14:03	PFK	TAL CHI
Total Recoverable	Prep	3005A			293059	06/23/15 19:00	PJH	TAL CHI
Total Recoverable	Analysis	6020		1	293194	06/24/15 13:59	PFK	TAL CHI
Dissolved	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Dissolved	Analysis	7470A		1	293146	06/24/15 10:41	MJD	TAL CHI
Total/NA	Prep	7470A			293030	06/23/15 14:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	293146	06/24/15 10:40	MJD	TAL CHI

## Client Sample ID: Field Blank

Date Collected: 06/18/15 00:00  
 Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 22:22	EMA	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 06/18/15 00:00  
 Date Received: 06/23/15 10:25

## Lab Sample ID: 500-97687-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	293871	06/30/15 20:09	EMA	TAL CHI

### Laboratory References:

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



# Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - #06024 - 132556

TestAmerica Job ID: 500-97687-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-15

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Report To (optional) Mike Roklik  
 Contact: Mike Roklik  
 Company: SEH  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional) \_\_\_\_\_  
 Contact: Bruce Olsen  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-97687  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: -0.5

Client		Client Project #		Preservative		Parameter		Comments	
<u>SEH</u>		<u>132556</u>						Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Lab Project #		Lab PM			
<u>Stress Lab</u>		<u>Trego WI.</u>				<u>SF</u>			
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix			
1		MW-8 (080)	6/18/15	1000	7	GW	VOC 8260		
2		MW-3 (030)		1040	1				
3		MW-2 (020)		1125	1				
4		MW-1 (010)		1200	1				
5		Field Blank			1				
6		Trip Blank			1				
7		North 1	6/18/15	-	1	S			
8		North 3		-	1				
9		North 7		-	1				

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
				<u>Shawn Smith</u>	<u>TA-CH</u>	<u>6/23/15</u>	<u>10:25</u>

Lab Courier: \_\_\_\_\_  
 Shipped: FedEx  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WL - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments  
GW only in client file for WWR

Lab Comments: \_\_\_\_\_

## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-97687-1

**Login Number: 97687**  
**List Number: 1**  
**Creator: Scott, Sherri L**

**List Source: 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	-0.5
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.	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	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-97687-2  
Client Project/Site: Stresau Lab - 132556

For:  
Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
6/30/2015 4:52:03 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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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# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

## Client Sample ID: North 1

## Lab Sample ID: 500-97687-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	34	V	1.0	0.19	mg/Kg	1	☼	6010B	Total/NA
Chromium	11	V	1.0	0.18	mg/Kg	1	☼	6010B	Total/NA
Lead	36	F1 V	0.51	0.25	mg/Kg	1	☼	6010B	Total/NA
Zinc	25	B	2.0	0.65	mg/Kg	1	☼	6010B	Total/NA

## Client Sample ID: North 3

## Lab Sample ID: 500-97687-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	38		0.99	0.18	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.2		0.99	0.17	mg/Kg	1	☼	6010B	Total/NA
Lead	2.6		0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Zinc	15	B	2.0	0.63	mg/Kg	1	☼	6010B	Total/NA

## Client Sample ID: North 7

## Lab Sample ID: 500-97687-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	14		1.0	0.19	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.098	J B	0.21	0.060	mg/Kg	1	☼	6010B	Total/NA
Chromium	5.7		1.0	0.18	mg/Kg	1	☼	6010B	Total/NA
Lead	100		0.51	0.26	mg/Kg	1	☼	6010B	Total/NA
Zinc	240	B	2.1	0.65	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI

**Protocol References:**

EPA = US Environmental Protection Agency

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

**Laboratory References:**

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



# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-97687-7	North 1	Solid	06/18/15 00:00	06/23/15 10:25
500-97687-8	North 3	Solid	06/18/15 00:00	06/23/15 10:25
500-97687-9	North 7	Solid	06/18/15 00:00	06/23/15 10:25

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

**Client Sample ID: North 1**  
**Date Collected: 06/18/15 00:00**  
**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-7**  
**Matrix: Solid**  
**Percent Solids: 95.7**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	34	V	1.0	0.19	mg/Kg	☼	06/24/15 09:12	06/26/15 12:45	1
Cadmium	<0.059		0.20	0.059	mg/Kg	☼	06/24/15 09:12	06/26/15 12:45	1
Chromium	11	V	1.0	0.18	mg/Kg	☼	06/24/15 09:12	06/26/15 12:45	1
Lead	36	F1 V	0.51	0.25	mg/Kg	☼	06/24/15 09:12	06/26/15 12:45	1
Zinc	25	B	2.0	0.65	mg/Kg	☼	06/24/15 09:12	06/26/15 12:45	1

**Client Sample ID: North 3**  
**Date Collected: 06/18/15 00:00**  
**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-8**  
**Matrix: Solid**  
**Percent Solids: 93.9**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	38		0.99	0.18	mg/Kg	☼	06/24/15 09:12	06/25/15 13:51	1
Cadmium	<0.057		0.20	0.057	mg/Kg	☼	06/24/15 09:12	06/25/15 13:51	1
Chromium	7.2		0.99	0.17	mg/Kg	☼	06/24/15 09:12	06/25/15 13:51	1
Lead	2.6		0.50	0.25	mg/Kg	☼	06/24/15 09:12	06/25/15 13:51	1
Zinc	15	B	2.0	0.63	mg/Kg	☼	06/24/15 09:12	06/26/15 13:16	1

**Client Sample ID: North 7**  
**Date Collected: 06/18/15 00:00**  
**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-9**  
**Matrix: Solid**  
**Percent Solids: 84.5**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	14		1.0	0.19	mg/Kg	☼	06/24/15 09:12	06/25/15 14:03	1
Cadmium	0.098	J B	0.21	0.060	mg/Kg	☼	06/24/15 09:12	06/25/15 14:03	1
Chromium	5.7		1.0	0.18	mg/Kg	☼	06/24/15 09:12	06/25/15 14:03	1
Lead	100		0.51	0.26	mg/Kg	☼	06/24/15 09:12	06/25/15 14:03	1
Zinc	240	B	2.1	0.65	mg/Kg	☼	06/24/15 09:12	06/26/15 13:22	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

## Qualifiers

### Metals

Qualifier	Qualifier Description
V	Serial Dilution exceeds the control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

## Metals

### Prep Batch: 293114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-7	North 1	Total/NA	Solid	3050B	
500-97687-7 DU	North 1	Total/NA	Solid	3050B	
500-97687-7 MS	North 1	Total/NA	Solid	3050B	
500-97687-7 MSD	North 1	Total/NA	Solid	3050B	
500-97687-8	North 3	Total/NA	Solid	3050B	
500-97687-9	North 7	Total/NA	Solid	3050B	

### Analysis Batch: 293455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-8	North 3	Total/NA	Solid	6010B	293114
500-97687-9	North 7	Total/NA	Solid	6010B	293114

### Analysis Batch: 293563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-7	North 1	Total/NA	Solid	6010B	293114
500-97687-7 DU	North 1	Total/NA	Solid	6010B	293114
500-97687-7 MS	North 1	Total/NA	Solid	6010B	293114
500-97687-7 MSD	North 1	Total/NA	Solid	6010B	293114
500-97687-8	North 3	Total/NA	Solid	6010B	293114
500-97687-9	North 7	Total/NA	Solid	6010B	293114

## General Chemistry

### Analysis Batch: 293344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-97687-7	North 1	Total/NA	Solid	Moisture	
500-97687-8	North 3	Total/NA	Solid	Moisture	
500-97687-9	North 7	Total/NA	Solid	Moisture	

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

## Method: 6010B - Metals (ICP)

**Lab Sample ID: 500-97687-7 MS**  
**Matrix: Solid**  
**Analysis Batch: 293563**

**Client Sample ID: North 1**  
**Prep Type: Total/NA**  
**Prep Batch: 293114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Barium	34	V	207	223		mg/Kg	☼	91	75 - 125
Cadmium	<0.059		5.19	4.50		mg/Kg	☼	87	75 - 125
Chromium	11	V	20.7	31.0		mg/Kg	☼	98	75 - 125
Lead	36	F1 V	10.4	39.3	F1	mg/Kg	☼	30	75 - 125
Zinc	25	B	51.9	68.3		mg/Kg	☼	84	75 - 125

**Lab Sample ID: 500-97687-7 MSD**  
**Matrix: Solid**  
**Analysis Batch: 293563**

**Client Sample ID: North 1**  
**Prep Type: Total/NA**  
**Prep Batch: 293114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Barium	34	V	189	213		mg/Kg	☼	95	75 - 125	5	20
Cadmium	<0.059		4.72	4.25		mg/Kg	☼	90	75 - 125	6	20
Chromium	11	V	18.9	27.5		mg/Kg	☼	89	75 - 125	12	20
Lead	36	F1 V	9.45	42.0	F1	mg/Kg	☼	62	75 - 125	7	20
Zinc	25	B	47.2	66.3		mg/Kg	☼	88	75 - 125	3	20

**Lab Sample ID: 500-97687-7 DU**  
**Matrix: Solid**  
**Analysis Batch: 293563**

**Client Sample ID: North 1**  
**Prep Type: Total/NA**  
**Prep Batch: 293114**

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
Barium	34	V	34.7		mg/Kg	☼	2	20
Cadmium	<0.059		<0.052		mg/Kg	☼	NC	20
Chromium	11	V	11.1		mg/Kg	☼	5	20
Lead	36	F1 V	138	F3	mg/Kg	☼	117	20
Zinc	25	B	46.0	F3	mg/Kg	☼	60	20

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

**Client Sample ID: North 1**

**Date Collected: 06/18/15 00:00**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-7**

**Matrix: Solid**

**Percent Solids: 95.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			293114	06/24/15 09:12	JML	TAL CHI
Total/NA	Analysis	6010B		1	293563	06/26/15 12:45	KML	TAL CHI
Total/NA	Analysis	Moisture		1	293344	06/25/15 13:42	LWN	TAL CHI

**Client Sample ID: North 3**

**Date Collected: 06/18/15 00:00**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-8**

**Matrix: Solid**

**Percent Solids: 93.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			293114	06/24/15 09:12	JML	TAL CHI
Total/NA	Analysis	6010B		1	293563	06/26/15 13:16	KML	TAL CHI
Total/NA	Prep	3050B			293114	06/24/15 09:12	JML	TAL CHI
Total/NA	Analysis	6010B		1	293455	06/25/15 13:51	KML	TAL CHI
Total/NA	Analysis	Moisture		1	293344	06/25/15 13:42	LWN	TAL CHI

**Client Sample ID: North 7**

**Date Collected: 06/18/15 00:00**

**Date Received: 06/23/15 10:25**

**Lab Sample ID: 500-97687-9**

**Matrix: Solid**

**Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			293114	06/24/15 09:12	JML	TAL CHI
Total/NA	Analysis	6010B		1	293563	06/26/15 13:22	KML	TAL CHI
Total/NA	Prep	3050B			293114	06/24/15 09:12	JML	TAL CHI
Total/NA	Analysis	6010B		1	293455	06/25/15 14:03	KML	TAL CHI
Total/NA	Analysis	Moisture		1	293344	06/25/15 13:42	LWN	TAL CHI

**Laboratory References:**

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

# Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab - 132556

TestAmerica Job ID: 500-97687-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

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



Report To (optional) Mike Roklik  
 Contact: SEH  
 Company: SEH  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional) \_\_\_\_\_  
 Contact: Bruce Olsen  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-97687  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: -0.5

Client		Client Project #		Preservative		Parameter		Comments		
<u>SEH</u>		<u>132556</u>						Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Project Location/State		Lab Project #		Lab PM				
<u>Stress Lab</u>		<u>Trego WI.</u>				<u>SF</u>				
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix				
1		<u>MW-8 (080)</u>	<u>6/18/15</u>	<u>1000</u>	<u>7</u>	<u>GW</u>	<u>VOC 8260</u>	<u>PHIL 8310</u>	<u>Tested metals: Barium, cadmium, lead, chromium, copper, mercury, nickel, silver, zinc</u>	<u>Bottle labeled F-Recd / Not file</u>
2		<u>MW-3 (030)</u>	↓	<u>1040</u>	↓	↓	↓	↓		
3		<u>MW-2 (020)</u>	↓	<u>1125</u>	↓	↓	↓	↓		
4		<u>MW-1 (010)</u>	↓	<u>1200</u>	↓	↓	↓	↓		
5		<u>Field Blank</u>	↓		<u>8</u>	↓				
6		<u>Trip Blank</u>			<u>1</u>	-				
7		<u>North 1</u>	<u>6/18/15</u>	-	<u>1</u>	<u>S</u>				
8		<u>North 3</u>	↓	-	↓	↓				
9		<u>North 7</u>	↓	-	↓	↓				

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
				<u>Shawn Smith</u>	<u>TA-CH</u>	<u>6/23/15</u>	<u>10:25</u>

Lab Courier: \_\_\_\_\_  
 Shipped: FedEx  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments  
GW only in client file for WWR

Lab Comments:

## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-97687-2

**Login Number: 97687**  
**List Number: 1**  
**Creator: Scott, Sherri L**

**List Source: 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	-0.5
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.	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	





## Appendix C

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005

**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
North-1	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
North-2	5-2-95	31	0.9	4	7	41	6	ND	17
North-3	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
North-4	5-2-95	69	2	4	8	30	6	ND	37
North-5	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
North-6	5-2-95	39	ND	3	7	ND	5	ND	23
North-7	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
Back-SW	5-1-95	34	ND	3	ND	ND	4	ND	14
Back-SE	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
Industrial		NE	510	200	NE	500	NE	NE	NE

Notes:

ppm = parts per million

ND = not detected

NE = not established

\* Based on human health risk from direct contact

Surface samples collected from the top 3 inches of soil

TABLE 2  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)									
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	
TU:												
MW-1	Total	6-27-95	39	0.2	5	50	1			ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2			ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND			ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND			ND	ND	43
	Total	8-15-96	120	ND	26	150	8			ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8			ND	ND	ND
	Total	8-6-98	53	ND	10	52	4			15	0.2	26
	Total	8-11-99	30	ND	ND	30	1			ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6			ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND		5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND		1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND		2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND		ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND		7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2			ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2			ND	ND	20
	Total	8-8-95	ND	ND	ND	10	ND			ND	20	120
	Dissolved	8-8-95	ND	ND	ND	ND	ND			ND	ND	30
	Total	8-15-96	50	ND	11	40	3			ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7			ND	ND	ND
	Total	8-6-98	26	ND	ND	18	4			ND	0.2	ND
	Total	8-11-99	10	ND	ND	ND	0.4			ND	ND	20
	Total	8-24-00	10	ND	ND	ND	ND			ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND		2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND		0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND		1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND		ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND		1.5	ND	24

TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.5	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
	Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
	Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

**TABLE 3**  
**WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS**

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
		9-4-03	VOCs	ND	
			Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
					0.15
11-3-03	1-Methylnaphthalene		0.034	NE	
	2-Methylnaphthalene	0.043	NE		
	Naphthalene	0.060	8		
8-18-04	PAHs, VOCs	ND			
11-3-04	2-Methylnaphthalene	0.014	NE		
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
Background	MW-8	8-13-02	VOCs	ND	
			Naphthalene	0.039	8
		9-4-03	PAHs, VOCs	ND	
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	

Notes: ppb = parts per billion  
ND = not detected  
VOCs = volatile organic compounds  
PAL = NR 140 Preventive Action Limit (2-04)  
NE = not established  
PAHs = polynuclear aromatic hydrocarbons

**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes: ppb = parts per billion  
VOCs = volatile organic compounds  
ND = not detected







Building a Better World  
for All of Us®

July 25, 2016

RE: Stresau Laboratory, Inc.  
2016 Groundwater Sampling Event  
SEH No. STRES 137308 1.0

Mr. Richard Hoff, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Mr. Hoff:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring event conducted during June 2016. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements.

Lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) concentration. Although the concentration of lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). The August 1, 2012 letter further indicates that Stresau anticipated analyzing groundwater samples for both total and dissolved metals at least until Stresau files a FPOR for renewal of Stresau's operating permit in 2016. Per recent discussions during WDNR's review of Stresau's FPOR submittal, sampling requirements for 2017 and beyond will be addressed during the FPOR renewal process.

## GROUNDWATER MONITORING

On June 28, 2016, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550

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Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities included pH, temperature and conductivity.

Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Test America Analytical Testing Corporation using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8310, and the following dissolved and total metals by EPA method 6020: barium, cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

## RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the June 28, 2016 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected in June 2016 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (eleven annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, PAHs have not been detected in groundwater samples collected in 2015 or 2016 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in June 2016 indicated generally slightly higher than historical concentrations of both total and dissolved metals. Total lead and chromium at monitoring wells MW-1 and MW-2 indicated an increase in concentrations from previous sampling events. These increases in concentrations were also observed at the up gradient monitoring well MW-8 and are considered natural fluctuations in groundwater chemistry.

The groundwater sample collected from monitoring well MW-1 indicated a PAL exceedance for total Lead at a concentration of 4.2 µg/l; however, the detected concentration has declined from 21 µg/l in the groundwater sample collected during the June 2010 monitoring event. Total lead concentration in MW-8 increased from 8.4 µg/l in 2015 to 21 µg/l.

Multiple dissolved metals were detected in each of the groundwater samples collected in June 2016. The detected concentrations of dissolved metals were higher than concentrations detected since 2011.

Mr. Richard Hoff  
July 25, 2016  
Page 3

Dissolved lead was detected at concentrations that exceed respective PAL concentration standards in MW-1, MW-2 as well as the up gradient MW-8.

The laboratory analytical report for the June 2016 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

## DISCUSSION

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs have been detected since the 2013 sampling event. Lead and other inorganic compounds continue to be detected in each of the wells sampled, including MW-8 which is a background well. This indicates inorganic compounds are naturally occurring.

SEH does not believe additional actions or sampling, other than continued close monitoring of the operations and physical site setting near the TTU, are warranted at this time for the following primary reasons:

- One or more PAHs have been detected in samples collected from the monitoring wells during annual sampling events conducted since 1997, However no detections of PAH have occurred since the 2013 monitoring event.
- The total lead concentration in samples collected from MW-1 indicated a continued downward trend since the 2010 sampling event.

The next groundwater monitoring and soil sampling event is scheduled to occur in June 2017. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Bruce K. Olson, PE  
Project Manager

MFR/lb/BKO

c: Mr. Steve Ashenbrucker, WDNR  
Mr. John Morris, WDNR

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**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
06/28/16	Depth to Water	38.70	36.76	36.28	35.92
	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52

Notes:

<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995

<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005

Compiled by: BKO Checked by: MJR June 2015 Data Compiled by: MFR Checked by: BKO

June 2010 Data Compiled by: BKO Checked by: MFR

June 2014 Data Compiled by: MS Checked by: BKO June 2016 Data Compiled by: MFR Checked by: BKO

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**Table 3  
Monitoring Well Groundwater Dissolved Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date											
				MW-1						MW-2					
				ES	PAL	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/28/16	6/6/12	6/12/13	6/23/14	6/18/15
<b>Dissolved Inorganics (µg/l)</b>															
Barium	7440-39-3	2000	400												
Cadmium	7440-43-9	5	0.5	<0.12	<0.10	<0.10	<0.15	<0.19	<0.19	<0.10	<0.10	<0.15	<0.19	0.19	
Chromium	7440-47-3	100	10												
Copper	7440-50-8	1300	130							<0.57					
Lead	7439-92-1	15	1.5	<0.13	<0.16	<0.15	<0.091			<0.16	<0.15		<0.96		
Mercury	7439-97-6	2	0.2	<0.070	<0.070	<0.064	<0.072	<0.061	<0.11	<0.070	<0.064	<0.072	<0.061	<0.11	
Nickel	7440-02-0	100	20		<0.52		<0.69	<0.53		<0.52		<0.69	<0.53		
Silver	7440-22-4	50	10	<0.11	<0.069	<0.12	<0.062	<0.080	<0.080	<0.069	<0.12	<0.062	<0.080	<0.080	
Zinc	7440-66-6	5000	2500	<3.0	<6.3			<4.6		<6.3		<5.9	<4.6		

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date										
				MW-3					MW-8					
				ES	PAL	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/6/12	6/12/13	6/23/14	6/18/15
<b>Dissolved Inorganics (µg/l)</b>														
Barium	7440-39-3	2000	400											
Cadmium	7440-43-9	5	0.5	<0.10	<0.10	<0.15	0.36	<0.19	<0.10	<0.10	<0.15	<0.19	<0.19	
Chromium	7440-47-3	100	10					<0.61			<0.63	<0.61		
Copper	7440-50-8	1300	130											
Lead	7439-92-1	15	1.5	<0.16	<0.15	<0.091	<0.14					<0.14		
Mercury	7439-97-6	2	0.2	<0.070	<0.064	<0.072	<0.061	<0.11	<0.070	<0.064	<0.072	<0.061	<0.11	
Nickel	7440-02-0	100	20	<0.52		<0.69					<0.69	<0.53		
Silver	7440-22-4	50	10	<0.069	<0.12	<0.062	<0.080	<0.080	<0.069	<0.12	<0.062	<0.080	<0.080	
Zinc	7440-66-6	5000	2500	<6.3		<5.9					<5.9	<4.6		

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)  
Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)  
 Shaded = Parameter detected above laboratory limit of detection  
 Compiled by: BKO Checked by: MJR

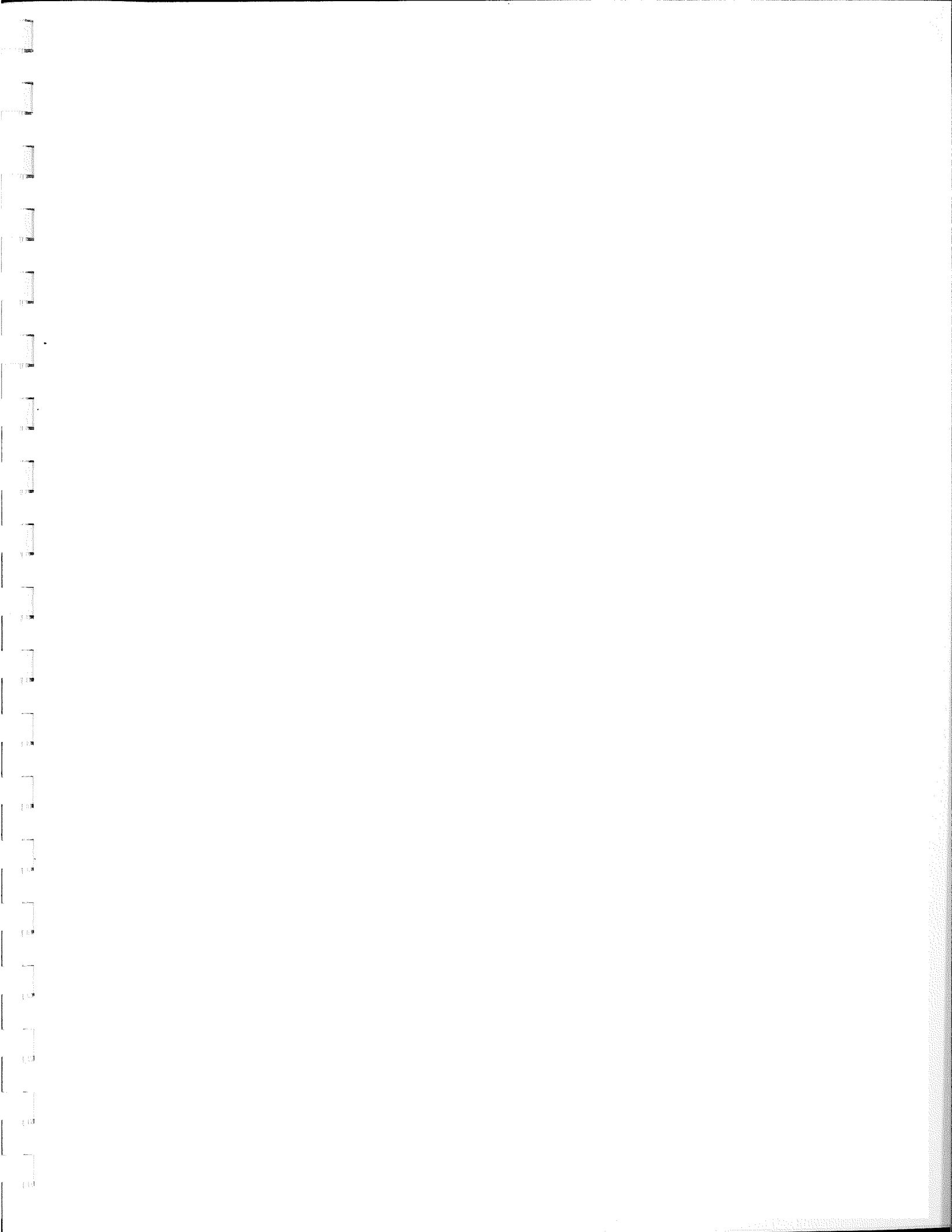
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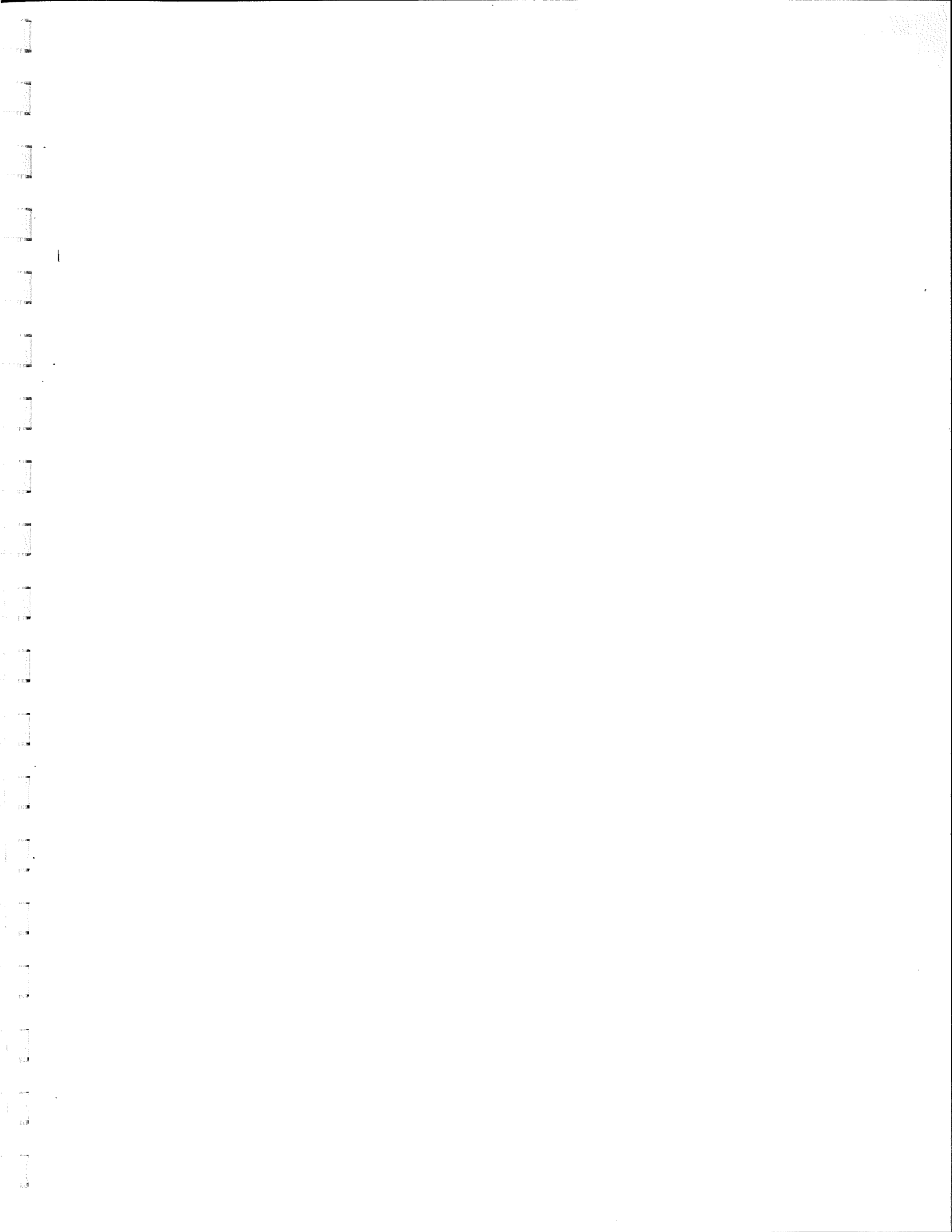
## Appendix A

### GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005







## **Appendix B**

June 2016 Analytical Report

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-113781-1  
Client Project/Site: Stresau Labs - 137308

For:  
Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
7/13/2016 4:40:33 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Job ID: 500-113781-1**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative  
500-113781-1**

### Comments

No additional comments.

### Receipt

The samples were received on 6/30/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

### GC/MS VOA

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

### GC/MS Semi VOA

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

### Metals

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

### Field Service / Mobile Lab

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

### Organic Prep

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



# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Client Sample ID: MW-8

## Lab Sample ID: 500-113781-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	77		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Chromium	17		5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	47		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	3.8		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	21		2.0	0.53	ug/L	1		6020	Total
									Recoverable
Silver	0.093	J	0.50	0.080	ug/L	1		6020	Total
									Recoverable
Zinc	37		20	4.6	ug/L	1		6020	Total
									Recoverable
Barium	50		2.5	0.84	ug/L	1		6020	Dissolved
Chromium	7.1		5.0	0.61	ug/L	1		6020	Dissolved
Copper	24		2.0	0.96	ug/L	1		6020	Dissolved
Lead	2.0		0.50	0.14	ug/L	1		6020	Dissolved
Nickel	9.8		2.0	0.53	ug/L	1		6020	Dissolved
Zinc	17	J	20	4.6	ug/L	1		6020	Dissolved

## Client Sample ID: MW-3

## Lab Sample ID: 500-113781-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	19		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Chromium	4.3	J	5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	12		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	1.0		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	4.1		2.0	0.53	ug/L	1		6020	Total
									Recoverable
Zinc	10	J	20	4.6	ug/L	1		6020	Total
									Recoverable
Barium	15		2.5	0.84	ug/L	1		6020	Dissolved
Copper	7.7		4.0	1.9	ug/L	2		6020	Dissolved
Lead	0.66		0.50	0.14	ug/L	1		6020	Dissolved
Nickel	1.3	J	2.0	0.53	ug/L	1		6020	Dissolved
Zinc	8.2	J	20	4.6	ug/L	1		6020	Dissolved

## Client Sample ID: MW-2

## Lab Sample ID: 500-113781-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	61		2.5	0.84	ug/L	1		6020	Total
									Recoverable
Chromium	15		5.0	0.61	ug/L	1		6020	Total
									Recoverable
Copper	56		2.0	0.96	ug/L	1		6020	Total
									Recoverable
Lead	4.1		0.50	0.14	ug/L	1		6020	Total
									Recoverable
Nickel	19		2.0	0.53	ug/L	1		6020	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Client Sample ID: MW-2 (Continued)

## Lab Sample ID: 500-113781-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	76		20	4.6	ug/L	1		6020	Total
Barium	43		2.5	0.84	ug/L	1		6020	Recoverable Dissolved
Cadmium	0.19	J	0.50	0.19	ug/L	1		6020	Dissolved
Chromium	4.4	J	5.0	0.61	ug/L	1		6020	Dissolved
Copper	34		2.0	0.96	ug/L	1		6020	Dissolved
Lead	2.7		0.50	0.14	ug/L	1		6020	Dissolved
Nickel	6.6		2.0	0.53	ug/L	1		6020	Dissolved
Zinc	59		20	4.6	ug/L	1		6020	Dissolved

## Client Sample ID: MW-1

## Lab Sample ID: 500-113781-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	52		2.5	0.84	ug/L	1		6020	Total
Chromium	12		5.0	0.61	ug/L	1		6020	Recoverable Total
Copper	54		2.0	0.96	ug/L	1		6020	Recoverable Total
Lead	4.2		0.50	0.14	ug/L	1		6020	Recoverable Total
Nickel	14		2.0	0.53	ug/L	1		6020	Recoverable Total
Zinc	24		20	4.6	ug/L	1		6020	Recoverable Total
Barium	44		2.5	0.84	ug/L	1		6020	Dissolved
Chromium	7.5	J	10	1.2	ug/L	2		6020	Dissolved
Copper	43		4.0	1.9	ug/L	2		6020	Dissolved
Lead	3.4		0.50	0.14	ug/L	1		6020	Dissolved
Nickel	11		4.0	1.1	ug/L	2		6020	Dissolved
Zinc	19	J	20	4.6	ug/L	1		6020	Dissolved

## Client Sample ID: Field Blank

## Lab Sample ID: 500-113781-5

No Detections.

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-113781-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	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 = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-113781-1	MW-8	Water	06/28/16 12:45	06/30/16 09:15
500-113781-2	MW-3	Water	06/28/16 13:20	06/30/16 09:15
500-113781-3	MW-2	Water	06/28/16 13:50	06/30/16 09:15
500-113781-4	MW-1	Water	06/28/16 14:20	06/30/16 09:15
500-113781-5	Field Blank	Water	06/28/16 00:00	06/30/16 09:15
500-113781-6	Trip Blank	Water	06/28/16 00:00	06/30/16 09:15

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-8**

**Date Collected: 06/28/16 12:45**

**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-1**

**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 14:53	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 14:53	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 14:53	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 14:53	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 14:53	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 14:53	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 14:53	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 14:53	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 14:53	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 14:53	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 14:53	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 14:53	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 14:53	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 14:53	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 14:53	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 14:53	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 14:53	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 14:53	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 14:53	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 14:53	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 14:53	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 14:53	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 14:53	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 14:53	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 14:53	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 14:53	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 14:53	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 14:53	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 14:53	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 14:53	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 14:53	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 14:53	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 14:53	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 14:53	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 14:53	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 14:53	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 14:53	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-113781-1**

**Date Collected: 06/28/16 12:45**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 14:53	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 14:53	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 14:53	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 14:53	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 14:53	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 14:53	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 14:53	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 14:53	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 14:53	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 14:53	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		71 - 127		07/06/16 14:53	1
4-Bromofluorobenzene (Surr)	83		71 - 120		07/06/16 14:53	1
Dibromofluoromethane	100		70 - 120		07/06/16 14:53	1
Toluene-d8 (Surr)	90		75 - 120		07/06/16 14:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/30/16 16:01	07/07/16 19:07	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		06/30/16 16:01	07/07/16 19:07	1
Acenaphthene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 19:07	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/30/16 16:01	07/07/16 19:07	1
Anthracene	<0.25		0.76	0.25	ug/L		06/30/16 16:01	07/07/16 19:07	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/30/16 16:01	07/07/16 19:07	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/30/16 16:01	07/07/16 19:07	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/30/16 16:01	07/07/16 19:07	1
Benzo[g,h,i]perylene	<0.29		0.76	0.29	ug/L		06/30/16 16:01	07/07/16 19:07	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/30/16 16:01	07/07/16 19:07	1
Chrysene	<0.052		0.38	0.052	ug/L		06/30/16 16:01	07/07/16 19:07	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/30/16 16:01	07/07/16 19:07	1
Fluoranthene	<0.35		0.76	0.35	ug/L		06/30/16 16:01	07/07/16 19:07	1
Fluorene	<0.19		0.76	0.19	ug/L		06/30/16 16:01	07/07/16 19:07	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/30/16 16:01	07/07/16 19:07	1
Naphthalene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 19:07	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 19:07	1
Pyrene	<0.32		0.76	0.32	ug/L		06/30/16 16:01	07/07/16 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	59		30 - 123	06/30/16 16:01	07/07/16 19:07	1
Nitrobenzene-d5 (Surr)	62		33 - 139	06/30/16 16:01	07/07/16 19:07	1
Terphenyl-d14 (Surr)	100		42 - 150	06/30/16 16:01	07/07/16 19:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	77		2.5	0.84	ug/L		07/12/16 15:14	07/13/16 13:47	1
Cadmium	<0.19		0.50	0.19	ug/L		07/12/16 15:14	07/13/16 13:47	1
Chromium	17		5.0	0.61	ug/L		07/12/16 15:14	07/13/16 13:47	1
Copper	47		2.0	0.96	ug/L		07/12/16 15:14	07/13/16 13:47	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-113781-1**

**Date Collected: 06/28/16 12:45**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.8		0.50	0.14	ug/L		07/12/16 15:14	07/13/16 13:47	1
Nickel	21		2.0	0.53	ug/L		07/12/16 15:14	07/13/16 13:47	1
Silver	0.093	J	0.50	0.080	ug/L		07/12/16 15:14	07/13/16 13:47	1
Zinc	37		20	4.6	ug/L		07/12/16 15:14	07/13/16 13:47	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	50		2.5	0.84	ug/L		07/01/16 13:07	07/01/16 18:21	1
Cadmium	<0.19		0.50	0.19	ug/L		07/01/16 13:07	07/01/16 18:21	1
Chromium	7.1		5.0	0.61	ug/L		07/01/16 13:07	07/07/16 23:06	1
Copper	24		2.0	0.96	ug/L		07/01/16 13:07	07/07/16 23:06	1
Lead	2.0		0.50	0.14	ug/L		07/01/16 13:07	07/01/16 18:21	1
Nickel	9.8		2.0	0.53	ug/L		07/01/16 13:07	07/07/16 23:06	1
Silver	<0.080		0.50	0.080	ug/L		07/01/16 13:07	07/01/16 18:21	1
Zinc	17	J	20	4.6	ug/L		07/01/16 13:07	07/01/16 18:21	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/12/16 15:30	07/13/16 09:32	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/07/16 16:00	07/08/16 09:05	1

**Client Sample ID: MW-3**

**Lab Sample ID: 500-113781-2**

**Date Collected: 06/28/16 13:20**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 15:21	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 15:21	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 15:21	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 15:21	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 15:21	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 15:21	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 15:21	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 15:21	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 15:21	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 15:21	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 15:21	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 15:21	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 15:21	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:21	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-3**  
**Date Collected: 06/28/16 13:20**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-2**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 15:21	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 15:21	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 15:21	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 15:21	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 15:21	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 15:21	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 15:21	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 15:21	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 15:21	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 15:21	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 15:21	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 15:21	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 15:21	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 15:21	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 15:21	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 15:21	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 15:21	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 15:21	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 15:21	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 15:21	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 15:21	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 15:21	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 15:21	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:21	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 15:21	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:21	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 15:21	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 15:21	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 15:21	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 15:21	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 15:21	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 15:21	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 15:21	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		71 - 127		07/06/16 15:21	1
4-Bromofluorobenzene (Surr)	87		71 - 120		07/06/16 15:21	1
Dibromofluoromethane	101		70 - 120		07/06/16 15:21	1
Toluene-d8 (Surr)	88		75 - 120		07/06/16 15:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/30/16 16:01	07/07/16 19:33	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-3**  
**Date Collected: 06/28/16 13:20**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-2**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		06/30/16 16:01	07/07/16 19:33	1
Acenaphthene	<0.23		0.75	0.23	ug/L		06/30/16 16:01	07/07/16 19:33	1
Acenaphthylene	<0.20		0.75	0.20	ug/L		06/30/16 16:01	07/07/16 19:33	1
Anthracene	<0.25		0.75	0.25	ug/L		06/30/16 16:01	07/07/16 19:33	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/30/16 16:01	07/07/16 19:33	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/30/16 16:01	07/07/16 19:33	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/30/16 16:01	07/07/16 19:33	1
Benzo[g,h,i]perylene	<0.28		0.75	0.28	ug/L		06/30/16 16:01	07/07/16 19:33	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/30/16 16:01	07/07/16 19:33	1
Chrysene	<0.051		0.38	0.051	ug/L		06/30/16 16:01	07/07/16 19:33	1
Dibenz(a,h)anthracene	<0.038		0.23	0.038	ug/L		06/30/16 16:01	07/07/16 19:33	1
Fluoranthene	<0.34		0.75	0.34	ug/L		06/30/16 16:01	07/07/16 19:33	1
Fluorene	<0.18		0.75	0.18	ug/L		06/30/16 16:01	07/07/16 19:33	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/30/16 16:01	07/07/16 19:33	1
Naphthalene	<0.23		0.75	0.23	ug/L		06/30/16 16:01	07/07/16 19:33	1
Phenanthrene	<0.23		0.75	0.23	ug/L		06/30/16 16:01	07/07/16 19:33	1
Pyrene	<0.32		0.75	0.32	ug/L		06/30/16 16:01	07/07/16 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	63		30 - 123	06/30/16 16:01	07/07/16 19:33	1
Nitrobenzene-d5 (Surr)	65		33 - 139	06/30/16 16:01	07/07/16 19:33	1
Terphenyl-d14 (Surr)	106		42 - 150	06/30/16 16:01	07/07/16 19:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	19		2.5	0.84	ug/L		07/12/16 15:14	07/13/16 13:51	1
Cadmium	<0.19		0.50	0.19	ug/L		07/12/16 15:14	07/13/16 13:51	1
Chromium	4.3	J	5.0	0.61	ug/L		07/12/16 15:14	07/13/16 13:51	1
Copper	12		2.0	0.96	ug/L		07/12/16 15:14	07/13/16 13:51	1
Lead	1.0		0.50	0.14	ug/L		07/12/16 15:14	07/13/16 13:51	1
Nickel	4.1		2.0	0.53	ug/L		07/12/16 15:14	07/13/16 13:51	1
Silver	<0.080		0.50	0.080	ug/L		07/12/16 15:14	07/13/16 13:51	1
Zinc	10	J	20	4.6	ug/L		07/12/16 15:14	07/13/16 13:51	1

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	15		2.5	0.84	ug/L		07/01/16 13:07	07/01/16 18:25	1
Cadmium	<0.19		0.50	0.19	ug/L		07/01/16 13:07	07/01/16 18:25	1
Chromium	<0.61		5.0	0.61	ug/L		07/01/16 13:07	07/01/16 18:25	1
Copper	7.7		4.0	1.9	ug/L		07/01/16 13:07	07/07/16 23:08	2
Lead	0.66		0.50	0.14	ug/L		07/01/16 13:07	07/01/16 18:25	1
Nickel	1.3	J	2.0	0.53	ug/L		07/01/16 13:07	07/01/16 18:25	1
Silver	<0.080		0.50	0.080	ug/L		07/01/16 13:07	07/01/16 18:25	1
Zinc	8.2	J	20	4.6	ug/L		07/01/16 13:07	07/01/16 18:25	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/12/16 15:30	07/13/16 09:34	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-3**  
**Date Collected: 06/28/16 13:20**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-2**  
**Matrix: Water**

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/07/16 16:00	07/08/16 09:11	1

**Client Sample ID: MW-2**  
**Date Collected: 06/28/16 13:50**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-3**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 15:49	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 15:49	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 15:49	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 15:49	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 15:49	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 15:49	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 15:49	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 15:49	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 15:49	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 15:49	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 15:49	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 15:49	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 15:49	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:49	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 15:49	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 15:49	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 15:49	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 15:49	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 15:49	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 15:49	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 15:49	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 15:49	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 15:49	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 15:49	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 15:49	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 15:49	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 15:49	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 15:49	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 15:49	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 15:49	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 15:49	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 15:49	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 15:49	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 15:49	1

TestAmerica Chicago



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-113781-3**

**Date Collected: 06/28/16 13:50**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 15:49	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 15:49	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 15:49	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:49	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 15:49	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 15:49	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 15:49	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 15:49	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 15:49	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 15:49	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 15:49	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 15:49	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 15:49	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		71 - 127		07/06/16 15:49	1
4-Bromofluorobenzene (Surr)	86		71 - 120		07/06/16 15:49	1
Dibromofluoromethane	102		70 - 120		07/06/16 15:49	1
Toluene-d8 (Surr)	88		75 - 120		07/06/16 15:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/30/16 16:01	07/07/16 19:59	1
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		06/30/16 16:01	07/07/16 19:59	1
Acenaphthene	<0.23		0.75	0.23	ug/L		06/30/16 16:01	07/07/16 19:59	1
Acenaphthylene	<0.20		0.75	0.20	ug/L		06/30/16 16:01	07/07/16 19:59	1
Anthracene	<0.25		0.75	0.25	ug/L		06/30/16 16:01	07/07/16 19:59	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/30/16 16:01	07/07/16 19:59	1
Benzo[a]pyrene	<0.074		0.15	0.074	ug/L		06/30/16 16:01	07/07/16 19:59	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/30/16 16:01	07/07/16 19:59	1
Benzo[g,h,i]perylene	<0.28		0.75	0.28	ug/L		06/30/16 16:01	07/07/16 19:59	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/30/16 16:01	07/07/16 19:59	1
Chrysene	<0.051		0.37	0.051	ug/L		06/30/16 16:01	07/07/16 19:59	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/30/16 16:01	07/07/16 19:59	1
Fluoranthene	<0.34		0.75	0.34	ug/L		06/30/16 16:01	07/07/16 19:59	1
Fluorene	<0.18		0.75	0.18	ug/L		06/30/16 16:01	07/07/16 19:59	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/30/16 16:01	07/07/16 19:59	1
Naphthalene	<0.23		0.75	0.23	ug/L		06/30/16 16:01	07/07/16 19:59	1
Phenanthrene	<0.22		0.75	0.22	ug/L		06/30/16 16:01	07/07/16 19:59	1
Pyrene	<0.32		0.75	0.32	ug/L		06/30/16 16:01	07/07/16 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	63		30 - 123	06/30/16 16:01	07/07/16 19:59	1
Nitrobenzene-d5 (Surr)	65		33 - 139	06/30/16 16:01	07/07/16 19:59	1
Terphenyl-d14 (Surr)	101		42 - 150	06/30/16 16:01	07/07/16 19:59	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-113781-3**

**Date Collected: 06/28/16 13:50**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>61</b>		2.5	0.84	ug/L		07/12/16 15:14	07/13/16 13:56	1
Cadmium	<0.19		0.50	0.19	ug/L		07/12/16 15:14	07/13/16 13:56	1
<b>Chromium</b>	<b>15</b>		5.0	0.61	ug/L		07/12/16 15:14	07/13/16 13:56	1
<b>Copper</b>	<b>56</b>		2.0	0.96	ug/L		07/12/16 15:14	07/13/16 13:56	1
<b>Lead</b>	<b>4.1</b>		0.50	0.14	ug/L		07/12/16 15:14	07/13/16 13:56	1
<b>Nickel</b>	<b>19</b>		2.0	0.53	ug/L		07/12/16 15:14	07/13/16 13:56	1
Silver	<0.080		0.50	0.080	ug/L		07/12/16 15:14	07/13/16 13:56	1
<b>Zinc</b>	<b>76</b>		20	4.6	ug/L		07/12/16 15:14	07/13/16 13:56	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>43</b>		2.5	0.84	ug/L		07/01/16 13:07	07/01/16 18:29	1
<b>Cadmium</b>	<b>0.19</b>	<b>J</b>	0.50	0.19	ug/L		07/01/16 13:07	07/01/16 18:29	1
<b>Chromium</b>	<b>4.4</b>	<b>J</b>	5.0	0.61	ug/L		07/01/16 13:07	07/01/16 18:29	1
<b>Copper</b>	<b>34</b>		2.0	0.96	ug/L		07/01/16 13:07	07/07/16 23:11	1
<b>Lead</b>	<b>2.7</b>		0.50	0.14	ug/L		07/01/16 13:07	07/01/16 18:29	1
<b>Nickel</b>	<b>6.6</b>		2.0	0.53	ug/L		07/01/16 13:07	07/01/16 18:29	1
Silver	<0.080		0.50	0.080	ug/L		07/01/16 13:07	07/01/16 18:29	1
<b>Zinc</b>	<b>59</b>		20	4.6	ug/L		07/01/16 13:07	07/01/16 18:29	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/12/16 15:30	07/13/16 09:35	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/07/16 16:00	07/08/16 09:13	1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-113781-4**

**Date Collected: 06/28/16 14:20**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 16:17	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 16:17	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 16:17	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 16:17	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 16:17	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 16:17	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 16:17	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 16:17	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 16:17	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 16:17	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 16:17	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 16:17	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-113781-4**

**Date Collected: 06/28/16 14:20**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 16:17	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:17	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 16:17	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 16:17	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 16:17	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 16:17	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 16:17	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 16:17	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 16:17	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 16:17	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 16:17	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 16:17	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 16:17	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 16:17	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 16:17	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 16:17	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 16:17	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 16:17	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 16:17	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 16:17	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 16:17	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 16:17	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 16:17	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 16:17	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 16:17	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:17	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 16:17	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:17	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 16:17	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 16:17	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 16:17	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 16:17	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 16:17	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 16:17	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 16:17	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		71 - 127		07/06/16 16:17	1
4-Bromofluorobenzene (Surr)	84		71 - 120		07/06/16 16:17	1
Dibromofluoromethane	100		70 - 120		07/06/16 16:17	1
Toluene-d8 (Surr)	91		75 - 120		07/06/16 16:17	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/30/16 16:01	07/07/16 20:25	1
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		06/30/16 16:01	07/07/16 20:25	1
Acenaphthene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 20:25	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/30/16 16:01	07/07/16 20:25	1
Anthracene	<0.25		0.76	0.25	ug/L		06/30/16 16:01	07/07/16 20:25	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/30/16 16:01	07/07/16 20:25	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/30/16 16:01	07/07/16 20:25	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/30/16 16:01	07/07/16 20:25	1
Benzo[g,h,i]perylene	<0.28		0.76	0.28	ug/L		06/30/16 16:01	07/07/16 20:25	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/30/16 16:01	07/07/16 20:25	1
Chrysene	<0.052		0.38	0.052	ug/L		06/30/16 16:01	07/07/16 20:25	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/30/16 16:01	07/07/16 20:25	1
Fluoranthene	<0.34		0.76	0.34	ug/L		06/30/16 16:01	07/07/16 20:25	1
Fluorene	<0.19		0.76	0.19	ug/L		06/30/16 16:01	07/07/16 20:25	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/30/16 16:01	07/07/16 20:25	1
Naphthalene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 20:25	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/30/16 16:01	07/07/16 20:25	1
Pyrene	<0.32		0.76	0.32	ug/L		06/30/16 16:01	07/07/16 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	63		30 - 123				06/30/16 16:01	07/07/16 20:25	1
Nitrobenzene-d5 (Surr)	68		33 - 139				06/30/16 16:01	07/07/16 20:25	1
Terphenyl-d14 (Surr)	103		42 - 150				06/30/16 16:01	07/07/16 20:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	52		2.5	0.84	ug/L		07/12/16 15:14	07/13/16 14:00	1
Cadmium	<0.19		0.50	0.19	ug/L		07/12/16 15:14	07/13/16 14:00	1
Chromium	12		5.0	0.61	ug/L		07/12/16 15:14	07/13/16 14:00	1
Copper	54		2.0	0.96	ug/L		07/12/16 15:14	07/13/16 14:00	1
Lead	4.2		0.50	0.14	ug/L		07/12/16 15:14	07/13/16 14:00	1
Nickel	14		2.0	0.53	ug/L		07/12/16 15:14	07/13/16 14:00	1
Silver	<0.080		0.50	0.080	ug/L		07/12/16 15:14	07/13/16 14:00	1
Zinc	24		20	4.6	ug/L		07/12/16 15:14	07/13/16 14:00	1

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	44		2.5	0.84	ug/L		07/01/16 13:07	07/01/16 18:33	1
Cadmium	<0.19		0.50	0.19	ug/L		07/01/16 13:07	07/01/16 18:33	1
Chromium	7.5	J	10	1.2	ug/L		07/01/16 13:07	07/07/16 23:14	2
Copper	43		4.0	1.9	ug/L		07/01/16 13:07	07/07/16 23:14	2
Lead	3.4		0.50	0.14	ug/L		07/01/16 13:07	07/01/16 18:33	1
Nickel	11		4.0	1.1	ug/L		07/01/16 13:07	07/07/16 23:14	2
Silver	<0.080		0.50	0.080	ug/L		07/01/16 13:07	07/01/16 18:33	1
Zinc	19	J	20	4.6	ug/L		07/01/16 13:07	07/01/16 18:33	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/12/16 15:30	07/13/16 09:37	1

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/07/16 16:00	07/08/16 09:17	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 500-113781-5**

**Date Collected: 06/28/16 00:00**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 16:45	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 16:45	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 16:45	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 16:45	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 16:45	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 16:45	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 16:45	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 16:45	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 16:45	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 16:45	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 16:45	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 16:45	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 16:45	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:45	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 16:45	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 16:45	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 16:45	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 16:45	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 16:45	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 16:45	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 16:45	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 16:45	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 16:45	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 16:45	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 16:45	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 16:45	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 16:45	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 16:45	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 16:45	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 16:45	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 16:45	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 16:45	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 16:45	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 16:45	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 16:45	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 16:45	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 16:45	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Client Sample ID: Field Blank

Date Collected: 06/28/16 00:00

Date Received: 06/30/16 09:15

## Lab Sample ID: 500-113781-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:45	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 16:45	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 16:45	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 16:45	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 16:45	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 16:45	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 16:45	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 16:45	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 16:45	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 16:45	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 16:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		71 - 127					07/06/16 16:45	1
4-Bromofluorobenzene (Surr)	90		71 - 120					07/06/16 16:45	1
Dibromofluoromethane	101		70 - 120					07/06/16 16:45	1
Toluene-d8 (Surr)	89		75 - 120					07/06/16 16:45	1

## Client Sample ID: Trip Blank

Date Collected: 06/28/16 00:00

Date Received: 06/30/16 09:15

## Lab Sample ID: 500-113781-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 17:12	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 17:12	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 17:12	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 17:12	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 17:12	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 17:12	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 17:12	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 17:12	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 17:12	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 17:12	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 17:12	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 17:12	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 17:12	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 17:12	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 17:12	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 17:12	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 17:12	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 17:12	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 17:12	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-113781-6**

**Date Collected: 06/28/16 00:00**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 17:12	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 17:12	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 17:12	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 17:12	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 17:12	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 17:12	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 17:12	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 17:12	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/06/16 17:12	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 17:12	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 17:12	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 17:12	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 17:12	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 17:12	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 17:12	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 17:12	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 17:12	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 17:12	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 17:12	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 17:12	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 17:12	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 17:12	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 17:12	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 17:12	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 17:12	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 17:12	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 17:12	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 17:12	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		71 - 127		07/06/16 17:12	1
4-Bromofluorobenzene (Surr)	88		71 - 120		07/06/16 17:12	1
Dibromofluoromethane	102		70 - 120		07/06/16 17:12	1
Toluene-d8 (Surr)	89		75 - 120		07/06/16 17:12	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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



# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## GC/MS VOA

### Analysis Batch: 342533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total/NA	Water	8260B	
500-113781-2	MW-3	Total/NA	Water	8260B	
500-113781-3	MW-2	Total/NA	Water	8260B	
500-113781-4	MW-1	Total/NA	Water	8260B	
500-113781-5	Field Blank	Total/NA	Water	8260B	
500-113781-6	Trip Blank	Total/NA	Water	8260B	
LCS 500-342533/4	Lab Control Sample	Total/NA	Water	8260B	
MB 500-342533/6	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 342110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total/NA	Water	3510C	
500-113781-2	MW-3	Total/NA	Water	3510C	
500-113781-3	MW-2	Total/NA	Water	3510C	
500-113781-4	MW-1	Total/NA	Water	3510C	
LCS 500-342110/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-342110/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 500-342110/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 342621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-342110/2-A	Lab Control Sample	Total/NA	Water	8270D	342110
LCSD 500-342110/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	342110
MB 500-342110/1-A	Method Blank	Total/NA	Water	8270D	342110

### Analysis Batch: 342856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total/NA	Water	8270D	342110
500-113781-2	MW-3	Total/NA	Water	8270D	342110
500-113781-3	MW-2	Total/NA	Water	8270D	342110
500-113781-4	MW-1	Total/NA	Water	8270D	342110

## Metals

### Prep Batch: 342230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Dissolved	Water	3005A	
500-113781-2	MW-3	Dissolved	Water	3005A	
500-113781-3	MW-2	Dissolved	Water	3005A	
500-113781-4	MW-1	Dissolved	Water	3005A	
LCS 500-342230/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 500-342230/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 342386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Dissolved	Water	6020	342230
500-113781-2	MW-3	Dissolved	Water	6020	342230
500-113781-3	MW-2	Dissolved	Water	6020	342230

TestAmerica Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Metals (Continued)

### Analysis Batch: 342386 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-4	MW-1	Dissolved	Water	6020	342230
LCS 500-342230/2-A	Lab Control Sample	Total Recoverable	Water	6020	342230
MB 500-342230/1-A	Method Blank	Total Recoverable	Water	6020	342230

### Prep Batch: 342837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Dissolved	Water	7470A	
500-113781-1 DU	MW-8	Dissolved	Water	7470A	
500-113781-1 MS	MW-8	Dissolved	Water	7470A	
500-113781-1 MSD	MW-8	Dissolved	Water	7470A	
500-113781-2	MW-3	Dissolved	Water	7470A	
500-113781-3	MW-2	Dissolved	Water	7470A	
500-113781-4	MW-1	Dissolved	Water	7470A	
LCS 500-342837/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-342837/12-A	Method Blank	Total/NA	Water	7470A	

### Analysis Batch: 342926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Dissolved	Water	6020	342230
500-113781-2	MW-3	Dissolved	Water	6020	342230
500-113781-3	MW-2	Dissolved	Water	6020	342230
500-113781-4	MW-1	Dissolved	Water	6020	342230
LCS 500-342230/2-A	Lab Control Sample	Total Recoverable	Water	6020	342230
MB 500-342230/1-A	Method Blank	Total Recoverable	Water	6020	342230

### Analysis Batch: 342980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Dissolved	Water	7470A	342837
500-113781-1 DU	MW-8	Dissolved	Water	7470A	342837
500-113781-1 MS	MW-8	Dissolved	Water	7470A	342837
500-113781-1 MSD	MW-8	Dissolved	Water	7470A	342837
500-113781-2	MW-3	Dissolved	Water	7470A	342837
500-113781-3	MW-2	Dissolved	Water	7470A	342837
500-113781-4	MW-1	Dissolved	Water	7470A	342837
LCS 500-342837/13-A	Lab Control Sample	Total/NA	Water	7470A	342837
MB 500-342837/12-A	Method Blank	Total/NA	Water	7470A	342837

### Prep Batch: 343354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total/NA	Water	7470A	
500-113781-2	MW-3	Total/NA	Water	7470A	
500-113781-3	MW-2	Total/NA	Water	7470A	
500-113781-4	MW-1	Total/NA	Water	7470A	
LCS 500-343354/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-343354/12-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 343371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total Recoverable	Water	3005A	
500-113781-2	MW-3	Total Recoverable	Water	3005A	
500-113781-3	MW-2	Total Recoverable	Water	3005A	

TestAmerica Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Metals (Continued)

### Prep Batch: 343371 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-4	MW-1	Total Recoverable	Water	3005A	
LCS 500-343371/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 500-343371/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 343505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total/NA	Water	7470A	343354
500-113781-2	MW-3	Total/NA	Water	7470A	343354
500-113781-3	MW-2	Total/NA	Water	7470A	343354
500-113781-4	MW-1	Total/NA	Water	7470A	343354
LCS 500-343354/13-A	Lab Control Sample	Total/NA	Water	7470A	343354
MB 500-343354/12-A	Method Blank	Total/NA	Water	7470A	343354

### Analysis Batch: 343532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-113781-1	MW-8	Total Recoverable	Water	6020	343371
500-113781-2	MW-3	Total Recoverable	Water	6020	343371
500-113781-3	MW-2	Total Recoverable	Water	6020	343371
500-113781-4	MW-1	Total Recoverable	Water	6020	343371
LCS 500-343371/2-A	Lab Control Sample	Total Recoverable	Water	6020	343371
MB 500-343371/1-A	Method Blank	Total Recoverable	Water	6020	343371

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (71-127)	BFB (71-120)	DBFM (70-120)	TOL (75-120)
500-113781-1	MW-8	101	83	100	90
500-113781-2	MW-3	100	87	101	88
500-113781-3	MW-2	103	86	102	88
500-113781-4	MW-1	101	84	100	91
500-113781-5	Field Blank	101	90	101	89
500-113781-6	Trip Blank	103	88	102	89
LCS 500-342533/4	Lab Control Sample	94	85	93	89
MB 500-342533/6	Method Blank	99	85	98	90

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP (30-123)	NBZ (33-139)	TPH (42-150)
500-113781-1	MW-8	59	62	100
500-113781-2	MW-3	63	65	106
500-113781-3	MW-2	63	65	101
500-113781-4	MW-1	63	68	103
LCS 500-342110/2-A	Lab Control Sample	61	67	85
LCSD 500-342110/3-A	Lab Control Sample Dup	73	79	93
MB 500-342110/1-A	Method Blank	65	70	92

### Surrogate Legend

FBP = 2-Fluorobiphenyl  
NBZ = Nitrobenzene-d5 (Surr)  
TPH = Terphenyl-d14 (Surr)

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: MB 500-342533/6**

**Matrix: Water**

**Analysis Batch: 342533**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/06/16 09:21	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/06/16 09:21	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/06/16 09:21	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/06/16 09:21	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/06/16 09:21	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/06/16 09:21	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/06/16 09:21	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/06/16 09:21	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/06/16 09:21	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/06/16 09:21	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/06/16 09:21	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/06/16 09:21	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/06/16 09:21	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/06/16 09:21	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/06/16 09:21	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/06/16 09:21	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/06/16 09:21	1
Benzene	<0.15		0.50	0.15	ug/L			07/06/16 09:21	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/06/16 09:21	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/06/16 09:21	1
Bromoform	<0.48		1.0	0.48	ug/L			07/06/16 09:21	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/06/16 09:21	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/06/16 09:21	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/06/16 09:21	1
Chloroform	<0.37		1.0	0.37	ug/L			07/06/16 09:21	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/06/16 09:21	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/06/16 09:21	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			07/06/16 09:21	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/06/16 09:21	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/06/16 09:21	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/06/16 09:21	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/06/16 09:21	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/06/16 09:21	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/06/16 09:21	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/06/16 09:21	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/06/16 09:21	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/06/16 09:21	1

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: MB 500-342533/6**  
**Matrix: Water**  
**Analysis Batch: 342533**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 09:21	1
Styrene	<0.39		1.0	0.39	ug/L			07/06/16 09:21	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/06/16 09:21	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/06/16 09:21	1
Toluene	<0.15		0.50	0.15	ug/L			07/06/16 09:21	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/06/16 09:21	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/06/16 09:21	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/06/16 09:21	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/06/16 09:21	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/06/16 09:21	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/06/16 09:21	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		71 - 127		07/06/16 09:21	1
4-Bromofluorobenzene (Surr)	85		71 - 120		07/06/16 09:21	1
Dibromofluoromethane	98		70 - 120		07/06/16 09:21	1
Toluene-d8 (Surr)	90		75 - 120		07/06/16 09:21	1

**Lab Sample ID: LCS 500-342533/4**  
**Matrix: Water**  
**Analysis Batch: 342533**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	70 - 125
1,1,1,2-Tetrachloroethane	50.0	44.6		ug/L		89	68 - 125
1,1,1,2-Trichloroethane	50.0	44.0		ug/L		88	70 - 125
1,1-Dichloroethane	50.0	45.1		ug/L		90	70 - 125
1,1-Dichloroethene	50.0	49.1		ug/L		98	70 - 125
1,1-Dichloropropene	50.0	44.7		ug/L		89	70 - 125
1,2,3-Trichlorobenzene	50.0	52.8		ug/L		106	58 - 135
1,2,3-Trichloropropane	50.0	38.7		ug/L		77	63 - 125
1,2,4-Trichlorobenzene	50.0	52.7		ug/L		105	64 - 126
1,2,4-Trimethylbenzene	50.0	43.2		ug/L		86	70 - 125
1,2-Dibromo-3-Chloropropane	50.0	43.2		ug/L		86	51 - 125
1,2-Dibromoethane	50.0	45.6		ug/L		91	70 - 125
1,2-Dichlorobenzene	50.0	47.5		ug/L		95	70 - 125
1,2-Dichloroethane	50.0	47.2		ug/L		94	70 - 125
1,2-Dichloropropane	50.0	45.6		ug/L		91	70 - 125
1,3,5-Trimethylbenzene	50.0	42.3		ug/L		85	70 - 125
1,3-Dichlorobenzene	50.0	47.0		ug/L		94	70 - 125
1,3-Dichloropropane	50.0	43.5		ug/L		87	70 - 125
1,4-Dichlorobenzene	50.0	46.1		ug/L		92	70 - 125
2,2-Dichloropropane	50.0	40.5		ug/L		81	62 - 125
2-Chlorotoluene	50.0	41.0		ug/L		82	69 - 125
4-Chlorotoluene	50.0	41.3		ug/L		83	70 - 125
Benzene	50.0	44.2		ug/L		88	70 - 125

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: LCS 500-342533/4**

**Matrix: Water**

**Analysis Batch: 342533**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	48.3		ug/L		97	70 - 125
Bromochloromethane	50.0	48.8		ug/L		98	70 - 125
Bromodichloromethane	50.0	43.1		ug/L		86	70 - 125
Bromoform	50.0	51.8		ug/L		104	54 - 128
Bromomethane	50.0	57.0		ug/L		114	40 - 150
Carbon tetrachloride	50.0	47.7		ug/L		95	70 - 125
Chlorobenzene	50.0	46.1		ug/L		92	70 - 125
Chloroethane	50.0	43.9		ug/L		88	60 - 139
Chloroform	50.0	44.4		ug/L		89	70 - 125
Chloromethane	50.0	45.1		ug/L		90	60 - 140
cis-1,2-Dichloroethene	50.0	44.4		ug/L		89	70 - 125
cis-1,3-Dichloropropene	50.0	41.6		ug/L		83	70 - 125
Dibromochloromethane	50.0	46.1		ug/L		92	66 - 125
Dibromomethane	50.0	44.9		ug/L		90	70 - 125
Dichlorodifluoromethane	50.0	51.0		ug/L		102	51 - 140
Ethylbenzene	50.0	44.3		ug/L		89	70 - 125
Hexachlorobutadiene	50.0	59.4		ug/L		119	57 - 140
Isopropylbenzene	50.0	42.0		ug/L		84	70 - 125
Methyl tert-butyl ether	50.0	41.0		ug/L		82	67 - 125
Methylene Chloride	50.0	46.1		ug/L		92	68 - 125
Naphthalene	50.0	45.1		ug/L		90	50 - 136
n-Butylbenzene	50.0	42.5		ug/L		85	70 - 125
N-Propylbenzene	50.0	41.4		ug/L		83	70 - 125
p-Isopropyltoluene	50.0	42.5		ug/L		85	70 - 125
sec-Butylbenzene	50.0	42.4		ug/L		85	70 - 125
Styrene	50.0	44.0		ug/L		88	70 - 125
tert-Butylbenzene	50.0	43.8		ug/L		88	70 - 125
Tetrachloroethene	50.0	52.4		ug/L		105	70 - 125
Toluene	50.0	43.0		ug/L		86	70 - 125
trans-1,2-Dichloroethene	50.0	45.5		ug/L		91	70 - 125
trans-1,3-Dichloropropene	50.0	41.1		ug/L		82	70 - 125
Trichloroethene	50.0	51.8		ug/L		104	70 - 125
Trichlorofluoromethane	50.0	46.2		ug/L		92	60 - 126
Vinyl chloride	50.0	47.0		ug/L		94	70 - 126
Xylenes, Total	100	84.8		ug/L		85	70 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		71 - 127
4-Bromofluorobenzene (Surr)	85		71 - 120
Dibromofluoromethane	93		70 - 120
Toluene-d8 (Surr)	89		75 - 120

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: MB 500-342110/1-A**

**Matrix: Water**

**Analysis Batch: 342621**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 342110**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		06/30/16 15:32	07/07/16 00:19	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		06/30/16 15:32	07/07/16 00:19	1
Acenaphthene	<0.25		0.80	0.25	ug/L		06/30/16 15:32	07/07/16 00:19	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		06/30/16 15:32	07/07/16 00:19	1
Anthracene	<0.27		0.80	0.27	ug/L		06/30/16 15:32	07/07/16 00:19	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		06/30/16 15:32	07/07/16 00:19	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		06/30/16 15:32	07/07/16 00:19	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		06/30/16 15:32	07/07/16 00:19	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		06/30/16 15:32	07/07/16 00:19	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		06/30/16 15:32	07/07/16 00:19	1
Chrysene	<0.055		0.40	0.055	ug/L		06/30/16 15:32	07/07/16 00:19	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		06/30/16 15:32	07/07/16 00:19	1
Fluoranthene	<0.36		0.80	0.36	ug/L		06/30/16 15:32	07/07/16 00:19	1
Fluorene	<0.20		0.80	0.20	ug/L		06/30/16 15:32	07/07/16 00:19	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		06/30/16 15:32	07/07/16 00:19	1
Naphthalene	<0.25		0.80	0.25	ug/L		06/30/16 15:32	07/07/16 00:19	1
Phenanthrene	<0.24		0.80	0.24	ug/L		06/30/16 15:32	07/07/16 00:19	1
Pyrene	<0.34		0.80	0.34	ug/L		06/30/16 15:32	07/07/16 00:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	65		30 - 123	06/30/16 15:32	07/07/16 00:19	1
Nitrobenzene-d5 (Surr)	70		33 - 139	06/30/16 15:32	07/07/16 00:19	1
Terphenyl-d14 (Surr)	92		42 - 150	06/30/16 15:32	07/07/16 00:19	1

**Lab Sample ID: LCS 500-342110/2-A**

**Matrix: Water**

**Analysis Batch: 342621**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 342110**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	32.0	15.7		ug/L		49	33 - 110
2-Methylnaphthalene	32.0	15.7		ug/L		49	32 - 110
Acenaphthene	32.0	19.8		ug/L		62	41 - 112
Acenaphthylene	32.0	18.2		ug/L		57	48 - 110
Anthracene	32.0	24.2		ug/L		76	65 - 118
Benzo[a]anthracene	32.0	26.3		ug/L		82	69 - 121
Benzo[a]pyrene	32.0	27.8		ug/L		87	69 - 130
Benzo[b]fluoranthene	32.0	30.1		ug/L		94	66 - 133
Benzo[g,h,i]perylene	32.0	26.8		ug/L		84	47 - 145
Benzo[k]fluoranthene	32.0	26.1		ug/L		82	64 - 134
Chrysene	32.0	26.1		ug/L		82	70 - 126
Dibenz(a,h)anthracene	32.0	30.2		ug/L		94	59 - 145
Fluoranthene	32.0	26.8		ug/L		84	68 - 127
Fluorene	32.0	20.8		ug/L		65	54 - 113
Indeno[1,2,3-cd]pyrene	32.0	29.0		ug/L		91	52 - 150
Naphthalene	32.0	15.8		ug/L		49	32 - 110
Phenanthrene	32.0	24.8		ug/L		77	63 - 121
Pyrene	32.0	25.7		ug/L		80	65 - 122

TestAmerica Chicago



# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: LCS 500-342110/2-A**  
**Matrix: Water**  
**Analysis Batch: 342621**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 342110**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	61		30 - 123
Nitrobenzene-d5 (Surr)	67		33 - 139
Terphenyl-d14 (Surr)	85		42 - 150

**Lab Sample ID: LCSD 500-342110/3-A**  
**Matrix: Water**  
**Analysis Batch: 342621**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 342110**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1-Methylnaphthalene	32.0	17.6		ug/L		55	33 - 110	12	20	
2-Methylnaphthalene	32.0	17.6		ug/L		55	32 - 110	12	20	
Acenaphthene	32.0	24.1		ug/L		75	41 - 112	20	20	
Acenaphthylene	32.0	21.6		ug/L		67	48 - 110	17	20	
Anthracene	32.0	25.3		ug/L		79	65 - 118	4	20	
Benzo[a]anthracene	32.0	28.0		ug/L		88	69 - 121	6	20	
Benzo[a]pyrene	32.0	30.0		ug/L		94	69 - 130	8	20	
Benzo[b]fluoranthene	32.0	32.1		ug/L		100	66 - 133	6	20	
Benzo[g,h,i]perylene	32.0	28.5		ug/L		89	47 - 145	6	20	
Benzo[k]fluoranthene	32.0	28.4		ug/L		89	64 - 134	9	20	
Chrysene	32.0	28.0		ug/L		88	70 - 126	7	20	
Dibenz(a,h)anthracene	32.0	32.4		ug/L		101	59 - 145	7	20	
Fluoranthene	32.0	28.6		ug/L		89	68 - 127	6	20	
Fluorene	32.0	24.6		ug/L		77	54 - 113	17	20	
Indeno[1,2,3-cd]pyrene	32.0	31.0		ug/L		97	52 - 150	7	20	
Naphthalene	32.0	17.8		ug/L		56	32 - 110	12	20	
Phenanthrene	32.0	27.1		ug/L		85	63 - 121	9	20	
Pyrene	32.0	27.6		ug/L		86	65 - 122	7	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	73		30 - 123
Nitrobenzene-d5 (Surr)	79		33 - 139
Terphenyl-d14 (Surr)	93		42 - 150

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

**Lab Sample ID: MB 500-342230/1-A**  
**Matrix: Water**  
**Analysis Batch: 342386**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 342230**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.84		2.5	0.84	ug/L		07/01/16 13:07	07/01/16 18:14	1
Cadmium	<0.19		0.50	0.19	ug/L		07/01/16 13:07	07/01/16 18:14	1
Chromium	<0.61		5.0	0.61	ug/L		07/01/16 13:07	07/01/16 18:14	1
Lead	<0.14		0.50	0.14	ug/L		07/01/16 13:07	07/01/16 18:14	1
Nickel	<0.53		2.0	0.53	ug/L		07/01/16 13:07	07/01/16 18:14	1
Silver	<0.080		0.50	0.080	ug/L		07/01/16 13:07	07/01/16 18:14	1
Zinc	<4.6		20	4.6	ug/L		07/01/16 13:07	07/01/16 18:14	1

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

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

**Lab Sample ID: MB 500-342230/1-A**  
**Matrix: Water**  
**Analysis Batch: 342926**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 342230**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.96		2.0	0.96	ug/L		07/01/16 13:07	07/07/16 23:00	1

**Lab Sample ID: LCS 500-342230/2-A**  
**Matrix: Water**  
**Analysis Batch: 342386**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 342230**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	500	469		ug/L		94	80 - 120
Cadmium	50.0	46.0		ug/L		92	80 - 120
Chromium	200	172		ug/L		86	80 - 120
Lead	100	91.8		ug/L		92	80 - 120
Nickel	500	441		ug/L		88	80 - 120
Silver	50.0	47.5		ug/L		95	80 - 120
Zinc	500	472		ug/L		94	80 - 120

**Lab Sample ID: LCS 500-342230/2-A**  
**Matrix: Water**  
**Analysis Batch: 342926**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 342230**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Copper	250	242		ug/L		97	80 - 120

**Lab Sample ID: MB 500-343371/1-A**  
**Matrix: Water**  
**Analysis Batch: 343532**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343371**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.84		2.5	0.84	ug/L		07/12/16 15:14	07/13/16 13:37	1
Cadmium	<0.19		0.50	0.19	ug/L		07/12/16 15:14	07/13/16 13:37	1
Chromium	<0.61		5.0	0.61	ug/L		07/12/16 15:14	07/13/16 13:37	1
Copper	<0.96		2.0	0.96	ug/L		07/12/16 15:14	07/13/16 13:37	1
Lead	<0.14		0.50	0.14	ug/L		07/12/16 15:14	07/13/16 13:37	1
Nickel	<0.53		2.0	0.53	ug/L		07/12/16 15:14	07/13/16 13:37	1
Silver	<0.080		0.50	0.080	ug/L		07/12/16 15:14	07/13/16 13:37	1
Zinc	<4.6		20	4.6	ug/L		07/12/16 15:14	07/13/16 13:37	1

**Lab Sample ID: LCS 500-343371/2-A**  
**Matrix: Water**  
**Analysis Batch: 343532**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343371**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	500	456		ug/L		91	80 - 120
Cadmium	50.0	45.1		ug/L		90	80 - 120
Chromium	200	182		ug/L		91	80 - 120
Copper	250	234		ug/L		94	80 - 120
Lead	100	89.7		ug/L		90	80 - 120
Nickel	500	469		ug/L		94	80 - 120
Silver	50.0	47.5		ug/L		95	80 - 120
Zinc	500	480		ug/L		96	80 - 120

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-342837/12-A**  
**Matrix: Water**  
**Analysis Batch: 342980**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 342837**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/07/16 16:00	07/08/16 08:41	1

**Lab Sample ID: LCS 500-342837/13-A**  
**Matrix: Water**  
**Analysis Batch: 342980**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 342837**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	2.00	2.30		ug/L		115	80 - 120

**Lab Sample ID: MB 500-343354/12-A**  
**Matrix: Water**  
**Analysis Batch: 343505**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 343354**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		07/12/16 15:30	07/13/16 09:29	1

**Lab Sample ID: LCS 500-343354/13-A**  
**Matrix: Water**  
**Analysis Batch: 343505**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 343354**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	2.00	2.21		ug/L		111	80 - 120

**Lab Sample ID: 500-113781-1 MS**  
**Matrix: Water**  
**Analysis Batch: 342980**

**Client Sample ID: MW-8**  
**Prep Type: Dissolved**  
**Prep Batch: 342837**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.11		1.00	0.933		ug/L		93	75 - 125

**Lab Sample ID: 500-113781-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 342980**

**Client Sample ID: MW-8**  
**Prep Type: Dissolved**  
**Prep Batch: 342837**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.11		1.00	0.866		ug/L		87	75 - 125	7	20

**Lab Sample ID: 500-113781-1 DU**  
**Matrix: Water**  
**Analysis Batch: 342980**

**Client Sample ID: MW-8**  
**Prep Type: Dissolved**  
**Prep Batch: 342837**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	<0.11		<0.11		ug/L		NC	20

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-8**  
**Date Collected: 06/28/16 12:45**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 14:53	TCT	TAL CHI
Total/NA	Prep	3510C			342110	06/30/16 16:01	JP1	TAL CHI
Total/NA	Analysis	8270D		1	342856	07/07/16 19:07	GES	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342926	07/07/16 23:06	PFK	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342386	07/01/16 18:21	FXG	TAL CHI
Total Recoverable	Prep	3005A			343371	07/12/16 15:14	JNH	TAL CHI
Total Recoverable	Analysis	6020		1	343532	07/13/16 13:47	FXG	TAL CHI
Dissolved	Prep	7470A			342837	07/07/16 16:00	MJD	TAL CHI
Dissolved	Analysis	7470A		1	342980	07/08/16 09:05	MJD	TAL CHI
Total/NA	Prep	7470A			343354	07/12/16 15:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	343505	07/13/16 09:32	MJD	TAL CHI

**Client Sample ID: MW-3**  
**Date Collected: 06/28/16 13:20**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 15:21	TCT	TAL CHI
Total/NA	Prep	3510C			342110	06/30/16 16:01	JP1	TAL CHI
Total/NA	Analysis	8270D		1	342856	07/07/16 19:33	GES	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		2	342926	07/07/16 23:08	PFK	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342386	07/01/16 18:25	FXG	TAL CHI
Total Recoverable	Prep	3005A			343371	07/12/16 15:14	JNH	TAL CHI
Total Recoverable	Analysis	6020		1	343532	07/13/16 13:51	FXG	TAL CHI
Dissolved	Prep	7470A			342837	07/07/16 16:00	MJD	TAL CHI
Dissolved	Analysis	7470A		1	342980	07/08/16 09:11	MJD	TAL CHI
Total/NA	Prep	7470A			343354	07/12/16 15:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	343505	07/13/16 09:34	MJD	TAL CHI

**Client Sample ID: MW-2**  
**Date Collected: 06/28/16 13:50**  
**Date Received: 06/30/16 09:15**

**Lab Sample ID: 500-113781-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 15:49	TCT	TAL CHI
Total/NA	Prep	3510C			342110	06/30/16 16:01	JP1	TAL CHI
Total/NA	Analysis	8270D		1	342856	07/07/16 19:59	GES	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342926	07/07/16 23:11	PFK	TAL CHI

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-113781-3**

**Date Collected: 06/28/16 13:50**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342386	07/01/16 18:29	FXG	TAL CHI
Total Recoverable	Prep	3005A			343371	07/12/16 15:14	JNH	TAL CHI
Total Recoverable	Analysis	6020		1	343532	07/13/16 13:56	FXG	TAL CHI
Dissolved	Prep	7470A			342837	07/07/16 16:00	MJD	TAL CHI
Dissolved	Analysis	7470A		1	342980	07/08/16 09:13	MJD	TAL CHI
Total/NA	Prep	7470A			343354	07/12/16 15:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	343505	07/13/16 09:35	MJD	TAL CHI

**Client Sample ID: MW-1**

**Lab Sample ID: 500-113781-4**

**Date Collected: 06/28/16 14:20**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 16:17	TCT	TAL CHI
Total/NA	Prep	3510C			342110	06/30/16 16:01	JP1	TAL CHI
Total/NA	Analysis	8270D		1	342856	07/07/16 20:25	GES	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		2	342926	07/07/16 23:14	PFK	TAL CHI
Dissolved	Prep	3005A			342230	07/01/16 13:07	JNH	TAL CHI
Dissolved	Analysis	6020		1	342386	07/01/16 18:33	FXG	TAL CHI
Total Recoverable	Prep	3005A			343371	07/12/16 15:14	JNH	TAL CHI
Total Recoverable	Analysis	6020		1	343532	07/13/16 14:00	FXG	TAL CHI
Dissolved	Prep	7470A			342837	07/07/16 16:00	MJD	TAL CHI
Dissolved	Analysis	7470A		1	342980	07/08/16 09:17	MJD	TAL CHI
Total/NA	Prep	7470A			343354	07/12/16 15:30	MJD	TAL CHI
Total/NA	Analysis	7470A		1	343505	07/13/16 09:37	MJD	TAL CHI

**Client Sample ID: Field Blank**

**Lab Sample ID: 500-113781-5**

**Date Collected: 06/28/16 00:00**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 16:45	TCT	TAL CHI

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-113781-6**

**Date Collected: 06/28/16 00:00**

**Matrix: Water**

**Date Received: 06/30/16 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	342533	07/06/16 17:12	TCT	TAL CHI

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

**Laboratory References:**

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

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# Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 137308

TestAmerica Job ID: 500-113781-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-16 *

\* Certification renewal pending - certification considered valid.




Report To: Miko Rohlik  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To: Bruce Olson  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-113781  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: 0.8

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4°
<u>SEH</u>										
Project Name <u>Stressor Labs</u>		Lab Project # <u>137308</u>		VOC 8260		PAH 8310		Total metals Barium, Cadmium, Zinc, Lead, Chromium, Copper, Mercury, Nickel, Silver		
Project Location/State <u>Trego WI</u>		Lab PM								 500-113781 COC Comments
Sampler <u>MFR</u>										
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix				
			Date	Time						
1		MW-8	6/28/16	12:45	7	6W	X	X	X	
2		MW-3		1:20	1					
3		MW-2		1:50	1					
4		MW-1		2:20	1					
5		Field Blank			2					
6		Trip Blank			1					

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date \_\_\_\_\_

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Miko Rohlik</u> Company: <u>SEH</u> Date: <u>6/29/16</u> Time: <u>2:00</u>	Received By: <u>Amit Sen</u> Company: <u>PAH</u> Date: <u>06/30/16</u> Time: <u>09:15</u>	Lab Courier: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WI - Wipe
- DW - Drinking Water
- O - Other

Client Comments: \_\_\_\_\_

Lab Comments: \_\_\_\_\_



CHICAGO LAB 534-5200  
2417 BOND ST  
UNIVERSITY PARK, IL 604843101  
UNITED STATES US

SHIP DATE: 29JUN16  
ACTWGT: 54.00 LB MAN  
CAD: /POS1704  
DIMS: 24x14x14 IN  
BILL SENDER

TO SAMPLE RECPT  
TESTAMERICA CHICAGO  
2417 BOND ST

UNIVERSITY PARK IL 60484  
(708) 634-5200 REF:  
YHU: PO: DEPT1:

48 at.

500-113781 Waybill



FedEx Package Express US Airbill

FedEx Tracking Number 8076 0224 0303

1 From  
Date 6/29/16  
Sender's Name Mike Pohle Phone 708 271-1059  
Company SEH  
Address 10 North Bridge St  
City Clarendon Hills State IL ZIP 60419

2 Your Internal Billing Reference  
3 To Recipient's Name SAMPLE RECEIPT Phone 708 534-5200  
Company TESTAMERICA CHICAGO

Address 2417 BOND ST  
We cannot deliver to P.O. boxes or P.O. ZIP codes  
Dept./Floor/Suite/Room  
Address  
Use this line for the HOLD location address or for continuation of your shipping address  
City UNIVERSITY PARK State IL ZIP 60484-3101



8076 0224 0303

Form ID No. 02

4 Express Pa  
NOTE: Service of Next Business

- FedEx First Class (Fastest and most economical service. Friday, Monday unless selected.)
- FedEx Priority (Next business day delivered on Monday unless selected.)
- FedEx Standard (Next business day delivered on Saturday unless selected.)

5 Packa  
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6 Spec  
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Package may be left without obtaining a signature for delivery.

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NA JOTA

THU - 30 JUN 3:00P  
STANDARD OVERNIGHT



60484  
IL-US ORD

Does this shipment contain dangerous goods?  
One box must be checked

- No
- Yes: As per attached Shipper's Declaration
- Yes: Shipper's Declaration not required
- Dry Ice: Dry Ice, 9 UN 1845 \_\_\_\_\_ kg
- Cargo Aircraft Only

7 Payment Bill to:  
Enter FedEx Acct No. or Credit Card No. below.  
Sender Acct No. in Section 1 will be billed  
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- 14
- 15

## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-113781-1

**Login Number: 113781**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

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	0.8
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Appendix C

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005

**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
<b>North-1</b>	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
<b>North-2</b>	5-2-95	31	0.9	4	7	41	6	ND	17
<b>North-3</b>	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
<b>North-4</b>	5-2-95	69	2	4	8	30	6	ND	37
<b>North-5</b>	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
<b>North-6</b>	5-2-95	39	ND	3	7	ND	5	ND	23
<b>North-7</b>	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
<b>Back-SW</b>	5-1-95	34	ND	3	ND	ND	4	ND	14
<b>Back-SE</b>	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
<b>Industrial</b>		NE	510	200	NE	500	NE	NE	NE

Notes:

ppm = parts per million

ND = not detected

NE = not established

\* Based on human health risk from direct contact

Surface samples collected from the top 3 inches of soil

TABLE 2  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)									
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	
TU:												
MW-1	Total	6-27-95	39	0.2	5	50	1			ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2			ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND			ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND			ND	ND	43
	Total	8-15-96	120	ND	26	150	8			ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8			ND	ND	ND
	Total	8-6-98	53	ND	10	52	4			15	0.2	26
	Total	8-11-99	30	ND	ND	30	1			ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6			ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND		5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND		1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND		2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND		ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND		7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2			ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2			ND	ND	20
	Total	8-8-95	ND	ND	ND	10	ND			ND	20	120
	Dissolved	8-8-95	ND	ND	ND	ND	ND			ND	ND	30
	Total	8-15-96	50	ND	11	40	3			ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7			ND	ND	ND
	Total	8-6-98	26	ND	ND	18	4			ND	0.2	ND
	Total	8-11-99	10	ND	ND	ND	0.4			ND	ND	20
	Total	8-24-00	10	ND	ND	ND	ND			ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND		2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND		0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND		1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND		ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND		1.5	ND	24

TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.5	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
	Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
	Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

**TABLE 3**  
**WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS**

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
			VOCs	ND	
		9-4-03	Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
			11-3-03	1-Methylnaphthalene	0.034
2-Methylnaphthalene	0.043			NE	
Naphthalene	0.060	8			
8-18-04	PAHs, VOCs	ND			
11-3-04	2-Methylnaphthalene	0.014	NE		
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8



**TABLE 3 (cont.)**  
**WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS**

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
Background	MW-8	8-13-02	VOCs	ND	8
			Naphthalene	0.039	
		9-4-03	PAHs, VOCs	ND	
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	

Notes:

- ppb = parts per billion
- ND = not detected
- VOCs = volatile organic compounds
- PAL = NR 140 Preventive Action Limit (2-04)
- NE = not established
- PAHs = polynuclear aromatic hydrocarbons

**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes:      ppb = parts per billion  
               VOCs = volatile organic compounds  
               ND = not detected





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for All of Us®

August 10, 2017

RE: Stresau Laboratory, Inc.  
2017 Groundwater and Soil Sampling Event  
SEH No. STRES 142723 1.0

Mr. Richard Hoff, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Mr. Hoff:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring and soil sampling event conducted during June 2017. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements.

Lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration. Although the concentration of lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Stresau anticipates analyzing groundwater samples for both total and dissolved metals until an alternate sampling protocol is agreed to with the WDNR.

Stresau files a FPOR for renewal of Stresau's operating permit in 2017. Sampling requirements for 2018 and beyond will be addressed during the FPOR renewal process.

## GROUNDWATER MONITORING

On June 27, 2017, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and

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Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550  
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groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities included pH, temperature and conductivity.

Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Test America Analytical Testing Corporation using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8310, and the following dissolved and total metals by EPA method 6020: barium, cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

## SOIL SAMPLING

On June 27, 2017, SEH collected three surface soil samples (North-1, North-3, and North-7) from the North site shown on Figure 1, "North Site Soil Sample Locations" (Appendix A). Dedicated plastic disposable spatulas were used to collect grab soil samples from the top three inches of soil at each of the sample locations. Soil Samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples were submitted to TestAmerica and analyzed for the following metals by various EPA Methods: barium, cadmium, chromium, lead, and zinc.

## RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the June 27, 2017 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected in June 2017 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (twelve annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, no PAHs were detected in groundwater samples collected in June 2017 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in June 2017 at all monitoring wells were generally consistent with historical concentrations. Total lead concentrations appear generally stable or decreasing in MW-1, MW-2, and MW-3.

The groundwater sample collected from monitoring well MW-1 indicated a PAL exceedance for total Lead at a concentration of 2.3 ug/l; however, the detected concentration has declined from 21 ug/l in the groundwater sample collected during the June 2010 monitoring event.

Multiple dissolved metals were detected in each of the groundwater samples collected in June 2017; however, the detected concentrations of dissolved metals were generally consistent with concentrations detected since 2011 and were well below their respective PAL concentration standards. Dissolved lead was not detected in groundwater samples collected from any of the monitoring wells. Soil analytical results are summarized in Table 4, "Soil Inorganic Analytical Results." Metals detected in samples collected during the June 2017 sampling event are within historical concentrations ranges. Concentrations of lead were detected at sample location North-7 at a concentration of 78 mg/kg and had concentrations of Zinc detected at 87 mg/kg. None of the metals were detected at concentrations exceeding their respective ch. NR720 Wis. Adm. Code Residual Contaminate Level (RCL) concentration for industrial sites.

The laboratory analytical report for the June 2017 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

## DISCUSSION

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs were detected in 2017. Lead and other inorganic compounds continue to be detected in each of the wells sampled, including MW-8 which is a background well. This indicates inorganic compounds are naturally occurring.

SEH does not believe additional actions or sampling, other than continued close monitoring of the operations and physical site setting near the TTU, are warranted at this time for the following primary reasons:

- No PAHs have been detected in samples collected from the monitoring wells during annual sampling events conducted since the June 2014 monitoring events. (Check on this)
- The total lead concentration in the samples collected from MW-1 have decreased since sampling SEH began sampling in 2006.
- The concentrations of detected dissolved metals in samples collected from all four wells in 2017 were well below their respective PAL concentrations.
- Metals detected in the soil samples collected from the north site (Figure 1) during the 2017 sampling event are at concentrations below individual and cumulative NR 720 industrial direct contact limits.

The next groundwater monitoring event is scheduled to occur in June 2018. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Bruce K. Olson, PE  
Project Manager

MFR/ls/BKO

c:Mr. John Morris, WDNR

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**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
06/28/16	Depth to Water	38.70	36.76	36.28	35.92
	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52
06/27/17	Depth to Water	38.40	36.52	38.03	38.02
	Groundwater Elevation	1017.41	1017.34	1015.25	1016.42

Notes:  
<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995  
<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005  
 Compiled by:   BKO   Checked by:   MJR   June 2015 Data Compiled by:   MFR   Checked by:   BKO    
 June 2010 Data Compiled by:   BKO   Checked by:   MFR   June 2016 Data Compiled by:   MFR   Checked by:   BKO    
 June 2014 Data Compiled by:   MS   Checked by:   BKO   June 2017 Data Compiled by:   MFR   Checked by:   BKO  

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**Table 3  
Monitoring Well Groundwater Dissolved Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date												
				MW-1						MW-2						
				ES	PAL	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/28/16	6/27/17	6/6/12	6/12/13	6/23/14	6/18/15
<b>Dissolved Inorganics (µg/l)</b>																
Barium	7440-39-3	2000	400													
Cadmium	7440-43-9	5	0.5	<0.12	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.10	<0.10	<0.15	<0.19	0.19	<0.17
Chromium	7440-47-3	100	10							<1.1						
Copper	7440-50-8	1300	130								<0.57			<0.96		
Lead	7439-92-1	15	1.5	<0.13	<0.16	<0.15	<0.091			<0.19	<0.16	<0.15		<0.14		
Mercury	7439-97-6	2	0.2	<0.070	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	
Nickel	7440-02-0	100	20		<0.52		<0.69	<0.53		<0.63	<0.52		<0.69	<0.53		
Silver	7440-22-4	50	10	<0.11	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	
Zinc	7440-66-6	5000	2500	<3.0	<6.3			<4.6		<6.9	<6.3		<5.9	<4.6	<6.9	

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date												
				MW-3						MW-8						
				ES	PAL	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16
<b>Dissolved Inorganics (µg/l)</b>																
Barium	7440-39-3	2000	400													
Cadmium	7440-43-9	5	0.5	<0.10	<0.10	<0.15	0.36	<0.19	<0.17	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	
Chromium	7440-47-3	100	10						<0.61			<0.63	<0.61		<1.1	
Copper	7440-50-8	1300	130													
Lead	7439-92-1	15	1.5	<0.16	<0.15	<0.091	<0.14		<0.19				<0.14		<0.19	
Mercury	7439-97-6	2	0.2	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	
Nickel	7440-02-0	100	20	<0.52		<0.69			<0.63			<0.69	<0.53		<0.63	
Silver	7440-22-4	50	10	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	
Zinc	7440-66-6	5000	2500	<6.3		<5.9			<6.9			<5.9	<4.6			

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)  
Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)  
 Shaded = Parameter detected above laboratory limit of detection  
 Compiled by: BKO Checked by: MFR

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**Table 4  
Soil Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 720 RCLs in Soil	Sample Name/Sample Date																												
			North-1 (0-3 inches)														North-3 (0-3 inches)														
			5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/12/13	6/18/15	6/27/17	5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/18/15	6/27/17
<b>Inorganics (mg/kg)</b>																															
Barium	7440-39-3	100,000	44	33	34	46	29	28	34	47	36	31	33	32	40	34	38	86	56	68	120	72	86	33	39	27	54	37	32	38	33
Cadmium	7440-43-9	799	ND	NS	NS	NS	ND	ND	0.081	0.11	0.06	0.18	0.24	<0.024	0.14	<0.059	0.13	1	NS	NS	NS	ND	ND	0.081	0.072	ND	0.28	0.30	<0.024	<0.057	0.093
Chromium	7440-47-3	NSE	5	NS	NS	NS	4	3	7.5	7.7	9.5	4.6	6.4	6.4	6.6	11	6.7	6	NS	NS	NS	5	2	5.1	7.4	7.1	4.5	5.1	5.8	7.2	6.4
Lead	7439-92-1	800	52	ND	8	9	ND	11	3	7.2	32	28	19	21	16	36	17	233	ND	10	19	23	41	3	4.6	2.5	14	4.4	4.4	2.6	2.4
Zinc	7440-66-6	100,000	33	ND	13	23	11	7	17	21	27	15	23	20	17	25	23	980	ND	25	44	37	80	17	18	13	19	16	15	15	13
<b>Inorganics (mg/kg)</b>																															
Barium	7440-39-3	100,000	28	20	23	31	16	16	16	15	15	14	19																		
Cadmium	7440-43-9	799	ND	ND	0.053	0.07	ND	0.12	<0.12	0.06	0.15	0.098	0.16																		
Chromium	7440-47-3	NSE	3	1	4.6	7.1	7.4	4.3	5.7	4.6	5.4	5.7	5.8																		
Lead	7439-92-1	800	ND	ND	4.6	4.2	13	77	18	150	120	100	78																		
Zinc	7440-66-6	100,000	11	5	17	18	32	26	32	60	54	240	87																		
Data prior to 8/16/07 from Table 1: Soil Chemistry Results-Metals From Annual Monitoring Report for the TTU and North Site Report (GME Consultants, Inc., December 15, 2005)																															
NR 720 Residual Contaminant Level (RCL) for industrial sites based on human health risk from direct contact																															
NSE = No standard established																															
ND = Not detected																															
NS = No sample result reported																															
Compiled by: <u>BKO</u> Checked by: <u>MFR</u>																															

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# Appendix A

## GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005





## Appendix B

### June 2017 Analytical Report

Engineers | Architects | Planners | Scientists

**Short Elliott Hendrickson Inc.**, 10 North Bridge Street, Chippewa Falls, WI 54729-2550  
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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 500-130274-1

Client Project/Site: Stresau Lab

For:

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
7/11/2017 3:15:20 PM

Sandie Fredrick, Project Manager II  
(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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**Job ID: 500-130274-1**

---

**Laboratory: TestAmerica Chicago**

**Narrative**

---

**Job Narrative**  
500-130274-1

### Comments

No additional comments.

### Receipt

The samples were received on 6/28/2017 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

### GC/MS VOA

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

### GC/MS Semi VOA

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

### Metals

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

### Field Service / Mobile Lab

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

### Organic Prep

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

## Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Client Sample ID: MW-8 (080)

### Lab Sample ID: 500-130274-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	18		2.5	0.73	ug/L	1		6020	Total Recoverable
Chromium	2.3	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	6.0		2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	0.50		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	1.6	J	2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	8.5	J	20	6.9	ug/L	1		6020	Total Recoverable
Barium	6.5		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.94	J	2.0	0.50	ug/L	1		6020	Dissolved
Zinc	8.9	J	20	6.9	ug/L	1		6020	Dissolved

### Client Sample ID: MW-3 (030)

### Lab Sample ID: 500-130274-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	14		2.5	0.73	ug/L	1		6020	Total Recoverable
Copper	6.2		2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	0.44	J	0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	1.6	J	2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	8.2	J	20	6.9	ug/L	1		6020	Total Recoverable
Barium	8.2		2.5	0.73	ug/L	1		6020	Dissolved
Chromium	1.2	J	5.0	1.1	ug/L	1		6020	Dissolved
Copper	0.61	J	2.0	0.50	ug/L	1		6020	Dissolved

### Client Sample ID: MW-2 (020)

### Lab Sample ID: 500-130274-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	30		2.5	0.73	ug/L	1		6020	Total Recoverable
Chromium	2.0	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	17		2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	1.1		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	3.1		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	12	J	20	6.9	ug/L	1		6020	Total Recoverable
Barium	11		2.5	0.73	ug/L	1		6020	Dissolved

### Client Sample ID: MW-1 (010)

### Lab Sample ID: 500-130274-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	86		2.5	0.73	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Client Sample ID: MW-1 (010) (Continued)

Lab Sample ID: 500-130274-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.39	J	0.50	0.17	ug/L	1		6020	Total Recoverable
Chromium	3.7	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	70		2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	2.3		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	6.9		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	19	J	20	6.9	ug/L	1		6020	Total Recoverable
Barium	10		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.67	J	2.0	0.50	ug/L	1		6020	Dissolved

### Client Sample ID: Field Blank (997)

Lab Sample ID: 500-130274-5

No Detections.

### Client Sample ID: Trip Blank

Lab Sample ID: 500-130274-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	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 = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-130274-1	MW-8 (080)	Ground Water	06/27/17 10:15	06/28/17 10:10
500-130274-2	MW-3 (030)	Ground Water	06/27/17 11:25	06/28/17 10:10
500-130274-3	MW-2 (020)	Ground Water	06/27/17 12:00	06/28/17 10:10
500-130274-4	MW-1 (010)	Ground Water	06/27/17 12:35	06/28/17 10:10
500-130274-5	Field Blank (997)	Water	06/27/17 00:00	06/28/17 10:10
500-130274-6	Trip Blank	Water	06/27/17 00:00	06/28/17 10:10

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-130274-1**

Date Collected: 06/27/17 10:15

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 16:59	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 16:59	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 16:59	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 16:59	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 16:59	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 16:59	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 16:59	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 16:59	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 16:59	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 16:59	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 16:59	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 16:59	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 16:59	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 16:59	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 16:59	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 16:59	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 16:59	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 16:59	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 16:59	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 16:59	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 16:59	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 16:59	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 16:59	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 16:59	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 16:59	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 16:59	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 16:59	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 16:59	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 16:59	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 16:59	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 16:59	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 16:59	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 16:59	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 16:59	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 16:59	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 16:59	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 16:59	1

TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-130274-1**

**Date Collected: 06/27/17 10:15**

**Matrix: Ground Water**

**Date Received: 06/28/17 10:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 16:59	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 16:59	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 16:59	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 16:59	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 16:59	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 16:59	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 16:59	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 16:59	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 16:59	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 16:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	109		75 - 126					07/07/17 16:59	1
4-Bromofluorobenzene (Surr)	100		72 - 124					07/07/17 16:59	1
Dibromofluoromethane	101		75 - 120					07/07/17 16:59	1
Toluene-d8 (Surr)	103		75 - 120					07/07/17 16:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/29/17 08:54	06/30/17 00:02	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		06/29/17 08:54	06/30/17 00:02	1
Acenaphthene	<0.24		0.77	0.24	ug/L		06/29/17 08:54	06/30/17 00:02	1
Acenaphthylene	<0.20		0.77	0.20	ug/L		06/29/17 08:54	06/30/17 00:02	1
Anthracene	<0.26		0.77	0.26	ug/L		06/29/17 08:54	06/30/17 00:02	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/29/17 08:54	06/30/17 00:02	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		06/29/17 08:54	06/30/17 00:02	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		06/29/17 08:54	06/30/17 00:02	1
Benzo[g,h,i]perylene	<0.29		0.77	0.29	ug/L		06/29/17 08:54	06/30/17 00:02	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/29/17 08:54	06/30/17 00:02	1
Chrysene	<0.052		0.15	0.052	ug/L		06/29/17 08:54	06/30/17 00:02	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/29/17 08:54	06/30/17 00:02	1
Fluoranthene	<0.35		0.77	0.35	ug/L		06/29/17 08:54	06/30/17 00:02	1
Fluorene	<0.19		0.77	0.19	ug/L		06/29/17 08:54	06/30/17 00:02	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/29/17 08:54	06/30/17 00:02	1
Naphthalene	<0.24		0.77	0.24	ug/L		06/29/17 08:54	06/30/17 00:02	1
Phenanthrene	<0.23		0.77	0.23	ug/L		06/29/17 08:54	06/30/17 00:02	1
Pyrene	<0.33		0.77	0.33	ug/L		06/29/17 08:54	06/30/17 00:02	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	60		34 - 110				06/29/17 08:54	06/30/17 00:02	1
Nitrobenzene-d5 (Surr)	79		36 - 120				06/29/17 08:54	06/30/17 00:02	1
Terphenyl-d14 (Surr)	108		40 - 145				06/29/17 08:54	06/30/17 00:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	18		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:05	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:05	1
Chromium	2.3	J	5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:05	1
Copper	6.0		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:05	1
Lead	0.50		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:05	1

TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-130274-1**

Date Collected: 06/27/17 10:15

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	1.6	J	2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:05	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:05	1
Zinc	8.5	J	20	6.9	ug/L		06/29/17 08:04	06/30/17 14:05	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	6.5		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:08	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:08	1
Chromium	<1.1		5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:08	1
Copper	0.94	J	2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:08	1
Lead	<0.19		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:08	1
Nickel	<0.63		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:08	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:08	1
Zinc	8.9	J	20	6.9	ug/L		06/29/17 08:04	06/30/17 14:08	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 10:55	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 10:57	1

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## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-130274-2**

**Date Collected: 06/27/17 11:25**

**Matrix: Ground Water**

**Date Received: 06/28/17 10:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 17:28	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 17:28	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 17:28	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 17:28	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 17:28	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 17:28	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 17:28	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 17:28	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 17:28	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 17:28	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 17:28	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 17:28	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 17:28	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:28	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 17:28	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 17:28	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 17:28	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 17:28	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 17:28	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 17:28	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 17:28	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 17:28	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 17:28	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 17:28	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 17:28	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 17:28	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 17:28	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 17:28	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 17:28	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 17:28	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 17:28	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 17:28	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 17:28	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 17:28	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 17:28	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 17:28	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:28	1

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TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-130274-2**

**Date Collected: 06/27/17 11:25**

**Matrix: Ground Water**

**Date Received: 06/28/17 10:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 17:28	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:28	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 17:28	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 17:28	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 17:28	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 17:28	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 17:28	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 17:28	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 17:28	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 17:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 126					07/07/17 17:28	1
4-Bromofluorobenzene (Surr)	101		72 - 124					07/07/17 17:28	1
Dibromofluoromethane	102		75 - 120					07/07/17 17:28	1
Toluene-d8 (Surr)	103		75 - 120					07/07/17 17:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/29/17 08:54	06/30/17 00:30	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		06/29/17 08:54	06/30/17 00:30	1
Acenaphthene	<0.24		0.76	0.24	ug/L		06/29/17 08:54	06/30/17 00:30	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/29/17 08:54	06/30/17 00:30	1
Anthracene	<0.25		0.76	0.25	ug/L		06/29/17 08:54	06/30/17 00:30	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/29/17 08:54	06/30/17 00:30	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/29/17 08:54	06/30/17 00:30	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/29/17 08:54	06/30/17 00:30	1
Benzo[g,h,i]perylene	<0.29		0.76	0.29	ug/L		06/29/17 08:54	06/30/17 00:30	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/29/17 08:54	06/30/17 00:30	1
Chrysene	<0.052		0.15	0.052	ug/L		06/29/17 08:54	06/30/17 00:30	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/29/17 08:54	06/30/17 00:30	1
Fluoranthene	<0.35		0.76	0.35	ug/L		06/29/17 08:54	06/30/17 00:30	1
Fluorene	<0.19		0.76	0.19	ug/L		06/29/17 08:54	06/30/17 00:30	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/29/17 08:54	06/30/17 00:30	1
Naphthalene	<0.24		0.76	0.24	ug/L		06/29/17 08:54	06/30/17 00:30	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/29/17 08:54	06/30/17 00:30	1
Pyrene	<0.32		0.76	0.32	ug/L		06/29/17 08:54	06/30/17 00:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		34 - 110				06/29/17 08:54	06/30/17 00:30	1
Nitrobenzene-d5 (Surr)	97		36 - 120				06/29/17 08:54	06/30/17 00:30	1
Terphenyl-d14 (Surr)	119		40 - 145				06/29/17 08:54	06/30/17 00:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	14		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:12	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:12	1
Chromium	<1.1		5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:12	1
Copper	6.2		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:12	1
Lead	0.44	J	0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:12	1

TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-130274-2**

Date Collected: 06/27/17 11:25

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	1.6	J	2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:12	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:12	1
Zinc	8.2	J	20	6.9	ug/L		06/29/17 08:04	06/30/17 14:12	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	8.2		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:16	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:16	1
Chromium	1.2	J	5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:16	1
Copper	0.61	J	2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:16	1
Lead	<0.19		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:16	1
Nickel	<0.63		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:16	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:16	1
Zinc	<6.9		20	6.9	ug/L		06/29/17 08:04	06/30/17 14:16	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 10:59	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 11:00	1

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-130274-3**

**Date Collected: 06/27/17 12:00**

**Matrix: Ground Water**

**Date Received: 06/28/17 10:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 17:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 17:58	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 17:58	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 17:58	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 17:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 17:58	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 17:58	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 17:58	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 17:58	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 17:58	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 17:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 17:58	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 17:58	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:58	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 17:58	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 17:58	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 17:58	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 17:58	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 17:58	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 17:58	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 17:58	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 17:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 17:58	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 17:58	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 17:58	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 17:58	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 17:58	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 17:58	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 17:58	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 17:58	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 17:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 17:58	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 17:58	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 17:58	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 17:58	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 17:58	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:58	1

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## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-130274-3**

Date Collected: 06/27/17 12:00

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 17:58	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 17:58	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 17:58	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 17:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 17:58	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 17:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 17:58	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 17:58	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 17:58	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		75 - 126					07/07/17 17:58	1
4-Bromofluorobenzene (Surr)	103		72 - 124					07/07/17 17:58	1
Dibromofluoromethane	103		75 - 120					07/07/17 17:58	1
Toluene-d8 (Surr)	102		75 - 120					07/07/17 17:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/29/17 08:54	06/30/17 00:57	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/29/17 08:54	06/30/17 00:57	1
Acenaphthene	<0.23		0.74	0.23	ug/L		06/29/17 08:54	06/30/17 00:57	1
Acenaphthylene	<0.20		0.74	0.20	ug/L		06/29/17 08:54	06/30/17 00:57	1
Anthracene	<0.25		0.74	0.25	ug/L		06/29/17 08:54	06/30/17 00:57	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/29/17 08:54	06/30/17 00:57	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/29/17 08:54	06/30/17 00:57	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/29/17 08:54	06/30/17 00:57	1
Benzo[g,h,i]perylene	<0.28		0.74	0.28	ug/L		06/29/17 08:54	06/30/17 00:57	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/29/17 08:54	06/30/17 00:57	1
Chrysene	<0.051		0.15	0.051	ug/L		06/29/17 08:54	06/30/17 00:57	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/29/17 08:54	06/30/17 00:57	1
Fluoranthene	<0.34		0.74	0.34	ug/L		06/29/17 08:54	06/30/17 00:57	1
Fluorene	<0.18		0.74	0.18	ug/L		06/29/17 08:54	06/30/17 00:57	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/29/17 08:54	06/30/17 00:57	1
Naphthalene	<0.23		0.74	0.23	ug/L		06/29/17 08:54	06/30/17 00:57	1
Phenanthrene	<0.22		0.74	0.22	ug/L		06/29/17 08:54	06/30/17 00:57	1
Pyrene	<0.32		0.74	0.32	ug/L		06/29/17 08:54	06/30/17 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		34 - 110				06/29/17 08:54	06/30/17 00:57	1
Nitrobenzene-d5 (Surr)	93		36 - 120				06/29/17 08:54	06/30/17 00:57	1
Terphenyl-d14 (Surr)	114		40 - 145				06/29/17 08:54	06/30/17 00:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	30		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:20	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:20	1
Chromium	2.0	J	5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:20	1
Copper	17		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:20	1
Lead	1.1		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:20	1

TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-130274-3**

Date Collected: 06/27/17 12:00

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	3.1		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:20	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:20	1
Zinc	12	J	20	6.9	ug/L		06/29/17 08:04	06/30/17 14:20	1

### Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	11		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:23	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:23	1
Chromium	<1.1		5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:23	1
Copper	<0.50		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:23	1
Lead	<0.19		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:23	1
Nickel	<0.63		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:23	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:23	1
Zinc	<6.9		20	6.9	ug/L		06/29/17 08:04	06/30/17 14:23	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 11:05	1

### Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 11:06	1

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-130274-4**

**Date Collected: 06/27/17 12:35**

**Matrix: Ground Water**

**Date Received: 06/28/17 10:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 18:27	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 18:27	1
1,1,2,2-Tetrachloroethane	<0.40	F1	1.0	0.40	ug/L			07/07/17 18:27	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 18:27	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 18:27	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 18:27	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 18:27	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 18:27	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 18:27	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 18:27	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 18:27	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 18:27	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 18:27	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 18:27	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 18:27	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 18:27	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 18:27	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 18:27	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 18:27	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 18:27	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 18:27	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 18:27	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 18:27	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 18:27	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 18:27	1
Chloromethane	<0.32	F2	1.0	0.32	ug/L			07/07/17 18:27	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 18:27	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 18:27	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 18:27	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 18:27	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 18:27	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 18:27	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 18:27	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 18:27	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 18:27	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 18:27	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 18:27	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-130274-4**

Date Collected: 06/27/17 12:35

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 18:27	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 18:27	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 18:27	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 18:27	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 18:27	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 18:27	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 18:27	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 18:27	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 18:27	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 18:27	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	109		75 - 126					07/07/17 18:27	1
4-Bromofluorobenzene (Surr)	101		72 - 124					07/07/17 18:27	1
Dibromofluoromethane	103		75 - 120					07/07/17 18:27	1
Toluene-d8 (Surr)	102		75 - 120					07/07/17 18:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/29/17 08:54	06/30/17 01:24	1
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		06/29/17 08:54	06/30/17 01:24	1
Acenaphthene	<0.23		0.75	0.23	ug/L		06/29/17 08:54	06/30/17 01:24	1
Acenaphthylene	<0.20		0.75	0.20	ug/L		06/29/17 08:54	06/30/17 01:24	1
Anthracene	<0.25		0.75	0.25	ug/L		06/29/17 08:54	06/30/17 01:24	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/29/17 08:54	06/30/17 01:24	1
Benzo[a]pyrene	<0.074		0.15	0.074	ug/L		06/29/17 08:54	06/30/17 01:24	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/29/17 08:54	06/30/17 01:24	1
Benzo[g,h,i]perylene	<0.28		0.75	0.28	ug/L		06/29/17 08:54	06/30/17 01:24	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/29/17 08:54	06/30/17 01:24	1
Chrysene	<0.051		0.15	0.051	ug/L		06/29/17 08:54	06/30/17 01:24	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/29/17 08:54	06/30/17 01:24	1
Fluoranthene	<0.34		0.75	0.34	ug/L		06/29/17 08:54	06/30/17 01:24	1
Fluorene	<0.18		0.75	0.18	ug/L		06/29/17 08:54	06/30/17 01:24	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/29/17 08:54	06/30/17 01:24	1
Naphthalene	<0.23		0.75	0.23	ug/L		06/29/17 08:54	06/30/17 01:24	1
Phenanthrene	<0.23		0.75	0.23	ug/L		06/29/17 08:54	06/30/17 01:24	1
Pyrene	<0.32		0.75	0.32	ug/L		06/29/17 08:54	06/30/17 01:24	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	69		34 - 110				06/29/17 08:54	06/30/17 01:24	1
Nitrobenzene-d5 (Surr)	87		36 - 120				06/29/17 08:54	06/30/17 01:24	1
Terphenyl-d14 (Surr)	107		40 - 145				06/29/17 08:54	06/30/17 01:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	86		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:27	1
Cadmium	0.39	J	0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:27	1
Chromium	3.7	J	5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:27	1
Copper	70		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:27	1
Lead	2.3		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:27	1

TestAmerica Chicago



## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-130274-4**

Date Collected: 06/27/17 12:35

Matrix: Ground Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	6.9		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:27	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:27	1
Zinc	19	J	20	6.9	ug/L		06/29/17 08:04	06/30/17 14:27	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	10		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 14:31	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 14:31	1
Chromium	<1.1		5.0	1.1	ug/L		06/29/17 08:04	06/30/17 14:31	1
Copper	0.67	J	2.0	0.50	ug/L		06/29/17 08:04	06/30/17 14:31	1
Lead	<0.19		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 14:31	1
Nickel	<0.63		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 14:31	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 14:31	1
Zinc	<6.9		20	6.9	ug/L		06/29/17 08:04	06/30/17 14:31	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 11:08	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 11:09	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-130274-5**

Date Collected: 06/27/17 00:00

Matrix: Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 14:00	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 14:00	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 14:00	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 14:00	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 14:00	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 14:00	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 14:00	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 14:00	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 14:00	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 14:00	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 14:00	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 14:00	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 14:00	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 14:00	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 14:00	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 14:00	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 14:00	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 14:00	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 14:00	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 14:00	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 14:00	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 14:00	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 14:00	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 14:00	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 14:00	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 14:00	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 14:00	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 14:00	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 14:00	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 14:00	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 14:00	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 14:00	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 14:00	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 14:00	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 14:00	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/07/17 14:00	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 14:00	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1

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## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-130274-5**

Date Collected: 06/27/17 00:00

Matrix: Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 14:00	1
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 14:00	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 14:00	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 14:00	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 14:00	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 14:00	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 14:00	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 14:00	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 14:00	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 14:00	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 14:00	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	108		75 - 126					07/07/17 14:00	1
4-Bromofluorobenzene (Surr)	99		72 - 124					07/07/17 14:00	1
Dibromofluoromethane	101		75 - 120					07/07/17 14:00	1
Toluene-d8 (Surr)	103		75 - 120					07/07/17 14:00	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-130274-6**

Date Collected: 06/27/17 00:00

Matrix: Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 12:30	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 12:30	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 12:30	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 12:30	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 12:30	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 12:30	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 12:30	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 12:30	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 12:30	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 12:30	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 12:30	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 12:30	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 12:30	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 12:30	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 12:30	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 12:30	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 12:30	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 12:30	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 12:30	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 12:30	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 12:30	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 12:30	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 12:30	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 12:30	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 12:30	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 12:30	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 12:30	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 12:30	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 12:30	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 12:30	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 12:30	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 12:30	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 12:30	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 12:30	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 12:30	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/07/17 12:30	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 12:30	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1

TestAmerica Chicago

## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-130274-6**

Date Collected: 06/27/17 00:00

Matrix: Water

Date Received: 06/28/17 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 12:30	1
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 12:30	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 12:30	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 12:30	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 12:30	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 12:30	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 12:30	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 12:30	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 12:30	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 12:30	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 12:30	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	106		75 - 126					07/07/17 12:30	1
4-Bromofluorobenzene (Surr)	99		72 - 124					07/07/17 12:30	1
Dibromofluoromethane	100		75 - 120					07/07/17 12:30	1
Toluene-d8 (Surr)	103		75 - 120					07/07/17 12:30	1

## Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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)

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## QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### GC/MS VOA

#### Analysis Batch: 392163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Total/NA	Ground Water	8260B	
500-130274-2	MW-3 (030)	Total/NA	Ground Water	8260B	
500-130274-3	MW-2 (020)	Total/NA	Ground Water	8260B	
500-130274-4	MW-1 (010)	Total/NA	Ground Water	8260B	
500-130274-5	Field Blank (997)	Total/NA	Water	8260B	
500-130274-6	Trip Blank	Total/NA	Water	8260B	
MB 500-392163/6	Method Blank	Total/NA	Water	8260B	
LCS 500-392163/24	Lab Control Sample	Total/NA	Water	8260B	
500-130274-4 MS	MW-1 (010)	Total/NA	Ground Water	8260B	
500-130274-4 MSD	MW-1 (010)	Total/NA	Ground Water	8260B	

### GC/MS Semi VOA

#### Prep Batch: 391283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Total/NA	Ground Water	3510C	
500-130274-2	MW-3 (030)	Total/NA	Ground Water	3510C	
500-130274-3	MW-2 (020)	Total/NA	Ground Water	3510C	
500-130274-4	MW-1 (010)	Total/NA	Ground Water	3510C	
MB 500-391283/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-391283/2-A	Lab Control Sample	Total/NA	Water	3510C	

#### Analysis Batch: 391368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-391283/1-A	Method Blank	Total/NA	Water	8270D	391283
LCS 500-391283/2-A	Lab Control Sample	Total/NA	Water	8270D	391283

#### Analysis Batch: 391378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Total/NA	Ground Water	8270D	391283
500-130274-2	MW-3 (030)	Total/NA	Ground Water	8270D	391283
500-130274-3	MW-2 (020)	Total/NA	Ground Water	8270D	391283
500-130274-4	MW-1 (010)	Total/NA	Ground Water	8270D	391283

### Metals

#### Prep Batch: 391275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Dissolved	Ground Water	3005A	
500-130274-1	MW-8 (080)	Total Recoverable	Ground Water	3005A	
500-130274-2	MW-3 (030)	Dissolved	Ground Water	3005A	
500-130274-2	MW-3 (030)	Total Recoverable	Ground Water	3005A	
500-130274-3	MW-2 (020)	Dissolved	Ground Water	3005A	
500-130274-3	MW-2 (020)	Total Recoverable	Ground Water	3005A	
500-130274-4	MW-1 (010)	Dissolved	Ground Water	3005A	
500-130274-4	MW-1 (010)	Total Recoverable	Ground Water	3005A	
MB 500-391275/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-391275/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

TestAmerica Chicago

## QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Metals (Continued)

#### Prep Batch: 391326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Dissolved	Ground Water	7470A	
500-130274-1	MW-8 (080)	Total/NA	Ground Water	7470A	
500-130274-2	MW-3 (030)	Dissolved	Ground Water	7470A	
500-130274-2	MW-3 (030)	Total/NA	Ground Water	7470A	
500-130274-3	MW-2 (020)	Dissolved	Ground Water	7470A	
500-130274-3	MW-2 (020)	Total/NA	Ground Water	7470A	
500-130274-4	MW-1 (010)	Dissolved	Ground Water	7470A	
500-130274-4	MW-1 (010)	Total/NA	Ground Water	7470A	
MB 500-391326/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-391326/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-130274-4 MS	MW-1 (010)	Dissolved	Ground Water	7470A	
500-130274-4 MSD	MW-1 (010)	Dissolved	Ground Water	7470A	
500-130274-4 DU	MW-1 (010)	Dissolved	Ground Water	7470A	

#### Analysis Batch: 391501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Dissolved	Ground Water	7470A	391326
500-130274-1	MW-8 (080)	Total/NA	Ground Water	7470A	391326
500-130274-2	MW-3 (030)	Dissolved	Ground Water	7470A	391326
500-130274-2	MW-3 (030)	Total/NA	Ground Water	7470A	391326
500-130274-3	MW-2 (020)	Dissolved	Ground Water	7470A	391326
500-130274-3	MW-2 (020)	Total/NA	Ground Water	7470A	391326
500-130274-4	MW-1 (010)	Dissolved	Ground Water	7470A	391326
500-130274-4	MW-1 (010)	Total/NA	Ground Water	7470A	391326
MB 500-391326/12-A	Method Blank	Total/NA	Water	7470A	391326
LCS 500-391326/13-A	Lab Control Sample	Total/NA	Water	7470A	391326
500-130274-4 MS	MW-1 (010)	Dissolved	Ground Water	7470A	391326
500-130274-4 MSD	MW-1 (010)	Dissolved	Ground Water	7470A	391326
500-130274-4 DU	MW-1 (010)	Dissolved	Ground Water	7470A	391326

#### Analysis Batch: 391703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-1	MW-8 (080)	Dissolved	Ground Water	6020	391275
500-130274-1	MW-8 (080)	Total Recoverable	Ground Water	6020	391275
500-130274-2	MW-3 (030)	Dissolved	Ground Water	6020	391275
500-130274-2	MW-3 (030)	Total Recoverable	Ground Water	6020	391275
500-130274-3	MW-2 (020)	Dissolved	Ground Water	6020	391275
500-130274-3	MW-2 (020)	Total Recoverable	Ground Water	6020	391275
500-130274-4	MW-1 (010)	Dissolved	Ground Water	6020	391275
500-130274-4	MW-1 (010)	Total Recoverable	Ground Water	6020	391275
MB 500-391275/1-A	Method Blank	Total Recoverable	Water	6020	391275
LCS 500-391275/2-A	Lab Control Sample	Total Recoverable	Water	6020	391275





## Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (75-126)	BFB (72-124)	DBFM (75-120)	TOL (75-120)
500-130274-1	MW-8 (080)	109	100	101	103
500-130274-2	MW-3 (030)	108	101	102	103
500-130274-3	MW-2 (020)	108	103	103	102
500-130274-4	MW-1 (010)	109	101	103	102
500-130274-4 MS	MW-1 (010)	103	103	96	104
500-130274-4 MSD	MW-1 (010)	103	108	96	104

**Surrogate Legend**

12DCE = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (75-126)	BFB (72-124)	DBFM (75-120)	TOL (75-120)
500-130274-5	Field Blank (997)	108	99	101	103
500-130274-6	Trip Blank	106	99	100	103
LCS 500-392163/24	Lab Control Sample	98	101	94	105
MB 500-392163/6	Method Blank	107	104	99	103

**Surrogate Legend**

12DCE = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

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

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (34-110)	NBZ (36-120)	TPH (40-145)
500-130274-1	MW-8 (080)	60	79	108
500-130274-2	MW-3 (030)	79	97	119
500-130274-3	MW-2 (020)	72	93	114
500-130274-4	MW-1 (010)	69	87	107

**Surrogate Legend**

FBP = 2-Fluorobiphenyl  
NBZ = Nitrobenzene-d5 (Surr)  
TPH = Terphenyl-d14 (Surr)

TestAmerica Chicago

## Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (34-110)	NBZ (36-120)	TPH (40-145)
LCS 500-391283/2-A	Lab Control Sample	70	83	99
MB 500-391283/1-A	Method Blank	71	84	104

#### Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: MB 500-392163/6

Matrix: Water

Analysis Batch: 392163

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			07/07/17 11:30	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			07/07/17 11:30	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			07/07/17 11:30	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			07/07/17 11:30	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			07/07/17 11:30	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			07/07/17 11:30	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			07/07/17 11:30	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			07/07/17 11:30	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			07/07/17 11:30	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			07/07/17 11:30	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			07/07/17 11:30	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			07/07/17 11:30	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			07/07/17 11:30	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			07/07/17 11:30	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			07/07/17 11:30	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			07/07/17 11:30	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			07/07/17 11:30	1
Benzene	<0.15		0.50	0.15	ug/L			07/07/17 11:30	1
Bromobenzene	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			07/07/17 11:30	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			07/07/17 11:30	1
Bromoform	<0.48		1.0	0.48	ug/L			07/07/17 11:30	1
Bromomethane	<0.80		2.0	0.80	ug/L			07/07/17 11:30	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			07/07/17 11:30	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
Chloroethane	<0.51		1.0	0.51	ug/L			07/07/17 11:30	1
Chloroform	<0.37		2.0	0.37	ug/L			07/07/17 11:30	1
Chloromethane	<0.32		1.0	0.32	ug/L			07/07/17 11:30	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			07/07/17 11:30	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			07/07/17 11:30	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			07/07/17 11:30	1
Dibromomethane	<0.27		1.0	0.27	ug/L			07/07/17 11:30	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			07/07/17 11:30	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			07/07/17 11:30	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			07/07/17 11:30	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			07/07/17 11:30	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			07/07/17 11:30	1
Naphthalene	<0.34		1.0	0.34	ug/L			07/07/17 11:30	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			07/07/17 11:30	1

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: MB 500-392163/6  
Matrix: Water  
Analysis Batch: 392163

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 11:30	1
Styrene	<0.39		1.0	0.39	ug/L			07/07/17 11:30	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			07/07/17 11:30	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			07/07/17 11:30	1
Toluene	<0.15		0.50	0.15	ug/L			07/07/17 11:30	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			07/07/17 11:30	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			07/07/17 11:30	1
Trichloroethene	<0.16		0.50	0.16	ug/L			07/07/17 11:30	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			07/07/17 11:30	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			07/07/17 11:30	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			07/07/17 11:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		75 - 126		07/07/17 11:30	1
4-Bromofluorobenzene (Surr)	104		72 - 124		07/07/17 11:30	1
Dibromofluoromethane	99		75 - 120		07/07/17 11:30	1
Toluene-d8 (Surr)	103		75 - 120		07/07/17 11:30	1

Lab Sample ID: LCS 500-392163/24  
Matrix: Water  
Analysis Batch: 392163

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	49.4		ug/L		99	70 - 125
1,1,1-Trichloroethane	50.0	45.2		ug/L		90	70 - 125
1,1,2,2-Tetrachloroethane	50.0	57.1		ug/L		114	67 - 127
1,1,2-Trichloroethane	50.0	53.5		ug/L		107	70 - 122
1,1-Dichloroethane	50.0	50.8		ug/L		102	70 - 125
1,1-Dichloroethene	50.0	48.8		ug/L		98	67 - 122
1,1-Dichloropropene	50.0	50.3		ug/L		101	70 - 121
1,2,3-Trichlorobenzene	50.0	46.5		ug/L		93	55 - 140
1,2,3-Trichloropropane	50.0	53.8		ug/L		108	50 - 133
1,2,4-Trichlorobenzene	50.0	45.7		ug/L		91	66 - 127
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	50.0		ug/L		100	56 - 123
1,2-Dibromoethane	50.0	52.2		ug/L		104	70 - 125
1,2-Dichlorobenzene	50.0	49.0		ug/L		98	70 - 125
1,2-Dichloroethane	50.0	48.8		ug/L		98	68 - 127
1,2-Dichloropropane	50.0	53.0		ug/L		106	67 - 130
1,3,5-Trimethylbenzene	50.0	51.1		ug/L		102	70 - 123
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	70 - 125
1,3-Dichloropropane	50.0	58.2		ug/L		116	62 - 136
1,4-Dichlorobenzene	50.0	49.7		ug/L		99	70 - 120
2,2-Dichloropropane	50.0	41.2		ug/L		82	58 - 129
2-Chlorotoluene	50.0	53.5		ug/L		107	70 - 125
4-Chlorotoluene	50.0	52.6		ug/L		105	68 - 124
Benzene	50.0	48.1		ug/L		96	70 - 120

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: LCS 500-392163/24

Matrix: Water

Analysis Batch: 392163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	49.6		ug/L		99	70 - 122
Bromochloromethane	50.0	46.2		ug/L		92	65 - 122
Bromodichloromethane	50.0	46.1		ug/L		92	69 - 120
Bromoform	50.0	49.9		ug/L		100	56 - 132
Bromomethane	50.0	43.8		ug/L		88	40 - 130
Carbon tetrachloride	50.0	45.7		ug/L		91	65 - 122
Chlorobenzene	50.0	50.9		ug/L		102	70 - 120
Chloroethane	50.0	39.3		ug/L		79	45 - 127
Chloroform	50.0	47.7		ug/L		95	70 - 120
Chloromethane	50.0	40.8		ug/L		82	54 - 147
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	70 - 125
cis-1,3-Dichloropropene	50.0	52.8		ug/L		106	64 - 127
Dibromochloromethane	50.0	50.8		ug/L		102	68 - 125
Dibromomethane	50.0	49.0		ug/L		98	70 - 120
Dichlorodifluoromethane	50.0	44.6		ug/L		89	40 - 150
Ethylbenzene	50.0	48.2		ug/L		96	70 - 120
Hexachlorobutadiene	50.0	48.4		ug/L		97	51 - 150
Isopropylbenzene	50.0	51.3		ug/L		103	70 - 126
Methyl tert-butyl ether	50.0	41.5		ug/L		83	70 - 120
Methylene Chloride	50.0	44.0		ug/L		88	69 - 125
Naphthalene	50.0	43.6		ug/L		87	59 - 130
n-Butylbenzene	50.0	54.2		ug/L		108	68 - 125
N-Propylbenzene	50.0	54.0		ug/L		108	69 - 127
p-Isopropyltoluene	50.0	49.4		ug/L		99	70 - 125
sec-Butylbenzene	50.0	51.4		ug/L		103	70 - 123
Styrene	50.0	49.1		ug/L		98	70 - 120
tert-Butylbenzene	50.0	50.7		ug/L		101	70 - 121
Tetrachloroethene	50.0	49.1		ug/L		98	70 - 128
Toluene	50.0	51.8		ug/L		104	70 - 125
trans-1,2-Dichloroethene	50.0	49.0		ug/L		98	70 - 125
trans-1,3-Dichloropropene	50.0	52.3		ug/L		105	62 - 128
Trichloroethene	50.0	44.9		ug/L		90	70 - 125
Trichlorofluoromethane	50.0	48.3		ug/L		97	70 - 126
Vinyl chloride	50.0	49.9		ug/L		100	64 - 126
Xylenes, Total	100	99.4		ug/L		99	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		75 - 126
4-Bromofluorobenzene (Surr)	101		72 - 124
Dibromofluoromethane	94		75 - 120
Toluene-d8 (Surr)	105		75 - 120

Lab Sample ID: 500-130274-4 MS

Matrix: Ground Water

Analysis Batch: 392163

Client Sample ID: MW-1 (010)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	<0.46		50.0	51.4		ug/L		103	70 - 125

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: 500-130274-4 MS

Matrix: Ground Water

Analysis Batch: 392163

Client Sample ID: MW-1 (010)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	<0.38		50.0	46.7		ug/L		93	70 - 125
1,1,2,2-Tetrachloroethane	<0.40	F1	50.0	60.1		ug/L		120	67 - 127
1,1,2-Trichloroethane	<0.35		50.0	56.6		ug/L		113	70 - 122
1,1-Dichloroethane	<0.41		50.0	52.2		ug/L		104	70 - 125
1,1-Dichloroethene	<0.39		50.0	49.0		ug/L		98	67 - 122
1,1-Dichloropropene	<0.30		50.0	50.9		ug/L		102	70 - 121
1,2,3-Trichlorobenzene	<0.46		50.0	45.3		ug/L		91	55 - 140
1,2,3-Trichloropropane	<0.41		50.0	54.5		ug/L		109	50 - 133
1,2,4-Trichlorobenzene	<0.34		50.0	41.4		ug/L		83	66 - 127
1,2,4-Trimethylbenzene	<0.36		50.0	51.8		ug/L		104	70 - 123
1,2-Dibromo-3-Chloropropane	<2.0		50.0	50.8		ug/L		102	56 - 123
1,2-Dibromoethane	<0.39		50.0	53.9		ug/L		108	70 - 125
1,2-Dichlorobenzene	<0.33		50.0	50.8		ug/L		102	70 - 125
1,2-Dichloroethane	<0.39		50.0	51.5		ug/L		103	68 - 127
1,2-Dichloropropane	<0.43		50.0	54.9		ug/L		110	67 - 130
1,3,5-Trimethylbenzene	<0.25		50.0	51.1		ug/L		102	70 - 123
1,3-Dichlorobenzene	<0.40		50.0	50.1		ug/L		100	70 - 125
1,3-Dichloropropane	<0.36		50.0	59.9		ug/L		120	62 - 136
1,4-Dichlorobenzene	<0.36		50.0	50.5		ug/L		101	70 - 120
2,2-Dichloropropane	<0.44		50.0	39.7		ug/L		79	58 - 129
2-Chlorotoluene	<0.31		50.0	54.6		ug/L		109	70 - 125
4-Chlorotoluene	<0.35		50.0	53.3		ug/L		107	68 - 124
Benzene	<0.15		50.0	49.3		ug/L		99	70 - 120
Bromobenzene	<0.36		50.0	52.5		ug/L		105	70 - 122
Bromochloromethane	<0.43		50.0	47.7		ug/L		95	65 - 122
Bromodichloromethane	<0.37		50.0	48.7		ug/L		97	69 - 120
Bromoform	<0.48		50.0	53.0		ug/L		106	56 - 132
Bromomethane	<0.80		50.0	62.3		ug/L		125	40 - 130
Carbon tetrachloride	<0.38		50.0	47.1		ug/L		94	65 - 122
Chlorobenzene	<0.39		50.0	51.7		ug/L		103	70 - 120
Chloroethane	<0.51		50.0	43.5		ug/L		87	45 - 127
Chloroform	<0.37		50.0	48.5		ug/L		97	70 - 120
Chloromethane	<0.32	F2	50.0	29.0		ug/L		58	54 - 147
cis-1,2-Dichloroethene	<0.41		50.0	49.1		ug/L		98	70 - 125
cis-1,3-Dichloropropene	<0.42		50.0	51.5		ug/L		103	64 - 127
Dibromochloromethane	<0.49		50.0	53.2		ug/L		106	68 - 125
Dibromomethane	<0.27		50.0	52.0		ug/L		104	70 - 120
Dichlorodifluoromethane	<0.67		50.0	46.3		ug/L		93	40 - 150
Ethylbenzene	<0.18		50.0	49.2		ug/L		98	70 - 120
Hexachlorobutadiene	<0.45		50.0	47.8		ug/L		96	51 - 150
Isopropylbenzene	<0.39		50.0	53.2		ug/L		106	70 - 126
Methyl tert-butyl ether	<0.39		50.0	40.6		ug/L		81	70 - 120
Methylene Chloride	<1.6		50.0	47.9		ug/L		96	69 - 125
n-Butylbenzene	<0.39		50.0	52.3		ug/L		105	68 - 125
N-Propylbenzene	<0.41		50.0	55.2		ug/L		110	69 - 127
p-Isopropyltoluene	<0.36		50.0	51.5		ug/L		103	70 - 125
sec-Butylbenzene	<0.40		50.0	52.9		ug/L		106	70 - 123
Styrene	<0.39		50.0	47.1		ug/L		94	70 - 120

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: 500-130274-4 MS

Matrix: Ground Water

Analysis Batch: 392163

Client Sample ID: MW-1 (010)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
tert-Butylbenzene	<0.40		50.0	50.4		ug/L		101	70 - 121
Tetrachloroethene	<0.37		50.0	48.9		ug/L		98	70 - 128
Toluene	<0.15		50.0	52.2		ug/L		104	70 - 125
trans-1,2-Dichloroethene	<0.35		50.0	49.1		ug/L		98	70 - 125
trans-1,3-Dichloropropene	<0.36		50.0	52.5		ug/L		105	62 - 128
Trichloroethene	<0.16		50.0	46.0		ug/L		92	70 - 125
Trichlorofluoromethane	<0.43		50.0	48.7		ug/L		97	70 - 126
Vinyl chloride	<0.20		50.0	51.9		ug/L		104	64 - 126
Xylenes, Total	<0.22		100	99.7		ug/L		100	70 - 125

Surrogate	MS %Recovery	MS Qualifier	MS Limits
1,2-Dichloroethane-d4 (Surr)	103		75 - 126
4-Bromofluorobenzene (Surr)	103		72 - 124
Dibromofluoromethane	96		75 - 120
Toluene-d8 (Surr)	104		75 - 120

Lab Sample ID: 500-130274-4 MSD

Matrix: Ground Water

Analysis Batch: 392163

Client Sample ID: MW-1 (010)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<0.46		50.0	54.0		ug/L		108	70 - 125	5	20
1,1,1-Trichloroethane	<0.38		50.0	48.5		ug/L		97	70 - 125	4	20
1,1,2,2-Tetrachloroethane	<0.40	F1	50.0	65.6	F1	ug/L		131	67 - 127	9	20
1,1,2-Trichloroethane	<0.35		50.0	59.3		ug/L		119	70 - 122	5	20
1,1-Dichloroethane	<0.41		50.0	54.2		ug/L		108	70 - 125	4	20
1,1-Dichloroethene	<0.39		50.0	51.5		ug/L		103	67 - 122	5	20
1,1-Dichloropropene	<0.30		50.0	52.5		ug/L		105	70 - 121	3	20
1,2,3-Trichlorobenzene	<0.46		50.0	48.5		ug/L		97	55 - 140	7	20
1,2,3-Trichloropropane	<0.41		50.0	61.0		ug/L		122	50 - 133	11	20
1,2,4-Trichlorobenzene	<0.34		50.0	43.7		ug/L		87	66 - 127	5	20
1,2,4-Trimethylbenzene	<0.36		50.0	55.5		ug/L		111	70 - 123	7	20
1,2-Dibromo-3-Chloropropane	<2.0		50.0	54.1		ug/L		108	56 - 123	6	20
1,2-Dibromoethane	<0.39		50.0	55.7		ug/L		111	70 - 125	3	20
1,2-Dichlorobenzene	<0.33		50.0	54.3		ug/L		109	70 - 125	7	20
1,2-Dichloroethane	<0.39		50.0	53.2		ug/L		106	68 - 127	3	20
1,2-Dichloropropane	<0.43		50.0	57.1		ug/L		114	67 - 130	4	20
1,3,5-Trimethylbenzene	<0.25		50.0	55.1		ug/L		110	70 - 123	8	20
1,3-Dichlorobenzene	<0.40		50.0	52.4		ug/L		105	70 - 125	5	20
1,3-Dichloropropane	<0.36		50.0	63.2		ug/L		126	62 - 136	5	20
1,4-Dichlorobenzene	<0.36		50.0	53.7		ug/L		107	70 - 120	6	20
2,2-Dichloropropane	<0.44		50.0	41.8		ug/L		84	58 - 129	5	20
2-Chlorotoluene	<0.31		50.0	59.8		ug/L		120	70 - 125	9	20
4-Chlorotoluene	<0.35		50.0	57.8		ug/L		116	68 - 124	8	20
Benzene	<0.15		50.0	51.6		ug/L		103	70 - 120	5	20
Bromobenzene	<0.36		50.0	56.9		ug/L		114	70 - 122	8	20
Bromochloromethane	<0.43		50.0	49.9		ug/L		100	65 - 122	5	20
Bromodichloromethane	<0.37		50.0	51.4		ug/L		103	69 - 120	5	20

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: 500-130274-4 MSD

Matrix: Ground Water

Analysis Batch: 392163

Client Sample ID: MW-1 (010)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	<0.48		50.0	56.1		ug/L		112	56 - 132	6	20
Bromomethane	<0.80		50.0	61.6		ug/L		123	40 - 130	1	20
Carbon tetrachloride	<0.38		50.0	49.6		ug/L		99	65 - 122	5	20
Chlorobenzene	<0.39		50.0	54.0		ug/L		108	70 - 120	4	20
Chloroethane	<0.51		50.0	46.3		ug/L		93	45 - 127	6	20
Chloroform	<0.37		50.0	50.9		ug/L		102	70 - 120	5	20
Chloromethane	<0.32	F2	50.0	36.9	F2	ug/L		74	54 - 147	24	20
cis-1,2-Dichloroethene	<0.41		50.0	50.7		ug/L		101	70 - 125	3	20
cis-1,3-Dichloropropene	<0.42		50.0	54.7		ug/L		109	64 - 127	6	20
Dibromochloromethane	<0.49		50.0	55.1		ug/L		110	68 - 125	3	20
Dibromomethane	<0.27		50.0	53.4		ug/L		107	70 - 120	3	20
Dichlorodifluoromethane	<0.67		50.0	50.0		ug/L		100	40 - 150	8	20
Ethylbenzene	<0.18		50.0	50.8		ug/L		102	70 - 120	3	20
Hexachlorobutadiene	<0.45		50.0	52.4		ug/L		105	51 - 150	9	20
Isopropylbenzene	<0.39		50.0	58.1		ug/L		116	70 - 126	9	20
Methyl tert-butyl ether	<0.39		50.0	43.9		ug/L		88	70 - 120	8	20
Methylene Chloride	<1.6		50.0	48.7		ug/L		97	69 - 125	2	20
n-Butylbenzene	<0.39		50.0	54.7		ug/L		109	68 - 125	5	20
N-Propylbenzene	<0.41		50.0	59.0		ug/L		118	69 - 127	7	20
p-Isopropyltoluene	<0.36		50.0	56.4		ug/L		113	70 - 125	9	20
sec-Butylbenzene	<0.40		50.0	56.8		ug/L		114	70 - 123	7	20
Styrene	<0.39		50.0	47.4		ug/L		95	70 - 120	1	20
tert-Butylbenzene	<0.40		50.0	53.6		ug/L		107	70 - 121	6	20
Tetrachloroethene	<0.37		50.0	51.1		ug/L		102	70 - 128	4	20
Toluene	<0.15		50.0	53.9		ug/L		108	70 - 125	3	20
trans-1,2-Dichloroethene	<0.35		50.0	51.5		ug/L		103	70 - 125	5	20
trans-1,3-Dichloropropene	<0.36		50.0	54.5		ug/L		109	62 - 128	4	20
Trichloroethene	<0.16		50.0	47.2		ug/L		94	70 - 125	3	20
Trichlorofluoromethane	<0.43		50.0	52.4		ug/L		105	70 - 126	7	20
Vinyl chloride	<0.20		50.0	54.6		ug/L		109	64 - 126	5	20
Xylenes, Total	<0.22		100	103		ug/L		103	70 - 125	4	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	103		75 - 126
4-Bromofluorobenzene (Surr)	108		72 - 124
Dibromofluoromethane	96		75 - 120
Toluene-d8 (Surr)	104		75 - 120

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

Lab Sample ID: MB 500-391283/1-A

Matrix: Water

Analysis Batch: 391368

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 391283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		06/29/17 08:54	06/29/17 21:13	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		06/29/17 08:54	06/29/17 21:13	1
Acenaphthene	<0.25		0.80	0.25	ug/L		06/29/17 08:54	06/29/17 21:13	1

TestAmerica Chicago



## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

**Lab Sample ID: MB 500-391283/1-A**

**Matrix: Water**

**Analysis Batch: 391368**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 391283**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthylene	<0.21		0.80	0.21	ug/L		06/29/17 08:54	06/29/17 21:13	1
Anthracene	<0.27		0.80	0.27	ug/L		06/29/17 08:54	06/29/17 21:13	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		06/29/17 08:54	06/29/17 21:13	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		06/29/17 08:54	06/29/17 21:13	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		06/29/17 08:54	06/29/17 21:13	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		06/29/17 08:54	06/29/17 21:13	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		06/29/17 08:54	06/29/17 21:13	1
Chrysene	<0.055		0.16	0.055	ug/L		06/29/17 08:54	06/29/17 21:13	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		06/29/17 08:54	06/29/17 21:13	1
Fluoranthene	<0.36		0.80	0.36	ug/L		06/29/17 08:54	06/29/17 21:13	1
Fluorene	<0.20		0.80	0.20	ug/L		06/29/17 08:54	06/29/17 21:13	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		06/29/17 08:54	06/29/17 21:13	1
Naphthalene	<0.25		0.80	0.25	ug/L		06/29/17 08:54	06/29/17 21:13	1
Phenanthrene	<0.24		0.80	0.24	ug/L		06/29/17 08:54	06/29/17 21:13	1
Pyrene	<0.34		0.80	0.34	ug/L		06/29/17 08:54	06/29/17 21:13	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	71		34 - 110	06/29/17 08:54	06/29/17 21:13	1
Nitrobenzene-d5 (Surr)	84		36 - 120	06/29/17 08:54	06/29/17 21:13	1
Terphenyl-d14 (Surr)	104		40 - 145	06/29/17 08:54	06/29/17 21:13	1

**Lab Sample ID: LCS 500-391283/2-A**

**Matrix: Water**

**Analysis Batch: 391368**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 391283**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
2-Methylnaphthalene	32.0	24.2		ug/L		76	34 - 110	
Acenaphthene	32.0	25.5		ug/L		80	46 - 110	
Acenaphthylene	32.0	25.5		ug/L		80	47 - 110	
Anthracene	32.0	28.8		ug/L		90	67 - 110	
Benzo[a]anthracene	32.0	30.3		ug/L		95	70 - 120	
Benzo[a]pyrene	32.0	30.3		ug/L		95	70 - 120	
Benzo[b]fluoranthene	32.0	32.4		ug/L		101	69 - 123	
Benzo[g,h,i]perylene	32.0	31.1		ug/L		97	70 - 120	
Benzo[k]fluoranthene	32.0	28.7		ug/L		90	70 - 120	
Chrysene	32.0	30.1		ug/L		94	68 - 120	
Dibenz(a,h)anthracene	32.0	30.8		ug/L		96	70 - 127	
Fluoranthene	32.0	30.3		ug/L		95	68 - 120	
Fluorene	32.0	27.2		ug/L		85	53 - 120	
Indeno[1,2,3-cd]pyrene	32.0	25.3		ug/L		79	65 - 133	
Naphthalene	32.0	23.0		ug/L		72	36 - 110	
Phenanthrene	32.0	28.6		ug/L		90	65 - 120	
Pyrene	32.0	28.7		ug/L		90	70 - 110	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	70		34 - 110

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

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

Lab Sample ID: LCS 500-391283/2-A  
Matrix: Water  
Analysis Batch: 391368

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 391283

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	83		36 - 120
Terphenyl-d14 (Surr)	99		40 - 145

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

Lab Sample ID: MB 500-391275/1-A  
Matrix: Water  
Analysis Batch: 391703

Client Sample ID: Method Blank  
Prep Type: Total Recoverable  
Prep Batch: 391275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.73		2.5	0.73	ug/L		06/29/17 08:04	06/30/17 13:57	1
Cadmium	<0.17		0.50	0.17	ug/L		06/29/17 08:04	06/30/17 13:57	1
Chromium	<1.1		5.0	1.1	ug/L		06/29/17 08:04	06/30/17 13:57	1
Copper	<0.50		2.0	0.50	ug/L		06/29/17 08:04	06/30/17 13:57	1
Lead	<0.19		0.50	0.19	ug/L		06/29/17 08:04	06/30/17 13:57	1
Nickel	<0.63		2.0	0.63	ug/L		06/29/17 08:04	06/30/17 13:57	1
Silver	<0.12		0.50	0.12	ug/L		06/29/17 08:04	06/30/17 13:57	1
Zinc	<6.9		20	6.9	ug/L		06/29/17 08:04	06/30/17 13:57	1

Lab Sample ID: LCS 500-391275/2-A  
Matrix: Water  
Analysis Batch: 391703

Client Sample ID: Lab Control Sample  
Prep Type: Total Recoverable  
Prep Batch: 391275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits %Rec.
Barium	500	540		ug/L		108	80 - 120
Cadmium	50.0	54.3		ug/L		109	80 - 120
Chromium	200	202		ug/L		101	80 - 120
Copper	250	272		ug/L		109	80 - 120
Lead	100	108		ug/L		108	80 - 120
Nickel	500	515		ug/L		103	80 - 120
Silver	50.0	56.1		ug/L		112	80 - 120
Zinc	500	546		ug/L		109	80 - 120

### Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-391326/12-A  
Matrix: Water  
Analysis Batch: 391501

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 391326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/29/17 11:15	06/30/17 10:53	1

Lab Sample ID: LCS 500-391326/13-A  
Matrix: Water  
Analysis Batch: 391501

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 391326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits %Rec.
Mercury	2.00	2.06		ug/L		103	80 - 120

TestAmerica Chicago

## QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 500-130274-4 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 391501**

**Client Sample ID: MW-1 (010)**  
**Prep Type: Dissolved**  
**Prep Batch: 391326**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.098		1.00	1.15		ug/L		115	75 - 125

**Lab Sample ID: 500-130274-4 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 391501**

**Client Sample ID: MW-1 (010)**  
**Prep Type: Dissolved**  
**Prep Batch: 391326**  
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.098		1.00	1.09		ug/L		109	75 - 125	6	20

**Lab Sample ID: 500-130274-4 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 391501**

**Client Sample ID: MW-1 (010)**  
**Prep Type: Dissolved**  
**Prep Batch: 391326**  
 RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	<0.098		<0.098		ug/L		NC	20

## Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-130274-1**

Date Collected: 06/27/17 10:15

Matrix: Ground Water

Date Received: 06/28/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 16:59	PMF	TAL CHI
Total/NA	Prep	3510C			391283	06/29/17 08:54	LMC	TAL CHI
Total/NA	Analysis	8270D		1	391378	06/30/17 00:02	GES	TAL CHI
Dissolved	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Dissolved	Analysis	6020		1	391703	06/30/17 14:08	PFK	TAL CHI
Total Recoverable	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Total Recoverable	Analysis	6020		1	391703	06/30/17 14:05	PFK	TAL CHI
Dissolved	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Dissolved	Analysis	7470A		1	391501	06/30/17 10:57	MJD	TAL CHI
Total/NA	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Total/NA	Analysis	7470A		1	391501	06/30/17 10:55	MJD	TAL CHI

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-130274-2**

Date Collected: 06/27/17 11:25

Matrix: Ground Water

Date Received: 06/28/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 17:28	PMF	TAL CHI
Total/NA	Prep	3510C			391283	06/29/17 08:54	LMC	TAL CHI
Total/NA	Analysis	8270D		1	391378	06/30/17 00:30	GES	TAL CHI
Dissolved	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Dissolved	Analysis	6020		1	391703	06/30/17 14:16	PFK	TAL CHI
Total Recoverable	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Total Recoverable	Analysis	6020		1	391703	06/30/17 14:12	PFK	TAL CHI
Dissolved	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Dissolved	Analysis	7470A		1	391501	06/30/17 11:00	MJD	TAL CHI
Total/NA	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Total/NA	Analysis	7470A		1	391501	06/30/17 10:59	MJD	TAL CHI

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-130274-3**

Date Collected: 06/27/17 12:00

Matrix: Ground Water

Date Received: 06/28/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 17:58	PMF	TAL CHI
Total/NA	Prep	3510C			391283	06/29/17 08:54	LMC	TAL CHI
Total/NA	Analysis	8270D		1	391378	06/30/17 00:57	GES	TAL CHI
Dissolved	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Dissolved	Analysis	6020		1	391703	06/30/17 14:23	PFK	TAL CHI
Total Recoverable	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Total Recoverable	Analysis	6020		1	391703	06/30/17 14:20	PFK	TAL CHI
Dissolved	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Dissolved	Analysis	7470A		1	391501	06/30/17 11:06	MJD	TAL CHI

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# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

## Client Sample ID: MW-2 (020)

Date Collected: 06/27/17 12:00  
Date Received: 06/28/17 10:10

## Lab Sample ID: 500-130274-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Total/NA	Analysis	7470A		1	391501	06/30/17 11:05	MJD	TAL CHI

## Client Sample ID: MW-1 (010)

Date Collected: 06/27/17 12:35  
Date Received: 06/28/17 10:10

## Lab Sample ID: 500-130274-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 18:27	PMF	TAL CHI
Total/NA	Prep	3510C			391283	06/29/17 08:54	LMC	TAL CHI
Total/NA	Analysis	8270D		1	391378	06/30/17 01:24	GES	TAL CHI
Dissolved	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Dissolved	Analysis	6020		1	391703	06/30/17 14:31	PFK	TAL CHI
Total Recoverable	Prep	3005A			391275	06/29/17 08:04	JEF	TAL CHI
Total Recoverable	Analysis	6020		1	391703	06/30/17 14:27	PFK	TAL CHI
Dissolved	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Dissolved	Analysis	7470A		1	391501	06/30/17 11:09	MJD	TAL CHI
Total/NA	Prep	7470A			391326	06/29/17 11:15	MJD	TAL CHI
Total/NA	Analysis	7470A		1	391501	06/30/17 11:08	MJD	TAL CHI

## Client Sample ID: Field Blank (997)

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

## Lab Sample ID: 500-130274-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 14:00	PMF	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

## Lab Sample ID: 500-130274-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	392163	07/07/17 12:30	PMF	TAL CHI

**Laboratory References:**

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

## Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-1

### Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17 *

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

TestAmerica Chicago

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.8200 Fax: 708.534.8211

Report To (optional)  
Contact: Mike Ruhl  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: Bruce Olson  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-130274

Chain of Custody Number: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Temperature °C of Cooler: 13 → 28

Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Parameter	Preservative	Comments
			Date	Time					
1		MW-9 (080)	6/27/17	10:15	7	GW	X	X	Preservative Key 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
2		MW-3 (030)		11:25			X	X	
3		MW-2 (020)		12:00			X	X	
4		MW-1 (010)		12:35			X	X	
5		Field Blank (497)			2	-			
6		Tr-p Blank			1	-			
7		North 1	6/27/17	-	7	S	X	X	
8		North 3		-					
9		North 7		-					

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other \_\_\_\_\_  
 Requested Due Date: \_\_\_\_\_

Relinquished By: <u>Mike Ruhl</u> Company: <u>SEH</u> Date: <u>6/27/17</u> Time: <u>4:00</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>06/28/17</u> Time: <u>10:10</u>	Lab Courier: <input checked="" type="checkbox"/>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Shipped: <input checked="" type="checkbox"/>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: <input type="checkbox"/>

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments: \_\_\_\_\_

Lab Comments:   
500-130274 COC

14

## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-130274-1

**Login Number: 130274**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Kelsey, Shawn M**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	2.8c
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

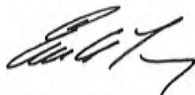
TestAmerica Job ID: 500-130274-2

Client Project/Site: Stresau Lab

For:

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:

6/30/2017 1:02:35 PM

Eric Lang, Manager of Project Management  
(708)534-5200

[eric.lang@testamericainc.com](mailto:eric.lang@testamericainc.com)

Designee for

Sandie Fredrick, Project Manager II  
(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)



### LINKS

Review your project results through

**Total Access**

Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

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**Job ID: 500-130274-2**

---

**Laboratory: TestAmerica Chicago**

**Narrative**

---

**Job Narrative**  
**500-130274-2**

**Comments**

No additional comments.

**Receipt**

The samples were received on 6/28/2017 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

**Metals**

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

## Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

### Client Sample ID: North 1

### Lab Sample ID: 500-130274-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	38		1.0	0.12	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13	J	0.21	0.037	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.7		1.0	0.51	mg/Kg	1	☼	6010B	Total/NA
Lead	17	B	0.51	0.24	mg/Kg	1	☼	6010B	Total/NA
Zinc	23	B	2.1	0.90	mg/Kg	1	☼	6010B	Total/NA

### Client Sample ID: North 3

### Lab Sample ID: 500-130274-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	33		1.2	0.14	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.093	J	0.24	0.044	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.4		1.2	0.60	mg/Kg	1	☼	6010B	Total/NA
Lead	2.4	B	0.61	0.28	mg/Kg	1	☼	6010B	Total/NA
Zinc	13	B	2.4	1.1	mg/Kg	1	☼	6010B	Total/NA

### Client Sample ID: North 7

### Lab Sample ID: 500-130274-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	19	V	1.0	0.11	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16	J	0.20	0.036	mg/Kg	1	☼	6010B	Total/NA
Chromium	5.8		1.0	0.49	mg/Kg	1	☼	6010B	Total/NA
Lead	78	B V	0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Zinc	87	B V	2.0	0.88	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

---

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI

---

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

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

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# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

---

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Matrix</b>	<b>Collected</b>	<b>Received</b>
500-130274-7	North 1	Solid	06/27/17 00:00	06/28/17 10:10
500-130274-8	North 3	Solid	06/27/17 00:00	06/28/17 10:10
500-130274-9	North 7	Solid	06/27/17 00:00	06/28/17 10:10

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

**Client Sample ID: North 1**

**Date Collected: 06/27/17 00:00**

**Date Received: 06/28/17 10:10**

**Lab Sample ID: 500-130274-7**

**Matrix: Solid**

**Percent Solids: 88.1**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	38		1.0	0.12	mg/Kg	⊗	06/29/17 09:26	06/29/17 20:05	1
Cadmium	0.13	J	0.21	0.037	mg/Kg	⊗	06/29/17 09:26	06/29/17 20:05	1
Chromium	6.7		1.0	0.51	mg/Kg	⊗	06/29/17 09:26	06/29/17 20:05	1
Lead	17	B	0.51	0.24	mg/Kg	⊗	06/29/17 09:26	06/29/17 20:05	1
Zinc	23	B	2.1	0.90	mg/Kg	⊗	06/29/17 09:26	06/29/17 20:05	1

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## Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

**Client Sample ID: North 3**

**Lab Sample ID: 500-130274-8**

Date Collected: 06/27/17 00:00

Matrix: Solid

Date Received: 06/28/17 10:10

Percent Solids: 81.4

Method: 6010B - Metals (ICP)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Barium	33		1.2	0.14	mg/Kg	☼	06/29/17 09:26	06/29/17 20:08	1	
Cadmium	0.093	J	0.24	0.044	mg/Kg	☼	06/29/17 09:26	06/29/17 20:08	1	
Chromium	6.4		1.2	0.60	mg/Kg	☼	06/29/17 09:26	06/29/17 20:08	1	
Lead	2.4	B	0.61	0.28	mg/Kg	☼	06/29/17 09:26	06/29/17 20:08	1	
Zinc	13	B	2.4	1.1	mg/Kg	☼	06/29/17 09:26	06/29/17 20:08	1	

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

**Client Sample ID: North 7**

Date Collected: 06/27/17 00:00

Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-9**

Matrix: Solid

Percent Solids: 79.1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	19	V	1.0	0.11	mg/Kg	*	06/29/17 09:26	06/29/17 20:12	1
Cadmium	0.16	J	0.20	0.036	mg/Kg	*	06/29/17 09:26	06/29/17 20:12	1
Chromium	5.8		1.0	0.49	mg/Kg	*	06/29/17 09:26	06/29/17 20:12	1
Lead	78	B V	0.50	0.23	mg/Kg	*	06/29/17 09:26	06/29/17 20:12	1
Zinc	87	B V	2.0	0.88	mg/Kg	*	06/29/17 09:26	06/29/17 20:12	1

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## Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
V	Serial Dilution exceeds the control limits
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
$\alpha$	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)

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## QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

### Metals

#### Prep Batch: 391289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-7	North 1	Total/NA	Solid	3050B	
500-130274-8	North 3	Total/NA	Solid	3050B	
500-130274-9	North 7	Total/NA	Solid	3050B	
MB 500-391289/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-391289/2-A	Lab Control Sample	Total/NA	Solid	3050B	
500-130274-9 MS	North 7	Total/NA	Solid	3050B	
500-130274-9 MSD	North 7	Total/NA	Solid	3050B	
500-130274-9 DU	North 7	Total/NA	Solid	3050B	

#### Analysis Batch: 391452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-7	North 1	Total/NA	Solid	6010B	391289
500-130274-8	North 3	Total/NA	Solid	6010B	391289
500-130274-9	North 7	Total/NA	Solid	6010B	391289
MB 500-391289/1-A	Method Blank	Total/NA	Solid	6010B	391289
LCS 500-391289/2-A	Lab Control Sample	Total/NA	Solid	6010B	391289
500-130274-9 MS	North 7	Total/NA	Solid	6010B	391289
500-130274-9 MSD	North 7	Total/NA	Solid	6010B	391289
500-130274-9 DU	North 7	Total/NA	Solid	6010B	391289

### General Chemistry

#### Analysis Batch: 391178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-130274-7	North 1	Total/NA	Solid	Moisture	
500-130274-8	North 3	Total/NA	Solid	Moisture	
500-130274-9	North 7	Total/NA	Solid	Moisture	

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-391289/1-A**  
**Matrix: Solid**  
**Analysis Batch: 391452**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 391289**

Analyte	Result	MB MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.11		1.0	0.11	mg/Kg		06/29/17 09:26	06/29/17 18:45	1
Cadmium	<0.036		0.20	0.036	mg/Kg		06/29/17 09:26	06/29/17 18:45	1
Chromium	<0.50		1.0	0.50	mg/Kg		06/29/17 09:26	06/29/17 18:45	1
Lead	0.264	J	0.50	0.23	mg/Kg		06/29/17 09:26	06/29/17 18:45	1
Zinc	1.55	J	2.0	0.88	mg/Kg		06/29/17 09:26	06/29/17 18:45	1

**Lab Sample ID: LCS 500-391289/2-A**  
**Matrix: Solid**  
**Analysis Batch: 391452**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 391289**  
**%Rec.**

Analyte	Spike Added	LCS LCS Result Qualifier	Unit	D	%Rec	Limits
Barium	200	192	mg/Kg		96	80 - 120
Cadmium	5.00	4.67	mg/Kg		93	80 - 120
Chromium	20.0	18.6	mg/Kg		93	80 - 120
Lead	10.0	9.54	mg/Kg		95	80 - 120
Zinc	50.0	49.3	mg/Kg		99	80 - 120

**Lab Sample ID: 500-130274-9 MS**  
**Matrix: Solid**  
**Analysis Batch: 391452**

**Client Sample ID: North 7**  
**Prep Type: Total/NA**  
**Prep Batch: 391289**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS Result Qualifier	Unit	D	%Rec	Limits
Barium	19	V	229	239	mg/Kg	☼	96	75 - 125
Cadmium	0.16	J	5.74	5.34	mg/Kg	☼	90	75 - 125
Chromium	5.8		22.9	26.4	mg/Kg	☼	90	75 - 125
Lead	78	B V	11.5	87.3 4	mg/Kg	☼	83	75 - 125
Zinc	87	B V	57.4	142	mg/Kg	☼	96	75 - 125

**Lab Sample ID: 500-130274-9 MSD**  
**Matrix: Solid**  
**Analysis Batch: 391452**

**Client Sample ID: North 7**  
**Prep Type: Total/NA**  
**Prep Batch: 391289**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	19	V	252	261	mg/Kg	☼	96	75 - 125	9	20
Cadmium	0.16	J	6.30	5.86	mg/Kg	☼	90	75 - 125	9	20
Chromium	5.8		25.2	29.9	mg/Kg	☼	96	75 - 125	12	20
Lead	78	B V	12.6	91.2 4	mg/Kg	☼	107	75 - 125	4	20
Zinc	87	B V	63.0	145	mg/Kg	☼	92	75 - 125	2	20

**Lab Sample ID: 500-130274-9 DU**  
**Matrix: Solid**  
**Analysis Batch: 391452**

**Client Sample ID: North 7**  
**Prep Type: Total/NA**  
**Prep Batch: 391289**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	DU DU Result Qualifier	Unit	D	RPD	Limit
Barium	19	V	17.5	mg/Kg	☼	8	20
Cadmium	0.16	J	0.153 J	mg/Kg	☼	7	20
Chromium	5.8		8.13 F3	mg/Kg	☼	33	20
Lead	78	B V	77.2	mg/Kg	☼	0.7	20
Zinc	87	B V	83.8	mg/Kg	☼	4	20

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

**Client Sample ID: North 1**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-7**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	391178	06/28/17 13:31	LWN	TAL CHI

**Client Sample ID: North 1**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-7**

Matrix: Solid  
Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			391289	06/29/17 09:26	AAP	TAL CHI
Total/NA	Analysis	6010B		1	391452	06/29/17 20:05	KML	TAL CHI

**Client Sample ID: North 3**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-8**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	391178	06/28/17 13:31	LWN	TAL CHI

**Client Sample ID: North 3**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-8**

Matrix: Solid  
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			391289	06/29/17 09:26	AAP	TAL CHI
Total/NA	Analysis	6010B		1	391452	06/29/17 20:08	KML	TAL CHI

**Client Sample ID: North 7**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-9**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	391178	06/28/17 13:31	LWN	TAL CHI

**Client Sample ID: North 7**

Date Collected: 06/27/17 00:00  
Date Received: 06/28/17 10:10

**Lab Sample ID: 500-130274-9**

Matrix: Solid  
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			391289	06/29/17 09:26	AAP	TAL CHI
Total/NA	Analysis	6010B		1	391452	06/29/17 20:12	KML	TAL CHI

**Laboratory References:**

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

## Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Lab

TestAmerica Job ID: 500-130274-2

### Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17 *

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: Mike Rahlke  
 Company: SEH  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: Bruce Olson  
 Company: SEH  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-130274  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: 13 → 28

Client		Client Project #		Preservative		Parameter		Comments	
<u>SEH</u>									
Project Name		Lab Project #		# of Containers		Matrix		Preservative Key	
<u>Stregan Lab</u>								1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Location/State		Lab PM		Date		Time		Matrix	
<u>Trego WI</u>		<u>SF</u>							
Sampler		Sample ID		Date		Time		Matrix	
<u>MFR</u>									
Lab ID	MSMSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix
<u>1</u>		<u>MW-9 (080)</u>	<u>6/27/17</u>	<u>10:15</u>	<u>7</u>	<u>GW</u>	<u>VOC 8260</u>	<u>PAH 8310</u>	<u>Total Metals (Barium, Cadmium, Lead, Chromium, Copper, Mercury, Nickel, Silver, Zinc)</u>
<u>2</u>		<u>MW-3 (030)</u>		<u>11:25</u>					
<u>3</u>		<u>MW-2 (020)</u>		<u>12:00</u>					
<u>4</u>		<u>MW-1 (010)</u>		<u>12:35</u>					
<u>5</u>		<u>Field Blank (497)</u>			<u>2</u>	<u>-</u>			
<u>6</u>		<u>Tr-p Blank</u>			<u>1</u>	<u>-</u>			
<u>7</u>		<u>North 1</u>	<u>6/27/17</u>	<u>-</u>	<u>1</u>	<u>S</u>			
<u>8</u>		<u>North 3</u>		<u>-</u>					
<u>9</u>		<u>North 7</u>		<u>-</u>					

Turnaround Time Required (Business Days) \_\_\_\_\_  
 Requested Due Date \_\_\_\_\_  
 Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Mike Rahlke</u>	Company: <u>SEH</u>	Date: <u>6/27/17</u>	Time: <u>4:00</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>06/28/17</u>	Time: <u>1010</u>	Lab Courier: <input checked="" type="checkbox"/>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____	Shipped: <input checked="" type="checkbox"/>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____	Hand Delivered: <input type="checkbox"/>

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipa  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments: \_\_\_\_\_

Lab Comments:   
 500-130274 COC

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## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-130274-2

Login Number: 130274

List Number: 1

Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	2.8c
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 $< 6$ mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Appendix C

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005

**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
North-1	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
North-2	5-2-95	31	0.9	4	7	41	6	ND	17
North-3	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
North-4	5-2-95	69	2	4	8	30	6	ND	37
North-5	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
North-6	5-2-95	39	ND	3	7	ND	5	ND	23
North-7	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
Back-SW	5-1-95	34	ND	3	ND	ND	4	ND	14
Back-SE	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
Industrial		NE	510	200	NE	500	NE	NE	NE

Notes:  
 ppm = parts per million  
 ND = not detected  
 NE = not established  
 \* Based on human health risk from direct contact  
 Surface samples collected from the top 3 inches of soil

Stresau Laboratory, Inc.  
Spooner, Wisconsin

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TABLE 2  
WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
TU:											
MW-1	Total	6-27-95	39	0.2	5	50	1		ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2		ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND		ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND		ND	ND	43
	Total	8-15-96	120	ND	26	150	8		ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8		ND	ND	ND
	Total	8-6-98	53	ND	10	52	4		15	0.2	26
	Total	8-11-99	30	ND	ND	30	1		ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6		ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND	5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND	1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND	2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND	ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND	7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2		ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2		ND	20	120
	Total	8-8-95	ND	ND	ND	10	ND		ND	ND	30
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	ND
	Total	8-15-96	50	ND	11	40	3		ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7		ND	0.2	ND
	Total	8-6-98	26	ND	ND	18	4		ND	ND	20
	Total	8-11-99	10	ND	ND	ND	0.4		ND	ND	ND
	Total	8-24-00	10	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND	2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND	0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND	1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND	ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND	1.5	ND	24

Stresau Laboratory, Inc.  
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TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.5	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1	
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15	
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

PAF - ND 140 Decontamination Action Limit (6.03)

TABLE 3  
WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
		9-4-03	VOCs	ND	
			Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
			11-3-03	1-Methylnaphthalene	0.034
		11-3-03	2-Methylnaphthalene	0.043	NE
			Naphthalene	0.060	8
		8-18-04	PAHs, VOCs	ND	
		11-3-04	2-Methylnaphthalene	0.014	NE
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8

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TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
<i>Background</i>	<i>MW-8</i>	<i>8-13-02</i>	<i>VOCs</i>	<i>ND</i>	
			<i>Naphthalene</i>	<i>0.039</i>	<i>8</i>
		<i>9-4-03</i>	<i>PAHs, VOCs</i>	<i>ND</i>	
		<i>8-18-04</i>	<i>PAHs, VOCs</i>	<i>ND</i>	
		<i>11-3-05</i>	<i>PAHs, VOCs</i>	<i>ND</i>	

Notes: ppb = parts per billion  
ND = not detected  
VOCs = volatile organic compounds  
PAL = NR 140 Preventive Action Limit (2-04)  
NE = not established  
PAHs = polynuclear aromatic hydrocarbons

**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes: ppb = parts per billion  
 VOCs = volatile organic compounds  
 ND = not detected



**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	-
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
06/28/16	Depth to Water	38.70	36.76	36.28	35.92
	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52
06/27/17	Depth to Water	38.40	36.52	38.03	38.02
	Groundwater Elevation	1017.41	1017.34	1015.25	1016.42

Notes:

<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary,

GME Consultants, Inc. Project No. D-1596C, September 29, 1995

<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation

Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005

Compiled by: BKO Checked by: MJR June 2015 Data Compiled by: MFR Checked by: BKO

June 2010 Data Compiled by: BKO Checked by: MFR June 2016 Data Compiled by: MFR Checked by: BKO

June 2014 Data Compiled by: MS Checked by: BKO June 2017 Data Compiled by: MFR Checked by: BKO

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Building a Better World  
for All of Us®

July 2, 2018

RE: Stresau Laboratory, Inc.  
2018 Groundwater Sampling Event  
SEH No. STRES 146641 1.0

Ms. Barbara Coulter, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Ms. Coulter:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring and soil sampling event conducted on May 29, 2018. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements.

Lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Preventative Action Limit (PAL) concentration. Although the concentration of lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Stresau anticipates analyzing groundwater samples for both total and dissolved metals until an alternate sampling protocol is agreed to with the WDNR.

## GROUNDWATER MONITORING

On May 29, 2018, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities

Engineers | Architects | Planners | Scientists

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included pH, temperature and conductivity.

Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Test America Analytical Testing Corporation using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8310, and the following dissolved and total metals by EPA method 6020: barium, cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

## RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the May 29, 2018 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected on May 29, 2018 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (thirteen annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, no PAHs were detected in groundwater samples collected in May 2018 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in May 2018 at all monitoring wells were generally consistent with historical concentrations. Total lead concentrations appear generally stable or decreasing in MW-1, MW-2, and MW-3.

The groundwater sample collected from monitoring well MW-1 indicated a PAL exceedance for total Lead at a concentration of 7.8 ug/l; however, the detected concentration has declined from 21 ug/l in the groundwater sample collected during the June 2010 monitoring event.

Multiple dissolved metals were detected in each of the groundwater samples collected in May 2018; however, the detected concentrations of dissolved metals were generally consistent with concentrations detected since 2011 and were well below their respective PAL concentration standards.

Dissolved lead was not detected in groundwater samples collected from any of the monitoring wells.

The laboratory analytical report for the May 2018 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

## DISCUSSION

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs were detected in 2018. Lead and other inorganic compounds

Ms. Barbara Coulter  
July 2, 2018  
Page 3

continue to be detected in each of the wells sampled, including MW-8 which is a background well. This indicates inorganic compounds are naturally occurring.

SEH does not believe additional actions or sampling, other than continued close monitoring of the operations and physical site setting near the TTU, are warranted at this time for the following primary reasons:

- No PAHs have been detected in samples collected from the monitoring wells during annual sampling events conducted since the June 2014 monitoring events.
- The total lead concentration in the samples collected from MW-1 have decreased since SEH began sampling in 2006.
- The concentrations of detected dissolved metals in samples collected from all four wells in 2018 were well below their respective PAL concentrations.

The next groundwater monitoring and soil sampling event is scheduled to occur in June 2019. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Bruce K. Olson, PE  
Project Manager

MFR/lb/BKO

c:Mr. John Morris, WDNR

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**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
06/28/16	Depth to Water	38.70	36.76	36.28	35.92
	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52
06/27/17	Depth to Water	38.40	36.52	38.03	38.02
	Groundwater Elevation	1017.41	1017.34	1015.25	1016.42
05/29/18	Depth to Water	39.24	37.37	36.81	37.02
	Groundwater Elevation	1016.57	1016.49	1016.47	1017.42

Notes:  
<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995  
<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005  
 Compiled by:   BKO   Checked by:   MJR   June 2015 Data Compiled by:   MFR   Checked by:   BKO    
 June 2010 Data Compiled by:   BKO   Checked by:   MFR   June 2016-18 Data Compiled by:   MFR   Checked by:   BKO    
 June 2014 Data Compiled by:   MS   Checked by:   BKO  

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Table 2  
Monitoring Well Groundwater Total Inorganics Analytical Results

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																																			
				MW-1												MW-2																							
				ES	PAL	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	7/27/10	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/28/16	6/27/17	5/29/18	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18							
<b>Inorganics</b> (µg/l)																																							
Barium	7440-39-3	2000	400																																				
Cadmium	7440-43-9	5	0.5	<0.14	<0.14									<0.15	<0.19	<0.19																							
Chromium	7440-47-3	100	10																																				
Copper	7440-50-8	1300	130	<18																																			
Lead	7439-92-1	15	1.5	<0.44																																			
Mercury	7439-97-6	2	0.2	<0.065	<0.065	<0.065	<0.065	<0.065																															
Nickel	7440-02-0	100	20	<4.0																																			
Silver	7440-22-4	50	10	<1.3	<1.3			<0.61																															
Zinc	7440-66-6	5000	2500	<2.8	2																																		

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																																		
				MW-3												MW-8																						
				ES	PAL	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18	8/24/06	8/16/07	5/5/08	5/21/09	6/24/10	6/29/11	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18							
<b>Inorganics</b> (µg/l)																																						
Barium	7440-39-3	2000	400																																			
Cadmium	7440-43-9	5	0.5	<0.14	<0.14	<0.12	<0.12	<0.12	<0.12	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.17	<0.14	<0.14	<0.12	<0.12	<0.12	<0.12	<0.10			<0.15		<0.19	<0.17									
Chromium	7440-47-3	100	10	<2.1																																		
Copper	7440-50-8	1300	130	<18	<18																																	
Lead	7439-92-1	15	1.5	<0.44																																		
Mercury	7439-97-6	2	0.2	<0.065	<0.065	<0.065	<0.065	<0.065	<0.051	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.065	<0.065	<0.065	<0.065	<0.065	<0.051	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098									
Nickel	7440-02-0	100	20	<4.0	<4.0																																	
Silver	7440-22-4	50	10	<1.3	<1.3			<0.12	<0.61	<0.11	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<1.3	<1.3			<0.12	<0.61	<0.11	<0.069	<0.12	<0.062	<0.080	0.093	<0.12	<0.12							
Zinc	7440-66-6	5000	2500	<2.8										<4.6																								

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)

Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)

Shaded = Parameter detected above laboratory limit of detection

Compiled by: BKO Checked by: MFR 2016-18 Data Compiled by: MFR Checked by: BKO

**Table 3  
Monitoring Well Groundwater Dissolved Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date														
				MW-1							MW-2							
				ES	PAL	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/28/16	6/27/17	5/29/18	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16
<b>Dissolved Inorganics (µg/l)</b>																		
Barium	7440-39-3	2000	400															
Cadmium	7440-43-9	5	0.5	<0.12	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.17	<0.10	<0.10	<0.15	<0.19	0.19	<0.17	<0.17
Chromium	7440-47-3	100	10							<1.1	<1.1						<1.1	<1.1
Copper	7440-50-8	1300	130									<0.57			<0.96		<0.50	
Lead	7439-92-1	15	1.5	<0.13	<0.16	<0.15	<0.091			<0.19	<0.19	<0.16	<0.15		<0.14		<0.19	<0.19
Mercury	7439-97-6	2	0.2	<0.070	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098
Nickel	7440-02-0	100	20		<0.52		<0.69	<0.53		<0.63	<0.63	<0.52		<0.69	<0.53		<0.63	<0.63
Silver	7440-22-4	50	10	<0.11	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12
Zinc	7440-66-6	5000	2500	<3.0	<6.3			<4.6		<6.9	<6.9	<6.3		<5.9	<4.6		<6.9	<6.9

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date														
				MW-3						MW-8								
				ES	PAL	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17
<b>Dissolved Inorganics (µg/l)</b>																		
Barium	7440-39-3	2000	400															
Cadmium	7440-43-9	5	0.5	<0.10	<0.10	<0.15	0.36	<0.19	<0.17	<0.17	<0.17	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.17
Chromium	7440-47-3	100	10							<0.61			<0.63	<0.61			<1.1	<1.1
Copper	7440-50-8	1300	130															
Lead	7439-92-1	15	1.5	<0.16	<0.15	<0.091	<0.14			<0.19	<0.19			<0.14			<0.19	<0.19
Mercury	7439-97-6	2	0.2	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098
Nickel	7440-02-0	100	20	<0.52		<0.69				<0.63	<0.63			<0.69	<0.53		<0.63	
Silver	7440-22-4	50	10	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12
Zinc	7440-66-6	5000	2500	<6.3		<5.9				<6.9	<6.9			<5.9	<4.6			<6.9

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)  
Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)  
 Shaded = Parameter detected above laboratory limit of detection  
 Compiled by: BKO Checked by: MFR

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**Table 4  
Soil Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 720 RCLs in Soil	Sample Name/Sample Date																												
			North-1 (0-3 inches)														North-3 (0-3 inches)														
			5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/12/13	6/18/15	6/27/17	5/2/95	8/15/96	7/31/97	8/6/98	8/11/99	8/24/00	6/18/01	9/4/03	11/3/05	8/16/07	5/21/09	6/29/11	6/18/15	6/27/17
<b>Inorganics (mg/kg)</b>																															
Barium	7440-39-3	100,000	44	33	34	46	29	28	34	47	36	31	33	32	40	34	38	86	56	68	120	72	86	33	39	27	54	37	32	38	33
Cadmium	7440-43-9	799	ND	NS	NS	NS	ND	ND	0.081	0.11	0.06	0.18	0.24	<0.024	0.14	<0.059	0.13	1	NS	NS	NS	ND	ND	0.081	0.072	ND	0.28	0.30	<0.024	<0.057	0.093
Chromium	7440-47-3	NSE	5	NS	NS	NS	4	3	7.5	7.7	9.5	4.6	6.4	6.4	6.6	11	6.7	6	NS	NS	NS	5	2	5.1	7.4	7.1	4.5	5.1	5.8	7.2	6.4
Lead	7439-92-1	800	52	ND	8	9	ND	11	3	7.2	32	28	19	21	16	36	17	233	ND	10	19	23	41	3	4.6	2.5	14	4.4	4.4	2.6	2.4
Zinc	7440-66-6	100,000	33	ND	13	23	11	7	17	21	27	15	23	20	17	25	23	980	ND	25	44	37	80	17	18	13	19	16	15	15	13
<b>Inorganics (mg/kg)</b>																															
Barium	7440-39-3	100,000	28	20	23	31	16	16	16	15	15	14	19																		
Cadmium	7440-43-9	799	ND	ND	0.053	0.07	ND	0.12	<0.12	0.06	0.15	0.098	0.16																		
Chromium	7440-47-3	NSE	3	1	4.6	7.1	7.4	4.3	5.7	4.6	5.4	5.7	5.8																		
Lead	7439-92-1	800	ND	ND	4.6	4.2	13	77	18	150	120	100	78																		
Zinc	7440-66-6	100,000	11	5	17	18	32	26	32	60	54	240	87																		
Data prior to 8/16/07 from Table 1: Soil Chemistry Results-Metals From Annual Monitoring Report for the TTU and North Site Report (GME Consultants, Inc., December 15, 2005)																															
NR 720 Residual Contaminant Level (RCL) for industrial sites based on human health risk from direct contact																															
NSE = No standard established																															
ND = Not detected																															
NS = No sample result reported																															
Compiled by: <u>BKO</u> Checked by: <u>MFR</u>																															

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## Appendix A

### GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005



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## Appendix B

May 2018 Analytical Report

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-146212-1  
Client Project/Site: Stresau Labs - 142723

For:  
Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
6/12/2018 2:55:12 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Job ID: 500-146212-1**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative  
500-146212-1**

### Comments

No additional comments.

### Receipt

The samples were received on 5/31/2018 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) for analytical batch 435544 recovered outside control limits for the following analytes: Dichlorodifluoromethane and Trichlorofluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data has been reported. MW-8 (500-146212-1), MW-3 (500-146212-2), MW-2 (500-146212-3), MW-1 (500-146212-4), Field Blank (500-146212-5) and Trip Blank (500-146212-6)

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

### GC/MS Semi VOA

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

### Metals

Method(s) 6020: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: MW-8 (500-146212-1), MW-2 (500-146212-3) and MW-1 (500-146212-4).

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

### Field Service / Mobile Lab

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

### Organic Prep

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



# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Client Sample ID: MW-8

## Lab Sample ID: 500-146212-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	83		5.0	1.5	ug/L	2		6020	Total
Cadmium	0.20	J	0.50	0.17	ug/L	1		6020	Recoverable Total
Chromium	12		10	2.3	ug/L	2		6020	Recoverable Total
Copper	42		2.0	0.50	ug/L	1		6020	Recoverable Total
Lead	3.7		0.50	0.19	ug/L	1		6020	Recoverable Total
Nickel	15		4.0	1.3	ug/L	2		6020	Recoverable Total
Zinc	31		20	6.9	ug/L	1		6020	Recoverable Total
Barium	6.9		2.5	0.73	ug/L	1		6020	Dissolved
Copper	1.7	J	2.0	0.50	ug/L	1		6020	Dissolved
Nickel	0.93	J	2.0	0.63	ug/L	1		6020	Dissolved

## Client Sample ID: MW-3

## Lab Sample ID: 500-146212-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	25		2.5	0.73	ug/L	1		6020	Total
Chromium	4.1	J	5.0	1.1	ug/L	1		6020	Recoverable Total
Copper	21		2.0	0.50	ug/L	1		6020	Recoverable Total
Lead	1.2		0.50	0.19	ug/L	1		6020	Recoverable Total
Nickel	3.8		2.0	0.63	ug/L	1		6020	Recoverable Total
Zinc	14	J	20	6.9	ug/L	1		6020	Recoverable Total
Barium	9.7		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.89	J	2.0	0.50	ug/L	1		6020	Dissolved

## Client Sample ID: MW-2

## Lab Sample ID: 500-146212-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	50		2.5	0.73	ug/L	1		6020	Total
Chromium	9.6	J	10	2.3	ug/L	2		6020	Recoverable Total
Copper	41		2.0	0.50	ug/L	1		6020	Recoverable Total
Lead	2.5		0.50	0.19	ug/L	1		6020	Recoverable Total
Nickel	11		4.0	1.3	ug/L	2		6020	Recoverable Total
Zinc	20		20	6.9	ug/L	1		6020	Recoverable Total
Barium	11		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.77	J	2.0	0.50	ug/L	1		6020	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Client Sample ID: MW-1

## Lab Sample ID: 500-146212-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	79		2.5	0.73	ug/L	1		6020	Total
Cadmium	0.26	J	0.50	0.17	ug/L	1		6020	Recoverable Total
Chromium	15		10	2.3	ug/L	2		6020	Recoverable Total
Copper	78		2.0	0.50	ug/L	1		6020	Recoverable Total
Lead	7.8		0.50	0.19	ug/L	1		6020	Recoverable Total
Nickel	18		4.0	1.3	ug/L	2		6020	Recoverable Total
Zinc	35		20	6.9	ug/L	1		6020	Recoverable Total
Barium	10		2.5	0.73	ug/L	1		6020	Dissolved
Copper	1.0	J	2.0	0.50	ug/L	1		6020	Dissolved

## Client Sample ID: Field Blank

## Lab Sample ID: 500-146212-5

No Detections.

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-146212-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI
7470A	Preparation, Mercury	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 = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-146212-1	MW-8	Ground Water	05/29/18 10:50	05/31/18 09:50
500-146212-2	MW-3	Ground Water	05/29/18 11:40	05/31/18 09:50
500-146212-3	MW-2	Ground Water	05/29/18 12:25	05/31/18 09:50
500-146212-4	MW-1	Ground Water	05/29/18 12:45	05/31/18 09:50
500-146212-5	Field Blank	Water	05/29/18 11:10	05/31/18 09:50
500-146212-6	Trip Blank	Water	05/29/18 00:00	05/31/18 09:50

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

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-8**  
**Date Collected: 05/29/18 10:50**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-1**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 16:32	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 16:32	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 16:32	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 16:32	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 16:32	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 16:32	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 16:32	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 16:32	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 16:32	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 16:32	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 16:32	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 16:32	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 16:32	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:32	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 16:32	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 16:32	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 16:32	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 16:32	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 16:32	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 16:32	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 16:32	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 16:32	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 16:32	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 16:32	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 16:32	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 16:32	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 16:32	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 16:32	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 16:32	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 16:32	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 16:32	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 16:32	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 16:32	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 16:32	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 16:32	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 16:32	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 16:32	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-146212-1**

**Date Collected: 05/29/18 10:50**

**Matrix: Ground Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:32	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 16:32	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:32	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 16:32	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 16:32	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 16:32	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 16:32	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 16:32	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 16:32	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 16:32	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 16:32	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	104		75 - 126					06/06/18 16:32	1
4-Bromofluorobenzene (Surr)	86		72 - 124					06/06/18 16:32	1
Dibromofluoromethane	100		75 - 120					06/06/18 16:32	1
Toluene-d8 (Surr)	86		75 - 120					06/06/18 16:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/01/18 09:11	06/01/18 20:08	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		06/01/18 09:11	06/01/18 20:08	1
Acenaphthene	<0.24		0.76	0.24	ug/L		06/01/18 09:11	06/01/18 20:08	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		06/01/18 09:11	06/01/18 20:08	1
Anthracene	<0.25		0.76	0.25	ug/L		06/01/18 09:11	06/01/18 20:08	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/01/18 09:11	06/01/18 20:08	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		06/01/18 09:11	06/01/18 20:08	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		06/01/18 09:11	06/01/18 20:08	1
Benzo[g,h,i]perylene	<0.29		0.76	0.29	ug/L		06/01/18 09:11	06/01/18 20:08	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/01/18 09:11	06/01/18 20:08	1
Chrysene	<0.052		0.15	0.052	ug/L		06/01/18 09:11	06/01/18 20:08	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/01/18 09:11	06/01/18 20:08	1
Fluoranthene	<0.35		0.76	0.35	ug/L		06/01/18 09:11	06/01/18 20:08	1
Fluorene	<0.19		0.76	0.19	ug/L		06/01/18 09:11	06/01/18 20:08	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		06/01/18 09:11	06/01/18 20:08	1
Naphthalene	<0.24		0.76	0.24	ug/L		06/01/18 09:11	06/01/18 20:08	1
Phenanthrene	<0.23		0.76	0.23	ug/L		06/01/18 09:11	06/01/18 20:08	1
Pyrene	<0.33		0.76	0.33	ug/L		06/01/18 09:11	06/01/18 20:08	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	88		34 - 110				06/01/18 09:11	06/01/18 20:08	1
Nitrobenzene-d5 (Surr)	100		36 - 120				06/01/18 09:11	06/01/18 20:08	1
Terphenyl-d14 (Surr)	113		40 - 145				06/01/18 09:11	06/01/18 20:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	83		5.0	1.5	ug/L		05/31/18 15:41	06/05/18 11:21	2
Cadmium	0.20	J	0.50	0.17	ug/L		05/31/18 15:41	06/01/18 12:39	1
Chromium	12		10	2.3	ug/L		05/31/18 15:41	06/05/18 11:21	2
Copper	42		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 12:39	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-8**  
**Date Collected: 05/29/18 10:50**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-1**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>3.7</b>		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 12:39	1
<b>Nickel</b>	<b>15</b>		4.0	1.3	ug/L		05/31/18 15:41	06/05/18 11:21	2
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 12:39	1
<b>Zinc</b>	<b>31</b>		20	6.9	ug/L		05/31/18 15:41	06/01/18 12:39	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>6.9</b>		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:07	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:07	1
Chromium	<1.1		5.0	1.1	ug/L		05/31/18 15:41	06/01/18 13:07	1
<b>Copper</b>	<b>1.7 J</b>		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:07	1
Lead	<0.19		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:07	1
<b>Nickel</b>	<b>0.93 J</b>		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 13:07	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:07	1
Zinc	<6.9		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:07	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 16:57	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:00	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-3**  
**Date Collected: 05/29/18 11:40**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-2**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 16:59	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 16:59	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 16:59	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 16:59	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 16:59	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 16:59	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 16:59	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 16:59	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 16:59	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 16:59	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 16:59	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 16:59	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 16:59	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:59	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 16:59	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 16:59	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 16:59	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 16:59	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 16:59	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 16:59	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 16:59	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 16:59	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 16:59	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 16:59	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 16:59	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 16:59	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 16:59	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 16:59	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 16:59	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 16:59	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 16:59	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 16:59	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 16:59	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 16:59	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 16:59	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 16:59	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 16:59	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1

TestAmerica Chicago



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-3**  
**Date Collected: 05/29/18 11:40**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-2**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:59	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 16:59	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 16:59	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 16:59	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 16:59	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 16:59	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 16:59	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 16:59	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 16:59	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 16:59	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 16:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	103		75 - 126					06/06/18 16:59	1
4-Bromofluorobenzene (Surr)	86		72 - 124					06/06/18 16:59	1
Dibromofluoromethane	102		75 - 120					06/06/18 16:59	1
Toluene-d8 (Surr)	88		75 - 120					06/06/18 16:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/01/18 09:11	06/01/18 20:32	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/01/18 09:11	06/01/18 20:32	1
Acenaphthene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 20:32	1
Acenaphthylene	<0.20		0.74	0.20	ug/L		06/01/18 09:11	06/01/18 20:32	1
Anthracene	<0.25		0.74	0.25	ug/L		06/01/18 09:11	06/01/18 20:32	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/01/18 09:11	06/01/18 20:32	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/01/18 09:11	06/01/18 20:32	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/01/18 09:11	06/01/18 20:32	1
Benzo[g,h,i]perylene	<0.28		0.74	0.28	ug/L		06/01/18 09:11	06/01/18 20:32	1
Benzo[k]fluoranthene	<0.047		0.15	0.047	ug/L		06/01/18 09:11	06/01/18 20:32	1
Chrysene	<0.050		0.15	0.050	ug/L		06/01/18 09:11	06/01/18 20:32	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/01/18 09:11	06/01/18 20:32	1
Fluoranthene	<0.34		0.74	0.34	ug/L		06/01/18 09:11	06/01/18 20:32	1
Fluorene	<0.18		0.74	0.18	ug/L		06/01/18 09:11	06/01/18 20:32	1
Indeno[1,2,3-cd]pyrene	<0.055		0.15	0.055	ug/L		06/01/18 09:11	06/01/18 20:32	1
Naphthalene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 20:32	1
Phenanthrene	<0.22		0.74	0.22	ug/L		06/01/18 09:11	06/01/18 20:32	1
Pyrene	<0.32		0.74	0.32	ug/L		06/01/18 09:11	06/01/18 20:32	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	83		34 - 110				06/01/18 09:11	06/01/18 20:32	1
Nitrobenzene-d5 (Surr)	96		36 - 120				06/01/18 09:11	06/01/18 20:32	1
Terphenyl-d14 (Surr)	114		40 - 145				06/01/18 09:11	06/01/18 20:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	25		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:11	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:11	1
Chromium	4.1	J	5.0	1.1	ug/L		05/31/18 15:41	06/01/18 13:11	1
Copper	21		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:11	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-3**  
**Date Collected: 05/29/18 11:40**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-2**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.2		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:11	1
Nickel	3.8		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 13:11	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:11	1
Zinc	14	J	20	6.9	ug/L		05/31/18 15:41	06/01/18 13:11	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	9.7		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:15	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:15	1
Chromium	<1.1		5.0	1.1	ug/L		05/31/18 15:41	06/01/18 13:15	1
Copper	0.89	J	2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:15	1
Lead	<0.19		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:15	1
Nickel	<0.63		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 13:15	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:15	1
Zinc	<6.9		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:15	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:02	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:04	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-2**  
**Date Collected: 05/29/18 12:25**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-3**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 17:26	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 17:26	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 17:26	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 17:26	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 17:26	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 17:26	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 17:26	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 17:26	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 17:26	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 17:26	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 17:26	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 17:26	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 17:26	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:26	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 17:26	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 17:26	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 17:26	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 17:26	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 17:26	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 17:26	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 17:26	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 17:26	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 17:26	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 17:26	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 17:26	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 17:26	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 17:26	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 17:26	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 17:26	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 17:26	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 17:26	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 17:26	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 17:26	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 17:26	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 17:26	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 17:26	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 17:26	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-2**  
**Date Collected: 05/29/18 12:25**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-3**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:26	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 17:26	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:26	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 17:26	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 17:26	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 17:26	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 17:26	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 17:26	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 17:26	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 17:26	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 17:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	103		75 - 126					06/06/18 17:26	1
4-Bromofluorobenzene (Surr)	85		72 - 124					06/06/18 17:26	1
Dibromofluoromethane	100		75 - 120					06/06/18 17:26	1
Toluene-d8 (Surr)	86		75 - 120					06/06/18 17:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/01/18 09:11	06/01/18 20:57	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/01/18 09:11	06/01/18 20:57	1
Acenaphthene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 20:57	1
Acenaphthylene	<0.20		0.74	0.20	ug/L		06/01/18 09:11	06/01/18 20:57	1
Anthracene	<0.25		0.74	0.25	ug/L		06/01/18 09:11	06/01/18 20:57	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/01/18 09:11	06/01/18 20:57	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/01/18 09:11	06/01/18 20:57	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/01/18 09:11	06/01/18 20:57	1
Benzo[g,h,i]perylene	<0.28		0.74	0.28	ug/L		06/01/18 09:11	06/01/18 20:57	1
Benzo[k]fluoranthene	<0.047		0.15	0.047	ug/L		06/01/18 09:11	06/01/18 20:57	1
Chrysene	<0.050		0.15	0.050	ug/L		06/01/18 09:11	06/01/18 20:57	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/01/18 09:11	06/01/18 20:57	1
Fluoranthene	<0.34		0.74	0.34	ug/L		06/01/18 09:11	06/01/18 20:57	1
Fluorene	<0.18		0.74	0.18	ug/L		06/01/18 09:11	06/01/18 20:57	1
Indeno[1,2,3-cd]pyrene	<0.055		0.15	0.055	ug/L		06/01/18 09:11	06/01/18 20:57	1
Naphthalene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 20:57	1
Phenanthrene	<0.22		0.74	0.22	ug/L		06/01/18 09:11	06/01/18 20:57	1
Pyrene	<0.32		0.74	0.32	ug/L		06/01/18 09:11	06/01/18 20:57	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	91		34 - 110				06/01/18 09:11	06/01/18 20:57	1
Nitrobenzene-d5 (Surr)	105		36 - 120				06/01/18 09:11	06/01/18 20:57	1
Terphenyl-d14 (Surr)	121		40 - 145				06/01/18 09:11	06/01/18 20:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	50		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:19	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:19	1
Chromium	9.6	J	10	2.3	ug/L		05/31/18 15:41	06/05/18 11:42	2
Copper	41		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:19	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-146212-3**

**Date Collected: 05/29/18 12:25**

**Matrix: Ground Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.5		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:19	1
Nickel	11		4.0	1.3	ug/L		05/31/18 15:41	06/05/18 11:42	2
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:19	1
Zinc	20		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:19	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	11		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:24	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:24	1
Chromium	<1.1		5.0	1.1	ug/L		05/31/18 15:41	06/01/18 13:24	1
Copper	0.77	J	2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:24	1
Lead	<0.19		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:24	1
Nickel	<0.63		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 13:24	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:24	1
Zinc	<6.9		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:24	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:18	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:21	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-1**

**Date Collected: 05/29/18 12:45**

**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-4**

**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 17:53	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 17:53	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 17:53	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 17:53	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 17:53	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 17:53	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 17:53	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 17:53	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 17:53	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 17:53	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 17:53	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 17:53	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 17:53	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:53	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 17:53	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 17:53	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 17:53	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 17:53	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 17:53	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 17:53	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 17:53	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 17:53	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 17:53	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 17:53	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 17:53	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 17:53	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 17:53	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 17:53	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 17:53	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 17:53	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 17:53	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 17:53	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 17:53	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 17:53	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 17:53	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 17:53	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 17:53	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-1**  
**Date Collected: 05/29/18 12:45**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-4**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:53	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 17:53	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 17:53	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 17:53	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 17:53	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 17:53	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 17:53	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 17:53	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 17:53	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 17:53	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 17:53	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	105		75 - 126					06/06/18 17:53	1
4-Bromofluorobenzene (Surr)	85		72 - 124					06/06/18 17:53	1
Dibromofluoromethane	101		75 - 120					06/06/18 17:53	1
Toluene-d8 (Surr)	87		75 - 120					06/06/18 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/01/18 09:11	06/01/18 21:21	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/01/18 09:11	06/01/18 21:21	1
Acenaphthene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 21:21	1
Acenaphthylene	<0.20		0.74	0.20	ug/L		06/01/18 09:11	06/01/18 21:21	1
Anthracene	<0.25		0.74	0.25	ug/L		06/01/18 09:11	06/01/18 21:21	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/01/18 09:11	06/01/18 21:21	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/01/18 09:11	06/01/18 21:21	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/01/18 09:11	06/01/18 21:21	1
Benzo[g,h,i]perylene	<0.28		0.74	0.28	ug/L		06/01/18 09:11	06/01/18 21:21	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/01/18 09:11	06/01/18 21:21	1
Chrysene	<0.051		0.15	0.051	ug/L		06/01/18 09:11	06/01/18 21:21	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/01/18 09:11	06/01/18 21:21	1
Fluoranthene	<0.34		0.74	0.34	ug/L		06/01/18 09:11	06/01/18 21:21	1
Fluorene	<0.18		0.74	0.18	ug/L		06/01/18 09:11	06/01/18 21:21	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/01/18 09:11	06/01/18 21:21	1
Naphthalene	<0.23		0.74	0.23	ug/L		06/01/18 09:11	06/01/18 21:21	1
Phenanthrene	<0.22		0.74	0.22	ug/L		06/01/18 09:11	06/01/18 21:21	1
Pyrene	<0.32		0.74	0.32	ug/L		06/01/18 09:11	06/01/18 21:21	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	88		34 - 110				06/01/18 09:11	06/01/18 21:21	1
Nitrobenzene-d5 (Surr)	99		36 - 120				06/01/18 09:11	06/01/18 21:21	1
Terphenyl-d14 (Surr)	121		40 - 145				06/01/18 09:11	06/01/18 21:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	79		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:28	1
Cadmium	0.26	J	0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:28	1
Chromium	15		10	2.3	ug/L		05/31/18 15:41	06/05/18 11:46	2
Copper	78		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:28	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-146212-4**

**Date Collected: 05/29/18 12:45**

**Matrix: Ground Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>7.8</b>		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:28	1
<b>Nickel</b>	<b>18</b>		4.0	1.3	ug/L		05/31/18 15:41	06/05/18 11:46	2
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:28	1
<b>Zinc</b>	<b>35</b>		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:28	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>10</b>		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 13:32	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 13:32	1
Chromium	<1.1		5.0	1.1	ug/L		05/31/18 15:41	06/01/18 13:32	1
<b>Copper</b>	<b>1.0</b>	<b>J</b>	2.0	0.50	ug/L		05/31/18 15:41	06/01/18 13:32	1
Lead	<0.19		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 13:32	1
Nickel	<0.63		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 13:32	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 13:32	1
Zinc	<6.9		20	6.9	ug/L		05/31/18 15:41	06/01/18 13:32	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:23	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 17:25	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 500-146212-5**

**Date Collected: 05/29/18 11:10**

**Matrix: Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 18:20	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 18:20	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 18:20	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 18:20	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 18:20	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 18:20	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 18:20	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 18:20	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 18:20	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 18:20	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 18:20	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 18:20	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 18:20	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 18:20	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 18:20	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 18:20	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 18:20	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 18:20	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 18:20	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 18:20	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 18:20	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 18:20	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 18:20	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 18:20	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 18:20	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 18:20	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 18:20	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 18:20	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 18:20	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 18:20	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 18:20	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 18:20	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 18:20	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 18:20	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 18:20	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 18:20	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 18:20	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 500-146212-5**

**Date Collected: 05/29/18 11:10**

**Matrix: Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 18:20	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 18:20	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 18:20	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 18:20	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 18:20	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 18:20	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 18:20	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 18:20	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 18:20	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 18:20	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		75 - 126		06/06/18 18:20	1
4-Bromofluorobenzene (Surr)	84		72 - 124		06/06/18 18:20	1
Dibromofluoromethane	99		75 - 120		06/06/18 18:20	1
Toluene-d8 (Surr)	86		75 - 120		06/06/18 18:20	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-146212-6**

**Date Collected: 05/29/18 00:00**

**Matrix: Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 11:39	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 11:39	1
1,1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 11:39	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 11:39	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 11:39	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 11:39	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 11:39	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 11:39	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 11:39	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 11:39	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 11:39	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 11:39	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 11:39	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 11:39	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 11:39	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 11:39	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 11:39	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 11:39	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 11:39	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 11:39	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 11:39	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 11:39	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 11:39	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 11:39	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 11:39	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 11:39	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 11:39	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/06/18 11:39	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 11:39	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 11:39	1
Dichlorodifluoromethane	<0.67 *		2.0	0.67	ug/L			06/06/18 11:39	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 11:39	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 11:39	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 11:39	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 11:39	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 11:39	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 11:39	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1

TestAmerica Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-146212-6**

**Date Collected: 05/29/18 00:00**

**Matrix: Water**

**Date Received: 05/31/18 09:50**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 11:39	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 11:39	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 11:39	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 11:39	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 11:39	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 11:39	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 11:39	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 11:39	1
Trichlorofluoromethane	<0.43 *		1.0	0.43	ug/L			06/06/18 11:39	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 11:39	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 11:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		75 - 126		06/06/18 11:39	1
4-Bromofluorobenzene (Surr)	85		72 - 124		06/06/18 11:39	1
Dibromofluoromethane	98		75 - 120		06/06/18 11:39	1
Toluene-d8 (Surr)	87		75 - 120		06/06/18 11:39	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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)

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## GC/MS VOA

### Analysis Batch: 435544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Total/NA	Ground Water	8260B	
500-146212-2	MW-3	Total/NA	Ground Water	8260B	
500-146212-3	MW-2	Total/NA	Ground Water	8260B	
500-146212-4	MW-1	Total/NA	Ground Water	8260B	
500-146212-5	Field Blank	Total/NA	Water	8260B	
500-146212-6	Trip Blank	Total/NA	Water	8260B	
MB 500-435544/7	Method Blank	Total/NA	Water	8260B	
LCS 500-435544/5	Lab Control Sample	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 434899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Total/NA	Ground Water	3510C	
500-146212-2	MW-3	Total/NA	Ground Water	3510C	
500-146212-3	MW-2	Total/NA	Ground Water	3510C	
500-146212-4	MW-1	Total/NA	Ground Water	3510C	
MB 500-434899/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-434899/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 434915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Total/NA	Ground Water	8270D	434899
500-146212-2	MW-3	Total/NA	Ground Water	8270D	434899
500-146212-3	MW-2	Total/NA	Ground Water	8270D	434899
500-146212-4	MW-1	Total/NA	Ground Water	8270D	434899

### Analysis Batch: 434943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-434899/1-A	Method Blank	Total/NA	Water	8270D	434899
LCS 500-434899/2-A	Lab Control Sample	Total/NA	Water	8270D	434899

## Metals

### Prep Batch: 434805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Dissolved	Ground Water	3005A	
500-146212-1	MW-8	Total Recoverable	Ground Water	3005A	
500-146212-2	MW-3	Dissolved	Ground Water	3005A	
500-146212-2	MW-3	Total Recoverable	Ground Water	3005A	
500-146212-3	MW-2	Dissolved	Ground Water	3005A	
500-146212-3	MW-2	Total Recoverable	Ground Water	3005A	
500-146212-4	MW-1	Dissolved	Ground Water	3005A	
500-146212-4	MW-1	Total Recoverable	Ground Water	3005A	
MB 500-434805/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-434805/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-146212-1 MS	MW-8	Total Recoverable	Ground Water	3005A	
500-146212-1 MSD	MW-8	Total Recoverable	Ground Water	3005A	
500-146212-1 DU	MW-8	Total Recoverable	Ground Water	3005A	

TestAmerica Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Metals (Continued)

### Prep Batch: 434931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Dissolved	Ground Water	7470A	
500-146212-1	MW-8	Total/NA	Ground Water	7470A	
500-146212-2	MW-3	Dissolved	Ground Water	7470A	
500-146212-2	MW-3	Total/NA	Ground Water	7470A	
500-146212-3	MW-2	Dissolved	Ground Water	7470A	
500-146212-3	MW-2	Total/NA	Ground Water	7470A	
500-146212-4	MW-1	Dissolved	Ground Water	7470A	
500-146212-4	MW-1	Total/NA	Ground Water	7470A	
MB 500-434931/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-434931/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-146212-2 MS	MW-3	Dissolved	Ground Water	7470A	
500-146212-2 MSD	MW-3	Dissolved	Ground Water	7470A	
500-146212-2 DU	MW-3	Dissolved	Ground Water	7470A	

### Analysis Batch: 435154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Dissolved	Ground Water	6020	434805
500-146212-1	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-2	MW-3	Dissolved	Ground Water	6020	434805
500-146212-2	MW-3	Total Recoverable	Ground Water	6020	434805
500-146212-3	MW-2	Dissolved	Ground Water	6020	434805
500-146212-3	MW-2	Total Recoverable	Ground Water	6020	434805
500-146212-4	MW-1	Dissolved	Ground Water	6020	434805
500-146212-4	MW-1	Total Recoverable	Ground Water	6020	434805
MB 500-434805/1-A	Method Blank	Total Recoverable	Water	6020	434805
LCS 500-434805/2-A	Lab Control Sample	Total Recoverable	Water	6020	434805
500-146212-1 MS	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-1 MSD	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-1 DU	MW-8	Total Recoverable	Ground Water	6020	434805

### Analysis Batch: 435302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Dissolved	Ground Water	7470A	434931
500-146212-1	MW-8	Total/NA	Ground Water	7470A	434931
500-146212-2	MW-3	Dissolved	Ground Water	7470A	434931
500-146212-2	MW-3	Total/NA	Ground Water	7470A	434931
500-146212-3	MW-2	Dissolved	Ground Water	7470A	434931
500-146212-3	MW-2	Total/NA	Ground Water	7470A	434931
500-146212-4	MW-1	Dissolved	Ground Water	7470A	434931
500-146212-4	MW-1	Total/NA	Ground Water	7470A	434931
MB 500-434931/12-A	Method Blank	Total/NA	Water	7470A	434931
LCS 500-434931/13-A	Lab Control Sample	Total/NA	Water	7470A	434931
500-146212-2 MS	MW-3	Dissolved	Ground Water	7470A	434931
500-146212-2 MSD	MW-3	Dissolved	Ground Water	7470A	434931
500-146212-2 DU	MW-3	Dissolved	Ground Water	7470A	434931

### Analysis Batch: 435611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-3	MW-2	Total Recoverable	Ground Water	6020	434805
500-146212-4	MW-1	Total Recoverable	Ground Water	6020	434805

TestAmerica Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Metals (Continued)

### Analysis Batch: 435611 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-146212-1 MS	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-1 MSD	MW-8	Total Recoverable	Ground Water	6020	434805
500-146212-1 DU	MW-8	Total Recoverable	Ground Water	6020	434805

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# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(75-126)	(72-124)	(75-120)	(75-120)
500-146212-1	MW-8	104	86	100	86
500-146212-2	MW-3	103	86	102	88
500-146212-3	MW-2	103	85	100	86
500-146212-4	MW-1	105	85	101	87

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(75-126)	(72-124)	(75-120)	(75-120)
500-146212-5	Field Blank	104	84	99	86
500-146212-6	Trip Blank	100	85	98	87
LCS 500-435544/5	Lab Control Sample	94	82	91	92
MB 500-435544/7	Method Blank	101	84	97	88

#### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane

TOL = Toluene-d8 (Surr)

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP	NBZ	TPHL
		(34-110)	(36-120)	(40-145)
500-146212-1	MW-8	88	100	113
500-146212-2	MW-3	83	96	114
500-146212-3	MW-2	91	105	121
500-146212-4	MW-1	88	99	121

#### Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

TestAmerica Chicago

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP (34-110)	NBZ (36-120)	TPHL (40-145)
LCS 500-434899/2-A	Lab Control Sample	82	104	105
MB 500-434899/1-A	Method Blank	89	107	110

#### Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: MB 500-435544/7**

**Matrix: Water**

**Analysis Batch: 435544**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/06/18 10:45	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/06/18 10:45	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/06/18 10:45	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/06/18 10:45	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/06/18 10:45	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/06/18 10:45	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/06/18 10:45	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			06/06/18 10:45	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/06/18 10:45	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/06/18 10:45	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/06/18 10:45	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/06/18 10:45	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/06/18 10:45	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/06/18 10:45	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/06/18 10:45	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/06/18 10:45	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/06/18 10:45	1
Benzene	<0.15		0.50	0.15	ug/L			06/06/18 10:45	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/06/18 10:45	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/06/18 10:45	1
Bromoform	<0.48		1.0	0.48	ug/L			06/06/18 10:45	1
Bromomethane	<0.80		2.0	0.80	ug/L			06/06/18 10:45	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/06/18 10:45	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/06/18 10:45	1
Chloroform	<0.37		2.0	0.37	ug/L			06/06/18 10:45	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/06/18 10:45	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/06/18 10:45	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/06/18 10:45	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/06/18 10:45	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/06/18 10:45	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			06/06/18 10:45	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/06/18 10:45	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/06/18 10:45	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/06/18 10:45	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/06/18 10:45	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/06/18 10:45	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/06/18 10:45	1

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: MB 500-435544/7**

**Matrix: Water**

**Analysis Batch: 435544**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 10:45	1
Styrene	<0.39		1.0	0.39	ug/L			06/06/18 10:45	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/06/18 10:45	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/06/18 10:45	1
Toluene	<0.15		0.50	0.15	ug/L			06/06/18 10:45	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/06/18 10:45	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/06/18 10:45	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/06/18 10:45	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/06/18 10:45	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/06/18 10:45	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/06/18 10:45	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	101		75 - 126		06/06/18 10:45	1
4-Bromofluorobenzene (Surr)	84		72 - 124		06/06/18 10:45	1
Dibromofluoromethane	97		75 - 120		06/06/18 10:45	1
Toluene-d8 (Surr)	88		75 - 120		06/06/18 10:45	1

**Lab Sample ID: LCS 500-435544/5**

**Matrix: Water**

**Analysis Batch: 435544**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	56.0		ug/L		112	70 - 125
1,1,1,2-Tetrachloroethane	50.0	45.6		ug/L		91	67 - 127
1,1,1,2-Trichloroethane	50.0	48.4		ug/L		97	70 - 122
1,1-Dichloroethane	50.0	48.4		ug/L		97	70 - 125
1,1-Dichloroethene	50.0	58.5		ug/L		117	67 - 122
1,1-Dichloropropene	50.0	53.0		ug/L		106	70 - 121
1,2,3-Trichlorobenzene	50.0	45.9		ug/L		92	55 - 140
1,2,3-Trichloropropane	50.0	46.2		ug/L		92	50 - 133
1,2,4-Trichlorobenzene	50.0	46.1		ug/L		92	66 - 127
1,2,4-Trimethylbenzene	50.0	45.7		ug/L		91	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	47.7		ug/L		95	56 - 123
1,2-Dibromoethane	50.0	48.7		ug/L		97	70 - 125
1,2-Dichlorobenzene	50.0	46.8		ug/L		94	70 - 125
1,2-Dichloroethane	50.0	50.6		ug/L		101	68 - 127
1,2-Dichloropropane	50.0	44.6		ug/L		89	67 - 130
1,3,5-Trimethylbenzene	50.0	47.6		ug/L		95	70 - 123
1,3-Dichlorobenzene	50.0	47.8		ug/L		96	70 - 125
1,3-Dichloropropane	50.0	47.1		ug/L		94	62 - 136
1,4-Dichlorobenzene	50.0	47.1		ug/L		94	70 - 120
2,2-Dichloropropane	50.0	46.5		ug/L		93	58 - 129
2-Chlorotoluene	50.0	45.8		ug/L		92	70 - 125
4-Chlorotoluene	50.0	46.8		ug/L		94	68 - 124
Benzene	50.0	48.9		ug/L		98	70 - 120

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: LCS 500-435544/5**

**Matrix: Water**

**Analysis Batch: 435544**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	48.0		ug/L		96	70 - 122
Bromochloromethane	50.0	51.6		ug/L		103	65 - 122
Bromodichloromethane	50.0	51.1		ug/L		102	69 - 120
Bromoform	50.0	57.7		ug/L		115	56 - 132
Bromomethane	50.0	63.4		ug/L		127	40 - 130
Carbon tetrachloride	50.0	60.9		ug/L		122	65 - 122
Chlorobenzene	50.0	47.0		ug/L		94	70 - 120
Chloroethane	50.0	62.3		ug/L		125	45 - 127
Chloroform	50.0	50.7		ug/L		101	70 - 120
Chloromethane	50.0	46.2		ug/L		92	54 - 147
cis-1,2-Dichloroethene	50.0	51.5		ug/L		103	70 - 125
cis-1,3-Dichloropropene	50.0	45.4		ug/L		91	64 - 127
Dibromochloromethane	50.0	53.5		ug/L		107	68 - 125
Dibromomethane	50.0	49.3		ug/L		99	70 - 120
Dichlorodifluoromethane	50.0	91.6	*	ug/L		183	40 - 150
Ethylbenzene	50.0	50.1		ug/L		100	70 - 120
Hexachlorobutadiene	50.0	48.8		ug/L		98	51 - 150
Isopropylbenzene	50.0	47.5		ug/L		95	70 - 126
Methyl tert-butyl ether	50.0	49.5		ug/L		99	70 - 120
Methylene Chloride	50.0	49.1		ug/L		98	69 - 125
Naphthalene	50.0	43.2		ug/L		86	59 - 130
n-Butylbenzene	50.0	50.0		ug/L		100	68 - 125
N-Propylbenzene	50.0	48.8		ug/L		98	69 - 127
p-Isopropyltoluene	50.0	48.8		ug/L		98	70 - 125
sec-Butylbenzene	50.0	49.9		ug/L		100	70 - 123
Styrene	50.0	49.1		ug/L		98	70 - 120
tert-Butylbenzene	50.0	47.5		ug/L		95	70 - 121
Tetrachloroethene	50.0	55.0		ug/L		110	70 - 128
Toluene	50.0	49.5		ug/L		99	70 - 125
trans-1,2-Dichloroethene	50.0	56.3		ug/L		113	70 - 125
trans-1,3-Dichloropropene	50.0	44.9		ug/L		90	62 - 128
Trichloroethene	50.0	53.3		ug/L		107	70 - 125
Trichlorofluoromethane	50.0	64.2	*	ug/L		128	70 - 126
Vinyl chloride	50.0	53.6		ug/L		107	64 - 126
Xylenes, Total	100	99.8		ug/L		100	70 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	94		75 - 126
4-Bromofluorobenzene (Surr)	82		72 - 124
Dibromofluoromethane	91		75 - 120
Toluene-d8 (Surr)	92		75 - 120

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: MB 500-434899/1-A**

**Matrix: Water**

**Analysis Batch: 434943**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 434899**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		06/01/18 09:11	06/01/18 17:27	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		06/01/18 09:11	06/01/18 17:27	1
Acenaphthene	<0.25		0.80	0.25	ug/L		06/01/18 09:11	06/01/18 17:27	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		06/01/18 09:11	06/01/18 17:27	1
Anthracene	<0.27		0.80	0.27	ug/L		06/01/18 09:11	06/01/18 17:27	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		06/01/18 09:11	06/01/18 17:27	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		06/01/18 09:11	06/01/18 17:27	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		06/01/18 09:11	06/01/18 17:27	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		06/01/18 09:11	06/01/18 17:27	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		06/01/18 09:11	06/01/18 17:27	1
Chrysene	<0.055		0.16	0.055	ug/L		06/01/18 09:11	06/01/18 17:27	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		06/01/18 09:11	06/01/18 17:27	1
Fluoranthene	<0.36		0.80	0.36	ug/L		06/01/18 09:11	06/01/18 17:27	1
Fluorene	<0.20		0.80	0.20	ug/L		06/01/18 09:11	06/01/18 17:27	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		06/01/18 09:11	06/01/18 17:27	1
Naphthalene	<0.25		0.80	0.25	ug/L		06/01/18 09:11	06/01/18 17:27	1
Phenanthrene	<0.24		0.80	0.24	ug/L		06/01/18 09:11	06/01/18 17:27	1
Pyrene	<0.34		0.80	0.34	ug/L		06/01/18 09:11	06/01/18 17:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		34 - 110	06/01/18 09:11	06/01/18 17:27	1
Nitrobenzene-d5 (Surr)	107		36 - 120	06/01/18 09:11	06/01/18 17:27	1
Terphenyl-d14 (Surr)	110		40 - 145	06/01/18 09:11	06/01/18 17:27	1

**Lab Sample ID: LCS 500-434899/2-A**

**Matrix: Water**

**Analysis Batch: 434943**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 434899**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	32.0	22.9		ug/L		72	38 - 110
2-Methylnaphthalene	32.0	22.7		ug/L		71	34 - 110
Acenaphthene	32.0	25.8		ug/L		81	46 - 110
Acenaphthylene	32.0	25.8		ug/L		80	47 - 110
Anthracene	32.0	27.2		ug/L		85	67 - 110
Benzo[a]anthracene	32.0	30.2		ug/L		94	70 - 120
Benzo[a]pyrene	32.0	30.6		ug/L		95	70 - 120
Benzo[b]fluoranthene	32.0	29.7		ug/L		93	69 - 123
Benzo[g,h,i]perylene	32.0	29.7		ug/L		93	70 - 120
Benzo[k]fluoranthene	32.0	30.8		ug/L		96	70 - 120
Chrysene	32.0	29.4		ug/L		92	68 - 120
Dibenz(a,h)anthracene	32.0	29.6		ug/L		92	70 - 127
Fluoranthene	32.0	27.5		ug/L		86	68 - 120
Fluorene	32.0	24.7		ug/L		77	53 - 120
Indeno[1,2,3-cd]pyrene	32.0	31.3		ug/L		98	65 - 133
Naphthalene	32.0	23.2		ug/L		72	36 - 110
Phenanthrene	32.0	26.9		ug/L		84	65 - 120
Pyrene	32.0	31.5		ug/L		98	70 - 110

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: LCS 500-434899/2-A**  
**Matrix: Water**  
**Analysis Batch: 434943**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 434899**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	82		34 - 110
Nitrobenzene-d5 (Surr)	104		36 - 120
Terphenyl-d14 (Surr)	105		40 - 145

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

**Lab Sample ID: MB 500-434805/1-A**  
**Matrix: Water**  
**Analysis Batch: 435154**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 434805**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.73		2.5	0.73	ug/L		05/31/18 15:41	06/01/18 12:30	1
Cadmium	<0.17		0.50	0.17	ug/L		05/31/18 15:41	06/01/18 12:30	1
Chromium	<1.1		5.0	1.1	ug/L		05/31/18 15:41	06/01/18 12:30	1
Copper	<0.50		2.0	0.50	ug/L		05/31/18 15:41	06/01/18 12:30	1
Lead	<0.19		0.50	0.19	ug/L		05/31/18 15:41	06/01/18 12:30	1
Nickel	<0.63		2.0	0.63	ug/L		05/31/18 15:41	06/01/18 12:30	1
Silver	<0.12		0.50	0.12	ug/L		05/31/18 15:41	06/01/18 12:30	1
Zinc	<6.9		20	6.9	ug/L		05/31/18 15:41	06/01/18 12:30	1

**Lab Sample ID: LCS 500-434805/2-A**  
**Matrix: Water**  
**Analysis Batch: 435154**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 434805**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	500	505		ug/L		101	80 - 120
Cadmium	50.0	50.6		ug/L		101	80 - 120
Chromium	200	203		ug/L		102	80 - 120
Copper	250	260		ug/L		104	80 - 120
Lead	100	102		ug/L		102	80 - 120
Nickel	500	516		ug/L		103	80 - 120
Silver	50.0	53.1		ug/L		106	80 - 120
Zinc	500	509		ug/L		102	80 - 120

**Lab Sample ID: 500-146212-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 435154**

**Client Sample ID: MW-8**  
**Prep Type: Total Recoverable**  
**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.20	J	50.0	51.4		ug/L		102	75 - 125
Copper	42		250	300		ug/L		103	75 - 125
Lead	3.7		100	106		ug/L		102	75 - 125
Silver	<0.12		50.0	53.7		ug/L		107	75 - 125
Zinc	31		500	542		ug/L		102	75 - 125

TestAmerica Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

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

**Lab Sample ID: 500-146212-1 MS**

**Matrix: Ground Water**

**Analysis Batch: 435611**

**Client Sample ID: MW-8**

**Prep Type: Total Recoverable**

**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Barium	83		500	586		ug/L		101	75 - 125	
Chromium	12		200	190		ug/L		89	75 - 125	
Nickel	15		500	458		ug/L		89	75 - 125	

**Lab Sample ID: 500-146212-1 MSD**

**Matrix: Ground Water**

**Analysis Batch: 435154**

**Client Sample ID: MW-8**

**Prep Type: Total Recoverable**

**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Cadmium	0.20	J	50.0	51.1		ug/L		102	75 - 125	1	20	
Copper	42		250	299		ug/L		103	75 - 125	1	20	
Lead	3.7		100	105		ug/L		101	75 - 125	1	20	
Silver	<0.12		50.0	53.2		ug/L		106	75 - 125	1	20	
Zinc	31		500	536		ug/L		101	75 - 125	1	20	

**Lab Sample ID: 500-146212-1 MSD**

**Matrix: Ground Water**

**Analysis Batch: 435611**

**Client Sample ID: MW-8**

**Prep Type: Total Recoverable**

**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Barium	83		500	575		ug/L		98	75 - 125	2	20	
Chromium	12		200	186		ug/L		87	75 - 125	2	20	
Nickel	15		500	451		ug/L		87	75 - 125	2	20	

**Lab Sample ID: 500-146212-1 DU**

**Matrix: Ground Water**

**Analysis Batch: 435154**

**Client Sample ID: MW-8**

**Prep Type: Total Recoverable**

**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU		Unit	D	%Rec	%Rec.		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Cadmium	0.20	J	50.0	0.193	J	ug/L				5	20	
Copper	42		250	42.0		ug/L				0.09	20	
Lead	3.7		100	3.72		ug/L				0.8	20	
Silver	<0.12		50.0	<0.12		ug/L				NC	20	
Zinc	31		500	30.7		ug/L				2	20	

**Lab Sample ID: 500-146212-1 DU**

**Matrix: Ground Water**

**Analysis Batch: 435611**

**Client Sample ID: MW-8**

**Prep Type: Total Recoverable**

**Prep Batch: 434805**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU		Unit	D	%Rec	%Rec.		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Barium	83		500	86.5		ug/L				4	20	
Chromium	12		200	12.4		ug/L				2	20	
Nickel	15		500	14.5		ug/L				0.4	20	

TestAmerica Chicago



# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-434931/12-A**  
**Matrix: Water**  
**Analysis Batch: 435302**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 434931**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/01/18 13:25	06/04/18 16:52	1

**Lab Sample ID: LCS 500-434931/13-A**  
**Matrix: Water**  
**Analysis Batch: 435302**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 434931**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	2.00	1.84		ug/L		92	80 - 120

**Lab Sample ID: 500-146212-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 435302**

**Client Sample ID: MW-3**  
**Prep Type: Dissolved**  
**Prep Batch: 434931**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.098		1.00	0.842		ug/L		84	75 - 125

**Lab Sample ID: 500-146212-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 435302**

**Client Sample ID: MW-3**  
**Prep Type: Dissolved**  
**Prep Batch: 434931**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.098		1.00	0.967		ug/L		97	75 - 125	14	20

**Lab Sample ID: 500-146212-2 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 435302**

**Client Sample ID: MW-3**  
**Prep Type: Dissolved**  
**Prep Batch: 434931**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	<0.098		<0.098		ug/L		NC	20

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-8**  
**Date Collected: 05/29/18 10:50**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 16:32	EMA	TAL CHI
Total/NA	Prep	3510C			434899	06/01/18 09:11	NKG	TAL CHI
Total/NA	Analysis	8270D		1	434915	06/01/18 20:08	WDS	TAL CHI
Dissolved	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Dissolved	Analysis	6020		1	435154	06/01/18 13:07	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	435154	06/01/18 12:39	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		2	435611	06/05/18 11:21	FXG	TAL CHI
Dissolved	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Dissolved	Analysis	7470A		1	435302	06/04/18 17:00	MJG	TAL CHI
Total/NA	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	435302	06/04/18 16:57	MJG	TAL CHI

**Client Sample ID: MW-3**  
**Date Collected: 05/29/18 11:40**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 16:59	EMA	TAL CHI
Total/NA	Prep	3510C			434899	06/01/18 09:11	NKG	TAL CHI
Total/NA	Analysis	8270D		1	434915	06/01/18 20:32	WDS	TAL CHI
Dissolved	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Dissolved	Analysis	6020		1	435154	06/01/18 13:15	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	435154	06/01/18 13:11	FXG	TAL CHI
Dissolved	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Dissolved	Analysis	7470A		1	435302	06/04/18 17:04	MJG	TAL CHI
Total/NA	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	435302	06/04/18 17:02	MJG	TAL CHI

**Client Sample ID: MW-2**  
**Date Collected: 05/29/18 12:25**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 17:26	EMA	TAL CHI
Total/NA	Prep	3510C			434899	06/01/18 09:11	NKG	TAL CHI
Total/NA	Analysis	8270D		1	434915	06/01/18 20:57	WDS	TAL CHI
Dissolved	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Dissolved	Analysis	6020		1	435154	06/01/18 13:24	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	435154	06/01/18 13:19	FXG	TAL CHI

TestAmerica Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

**Client Sample ID: MW-2**  
**Date Collected: 05/29/18 12:25**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		2	435611	06/05/18 11:42	FXG	TAL CHI
Dissolved	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Dissolved	Analysis	7470A		1	435302	06/04/18 17:21	MJG	TAL CHI
Total/NA	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	435302	06/04/18 17:18	MJG	TAL CHI

**Client Sample ID: MW-1**  
**Date Collected: 05/29/18 12:45**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 17:53	EMA	TAL CHI
Total/NA	Prep	3510C			434899	06/01/18 09:11	NKG	TAL CHI
Total/NA	Analysis	8270D		1	434915	06/01/18 21:21	WDS	TAL CHI
Dissolved	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Dissolved	Analysis	6020		1	435154	06/01/18 13:32	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	435154	06/01/18 13:28	FXG	TAL CHI
Total Recoverable	Prep	3005A			434805	05/31/18 15:41	BDE	TAL CHI
Total Recoverable	Analysis	6020		2	435611	06/05/18 11:46	FXG	TAL CHI
Dissolved	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Dissolved	Analysis	7470A		1	435302	06/04/18 17:25	MJG	TAL CHI
Total/NA	Prep	7470A			434931	06/01/18 13:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	435302	06/04/18 17:23	MJG	TAL CHI

**Client Sample ID: Field Blank**  
**Date Collected: 05/29/18 11:10**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 18:20	EMA	TAL CHI

**Client Sample ID: Trip Blank**  
**Date Collected: 05/29/18 00:00**  
**Date Received: 05/31/18 09:50**

**Lab Sample ID: 500-146212-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	435544	06/06/18 11:39	EMA	TAL CHI

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs - 142723

TestAmerica Job ID: 500-146212-1

## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
Contact: Mike Rohlich  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: Bruce Olson  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-146212

Chain of Custody Number: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Temperature °C of Cooler: 0.5-2.0

Client		Client Project #		Preservative		Parameter		Comments			
<u>SEH</u>		<u>142 723</u>									
Project Name				Parameter							
<u>Stressor Labs</u>											
Project Location/State		Lab Project #									
<u>Trigo WI.</u>											
Sampler		Lab PM									
<u>MAR</u>		<u>SIF</u>									
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOC 8260	PAH 8310	Total Metals Barium, cadmium, lead, chromium, copper, mercury, nickel, silver, zinc	Diss Metals Barium, cadmium, lead, chromium, copper, mercury, nickel, silver, zinc	Comments
			Date	Time							
1		MW-8	5/29/18	10:50	7	GW	X	X	X	X	
2		MW-3		11:40							
3		MW-2		12:25							
4		MW-1		12:45							
5		Field Blank		11:10	3	Other					
6		Tr.p Blank			1						

- Preservative Key
1. HCL, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other



500-146212 COC

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other  
 Requested Due Date \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>Mike Rohlich</u> Company: <u>SEH</u> Date: <u>5/30/18</u> Time: <u>2:00</u>	Received By: <u>Julie Sanchez</u> Company: <u>TALTE</u> Date: <u>05/31/18</u> Time: <u>09:50</u>	Lab Courier: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Shipped: <u>FX Priority</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: Totals (Not Filtered)  
Diss (Field Filtered)

Lab Comments: \_\_\_\_\_

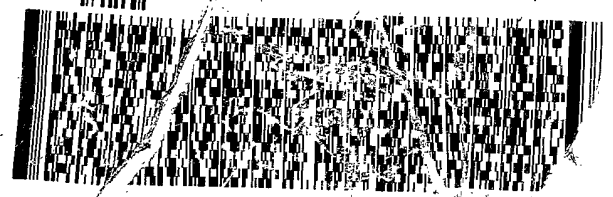
ORIGIN ID: JOTA (708) 534-5200  
ADAM MACKLEY  
SHOCK EROTIC HENDRICKSON, INC. DBA  
10 NORTH BRIDGE STREET  
CHIPPewa FALLS, WI 5493374  
UNITED STATES US

SHIP DATE: 04OCT17  
ACTWT: 20.00 LB MAN  
CAD: 33264/CAFE3108

76  
**SAMPLE LOGIN**  
**TESTAMERICA ABS**  
**2417 BOND ST**

**UNIVERSITY PARK IL 60466**  
(708) 534-5200  
REF: S500-570 '16

RMA: ||| ||| |||



500-146212 Waybill

TRK# 4059 7166  
0221

FedEx  
TRK# 4059 7166  
0221

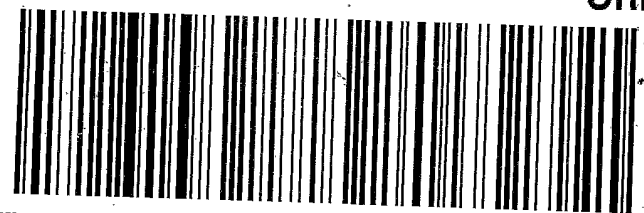
FedEx  
TRK# 4059 7166 0068  
0201

FRI - 04  
PRIOR RT 519  
ST 19

5 10:30  
A 0068  
05.31

**79 JOTA**

IL-US  
ORD



FID 57866 31MAY18 JOTA 546C2/782B/0C8A

# Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-146212-1

**Login Number: 146212**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

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	2.0
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	



## Appendix C

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005



**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
North-1	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
North-2	5-2-95	31	0.9	4	7	41	6	ND	17
North-3	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
North-4	5-2-95	69	2	4	8	30	6	ND	37
North-5	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
North-6	5-2-95	39	ND	3	7	ND	5	ND	23
North-7	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
Back-SW	5-1-95	34	ND	3	ND	ND	4	ND	14
Back-SE	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
Industrial		NE	510	200	NE	500	NE	NE	NE

Notes:

ppm = parts per million

ND = not detected

NE = not established

\* Based on human health risk from direct contact

Surface samples collected from the top 3 inches of soil

TABLE 2  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)									
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	
TU:												
MW-1	Total	6-27-95	39	0.2	5	50	1			ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2			ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND			ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND			ND	ND	43
	Total	8-15-96	120	ND	26	150	8			ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8			ND	ND	ND
	Total	8-6-98	53	ND	10	52	4			15	0.2	26
	Total	8-11-99	30	ND	ND	30	1			ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6			ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND		5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND		1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND		2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND		ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND		7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2			ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2			ND	ND	20
	Total	8-8-95	ND	ND	ND	10	ND			ND	20	120
	Dissolved	8-8-95	ND	ND	ND	ND	ND			ND	ND	30
	Total	8-15-96	50	ND	11	40	3			ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7			ND	ND	ND
	Total	8-6-98	26	ND	ND	18	4			ND	0.2	ND
	Total	8-11-99	10	ND	ND	ND	0.4			ND	ND	20
	Total	8-24-00	10	ND	ND	ND	ND			ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND		2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND		0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND		1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND		ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND		1.5	ND	24

TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.5	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
	Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
	Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

**TABLE 3**  
**WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS**

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
		9-4-03	VOCs	ND	
			Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
			11-3-03	1-Methylnaphthalene	0.034
2-Methylnaphthalene	0.043			NE	
Naphthalene	0.060	8			
8-18-04	PAHs, VOCs	ND			
11-3-04	2-Methylnaphthalene	0.014	NE		
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
Background	MW-8	8-13-02	VOCs	ND	
			Naphthalene	0.039	8
		9-4-03	PAHs, VOCs	ND	
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	

Notes: ppb = parts per billion  
ND = not detected  
VOCs = volatile organic compounds  
PAL = NR 140 Preventive Action Limit (2-04)  
NE = not established  
PAHs = polynuclear aromatic hydrocarbons

**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes: ppb = parts per billion  
VOCs = volatile organic compounds  
ND = not detected







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July 12, 2019

RE: Stresau Laboratory, Inc.  
2019 Groundwater and Soil Sampling Event  
SEH No. STRES 150992 1.0

Mr. Marc Makela, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Mr. Makela:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring and soil sampling event conducted during June 2019. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements.

Lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) concentration. Although the concentration of lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Stresau anticipates analyzing groundwater samples for both total and dissolved metals until an alternate sampling protocol is agreed to with the WDNR.

## GROUNDWATER MONITORING

On June 10, 2019, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities included pH, temperature and conductivity.

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550  
SEH is 100% employee-owned | [sehinc.com](http://sehinc.com) | 715.720.6200 | 800.472.5881 | 888.908.8166 fax

Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Eurofins TestAmerica using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8310, and the following dissolved and total metals by EPA method 6020: barium cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

### SOIL SAMPLING

On June 10, 2019, SEH collected three surface soil samples (North-1, North-3, and North-7) from the North site shown on Figure 1, "North Site Soil Sample Locations" (Appendix A). Dedicated plastic disposable spatulas were used to collect grab soil samples from the top three inches of soil at each of the sample locations. Soil samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples were submitted to Eurofins TestAmerica and analyzed for the following metals by various EPA Methods: barium, cadmium, chromium, lead, and zinc.

### RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the June 10, 2019 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected in June 2019 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (fourteen annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, no PAHs were detected in groundwater samples collected in June 2019 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in June 2019 at all monitoring wells were generally consistent with historical concentrations.

The groundwater sample collected from monitoring well MW-1 indicated an ES exceedance for total Lead at a concentration of 17 ug/l; however, the detected concentration is lower than the 21 ug/l detected in the groundwater sample collected during the June 2010 monitoring event.

Multiple dissolved metals were detected in each of the groundwater samples collected in June 2019; however, the detected concentrations of dissolved metals were generally consistent with concentrations detected since 2011. Monitoring well MW-8, the up gradient well, was the only well with a PAL exceedance for a dissolved compound (cadmium at 0.72 ug/l).

Mr. Marc Makela  
July 12, 2019  
Page 3

Dissolved lead was detected in groundwater samples collected from MW-1 at 0.19 ug/l; however, this detection was well below the PAL of 1.5 ug/l.

Soil analytical results are summarized in Table 4, "Soil Inorganic Analytical Results." Metals detected in samples collected during the June 2019 sampling event are generally within historical concentrations ranges. Concentrations of lead were detected at sample location North-7 at a concentration of 140 mg/kg and had concentrations of Zinc detected at 92 mg/kg. None of the metals were detected at concentrations exceeding their respective ch. NR720 Wis. Adm. Code Residual Contaminant Level (RCL) concentration for industrial sites.

The laboratory analytical report for the June 2019 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

#### DISCUSSION

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs were detected in 2019. Lead and other inorganic compounds continue to be detected in each of the wells sampled, including MW-8 which is a background well. This indicates inorganic compounds are naturally occurring.

SEH does not believe additional actions or sampling, other than continued monitoring of the operations and physical site setting near the TTU, are warranted. The next groundwater monitoring event is scheduled to occur in June 2020. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Bruce K. Olson, PE  
Project Manager

MFR/Is/BKO

c: Mr. Nathan Coller, WDNR

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**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		1055.81	1053.86	1053.28	1054.44
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
06/18/15	Depth to Water	39.18	37.28	36.74	37.79
	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
06/28/16	Depth to Water	38.70	36.76	36.28	35.92
	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52
06/27/17	Depth to Water	38.40	36.52	38.03	38.02
	Groundwater Elevation	1017.41	1017.34	1015.25	1016.42
05/29/18	Depth to Water	39.24	37.37	36.81	37.02
	Groundwater Elevation	1016.57	1016.49	1016.47	1017.42
06/10/19	Depth to Water	38.05	38.81	38.51	35.28
	Groundwater Elevation	1017.76	1015.05	1014.77	1019.16

Notes:  
<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995  
<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005  
 Compiled by:   BKO   Checked by:   MJR   June 2015 Data Compiled by:   MFR   Checked by:   BKO    
 June 2010 Data Compiled by:   BKO   Checked by:   MFR   June 2016-19 Data Compiled by:   MFR   Checked by:   BKO    
 June 2014 Data Compiled by:   MS   Checked by:   BKO  

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**Table 3  
Monitoring Well Groundwater Dissolved Inorganics Analytical Results**

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																
				MW-1								MW-2								
				ES	PAL	6/29/11	6/6/12	6/12/13	6/30/14	6/18/15	6/28/16	6/27/17	5/29/18	6/10/19	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17
<b>Dissolved Inorganics (µg/l)</b>																				
Barium	7440-39-3	2000	400														3			
Cadmium	7440-43-9	5	0.5	<0.12	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.17	<0.17	<0.10	<0.10	<0.15	<0.19	0.19	<0.17	<0.17	<0.17
Chromium	7440-47-3	100	10							<1.1	<1.1	<1.1						<1.1	<1.1	<1.1
Copper	7440-50-8	1300	130										<0.57			<0.96		<0.50		
Lead	7439-92-1	15	1.5	<0.13	<0.16	<0.15	<0.091			<0.19	<0.19		<0.16	<0.15		<0.14		<0.19	<0.19	<0.19
Mercury	7439-97-6	2	0.2	<0.070	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.098
Nickel	7440-02-0	100	20		<0.52		<0.69	<0.53		<0.63	<0.63	<0.63	<0.52		<0.69	<0.53		<0.63	<0.63	<0.63
Silver	7440-22-4	50	10	<0.11	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.12
Zinc	7440-66-6	5000	2500	<3.0	<6.3			<4.6		<6.9	<6.9	<6.9	<6.3		<5.9	<4.6		<6.9	<6.9	<6.9

Analytical Parameters	CAS No.	NR 140 Standard		Well No./Sampling Date																
				MW-3								MW-8								
				ES	PAL	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18	6/10/19	6/6/12	6/12/13	6/23/14	6/18/15	6/28/16	6/27/17	5/29/18
<b>Dissolved Inorganics (µg/l)</b>																				
Barium	7440-39-3	2000	400																	
Cadmium	7440-43-9	5	0.5	<0.10	<0.10	<0.15	0.36	<0.19	<0.17	<0.17	<0.17	<0.10	<0.10	<0.15	<0.19	<0.19	<0.17	<0.17	<u>0.72</u>	
Chromium	7440-47-3	100	10					<0.61		<1.1	<1.1			<0.63	<0.61		<1.1	<1.1	<1.1	
Copper	7440-50-8	1300	130																	
Lead	7439-92-1	15	1.5	<0.16	<0.15	<0.091	<0.14		<0.19	<0.19	<0.19				<0.14		<0.19	<0.19	<0.19	
Mercury	7439-97-6	2	0.2	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.098	<0.070	<0.064	<0.072	<0.061	<0.11	<0.098	<0.098	<0.098	
Nickel	7440-02-0	100	20	<0.52			<0.69		<0.63	<0.63	<0.63			<0.69	<0.53		<0.63			
Silver	7440-22-4	50	10	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.12	<0.069	<0.12	<0.062	<0.080	<0.080	<0.12	<0.12	<0.12	
Zinc	7440-66-6	5000	2500	<6.3			<5.9			<6.9	<6.9	<6.9			<5.9	<4.6		<6.9		

**Bold** = Exceeds ch. NR 140 Enforcement Standard (ES)

Underline = Exceeds ch. NR 140 Preventive Action Limit (PAL)

Shaded = Parameter detected above laboratory limit of detection

Compiled by: BKO Checked by: MFR

<P:\PT\S\Stres\150992\2019 Report\Tables\T3-Mon Well GW Inorganics Dissolved>



## Appendix A

### GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005







## **Appendix B**

June 2019 Analytical Report

## ANALYTICAL REPORT

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

Laboratory Job ID: 500-164905-1  
Client Project/Site: Stresau Labs

**For:**

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
6/25/2019 12:19:16 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Job ID: 500-164905-1**

**Laboratory: Eurofins TestAmerica, Chicago**

## Narrative

### Job Narrative 500-164905-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/12/2019 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

#### GC/MS VOA

Toluene was detected in the following sample: Trip Blank (500-164905-6). The method blank associated with this sample was non-detect for Toluene. The sample was re-analyzed and similar results were obtained.

The method blank for 491502 contained Styrene above the method detection limit and below the Reporting limit (RL). This target analyte concentration was not detected in the associated samples therefore: the data was reported.

The laboratory control sample (LCS) for 491611 recovered outside control limits for the following analyte: Methyl tert-butyl ether. 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/MS Semi VOA

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

#### Metals

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

#### Field Service / Mobile Lab

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

#### Organic Prep

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

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

## Client Sample ID: MW-8 (080)

## Lab Sample ID: 500-164905-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	64	V	2.5	0.73	ug/L	1		6020	Total Recoverable
Cadmium	2.1		0.50	0.17	ug/L	1		6020	Total Recoverable
Chromium	9.5		5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	28	B	2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	2.6		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	12		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	66		20	6.9	ug/L	1		6020	Total Recoverable
Barium	6.9		2.5	0.73	ug/L	1		6020	Dissolved
Cadmium	0.72		0.50	0.17	ug/L	1		6020	Dissolved
Copper	1.1	J B	2.0	0.50	ug/L	1		6020	Dissolved
Nickel	0.71	J	2.0	0.63	ug/L	1		6020	Dissolved
Zinc	8.7	J	20	6.9	ug/L	1		6020	Dissolved

## Client Sample ID: MW-3 (030)

## Lab Sample ID: 500-164905-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	25		2.5	0.73	ug/L	1		6020	Total Recoverable
Chromium	4.2	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	15	B	2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	1.2		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	4.1		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	12	J	20	6.9	ug/L	1		6020	Total Recoverable
Barium	8.0		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.96	J B	2.0	0.50	ug/L	1		6020	Dissolved

## Client Sample ID: MW-2 (020)

## Lab Sample ID: 500-164905-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	46		2.5	0.73	ug/L	1		6020	Total Recoverable
Chromium	7.9		5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	35	B	2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	2.7		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	9.7		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	21		20	6.9	ug/L	1		6020	Total Recoverable
Barium	9.3		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.99	J B	2.0	0.50	ug/L	1		6020	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## Client Sample ID: MW-1 (010)

## Lab Sample ID: 500-164905-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	160		2.5	0.73	ug/L	1		6020	Total Recoverable
Cadmium	0.36	J	0.50	0.17	ug/L	1		6020	Total Recoverable
Chromium	37		5.0	1.1	ug/L	1		6020	Total Recoverable
Copper	180	B	2.0	0.50	ug/L	1		6020	Total Recoverable
Lead	17		0.50	0.19	ug/L	1		6020	Total Recoverable
Nickel	43		2.0	0.63	ug/L	1		6020	Total Recoverable
Zinc	82		20	6.9	ug/L	1		6020	Total Recoverable
Barium	9.0		2.5	0.73	ug/L	1		6020	Dissolved
Copper	0.91	J B	2.0	0.50	ug/L	1		6020	Dissolved
Lead	0.19	J	0.50	0.19	ug/L	1		6020	Dissolved

## Client Sample ID: Field Blank (997)

## Lab Sample ID: 500-164905-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.42	J	0.50	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene	0.23	J	0.50	0.18	ug/L	1		8260B	Total/NA
Toluene	2.1		0.50	0.15	ug/L	1		8260B	Total/NA
Xylenes, Total	1.5		1.0	0.22	ug/L	1		8260B	Total/NA

## Client Sample ID: Trip Blank

## Lab Sample ID: 500-164905-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.50	J	1.0	0.36	ug/L	1		8260B	Total/NA
Benzene	0.38	J	0.50	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene	0.24	J	0.50	0.18	ug/L	1		8260B	Total/NA
Naphthalene	0.39	J	1.0	0.34	ug/L	1		8260B	Total/NA
Toluene	2.0		0.50	0.15	ug/L	1		8260B	Total/NA
Xylenes, Total	1.7		1.0	0.22	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago



# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI
7470A	Preparation, Mercury	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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-164905-1	MW-8 (080)	Ground Water	06/10/19 11:00	06/12/19 09:10	
500-164905-2	MW-3 (030)	Ground Water	06/10/19 11:45	06/12/19 09:10	
500-164905-3	MW-2 (020)	Ground Water	06/10/19 12:30	06/12/19 09:10	
500-164905-4	MW-1 (010)	Ground Water	06/10/19 13:10	06/12/19 09:10	
500-164905-5	Field Blank (997)	Water	06/10/19 10:30	06/12/19 09:10	
500-164905-6	Trip Blank	Water	06/10/19 00:00	06/12/19 09:10	

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-164905-1**

**Date Collected: 06/10/19 11:00**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/24/19 11:31	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/24/19 11:31	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/24/19 11:31	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/24/19 11:31	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/24/19 11:31	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/24/19 11:31	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/24/19 11:31	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/24/19 11:31	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/24/19 11:31	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/24/19 11:31	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/24/19 11:31	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/24/19 11:31	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/24/19 11:31	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:31	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/24/19 11:31	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/24/19 11:31	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/24/19 11:31	1
Benzene	<0.15		0.50	0.15	ug/L			06/24/19 11:31	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:31	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/24/19 11:31	1
Bromoform	<0.48		1.0	0.48	ug/L			06/24/19 11:31	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/24/19 11:31	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/24/19 11:31	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/24/19 11:31	1
Chloroform	<0.37		2.0	0.37	ug/L			06/24/19 11:31	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/24/19 11:31	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/24/19 11:31	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/24/19 11:31	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/24/19 11:31	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/24/19 11:31	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/24/19 11:31	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/24/19 11:31	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/24/19 11:31	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/24/19 11:31	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
Methyl tert-butyl ether	<0.39 *		1.0	0.39	ug/L			06/24/19 11:31	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/24/19 11:31	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/24/19 11:31	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/24/19 11:31	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-164905-1**

**Date Collected: 06/10/19 11:00**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:31	1
Styrene	<0.39		1.0	0.39	ug/L			06/24/19 11:31	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:31	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/24/19 11:31	1
Toluene	<0.15		0.50	0.15	ug/L			06/24/19 11:31	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/24/19 11:31	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/24/19 11:31	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/24/19 11:31	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:31	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/24/19 11:31	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/24/19 11:31	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	111		75 - 126					06/24/19 11:31	1
4-Bromofluorobenzene (Surr)	111		72 - 124					06/24/19 11:31	1
Dibromofluoromethane	106		75 - 120					06/24/19 11:31	1
Toluene-d8 (Surr)	91		75 - 120					06/24/19 11:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/17/19 13:15	06/18/19 14:37	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/17/19 13:15	06/18/19 14:37	1
Acenaphthene	<0.23		0.74	0.23	ug/L		06/17/19 13:15	06/18/19 14:37	1
Acenaphthylene	<0.20		0.74	0.20	ug/L		06/17/19 13:15	06/18/19 14:37	1
Anthracene	<0.25		0.74	0.25	ug/L		06/17/19 13:15	06/18/19 14:37	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/17/19 13:15	06/18/19 14:37	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/17/19 13:15	06/18/19 14:37	1
Benzo[b]fluoranthene	<0.060		0.15	0.060	ug/L		06/17/19 13:15	06/18/19 14:37	1
Benzo[g,h,i]perylene	<0.28		0.74	0.28	ug/L		06/17/19 13:15	06/18/19 14:37	1
Benzo[k]fluoranthene	<0.047		0.15	0.047	ug/L		06/17/19 13:15	06/18/19 14:37	1
Chrysene	<0.050		0.15	0.050	ug/L		06/17/19 13:15	06/18/19 14:37	1
Dibenz(a,h)anthracene	<0.038		0.22	0.038	ug/L		06/17/19 13:15	06/18/19 14:37	1
Fluoranthene	<0.34		0.74	0.34	ug/L		06/17/19 13:15	06/18/19 14:37	1
Fluorene	<0.18		0.74	0.18	ug/L		06/17/19 13:15	06/18/19 14:37	1
Indeno[1,2,3-cd]pyrene	<0.055		0.15	0.055	ug/L		06/17/19 13:15	06/18/19 14:37	1
Naphthalene	<0.23		0.74	0.23	ug/L		06/17/19 13:15	06/18/19 14:37	1
Phenanthrene	<0.22		0.74	0.22	ug/L		06/17/19 13:15	06/18/19 14:37	1
Pyrene	<0.32		0.74	0.32	ug/L		06/17/19 13:15	06/18/19 14:37	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	72		34 - 110				06/17/19 13:15	06/18/19 14:37	1
Nitrobenzene-d5 (Surr)	80		36 - 120				06/17/19 13:15	06/18/19 14:37	1
Terphenyl-d14 (Surr)	101		40 - 145				06/17/19 13:15	06/18/19 14:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	64	V	2.5	0.73	ug/L		06/12/19 16:38	06/13/19 11:48	1
Cadmium	2.1		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 11:48	1
Chromium	9.5		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 11:48	1
Copper	28	B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 11:48	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-164905-1**

Date Collected: 06/10/19 11:00

Matrix: Ground Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.6		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 11:48	1
Nickel	12		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 11:48	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 11:48	1
Zinc	66		20	6.9	ug/L		06/12/19 16:38	06/13/19 11:48	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	6.9		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:09	1
Cadmium	0.72		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:09	1
Chromium	<1.1		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:09	1
Copper	1.1	J B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:09	1
Lead	<0.19		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:09	1
Nickel	0.71	J	2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:09	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:09	1
Zinc	8.7	J	20	6.9	ug/L		06/12/19 16:38	06/13/19 12:09	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/13/19 10:30	06/14/19 08:25	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/14/19 10:10	06/17/19 11:02	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-164905-2**

**Date Collected: 06/10/19 11:45**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/22/19 18:25	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/22/19 18:25	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/22/19 18:25	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/22/19 18:25	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/22/19 18:25	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/22/19 18:25	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/22/19 18:25	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/22/19 18:25	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/22/19 18:25	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/22/19 18:25	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/22/19 18:25	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/22/19 18:25	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/22/19 18:25	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/22/19 18:25	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/22/19 18:25	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/22/19 18:25	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/22/19 18:25	1
Benzene	<0.15		0.50	0.15	ug/L			06/22/19 18:25	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/22/19 18:25	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/22/19 18:25	1
Bromoform	<0.48		1.0	0.48	ug/L			06/22/19 18:25	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/22/19 18:25	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/22/19 18:25	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/22/19 18:25	1
Chloroform	<0.37		2.0	0.37	ug/L			06/22/19 18:25	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/22/19 18:25	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/22/19 18:25	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/22/19 18:25	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/22/19 18:25	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/22/19 18:25	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/22/19 18:25	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/22/19 18:25	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/22/19 18:25	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/22/19 18:25	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/22/19 18:25	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/22/19 18:25	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/22/19 18:25	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-164905-2**

Date Collected: 06/10/19 11:45

Matrix: Ground Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 18:25	1
Styrene	<0.39		1.0	0.39	ug/L			06/22/19 18:25	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 18:25	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/22/19 18:25	1
Toluene	<0.15		0.50	0.15	ug/L			06/22/19 18:25	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/22/19 18:25	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/22/19 18:25	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/22/19 18:25	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/22/19 18:25	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/22/19 18:25	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/22/19 18:25	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	111		75 - 126					06/22/19 18:25	1
4-Bromofluorobenzene (Surr)	109		72 - 124					06/22/19 18:25	1
Dibromofluoromethane	105		75 - 120					06/22/19 18:25	1
Toluene-d8 (Surr)	86		75 - 120					06/22/19 18:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/17/19 13:15	06/18/19 15:05	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		06/17/19 13:15	06/18/19 15:05	1
Acenaphthene	<0.24		0.77	0.24	ug/L		06/17/19 13:15	06/18/19 15:05	1
Acenaphthylene	<0.21		0.77	0.21	ug/L		06/17/19 13:15	06/18/19 15:05	1
Anthracene	<0.26		0.77	0.26	ug/L		06/17/19 13:15	06/18/19 15:05	1
Benzo[a]anthracene	<0.044		0.15	0.044	ug/L		06/17/19 13:15	06/18/19 15:05	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		06/17/19 13:15	06/18/19 15:05	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		06/17/19 13:15	06/18/19 15:05	1
Benzo[g,h,i]perylene	<0.29		0.77	0.29	ug/L		06/17/19 13:15	06/18/19 15:05	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		06/17/19 13:15	06/18/19 15:05	1
Chrysene	<0.053		0.15	0.053	ug/L		06/17/19 13:15	06/18/19 15:05	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		06/17/19 13:15	06/18/19 15:05	1
Fluoranthene	<0.35		0.77	0.35	ug/L		06/17/19 13:15	06/18/19 15:05	1
Fluorene	<0.19		0.77	0.19	ug/L		06/17/19 13:15	06/18/19 15:05	1
Indeno[1,2,3-cd]pyrene	<0.058		0.15	0.058	ug/L		06/17/19 13:15	06/18/19 15:05	1
Naphthalene	<0.24		0.77	0.24	ug/L		06/17/19 13:15	06/18/19 15:05	1
Phenanthrene	<0.23		0.77	0.23	ug/L		06/17/19 13:15	06/18/19 15:05	1
Pyrene	<0.33		0.77	0.33	ug/L		06/17/19 13:15	06/18/19 15:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	63		34 - 110				06/17/19 13:15	06/18/19 15:05	1
Nitrobenzene-d5 (Surr)	68		36 - 120				06/17/19 13:15	06/18/19 15:05	1
Terphenyl-d14 (Surr)	86		40 - 145				06/17/19 13:15	06/18/19 15:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	25		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:13	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:13	1
Chromium	4.2	J	5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:13	1
Copper	15	B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:13	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-164905-2**

Date Collected: 06/10/19 11:45

Matrix: Ground Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.2		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:13	1
Nickel	4.1		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:13	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:13	1
Zinc	12	J	20	6.9	ug/L		06/12/19 16:38	06/13/19 12:13	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	8.0		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:26	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:26	1
Chromium	<1.1		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:26	1
Copper	0.96	J B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:26	1
Lead	<0.19		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:26	1
Nickel	<0.63		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:26	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:26	1
Zinc	<6.9		20	6.9	ug/L		06/12/19 16:38	06/13/19 12:26	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/13/19 10:30	06/14/19 08:44	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/14/19 10:10	06/17/19 11:04	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-164905-3**

**Date Collected: 06/10/19 12:30**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/24/19 11:58	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/24/19 11:58	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/24/19 11:58	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/24/19 11:58	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/24/19 11:58	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/24/19 11:58	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/24/19 11:58	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/24/19 11:58	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/24/19 11:58	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/24/19 11:58	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/24/19 11:58	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/24/19 11:58	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/24/19 11:58	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:58	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/24/19 11:58	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/24/19 11:58	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/24/19 11:58	1
Benzene	<0.15		0.50	0.15	ug/L			06/24/19 11:58	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:58	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/24/19 11:58	1
Bromoform	<0.48		1.0	0.48	ug/L			06/24/19 11:58	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/24/19 11:58	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/24/19 11:58	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/24/19 11:58	1
Chloroform	<0.37		2.0	0.37	ug/L			06/24/19 11:58	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/24/19 11:58	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/24/19 11:58	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/24/19 11:58	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/24/19 11:58	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/24/19 11:58	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/24/19 11:58	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/24/19 11:58	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/24/19 11:58	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/24/19 11:58	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
Methyl tert-butyl ether	<0.39 *		1.0	0.39	ug/L			06/24/19 11:58	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/24/19 11:58	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/24/19 11:58	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/24/19 11:58	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-164905-3**

**Date Collected: 06/10/19 12:30**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:58	1
Styrene	<0.39		1.0	0.39	ug/L			06/24/19 11:58	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:58	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/24/19 11:58	1
Toluene	<0.15		0.50	0.15	ug/L			06/24/19 11:58	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/24/19 11:58	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/24/19 11:58	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/24/19 11:58	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:58	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/24/19 11:58	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/24/19 11:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	115		75 - 126					06/24/19 11:58	1
4-Bromofluorobenzene (Surr)	109		72 - 124					06/24/19 11:58	1
Dibromofluoromethane	107		75 - 120					06/24/19 11:58	1
Toluene-d8 (Surr)	91		75 - 120					06/24/19 11:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		06/17/19 13:15	06/18/19 15:33	1
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		06/17/19 13:15	06/18/19 15:33	1
Acenaphthene	<0.23		0.75	0.23	ug/L		06/17/19 13:15	06/18/19 15:33	1
Acenaphthylene	<0.20		0.75	0.20	ug/L		06/17/19 13:15	06/18/19 15:33	1
Anthracene	<0.25		0.75	0.25	ug/L		06/17/19 13:15	06/18/19 15:33	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		06/17/19 13:15	06/18/19 15:33	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		06/17/19 13:15	06/18/19 15:33	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		06/17/19 13:15	06/18/19 15:33	1
Benzo[g,h,i]perylene	<0.28		0.75	0.28	ug/L		06/17/19 13:15	06/18/19 15:33	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		06/17/19 13:15	06/18/19 15:33	1
Chrysene	<0.051		0.15	0.051	ug/L		06/17/19 13:15	06/18/19 15:33	1
Dibenz(a,h)anthracene	<0.038		0.23	0.038	ug/L		06/17/19 13:15	06/18/19 15:33	1
Fluoranthene	<0.34		0.75	0.34	ug/L		06/17/19 13:15	06/18/19 15:33	1
Fluorene	<0.18		0.75	0.18	ug/L		06/17/19 13:15	06/18/19 15:33	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		06/17/19 13:15	06/18/19 15:33	1
Naphthalene	<0.23		0.75	0.23	ug/L		06/17/19 13:15	06/18/19 15:33	1
Phenanthrene	<0.23		0.75	0.23	ug/L		06/17/19 13:15	06/18/19 15:33	1
Pyrene	<0.32		0.75	0.32	ug/L		06/17/19 13:15	06/18/19 15:33	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	74		34 - 110				06/17/19 13:15	06/18/19 15:33	1
Nitrobenzene-d5 (Surr)	81		36 - 120				06/17/19 13:15	06/18/19 15:33	1
Terphenyl-d14 (Surr)	100		40 - 145				06/17/19 13:15	06/18/19 15:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>46</b>		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:30	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:30	1
<b>Chromium</b>	<b>7.9</b>		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:30	1
<b>Copper</b>	<b>35</b>	<b>B</b>	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:30	1

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-164905-3**

Date Collected: 06/10/19 12:30

Matrix: Ground Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.7		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:30	1
Nickel	9.7		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:30	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:30	1
Zinc	21		20	6.9	ug/L		06/12/19 16:38	06/13/19 12:30	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	9.3		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:34	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:34	1
Chromium	<1.1		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:34	1
Copper	0.99	J B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:34	1
Lead	<0.19		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:34	1
Nickel	<0.63		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:34	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:34	1
Zinc	<6.9		20	6.9	ug/L		06/12/19 16:38	06/13/19 12:34	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/13/19 10:30	06/14/19 08:45	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/14/19 10:10	06/17/19 11:05	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-164905-4**

**Date Collected: 06/10/19 13:10**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/22/19 19:16	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/22/19 19:16	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/22/19 19:16	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/22/19 19:16	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/22/19 19:16	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/22/19 19:16	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/22/19 19:16	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/22/19 19:16	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/22/19 19:16	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/22/19 19:16	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/22/19 19:16	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/22/19 19:16	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/22/19 19:16	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:16	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/22/19 19:16	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/22/19 19:16	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/22/19 19:16	1
Benzene	<0.15		0.50	0.15	ug/L			06/22/19 19:16	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/22/19 19:16	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/22/19 19:16	1
Bromoform	<0.48		1.0	0.48	ug/L			06/22/19 19:16	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/22/19 19:16	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/22/19 19:16	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/22/19 19:16	1
Chloroform	<0.37		2.0	0.37	ug/L			06/22/19 19:16	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/22/19 19:16	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/22/19 19:16	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/22/19 19:16	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/22/19 19:16	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/22/19 19:16	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/22/19 19:16	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/22/19 19:16	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/22/19 19:16	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/22/19 19:16	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/22/19 19:16	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/22/19 19:16	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/22/19 19:16	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-164905-4**

**Date Collected: 06/10/19 13:10**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:16	1
Styrene	<0.39		1.0	0.39	ug/L			06/22/19 19:16	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:16	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/22/19 19:16	1
Toluene	<0.15		0.50	0.15	ug/L			06/22/19 19:16	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/22/19 19:16	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/22/19 19:16	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/22/19 19:16	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/22/19 19:16	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/22/19 19:16	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/22/19 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		75 - 126					06/22/19 19:16	1
4-Bromofluorobenzene (Surr)	95		72 - 124					06/22/19 19:16	1
Dibromofluoromethane	106		75 - 120					06/22/19 19:16	1
Toluene-d8 (Surr)	97		75 - 120					06/22/19 19:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.22		1.5	0.22	ug/L		06/17/19 13:15	06/18/19 16:01	1
2-Methylnaphthalene	<0.048		1.5	0.048	ug/L		06/17/19 13:15	06/18/19 16:01	1
Acenaphthene	<0.23		0.73	0.23	ug/L		06/17/19 13:15	06/18/19 16:01	1
Acenaphthylene	<0.20		0.73	0.20	ug/L		06/17/19 13:15	06/18/19 16:01	1
Anthracene	<0.24		0.73	0.24	ug/L		06/17/19 13:15	06/18/19 16:01	1
Benzo[a]anthracene	<0.042		0.15	0.042	ug/L		06/17/19 13:15	06/18/19 16:01	1
Benzo[a]pyrene	<0.073		0.15	0.073	ug/L		06/17/19 13:15	06/18/19 16:01	1
Benzo[b]fluoranthene	<0.059		0.15	0.059	ug/L		06/17/19 13:15	06/18/19 16:01	1
Benzo[g,h,i]perylene	<0.28		0.73	0.28	ug/L		06/17/19 13:15	06/18/19 16:01	1
Benzo[k]fluoranthene	<0.047		0.15	0.047	ug/L		06/17/19 13:15	06/18/19 16:01	1
Chrysene	<0.050		0.15	0.050	ug/L		06/17/19 13:15	06/18/19 16:01	1
Dibenz(a,h)anthracene	<0.037		0.22	0.037	ug/L		06/17/19 13:15	06/18/19 16:01	1
Fluoranthene	<0.33		0.73	0.33	ug/L		06/17/19 13:15	06/18/19 16:01	1
Fluorene	<0.18		0.73	0.18	ug/L		06/17/19 13:15	06/18/19 16:01	1
Indeno[1,2,3-cd]pyrene	<0.055		0.15	0.055	ug/L		06/17/19 13:15	06/18/19 16:01	1
Naphthalene	<0.23		0.73	0.23	ug/L		06/17/19 13:15	06/18/19 16:01	1
Phenanthrene	<0.22		0.73	0.22	ug/L		06/17/19 13:15	06/18/19 16:01	1
Pyrene	<0.31		0.73	0.31	ug/L		06/17/19 13:15	06/18/19 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		34 - 110				06/17/19 13:15	06/18/19 16:01	1
Nitrobenzene-d5 (Surr)	84		36 - 120				06/17/19 13:15	06/18/19 16:01	1
Terphenyl-d14 (Surr)	101		40 - 145				06/17/19 13:15	06/18/19 16:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	160		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:38	1
Cadmium	0.36	J	0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:38	1
Chromium	37		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:38	1
Copper	180	B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:38	1

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-1 (010)**

**Lab Sample ID: 500-164905-4**

Date Collected: 06/10/19 13:10

Matrix: Ground Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	17		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:38	1
Nickel	43		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:38	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:38	1
Zinc	82		20	6.9	ug/L		06/12/19 16:38	06/13/19 12:38	1

**Method: 6020 - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	9.0		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 12:42	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 12:42	1
Chromium	<1.1		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 12:42	1
Copper	0.91	J B	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 12:42	1
Lead	0.19	J	0.50	0.19	ug/L		06/12/19 16:38	06/13/19 12:42	1
Nickel	<0.63		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 12:42	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 12:42	1
Zinc	<6.9		20	6.9	ug/L		06/12/19 16:38	06/13/19 12:42	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/13/19 10:30	06/14/19 08:51	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/14/19 10:10	06/17/19 11:07	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-164905-5**

Date Collected: 06/10/19 10:30

Matrix: Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/22/19 19:41	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/22/19 19:41	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/22/19 19:41	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/22/19 19:41	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/22/19 19:41	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/22/19 19:41	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/22/19 19:41	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/22/19 19:41	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/22/19 19:41	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/22/19 19:41	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/22/19 19:41	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/22/19 19:41	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/22/19 19:41	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:41	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/22/19 19:41	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/22/19 19:41	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/22/19 19:41	1
<b>Benzene</b>	<b>0.42 J</b>		0.50	0.15	ug/L			06/22/19 19:41	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/22/19 19:41	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/22/19 19:41	1
Bromoform	<0.48		1.0	0.48	ug/L			06/22/19 19:41	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/22/19 19:41	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/22/19 19:41	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/22/19 19:41	1
Chloroform	<0.37		2.0	0.37	ug/L			06/22/19 19:41	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/22/19 19:41	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/22/19 19:41	1
cis-1,3-Dichloropropane	<0.42		1.0	0.42	ug/L			06/22/19 19:41	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/22/19 19:41	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/22/19 19:41	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/22/19 19:41	1
<b>Ethylbenzene</b>	<b>0.23 J</b>		0.50	0.18	ug/L			06/22/19 19:41	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/22/19 19:41	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/22/19 19:41	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/22/19 19:41	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/22/19 19:41	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/22/19 19:41	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-164905-5**

Date Collected: 06/10/19 10:30

Matrix: Water

Date Received: 06/12/19 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:41	1
Styrene	<0.39		1.0	0.39	ug/L			06/22/19 19:41	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 19:41	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/22/19 19:41	1
<b>Toluene</b>	<b>2.1</b>		0.50	0.15	ug/L			06/22/19 19:41	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/22/19 19:41	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/22/19 19:41	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/22/19 19:41	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/22/19 19:41	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/22/19 19:41	1
<b>Xylenes, Total</b>	<b>1.5</b>		1.0	0.22	ug/L			06/22/19 19:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 126		06/22/19 19:41	1
4-Bromofluorobenzene (Surr)	111		72 - 124		06/22/19 19:41	1
Dibromofluoromethane	105		75 - 120		06/22/19 19:41	1
Toluene-d8 (Surr)	86		75 - 120		06/22/19 19:41	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-164905-6**

**Date Collected: 06/10/19 00:00**

**Matrix: Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/24/19 11:03	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/24/19 11:03	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/24/19 11:03	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/24/19 11:03	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/24/19 11:03	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/24/19 11:03	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/24/19 11:03	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/24/19 11:03	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/24/19 11:03	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.50</b>	<b>J</b>	1.0	0.36	ug/L			06/24/19 11:03	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/24/19 11:03	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/24/19 11:03	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/24/19 11:03	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/24/19 11:03	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:03	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/24/19 11:03	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:03	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/24/19 11:03	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/24/19 11:03	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/24/19 11:03	1
<b>Benzene</b>	<b>0.38</b>	<b>J</b>	0.50	0.15	ug/L			06/24/19 11:03	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/24/19 11:03	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:03	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/24/19 11:03	1
Bromoform	<0.48		1.0	0.48	ug/L			06/24/19 11:03	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/24/19 11:03	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/24/19 11:03	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/24/19 11:03	1
Chloroform	<0.37		2.0	0.37	ug/L			06/24/19 11:03	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/24/19 11:03	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/24/19 11:03	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/24/19 11:03	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/24/19 11:03	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/24/19 11:03	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/24/19 11:03	1
<b>Ethylbenzene</b>	<b>0.24</b>	<b>J</b>	0.50	0.18	ug/L			06/24/19 11:03	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/24/19 11:03	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/24/19 11:03	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
Methyl tert-butyl ether	<0.39	*	1.0	0.39	ug/L			06/24/19 11:03	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/24/19 11:03	1
<b>Naphthalene</b>	<b>0.39</b>	<b>J</b>	1.0	0.34	ug/L			06/24/19 11:03	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/24/19 11:03	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/24/19 11:03	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-164905-6**

**Date Collected: 06/10/19 00:00**

**Matrix: Water**

**Date Received: 06/12/19 09:10**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:03	1
Styrene	<0.39		1.0	0.39	ug/L			06/24/19 11:03	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 11:03	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/24/19 11:03	1
<b>Toluene</b>	<b>2.0</b>		0.50	0.15	ug/L			06/24/19 11:03	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/24/19 11:03	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/24/19 11:03	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/24/19 11:03	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/24/19 11:03	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/24/19 11:03	1
<b>Xylenes, Total</b>	<b>1.7</b>		1.0	0.22	ug/L			06/24/19 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		75 - 126		06/24/19 11:03	1
4-Bromofluorobenzene (Surr)	108		72 - 124		06/24/19 11:03	1
Dibromofluoromethane	104		75 - 120		06/24/19 11:03	1
Toluene-d8 (Surr)	90		75 - 120		06/24/19 11:03	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	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.

### Metals

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

## Glossary

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

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## GC/MS VOA

### Analysis Batch: 491502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-2	MW-3 (030)	Total/NA	Ground Water	8260B	
500-164905-4	MW-1 (010)	Total/NA	Ground Water	8260B	
500-164905-5	Field Blank (997)	Total/NA	Water	8260B	
MB 500-491502/6	Method Blank	Total/NA	Water	8260B	
LCS 500-491502/4	Lab Control Sample	Total/NA	Water	8260B	

### Analysis Batch: 491611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Total/NA	Ground Water	8260B	
500-164905-3	MW-2 (020)	Total/NA	Ground Water	8260B	
500-164905-6	Trip Blank	Total/NA	Water	8260B	
MB 500-491611/6	Method Blank	Total/NA	Water	8260B	
LCS 500-491611/4	Lab Control Sample	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 490639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Total/NA	Ground Water	3510C	
500-164905-2	MW-3 (030)	Total/NA	Ground Water	3510C	
500-164905-3	MW-2 (020)	Total/NA	Ground Water	3510C	
500-164905-4	MW-1 (010)	Total/NA	Ground Water	3510C	
MB 500-490639/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-490639/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-490639/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 490754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Total/NA	Ground Water	8270D	490639
500-164905-2	MW-3 (030)	Total/NA	Ground Water	8270D	490639
500-164905-3	MW-2 (020)	Total/NA	Ground Water	8270D	490639
500-164905-4	MW-1 (010)	Total/NA	Ground Water	8270D	490639
MB 500-490639/1-A	Method Blank	Total/NA	Water	8270D	490639
LCS 500-490639/2-A	Lab Control Sample	Total/NA	Water	8270D	490639
LCSD 500-490639/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	490639

## Metals

### Prep Batch: 489975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Dissolved	Ground Water	3005A	
500-164905-1	MW-8 (080)	Total Recoverable	Ground Water	3005A	
500-164905-2	MW-3 (030)	Dissolved	Ground Water	3005A	
500-164905-2	MW-3 (030)	Total Recoverable	Ground Water	3005A	
500-164905-3	MW-2 (020)	Dissolved	Ground Water	3005A	
500-164905-3	MW-2 (020)	Total Recoverable	Ground Water	3005A	
500-164905-4	MW-1 (010)	Dissolved	Ground Water	3005A	
500-164905-4	MW-1 (010)	Total Recoverable	Ground Water	3005A	
MB 500-489975/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-489975/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-164905-1 MS	MW-8 (080)	Total Recoverable	Ground Water	3005A	
500-164905-1 MSD	MW-8 (080)	Total Recoverable	Ground Water	3005A	

Eurofins TestAmerica, Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## Metals (Continued)

### Prep Batch: 489975 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1 DU	MW-8 (080)	Total Recoverable	Ground Water	3005A	

### Prep Batch: 490101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Total/NA	Ground Water	7470A	
500-164905-2	MW-3 (030)	Total/NA	Ground Water	7470A	
500-164905-3	MW-2 (020)	Total/NA	Ground Water	7470A	
500-164905-4	MW-1 (010)	Total/NA	Ground Water	7470A	
MB 500-490101/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-490101/13-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 490287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Dissolved	Ground Water	6020	489975
500-164905-1	MW-8 (080)	Total Recoverable	Ground Water	6020	489975
500-164905-2	MW-3 (030)	Dissolved	Ground Water	6020	489975
500-164905-2	MW-3 (030)	Total Recoverable	Ground Water	6020	489975
500-164905-3	MW-2 (020)	Dissolved	Ground Water	6020	489975
500-164905-3	MW-2 (020)	Total Recoverable	Ground Water	6020	489975
500-164905-4	MW-1 (010)	Dissolved	Ground Water	6020	489975
500-164905-4	MW-1 (010)	Total Recoverable	Ground Water	6020	489975
MB 500-489975/1-A	Method Blank	Total Recoverable	Water	6020	489975
LCS 500-489975/2-A	Lab Control Sample	Total Recoverable	Water	6020	489975
500-164905-1 MS	MW-8 (080)	Total Recoverable	Ground Water	6020	489975
500-164905-1 MSD	MW-8 (080)	Total Recoverable	Ground Water	6020	489975
500-164905-1 DU	MW-8 (080)	Total Recoverable	Ground Water	6020	489975

### Analysis Batch: 490294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Total/NA	Ground Water	7470A	490101
500-164905-2	MW-3 (030)	Total/NA	Ground Water	7470A	490101
500-164905-3	MW-2 (020)	Total/NA	Ground Water	7470A	490101
500-164905-4	MW-1 (010)	Total/NA	Ground Water	7470A	490101
MB 500-490101/12-A	Method Blank	Total/NA	Water	7470A	490101
LCS 500-490101/13-A	Lab Control Sample	Total/NA	Water	7470A	490101

### Prep Batch: 490297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Dissolved	Ground Water	7470A	
500-164905-2	MW-3 (030)	Dissolved	Ground Water	7470A	
500-164905-3	MW-2 (020)	Dissolved	Ground Water	7470A	
500-164905-4	MW-1 (010)	Dissolved	Ground Water	7470A	
MB 500-490297/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-490297/13-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 490630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-1	MW-8 (080)	Dissolved	Ground Water	7470A	490297
500-164905-2	MW-3 (030)	Dissolved	Ground Water	7470A	490297
500-164905-3	MW-2 (020)	Dissolved	Ground Water	7470A	490297
500-164905-4	MW-1 (010)	Dissolved	Ground Water	7470A	490297

Eurofins TestAmerica, Chicago

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## Metals (Continued)

### Analysis Batch: 490630 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-490297/12-A	Method Blank	Total/NA	Water	7470A	490297
LCS 500-490297/13-A	Lab Control Sample	Total/NA	Water	7470A	490297

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# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(75-126)	(72-124)	(75-120)	(75-120)
500-164905-1	MW-8 (080)	111	111	106	91
500-164905-2	MW-3 (030)	111	109	105	86
500-164905-3	MW-2 (020)	115	109	107	91
500-164905-4	MW-1 (010)	118	95	106	97

#### Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(75-126)	(72-124)	(75-120)	(75-120)
500-164905-5	Field Blank (997)	114	111	105	86
500-164905-6	Trip Blank	112	108	104	90
LCS 500-491502/4	Lab Control Sample	83	100	99	89
LCS 500-491611/4	Lab Control Sample	112	106	109	91
MB 500-491502/6	Method Blank	89	106	97	86
MB 500-491611/6	Method Blank	115	111	105	91

#### Surrogate Legend

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

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP	NBZ	TPHL
		(34-110)	(36-120)	(40-145)
500-164905-1	MW-8 (080)	72	80	101
500-164905-2	MW-3 (030)	63	68	86
500-164905-3	MW-2 (020)	74	81	100
500-164905-4	MW-1 (010)	76	84	101

#### Surrogate Legend

FBP = 2-Fluorobiphenyl  
NBZ = Nitrobenzene-d5 (Surr)  
TPHL = Terphenyl-d14 (Surr)

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Matrix: Water**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	FBP (34-110)	NBZ (36-120)	TPHL (40-145)
LCS 500-490639/2-A	Lab Control Sample	77	84	88
LCSD 500-490639/3-A	Lab Control Sample Dup	67	80	88
MB 500-490639/1-A	Method Blank	78	85	101

### Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)



# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: MB 500-491502/6**  
**Matrix: Water**  
**Analysis Batch: 491502**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/22/19 12:33	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/22/19 12:33	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/22/19 12:33	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/22/19 12:33	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/22/19 12:33	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/22/19 12:33	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/22/19 12:33	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/22/19 12:33	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/22/19 12:33	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/22/19 12:33	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/22/19 12:33	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/22/19 12:33	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/22/19 12:33	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/22/19 12:33	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/22/19 12:33	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/22/19 12:33	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/22/19 12:33	1
Benzene	<0.15		0.50	0.15	ug/L			06/22/19 12:33	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/22/19 12:33	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/22/19 12:33	1
Bromoform	<0.48		1.0	0.48	ug/L			06/22/19 12:33	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/22/19 12:33	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/22/19 12:33	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/22/19 12:33	1
Chloroform	<0.37		2.0	0.37	ug/L			06/22/19 12:33	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/22/19 12:33	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/22/19 12:33	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/22/19 12:33	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/22/19 12:33	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/22/19 12:33	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/22/19 12:33	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/22/19 12:33	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/22/19 12:33	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/22/19 12:33	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/22/19 12:33	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/22/19 12:33	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/22/19 12:33	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/22/19 12:33	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: MB 500-491502/6**  
**Matrix: Water**  
**Analysis Batch: 491502**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 12:33	1
Styrene	0.608	J	1.0	0.39	ug/L			06/22/19 12:33	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/22/19 12:33	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/22/19 12:33	1
Toluene	<0.15		0.50	0.15	ug/L			06/22/19 12:33	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/22/19 12:33	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/22/19 12:33	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/22/19 12:33	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/22/19 12:33	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/22/19 12:33	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/22/19 12:33	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	89		75 - 126		06/22/19 12:33	1
4-Bromofluorobenzene (Surr)	106		72 - 124		06/22/19 12:33	1
Dibromofluoromethane	97		75 - 120		06/22/19 12:33	1
Toluene-d8 (Surr)	86		75 - 120		06/22/19 12:33	1

**Lab Sample ID: LCS 500-491502/4**  
**Matrix: Water**  
**Analysis Batch: 491502**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	50.4		ug/L		101	70 - 125
1,1,2,2-Tetrachloroethane	50.0	44.7		ug/L		89	62 - 140
1,1,2-Trichloroethane	50.0	45.5		ug/L		91	71 - 130
1,1-Dichloroethane	50.0	45.6		ug/L		91	70 - 125
1,1-Dichloroethene	50.0	44.1		ug/L		88	67 - 122
1,1-Dichloropropene	50.0	46.7		ug/L		93	70 - 121
1,2,3-Trichlorobenzene	50.0	53.8		ug/L		108	51 - 145
1,2,3-Trichloropropane	50.0	48.2		ug/L		96	50 - 133
1,2,4-Trichlorobenzene	50.0	51.3		ug/L		103	57 - 137
1,2,4-Trimethylbenzene	50.0	51.2		ug/L		102	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	41.5		ug/L		83	56 - 123
1,2-Dibromoethane	50.0	45.9		ug/L		92	70 - 125
1,2-Dichlorobenzene	50.0	49.8		ug/L		100	70 - 125
1,2-Dichloroethane	50.0	41.5		ug/L		83	68 - 127
1,2-Dichloropropane	50.0	48.4		ug/L		97	67 - 130
1,3,5-Trimethylbenzene	50.0	51.6		ug/L		103	70 - 123
1,3-Dichlorobenzene	50.0	50.8		ug/L		102	70 - 125
1,3-Dichloropropane	50.0	44.3		ug/L		89	62 - 136
1,4-Dichlorobenzene	50.0	50.9		ug/L		102	70 - 120
2,2-Dichloropropane	50.0	49.6		ug/L		99	58 - 139
2-Chlorotoluene	50.0	49.9		ug/L		100	70 - 125
4-Chlorotoluene	50.0	49.5		ug/L		99	68 - 124
Benzene	50.0	45.9		ug/L		92	70 - 120

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: LCS 500-491502/4**  
**Matrix: Water**  
**Analysis Batch: 491502**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	52.3		ug/L		105	70 - 122
Bromochloromethane	50.0	54.0		ug/L		108	65 - 122
Bromodichloromethane	50.0	44.8		ug/L		90	69 - 120
Bromoform	50.0	39.3		ug/L		79	56 - 132
Bromomethane	50.0	31.3		ug/L		63	40 - 152
Carbon tetrachloride	50.0	48.1		ug/L		96	59 - 133
Chlorobenzene	50.0	48.7		ug/L		97	70 - 120
Chloroethane	50.0	27.8		ug/L		56	48 - 136
Chloroform	50.0	46.4		ug/L		93	70 - 120
Chloromethane	50.0	52.2		ug/L		104	56 - 152
cis-1,2-Dichloroethene	50.0	50.2		ug/L		100	70 - 125
cis-1,3-Dichloropropene	50.0	42.3		ug/L		85	64 - 127
Dibromochloromethane	50.0	44.1		ug/L		88	68 - 125
Dibromomethane	50.0	46.5		ug/L		93	70 - 120
Dichlorodifluoromethane	50.0	47.1		ug/L		94	40 - 159
Ethylbenzene	50.0	49.4		ug/L		99	70 - 123
Hexachlorobutadiene	50.0	51.6		ug/L		103	51 - 150
Isopropylbenzene	50.0	52.8		ug/L		106	70 - 126
Methyl tert-butyl ether	50.0	45.2		ug/L		90	55 - 123
Methylene Chloride	50.0	46.4		ug/L		93	69 - 125
Naphthalene	50.0	49.8		ug/L		100	53 - 144
n-Butylbenzene	50.0	46.1		ug/L		92	68 - 125
N-Propylbenzene	50.0	50.1		ug/L		100	69 - 127
p-Isopropyltoluene	50.0	52.1		ug/L		104	70 - 125
sec-Butylbenzene	50.0	50.8		ug/L		102	70 - 123
Styrene	50.0	52.6		ug/L		105	70 - 120
tert-Butylbenzene	50.0	53.2		ug/L		106	70 - 121
Tetrachloroethene	50.0	48.9		ug/L		98	70 - 128
Toluene	50.0	46.1		ug/L		92	70 - 125
trans-1,2-Dichloroethene	50.0	48.2		ug/L		96	70 - 125
trans-1,3-Dichloropropene	50.0	41.9		ug/L		84	62 - 128
Trichloroethene	50.0	52.3		ug/L		105	70 - 125
Trichlorofluoromethane	50.0	43.5		ug/L		87	55 - 128
Vinyl chloride	50.0	42.4		ug/L		85	64 - 126
Xylenes, Total	100	96.0		ug/L		96	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	83		75 - 126
4-Bromofluorobenzene (Surr)	100		72 - 124
Dibromofluoromethane	99		75 - 120
Toluene-d8 (Surr)	89		75 - 120

**Lab Sample ID: MB 500-491611/6**  
**Matrix: Water**  
**Analysis Batch: 491611**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			06/24/19 10:36	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: MB 500-491611/6**  
**Matrix: Water**  
**Analysis Batch: 491611**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			06/24/19 10:36	1
1,1,1,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			06/24/19 10:36	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			06/24/19 10:36	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			06/24/19 10:36	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			06/24/19 10:36	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			06/24/19 10:36	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			06/24/19 10:36	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			06/24/19 10:36	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			06/24/19 10:36	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			06/24/19 10:36	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			06/24/19 10:36	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			06/24/19 10:36	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			06/24/19 10:36	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			06/24/19 10:36	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			06/24/19 10:36	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			06/24/19 10:36	1
Benzene	<0.15		0.50	0.15	ug/L			06/24/19 10:36	1
Bromobenzene	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			06/24/19 10:36	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			06/24/19 10:36	1
Bromoform	<0.48		1.0	0.48	ug/L			06/24/19 10:36	1
Bromomethane	<0.80		3.0	0.80	ug/L			06/24/19 10:36	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			06/24/19 10:36	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
Chloroethane	<0.51		1.0	0.51	ug/L			06/24/19 10:36	1
Chloroform	<0.37		2.0	0.37	ug/L			06/24/19 10:36	1
Chloromethane	<0.32		1.0	0.32	ug/L			06/24/19 10:36	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			06/24/19 10:36	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			06/24/19 10:36	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			06/24/19 10:36	1
Dibromomethane	<0.27		1.0	0.27	ug/L			06/24/19 10:36	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			06/24/19 10:36	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			06/24/19 10:36	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			06/24/19 10:36	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			06/24/19 10:36	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			06/24/19 10:36	1
Naphthalene	<0.34		1.0	0.34	ug/L			06/24/19 10:36	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			06/24/19 10:36	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 10:36	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: MB 500-491611/6**  
**Matrix: Water**  
**Analysis Batch: 491611**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Styrene	<0.39		1.0	0.39	ug/L			06/24/19 10:36	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			06/24/19 10:36	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			06/24/19 10:36	1
Toluene	<0.15		0.50	0.15	ug/L			06/24/19 10:36	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			06/24/19 10:36	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			06/24/19 10:36	1
Trichloroethene	<0.16		0.50	0.16	ug/L			06/24/19 10:36	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			06/24/19 10:36	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			06/24/19 10:36	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			06/24/19 10:36	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	115		75 - 126		06/24/19 10:36	1
4-Bromofluorobenzene (Surr)	111		72 - 124		06/24/19 10:36	1
Dibromofluoromethane	105		75 - 120		06/24/19 10:36	1
Toluene-d8 (Surr)	91		75 - 120		06/24/19 10:36	1

**Lab Sample ID: LCS 500-491611/4**  
**Matrix: Water**  
**Analysis Batch: 491611**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/L		104	70 - 125
1,1,1-Trichloroethane	50.0	57.3		ug/L		115	70 - 125
1,1,2,2-Tetrachloroethane	50.0	40.0		ug/L		80	62 - 140
1,1,2-Trichloroethane	50.0	43.8		ug/L		88	71 - 130
1,1-Dichloroethane	50.0	47.9		ug/L		96	70 - 125
1,1-Dichloroethene	50.0	45.6		ug/L		91	67 - 122
1,1-Dichloropropene	50.0	52.0		ug/L		104	70 - 121
1,2,3-Trichlorobenzene	50.0	56.6		ug/L		113	51 - 145
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	50 - 133
1,2,4-Trichlorobenzene	50.0	55.1		ug/L		110	57 - 137
1,2,4-Trimethylbenzene	50.0	53.2		ug/L		106	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	43.3		ug/L		87	56 - 123
1,2-Dibromoethane	50.0	47.9		ug/L		96	70 - 125
1,2-Dichlorobenzene	50.0	50.7		ug/L		101	70 - 125
1,2-Dichloroethane	50.0	54.9		ug/L		110	68 - 127
1,2-Dichloropropane	50.0	46.6		ug/L		93	67 - 130
1,3,5-Trimethylbenzene	50.0	53.0		ug/L		106	70 - 123
1,3-Dichlorobenzene	50.0	51.0		ug/L		102	70 - 125
1,3-Dichloropropane	50.0	44.2		ug/L		88	62 - 136
1,4-Dichlorobenzene	50.0	49.7		ug/L		99	70 - 120
2,2-Dichloropropane	50.0	49.1		ug/L		98	58 - 139
2-Chlorotoluene	50.0	49.5		ug/L		99	70 - 125
4-Chlorotoluene	50.0	48.7		ug/L		97	68 - 124
Benzene	50.0	46.6		ug/L		93	70 - 120
Bromobenzene	50.0	52.6		ug/L		105	70 - 122
Bromochloromethane	50.0	53.5		ug/L		107	65 - 122

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

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

Lab Sample ID: LCS 500-491611/4  
Matrix: Water  
Analysis Batch: 491611

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromodichloromethane	50.0	53.2		ug/L		106	69 - 120
Bromoform	50.0	49.0		ug/L		98	56 - 132
Bromomethane	50.0	37.3		ug/L		75	40 - 152
Carbon tetrachloride	50.0	59.1		ug/L		118	59 - 133
Chlorobenzene	50.0	49.6		ug/L		99	70 - 120
Chloroethane	50.0	47.9		ug/L		96	48 - 136
Chloroform	50.0	52.1		ug/L		104	70 - 120
Chloromethane	50.0	38.8		ug/L		78	56 - 152
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	70 - 125
cis-1,3-Dichloropropene	50.0	43.6		ug/L		87	64 - 127
Dibromochloromethane	50.0	50.5		ug/L		101	68 - 125
Dibromomethane	50.0	49.6		ug/L		99	70 - 120
Dichlorodifluoromethane	50.0	52.4		ug/L		105	40 - 159
Ethylbenzene	50.0	48.8		ug/L		98	70 - 123
Hexachlorobutadiene	50.0	64.6		ug/L		129	51 - 150
Isopropylbenzene	50.0	51.0		ug/L		102	70 - 126
Methyl tert-butyl ether	50.0	70.5	*	ug/L		141	55 - 123
Methylene Chloride	50.0	44.5		ug/L		89	69 - 125
Naphthalene	50.0	53.2		ug/L		106	53 - 144
n-Butylbenzene	50.0	50.9		ug/L		102	68 - 125
N-Propylbenzene	50.0	49.7		ug/L		99	69 - 127
p-Isopropyltoluene	50.0	54.8		ug/L		110	70 - 125
sec-Butylbenzene	50.0	52.3		ug/L		105	70 - 123
Styrene	50.0	50.5		ug/L		101	70 - 120
tert-Butylbenzene	50.0	55.2		ug/L		110	70 - 121
Tetrachloroethene	50.0	57.0		ug/L		114	70 - 128
Toluene	50.0	42.2		ug/L		84	70 - 125
trans-1,2-Dichloroethene	50.0	48.0		ug/L		96	70 - 125
trans-1,3-Dichloropropene	50.0	44.0		ug/L		88	62 - 128
Trichloroethene	50.0	54.1		ug/L		108	70 - 125
Trichlorofluoromethane	50.0	58.7		ug/L		117	55 - 128
Vinyl chloride	50.0	43.1		ug/L		86	64 - 126
Xylenes, Total	100	97.6		ug/L		98	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		75 - 126
4-Bromofluorobenzene (Surr)	106		72 - 124
Dibromofluoromethane	109		75 - 120
Toluene-d8 (Surr)	91		75 - 120

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

Lab Sample ID: MB 500-490639/1-A  
Matrix: Water  
Analysis Batch: 490754

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 490639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		06/17/19 13:15	06/18/19 13:42	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		06/17/19 13:15	06/18/19 13:42	1

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: MB 500-490639/1-A**  
**Matrix: Water**  
**Analysis Batch: 490754**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 490639**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	<0.25		0.80	0.25	ug/L		06/17/19 13:15	06/18/19 13:42	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		06/17/19 13:15	06/18/19 13:42	1
Anthracene	<0.27		0.80	0.27	ug/L		06/17/19 13:15	06/18/19 13:42	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		06/17/19 13:15	06/18/19 13:42	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		06/17/19 13:15	06/18/19 13:42	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		06/17/19 13:15	06/18/19 13:42	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		06/17/19 13:15	06/18/19 13:42	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		06/17/19 13:15	06/18/19 13:42	1
Chrysene	<0.055		0.16	0.055	ug/L		06/17/19 13:15	06/18/19 13:42	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		06/17/19 13:15	06/18/19 13:42	1
Fluoranthene	<0.36		0.80	0.36	ug/L		06/17/19 13:15	06/18/19 13:42	1
Fluorene	<0.20		0.80	0.20	ug/L		06/17/19 13:15	06/18/19 13:42	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		06/17/19 13:15	06/18/19 13:42	1
Naphthalene	<0.25		0.80	0.25	ug/L		06/17/19 13:15	06/18/19 13:42	1
Phenanthrene	<0.24		0.80	0.24	ug/L		06/17/19 13:15	06/18/19 13:42	1
Pyrene	<0.34		0.80	0.34	ug/L		06/17/19 13:15	06/18/19 13:42	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	78		34 - 110	06/17/19 13:15	06/18/19 13:42	1
Nitrobenzene-d5 (Surr)	85		36 - 120	06/17/19 13:15	06/18/19 13:42	1
Terphenyl-d14 (Surr)	101		40 - 145	06/17/19 13:15	06/18/19 13:42	1

**Lab Sample ID: LCS 500-490639/2-A**  
**Matrix: Water**  
**Analysis Batch: 490754**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 490639**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Methylnaphthalene	32.0	24.9		ug/L		78	34 - 110
Acenaphthene	32.0	24.8		ug/L		78	46 - 110
Acenaphthylene	32.0	24.1		ug/L		75	47 - 113
Anthracene	32.0	27.0		ug/L		84	67 - 118
Benzo[a]anthracene	32.0	26.0		ug/L		81	70 - 126
Benzo[a]pyrene	32.0	30.7		ug/L		96	70 - 135
Benzo[b]fluoranthene	32.0	29.9		ug/L		93	69 - 136
Benzo[g,h,i]perylene	32.0	26.5		ug/L		83	70 - 135
Benzo[k]fluoranthene	32.0	30.8		ug/L		96	70 - 133
Chrysene	32.0	27.1		ug/L		85	68 - 129
Dibenz(a,h)anthracene	32.0	29.8		ug/L		93	70 - 134
Fluoranthene	32.0	27.8		ug/L		87	68 - 126
Fluorene	32.0	25.9		ug/L		81	53 - 120
Indeno[1,2,3-cd]pyrene	32.0	29.1		ug/L		91	65 - 133
Naphthalene	32.0	23.5		ug/L		73	36 - 110
Phenanthrene	32.0	27.2		ug/L		85	65 - 120
Pyrene	32.0	26.9		ug/L		84	70 - 126

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	77		34 - 110

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: LCS 500-490639/2-A**  
**Matrix: Water**  
**Analysis Batch: 490754**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 490639**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	84		36 - 120
Terphenyl-d14 (Surr)	88		40 - 145

**Lab Sample ID: LCSD 500-490639/3-A**  
**Matrix: Water**  
**Analysis Batch: 490754**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 490639**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1-Methylnaphthalene	32.0	22.9		ug/L		71	38 - 110	11	20	
2-Methylnaphthalene	32.0	21.8		ug/L		68	34 - 110	13	20	
Acenaphthene	32.0	22.9		ug/L		72	46 - 110	8	20	
Acenaphthylene	32.0	22.3		ug/L		70	47 - 113	8	20	
Anthracene	32.0	27.2		ug/L		85	67 - 118	1	20	
Benzo[a]anthracene	32.0	27.1		ug/L		85	70 - 126	4	20	
Benzo[a]pyrene	32.0	32.0		ug/L		100	70 - 135	4	20	
Benzo[b]fluoranthene	32.0	30.6		ug/L		96	69 - 136	2	20	
Benzo[g,h,i]perylene	32.0	26.9		ug/L		84	70 - 135	1	20	
Benzo[k]fluoranthene	32.0	29.9		ug/L		93	70 - 133	3	20	
Chrysene	32.0	28.2		ug/L		88	68 - 129	4	20	
Dibenz(a,h)anthracene	32.0	30.3		ug/L		95	70 - 134	1	20	
Fluoranthene	32.0	28.1		ug/L		88	68 - 126	1	20	
Fluorene	32.0	24.3		ug/L		76	53 - 120	6	20	
Indeno[1,2,3-cd]pyrene	32.0	29.3		ug/L		92	65 - 133	1	20	
Naphthalene	32.0	21.1		ug/L		66	36 - 110	11	20	
Phenanthrene	32.0	26.9		ug/L		84	65 - 120	1	20	
Pyrene	32.0	28.1		ug/L		88	70 - 126	4	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	67		34 - 110
Nitrobenzene-d5 (Surr)	80		36 - 120
Terphenyl-d14 (Surr)	88		40 - 145

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

**Lab Sample ID: MB 500-489975/1-A**  
**Matrix: Water**  
**Analysis Batch: 490287**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 489975**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.73		2.5	0.73	ug/L		06/12/19 16:38	06/13/19 11:36	1
Cadmium	<0.17		0.50	0.17	ug/L		06/12/19 16:38	06/13/19 11:36	1
Chromium	<1.1		5.0	1.1	ug/L		06/12/19 16:38	06/13/19 11:36	1
Copper	0.669	J	2.0	0.50	ug/L		06/12/19 16:38	06/13/19 11:36	1
Lead	<0.19		0.50	0.19	ug/L		06/12/19 16:38	06/13/19 11:36	1
Nickel	<0.63		2.0	0.63	ug/L		06/12/19 16:38	06/13/19 11:36	1
Silver	<0.12		0.50	0.12	ug/L		06/12/19 16:38	06/13/19 11:36	1
Zinc	<6.9		20	6.9	ug/L		06/12/19 16:38	06/13/19 11:36	1

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

**Lab Sample ID: LCS 500-489975/2-A**  
**Matrix: Water**  
**Analysis Batch: 490287**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 489975**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	500	501		ug/L		100	80 - 120
Cadmium	50.0	50.1		ug/L		100	80 - 120
Chromium	200	198		ug/L		99	80 - 120
Copper	250	256		ug/L		102	80 - 120
Lead	100	103		ug/L		103	80 - 120
Nickel	500	505		ug/L		101	80 - 120
Silver	50.0	51.0		ug/L		102	80 - 120
Zinc	500	508		ug/L		102	80 - 120

**Lab Sample ID: 500-164905-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 490287**

**Client Sample ID: MW-8 (080)**  
**Prep Type: Total Recoverable**  
**Prep Batch: 489975**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	64	V	500	563		ug/L		100	75 - 125
Cadmium	2.1		50.0	52.4		ug/L		101	75 - 125
Chromium	9.5		200	206		ug/L		98	75 - 125
Copper	28	B	250	281		ug/L		101	75 - 125
Lead	2.6		100	103		ug/L		100	75 - 125
Nickel	12		500	506		ug/L		99	75 - 125
Silver	<0.12		50.0	52.0		ug/L		104	75 - 125
Zinc	66		500	566		ug/L		100	75 - 125

**Lab Sample ID: 500-164905-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 490287**

**Client Sample ID: MW-8 (080)**  
**Prep Type: Total Recoverable**  
**Prep Batch: 489975**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	64	V	500	552		ug/L		98	75 - 125	2	20
Cadmium	2.1		50.0	53.2		ug/L		102	75 - 125	2	20
Chromium	9.5		200	200		ug/L		95	75 - 125	3	20
Copper	28	B	250	279		ug/L		100	75 - 125	1	20
Lead	2.6		100	101		ug/L		98	75 - 125	2	20
Nickel	12		500	491		ug/L		96	75 - 125	3	20
Silver	<0.12		50.0	51.7		ug/L		103	75 - 125	1	20
Zinc	66		500	556		ug/L		98	75 - 125	2	20

**Lab Sample ID: 500-164905-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 490287**

**Client Sample ID: MW-8 (080)**  
**Prep Type: Total Recoverable**  
**Prep Batch: 489975**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Barium	64	V	61.4		ug/L		4	20
Cadmium	2.1		2.17		ug/L		3	20
Chromium	9.5		9.13		ug/L		4	20
Copper	28	B	27.1		ug/L		3	20
Lead	2.6		2.59		ug/L		1	20
Nickel	12		11.4		ug/L		7	20
Silver	<0.12		<0.12		ug/L		NC	20

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

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

Lab Sample ID: 500-164905-1 DU  
 Matrix: Ground Water  
 Analysis Batch: 490287

Client Sample ID: MW-8 (080)  
 Prep Type: Total Recoverable  
 Prep Batch: 489975

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Zinc	66		63.8		ug/L		4	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-490101/12-A  
 Matrix: Water  
 Analysis Batch: 490294

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 490101

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/13/19 10:30	06/14/19 08:12	1

Lab Sample ID: LCS 500-490101/13-A  
 Matrix: Water  
 Analysis Batch: 490294

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 490101

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.16		ug/L		108	80 - 120

Lab Sample ID: MB 500-490297/12-A  
 Matrix: Water  
 Analysis Batch: 490630

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 490297

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		06/14/19 10:10	06/17/19 10:35	1

Lab Sample ID: LCS 500-490297/13-A  
 Matrix: Water  
 Analysis Batch: 490630

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 490297

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.05		ug/L		102	80 - 120

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

**Client Sample ID: MW-8 (080)**

**Lab Sample ID: 500-164905-1**

**Date Collected: 06/10/19 11:00**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491611	06/24/19 11:31	EMA	TAL CHI
Total/NA	Prep	3510C			490639	06/17/19 13:15	JVD	TAL CHI
Total/NA	Analysis	8270D		1	490754	06/18/19 14:37	AJD	TAL CHI
Dissolved	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Dissolved	Analysis	6020		1	490287	06/13/19 12:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	490287	06/13/19 11:48	FXG	TAL CHI
Dissolved	Prep	7470A			490297	06/14/19 10:10	MJG	TAL CHI
Dissolved	Analysis	7470A		1	490630	06/17/19 11:02	MJG	TAL CHI
Total/NA	Prep	7470A			490101	06/13/19 10:30	MJG	TAL CHI
Total/NA	Analysis	7470A		1	490294	06/14/19 08:25	MJG	TAL CHI

**Client Sample ID: MW-3 (030)**

**Lab Sample ID: 500-164905-2**

**Date Collected: 06/10/19 11:45**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491502	06/22/19 18:25	JDD	TAL CHI
Total/NA	Prep	3510C			490639	06/17/19 13:15	JVD	TAL CHI
Total/NA	Analysis	8270D		1	490754	06/18/19 15:05	AJD	TAL CHI
Dissolved	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Dissolved	Analysis	6020		1	490287	06/13/19 12:26	FXG	TAL CHI
Total Recoverable	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	490287	06/13/19 12:13	FXG	TAL CHI
Dissolved	Prep	7470A			490297	06/14/19 10:10	MJG	TAL CHI
Dissolved	Analysis	7470A		1	490630	06/17/19 11:04	MJG	TAL CHI
Total/NA	Prep	7470A			490101	06/13/19 10:30	MJG	TAL CHI
Total/NA	Analysis	7470A		1	490294	06/14/19 08:44	MJG	TAL CHI

**Client Sample ID: MW-2 (020)**

**Lab Sample ID: 500-164905-3**

**Date Collected: 06/10/19 12:30**

**Matrix: Ground Water**

**Date Received: 06/12/19 09:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491611	06/24/19 11:58	EMA	TAL CHI
Total/NA	Prep	3510C			490639	06/17/19 13:15	JVD	TAL CHI
Total/NA	Analysis	8270D		1	490754	06/18/19 15:33	AJD	TAL CHI
Dissolved	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Dissolved	Analysis	6020		1	490287	06/13/19 12:34	FXG	TAL CHI
Total Recoverable	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	490287	06/13/19 12:30	FXG	TAL CHI
Dissolved	Prep	7470A			490297	06/14/19 10:10	MJG	TAL CHI
Dissolved	Analysis	7470A		1	490630	06/17/19 11:05	MJG	TAL CHI
Total/NA	Prep	7470A			490101	06/13/19 10:30	MJG	TAL CHI
Total/NA	Analysis	7470A		1	490294	06/14/19 08:45	MJG	TAL CHI

Eurofins TestAmerica, Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-1

## Client Sample ID: MW-1 (010)

Date Collected: 06/10/19 13:10

Date Received: 06/12/19 09:10

## Lab Sample ID: 500-164905-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491502	06/22/19 19:16	JDD	TAL CHI
Total/NA	Prep	3510C			490639	06/17/19 13:15	JVD	TAL CHI
Total/NA	Analysis	8270D		1	490754	06/18/19 16:01	AJD	TAL CHI
Dissolved	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Dissolved	Analysis	6020		1	490287	06/13/19 12:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			489975	06/12/19 16:38	BDE	TAL CHI
Total Recoverable	Analysis	6020		1	490287	06/13/19 12:38	FXG	TAL CHI
Dissolved	Prep	7470A			490297	06/14/19 10:10	MJG	TAL CHI
Dissolved	Analysis	7470A		1	490630	06/17/19 11:07	MJG	TAL CHI
Total/NA	Prep	7470A			490101	06/13/19 10:30	MJG	TAL CHI
Total/NA	Analysis	7470A		1	490294	06/14/19 08:51	MJG	TAL CHI

## Client Sample ID: Field Blank (997)

Date Collected: 06/10/19 10:30

Date Received: 06/12/19 09:10

## Lab Sample ID: 500-164905-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491502	06/22/19 19:41	JDD	TAL CHI

## Client Sample ID: Trip Blank

Date Collected: 06/10/19 00:00

Date Received: 06/12/19 09:10

## Lab Sample ID: 500-164905-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	491611	06/24/19 11:03	EMA	TAL CHI

### Laboratory References:

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

# Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-1

## Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60  
Phone: 708.534.5200 Fax: 708.534.5200



500-164905 COC

Report To (optional) Mike Rohlic  
Contact: SEH  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional) \_\_\_\_\_  
Contact: Bruce Olson  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-164905  
Chain of Custody Number: \_\_\_\_\_  
Page \_\_\_\_\_ of \_\_\_\_\_  
Temperature °C of Cooler: 15 → 15

Client		Client Project #		Preservative		Parameter		Comments	
<u>SEH</u>								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Lab Project #		Lab PM			
<u>Stressor labs</u>		<u>Trego WI</u>				<u>SF</u>			
Sampler		Sample ID		Sampling		# of Containers		Matrix	
<u>MFR</u>				Date Time		Matrix			
1		MW-8 (080)	6-10-19	11:00	9	6W	X	X	X
2		MW-3 (030)		11:45					
3		MW-2 (020)		12:30					
4		MW-1 (010)		1:10					
5		Field Blank (997)		10:30	2	.			
6		Trip Blank		-	1	.			
7		North-1			1	S		X	
8		North-3							
9		North-7							

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>Mike Rohlic</u>	Company <u>SEH</u>	Date <u>6-11-19</u>	Time <u>9:50</u>	Received By <u>Shawn Scott</u>	Company <u>FA-CHE</u>	Date <u>6/12/19</u>	Time <u>8:10</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: \_\_\_\_\_  
Shipped: FedEx  
Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments:

Lab Comments:

ORIGIN ID:PHDA (715) 720-6200  
MR. MIKE ROHLIK  
SHORT ELLIOTT HENDRICKSON, INC. DBA  
10 NORTH BRIDGE STREET

SHIP DATE: 24APR19  
ACTWGT: 10.00 LB MAN  
CAD: 0562065/CAFE3211

CHIPPEWA FALLS, WI 54729  
UNITED STATES US

TO **SAMPLE RECEIVING**  
**TESTAMERICA CHICAGO**  
**2417 BOND STREET**



551C1,07E5/104C

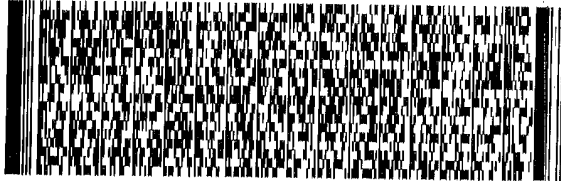
500-164905 Waybill

**UNIVERSITY PARK IL 604843101**

(708) 534-6200

REF: S600-71667

RMA: III IIII III



**FedEx**  
Express



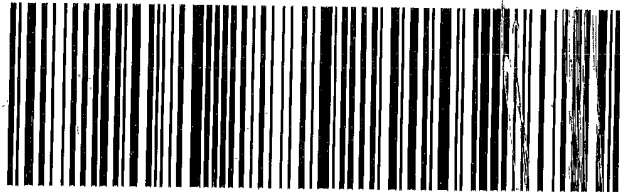
J16T118060501uy

**RETURNS MON-SAT**  
**PRIORITY OVERNIGHT**

TRK#  
0221 **4917 8544 2733**

**60484**

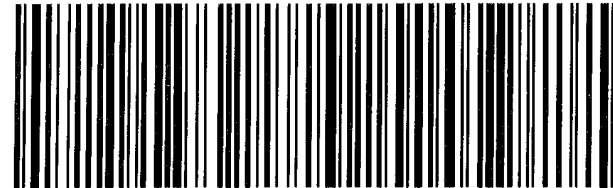
IL-US



*48 qt*

**FedEx**  
TRK#  
0221 **4917 8544 2733**

**GE JOTA**



#208109-06/11 565J1/D210/236D

**WED - 12 JUN 10:30A**  
**PRIORITY OVERNIGHT**

**60484**

IL-US **ORD**

551C1,07E5/104C  
EXP 09/19

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## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-164905-1

**Login Number: 164905**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	1.5
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

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

Laboratory Job ID: 500-164905-2  
Client Project/Site: Stresau Labs

**For:**

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Mike Rohlik



Authorized for release by:  
6/25/2019 12:20:41 PM

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

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**Job ID: 500-164905-2**

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**Laboratory: Eurofins TestAmerica, Chicago**

## Narrative

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**Job Narrative**  
**500-164905-2**

## Comments

No additional comments.

## Receipt

The samples were received on 6/12/2019 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C.

## Metals

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

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# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

## Client Sample ID: North-1

## Lab Sample ID: 500-164905-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	31		1.1	0.12	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	J B	0.21	0.038	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.4		1.1	0.53	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.53	0.25	mg/Kg	1	☼	6010B	Total/NA
Zinc	26		2.1	0.94	mg/Kg	1	☼	6010B	Total/NA

## Client Sample ID: North-3

## Lab Sample ID: 500-164905-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	99		1.2	0.13	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.19	J B	0.23	0.042	mg/Kg	1	☼	6010B	Total/NA
Chromium	13		1.2	0.58	mg/Kg	1	☼	6010B	Total/NA
Lead	6.5		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Zinc	36		2.3	1.0	mg/Kg	1	☼	6010B	Total/NA

## Client Sample ID: North-7

## Lab Sample ID: 500-164905-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	11		1.1	0.12	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20	J B	0.21	0.038	mg/Kg	1	☼	6010B	Total/NA
Chromium	22		1.1	0.52	mg/Kg	1	☼	6010B	Total/NA
Lead	140		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Zinc	92		2.1	0.92	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI
3050B	Preparation, Metals	SW846	TAL CHI

**Protocol References:**

EPA = US Environmental Protection Agency

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

**Laboratory References:**

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



# Sample Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-164905-7	North-1	Solid	06/10/19 00:00	06/12/19 09:10	
500-164905-8	North-3	Solid	06/10/19 00:00	06/12/19 09:10	
500-164905-9	North-7	Solid	06/10/19 00:00	06/12/19 09:10	

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

**Client Sample ID: North-1**  
**Date Collected: 06/10/19 00:00**  
**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-7**  
**Matrix: Solid**  
**Percent Solids: 82.3**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	31		1.1	0.12	mg/Kg	☼	06/14/19 08:24	06/14/19 15:58	1
Cadmium	0.14	J B	0.21	0.038	mg/Kg	☼	06/14/19 08:24	06/14/19 15:58	1
Chromium	7.4		1.1	0.53	mg/Kg	☼	06/14/19 08:24	06/14/19 15:58	1
Lead	25		0.53	0.25	mg/Kg	☼	06/14/19 08:24	06/14/19 15:58	1
Zinc	26		2.1	0.94	mg/Kg	☼	06/14/19 08:24	06/14/19 15:58	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-2

**Client Sample ID: North-3**  
**Date Collected: 06/10/19 00:00**  
**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-8**  
**Matrix: Solid**  
**Percent Solids: 82.5**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	99		1.2	0.13	mg/Kg	☼	06/14/19 08:24	06/14/19 16:02	1
Cadmium	0.19	J B	0.23	0.042	mg/Kg	☼	06/14/19 08:24	06/14/19 16:02	1
Chromium	13		1.2	0.58	mg/Kg	☼	06/14/19 08:24	06/14/19 16:02	1
Lead	6.5		0.59	0.27	mg/Kg	☼	06/14/19 08:24	06/14/19 16:02	1
Zinc	36		2.3	1.0	mg/Kg	☼	06/14/19 08:24	06/14/19 16:02	1

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

**Client Sample ID: North-7**  
**Date Collected: 06/10/19 00:00**  
**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-9**  
**Matrix: Solid**  
**Percent Solids: 84.7**

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	11		1.1	0.12	mg/Kg	☼	06/14/19 08:24	06/14/19 16:06	1
Cadmium	0.20	J B	0.21	0.038	mg/Kg	☼	06/14/19 08:24	06/14/19 16:06	1
Chromium	22		1.1	0.52	mg/Kg	☼	06/14/19 08:24	06/14/19 16:06	1
Lead	140		0.53	0.24	mg/Kg	☼	06/14/19 08:24	06/14/19 16:06	1
Zinc	92		2.1	0.92	mg/Kg	☼	06/14/19 08:24	06/14/19 16:06	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

## Qualifiers

### Metals

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

## 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)

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

## Metals

### Prep Batch: 490260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-7	North-1	Total/NA	Solid	3050B	
500-164905-8	North-3	Total/NA	Solid	3050B	
500-164905-9	North-7	Total/NA	Solid	3050B	
MB 500-490260/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-490260/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 490536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-7	North-1	Total/NA	Solid	6010B	490260
500-164905-8	North-3	Total/NA	Solid	6010B	490260
500-164905-9	North-7	Total/NA	Solid	6010B	490260
MB 500-490260/1-A	Method Blank	Total/NA	Solid	6010B	490260
LCS 500-490260/2-A	Lab Control Sample	Total/NA	Solid	6010B	490260

## General Chemistry

### Analysis Batch: 490113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-164905-7	North-1	Total/NA	Solid	Moisture	
500-164905-8	North-3	Total/NA	Solid	Moisture	
500-164905-9	North-7	Total/NA	Solid	Moisture	

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-164905-2

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-490260/1-A  
 Matrix: Solid  
 Analysis Batch: 490536

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 490260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.11		1.0	0.11	mg/Kg		06/14/19 08:24	06/14/19 14:38	1
Cadmium	0.0428	J	0.20	0.036	mg/Kg		06/14/19 08:24	06/14/19 14:38	1
Chromium	<0.50		1.0	0.50	mg/Kg		06/14/19 08:24	06/14/19 14:38	1
Lead	<0.23		0.50	0.23	mg/Kg		06/14/19 08:24	06/14/19 14:38	1
Zinc	<0.88		2.0	0.88	mg/Kg		06/14/19 08:24	06/14/19 14:38	1

Lab Sample ID: LCS 500-490260/2-A  
 Matrix: Solid  
 Analysis Batch: 490536

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 490260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	200	190		mg/Kg		95	80 - 120
Cadmium	5.00	4.61		mg/Kg		92	80 - 120
Chromium	20.0	19.4		mg/Kg		97	80 - 120
Lead	10.0	9.26		mg/Kg		93	80 - 120
Zinc	50.0	47.6		mg/Kg		95	80 - 120

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

**Client Sample ID: North-1**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	490113	06/13/19 12:11	LWN	TAL CHI

**Client Sample ID: North-1**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-7**

**Matrix: Solid**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			490260	06/14/19 08:24	SAH	TAL CHI
Total/NA	Analysis	6010B		1	490536	06/14/19 15:58	JEF	TAL CHI

**Client Sample ID: North-3**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-8**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	490113	06/13/19 12:11	LWN	TAL CHI

**Client Sample ID: North-3**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-8**

**Matrix: Solid**

**Percent Solids: 82.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			490260	06/14/19 08:24	SAH	TAL CHI
Total/NA	Analysis	6010B		1	490536	06/14/19 16:02	JEF	TAL CHI

**Client Sample ID: North-7**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-9**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	490113	06/13/19 12:11	LWN	TAL CHI

**Client Sample ID: North-7**

**Date Collected: 06/10/19 00:00**

**Date Received: 06/12/19 09:10**

**Lab Sample ID: 500-164905-9**

**Matrix: Solid**

**Percent Solids: 84.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			490260	06/14/19 08:24	SAH	TAL CHI
Total/NA	Analysis	6010B		1	490536	06/14/19 16:06	JEF	TAL CHI

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-164905-2

## Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-19 *

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60  
Phone: 708.534.5200 Fax: 708.534.5200



500-164905 COC

Report To (optional) Mike Rohlic  
Contact: SEH  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional) Bruce Olson  
Contact: SEH  
Company: SEH  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-164905  
Chain of Custody Number: \_\_\_\_\_  
Page \_\_\_\_\_ of \_\_\_\_\_  
Temperature °C of Cooler: 15 → 15

Client		Client Project #		Preservative		Parameter		Comments	
<u>SEH</u>								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Lab Project #		Lab PM			
<u>Stressor labs</u>		<u>Trego WI</u>				<u>SF</u>			
Sampler		Sample ID		Sampling		# of Containers		Matrix	
<u>MFR</u>				Date Time		Matrix			
1	MW-8 (080)	6-10-19	11:00	9	6W	X	X	X	
2	MW-3 (030)		11:45						
3	MW-2 (020)		12:30						
4	MW-1 (010)		1:10						
5	Field Blank (997)		10:30	2	-				
6	Trip Blank		-	1	-				
7	North-1			1	S			X	
8	North-3								
9	North-7								

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>Mike Rohlic</u>	Company <u>SEH</u>	Date <u>6-11-19</u>	Time <u>9:50</u>	Received By <u>Shirley Scott</u>	Company <u>FA-CHE</u>	Date <u>6/12/19</u>	Time <u>8:10</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: \_\_\_\_\_  
Shipped: FedEx  
Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
W - Water SO - Soil  
S - Soil L - Leachate  
SL - Sludge WI - Wipe  
MS - Miscellaneous DW - Drinking Water  
OL - Oil O - Other  
A - Air

Client Comments

Lab Comments:

ORIGIN ID:PHDA (715) 720-6200  
MR. MIKE ROHLIK  
SHORT ELLIOTT HENDRICKSON, INC. DBA  
10 NORTH BRIDGE STREET

SHIP DATE: 24APR19  
ACTWGT: 10.00 LB MAN  
CAD: 0562065/CAFE3211

CHIPPEWA FALLS, WI 54729  
UNITED STATES US

TO **SAMPLE RECEIVING**  
**TESTAMERICA CHICAGO**  
**2417 BOND STREET**



551C1207E5/104C

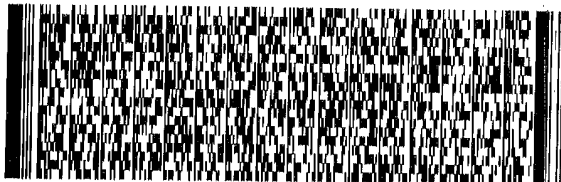
500-164905 Waybill

**UNIVERSITY PARK IL 604843101**

(708) 534-6200

REF: S600-71667

RMA: III III III



**FedEx**  
Express



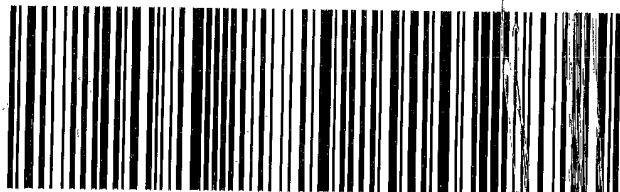
J16T118060501uy

**RETURNS MON-SAT**  
**PRIORITY OVERNIGHT**

TRK#  
0221 **4917 8544 2733**

**60484**

IL-US



*48 qt*

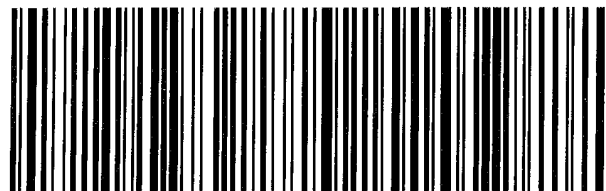
**FedEx**  
TRK#  
0221 **4917 8544 2733**

**WED - 12 JUN 10:30A**  
**PRIORITY OVERNIGHT**

**GE JOTA**

**60484**  
IL-US **ORD**

60497-435-EXP 09/19



#208109-06/11 565J1/D210/236D

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## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-164905-2

**Login Number: 164905**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	1.5
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Appendix C

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005

**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
North-1	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
North-2	5-2-95	31	0.9	4	7	41	6	ND	17
North-3	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
North-4	5-2-95	69	2	4	8	30	6	ND	37
North-5	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
North-6	5-2-95	39	ND	3	7	ND	5	ND	23
North-7	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
Back-SW	5-1-95	34	ND	3	ND	ND	4	ND	14
Back-SE	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
Industrial		NE	510	200	NE	500	NE	NE	NE

Notes:

ppm = parts per million

ND = not detected

NE = not established

\* Based on human health risk from direct contact

Surface samples collected from the top 3 inches of soil

TABLE 2  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)									
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	
TU:												
MW-1	Total	6-27-95	39	0.2	5	50	1			ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2			ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND			ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND			ND	ND	43
	Total	8-15-96	120	ND	26	150	8			ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8			ND	ND	ND
	Total	8-6-98	53	ND	10	52	4			15	0.2	26
	Total	8-11-99	30	ND	ND	30	1			ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6			ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND		5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND		1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND		2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND		ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND		7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2			ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2			ND	ND	20
	Total	8-8-95	ND	ND	ND	10	ND			ND	20	120
	Dissolved	8-8-95	ND	ND	ND	ND	ND			ND	ND	30
	Total	8-15-96	50	ND	11	40	3			ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7			ND	ND	ND
	Total	8-6-98	26	ND	ND	18	4			ND	0.2	ND
	Total	8-11-99	10	ND	ND	ND	0.4			ND	ND	20
	Total	8-24-00	10	ND	ND	ND	ND			ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND		2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND		0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND		1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND		ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND		1.5	ND	24

TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.5	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
	Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
	Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

**TABLE 3**  
**WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS**

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
		9-4-03	VOCs	ND	
			Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
			11-3-03	1-Methylnaphthalene	0.034
2-Methylnaphthalene	0.043			NE	
Naphthalene	0.060	8			
8-18-04	PAHs, VOCs	ND			
11-3-04	2-Methylnaphthalene	0.014	NE		
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8

TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
Background	MW-8	8-13-02	VOCs	ND	
			Naphthalene	0.039	8
		9-4-03	PAHs, VOCs	ND	
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	

Notes: ppb = parts per billion  
ND = not detected  
VOCs = volatile organic compounds  
PAL = NR 140 Preventive Action Limit (2-04)  
NE = not established  
PAHs = polynuclear aromatic hydrocarbons



**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes:      ppb = parts per billion  
               VOCs = volatile organic compounds  
               ND = not detected





Building a Better World  
for All of Us®

November 16, 2020

RE: Stresau Laboratory, Inc.  
2020 Groundwater Sampling Event  
SEH No. STRES 157127 1.0

Mr. Marc Makela, Compliance Specialist  
Stresau Laboratory, Inc.  
N8265 Medley Road  
Spooner, WI 54801

Dear Mr. Makela:

Short Elliott Hendrickson Inc. (SEH®) is pleased to provide this letter report to Stresau Laboratory, Inc. (Stresau) summarizing a groundwater monitoring event conducted during September 2020. The sampling event was conducted at Stresau's site located at N8265 Medley Road in Spooner, Wisconsin. SEH understands that Stresau is currently required to perform annual groundwater monitoring, and bi-annual soil sampling, and associated reporting to the Wisconsin Department of Natural Resources (WDNR) as part of your thermal treatment unit (TTU) permit requirements. It is noted that this annual sampling event was conducted slightly later in the year than recent events as we were planning to combine this annual sampling with sampling to be conducted as part of a more comprehensive site investigation. However, agreement of the scope of work for the SI took longer than anticipated and approval of the Site Investigation Work Plan (SIWP) was not received from WDNR until October 14, 2020. Therefore, as it became evident that approval of the SIWP would continue to take longer than expected, Stresau chose to sample the wells as part of the annual sampling program in early September.

Total lead was detected in groundwater samples collected from MW-1 in 2010 at concentrations exceeding its ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) concentration. Although the concentration of total lead in groundwater samples collected from MW-1 (as well as lead and several other metals in groundwater samples collected from other monitoring wells) had historically exceeded its ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) concentration, the 2010 results were the first ES exceedance. Actions taken by Stresau due to the higher total lead concentrations detected in 2010 were documented in the annual sampling report submitted to WDNR on October 12, 2010. The results were also discussed with Mr. John Morris, WDNR Hydrogeologist.

Stresau collected an additional sample from MW-1 for analysis of dissolved lead during the 2011 sampling event. Based on discussions between Stresau and Mr. Morris, Stresau sampled all wells in 2012 for total and dissolved metals. As documented in an August 1, 2012 letter from Stresau to Mr. Morris, the groundwater monitoring scope of work will include analysis for both total and dissolved metals, as well as volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Stresau anticipates analyzing groundwater samples for both total and dissolved metals until an alternate sampling protocol is agreed to with the WDNR.

## GROUNDWATER MONITORING

On September 1, 2020, SEH collected groundwater samples from groundwater monitoring wells MW-1, MW-2, MW-3 and MW-8 shown on Figure 2, "TTU Monitoring Well Locations" (Appendix A, "GME Site Figures").

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550  
SEH is 100% employee-owned | [sehinc.com](http://sehinc.com) | 715.720.6200 | 800.472.5881 | 888.908.8166 fax

Prior to purging or sampling, SEH obtained water level readings at each monitoring well. The groundwater monitoring wells were purged of four well volumes using dedicated disposable bailers. In accordance with the WDNR's Groundwater Sampling Field Manual (PUBL-DG-038 96), if a monitoring well purged dry before four well volumes were removed, the well was allowed to recharge and groundwater samples were collected. Each groundwater monitoring well was sampled using the disposable bailer. Purge water was disposed of on site. Field data recorded during sampling activities included pH, temperature and conductivity.

Groundwater samples were collected directly into laboratory-supplied sample jars and stored on ice in a cooler. The samples from the four monitoring wells for analysis of dissolved metals were field filtered through a 0.45 micron membrane filter. The samples were transported via overnight courier to Eurofins TestAmerica using SEH's standard chain-of-custody procedures. Groundwater samples were analyzed for VOCs by US Environmental Protection Agency (EPA) Method 8260B, PAHs by EPA method 8270D, and the following dissolved and total metals by EPA method 6020A: barium cadmium, chromium, copper, lead, nickel, silver, and zinc, and dissolved and total mercury by EPA method 7470A. To be consistent with the analytical program documented in GME Consultants' (GME) December 2005 *Annual Monitoring Report*, a field blank and trip blank sample were also collected and analyzed for VOCs as part of the quality assurance program.

## RESULTS

Depth to groundwater measurements and corresponding groundwater elevations are reported on Table 1, "Groundwater Elevation Data." Based on comparison of historical groundwater elevation data to the September 1, 2020 groundwater elevation data, groundwater flow direction is expected to be generally toward the north, which is similar to the historically reported groundwater flow direction.

No VOCs were detected in groundwater samples collected in September 2020 at concentrations exceeding their respective laboratory method detection limits (MDLs).

As shown on tables included in Appendix C, "GME Analytical Data Tables", various PAHs have been detected in groundwater samples collected from all four monitoring wells during one or more annual sampling events conducted by GME between 1997 and 2005. Since SEH began collecting groundwater samples at Stresau in 2006 (15 annual sampling events conducted), several PAH compounds have been detected in groundwater samples. However, no PAHs were detected in groundwater samples collected in September 2020 at concentrations exceeding their respective laboratory MDLs.

Groundwater analytical results for total and dissolved metals are summarized on Table 2, "Monitoring Well Groundwater Total Inorganics Analytical Results" and Table 3, "Monitoring Well Groundwater Dissolved Inorganics Analytical Results", respectively. Measured concentrations of total barium, cadmium, chromium, copper, mercury, nickel, silver, and/or zinc in the groundwater samples collected in September 2020 at all monitoring wells were generally consistent with historical concentrations.

No ES exceedances for total metals were noted during the sampling. PAL exceedances for chromium and/or lead were noted in samples collected from monitoring wells MW-1, MW-2 and MW-8, generally consistent with historical concentrations.

Multiple dissolved metals were detected in each of the groundwater samples collected in September 2020; however, the detected concentrations of dissolved metals were generally consistent with concentrations detected since 2011. None of the samples collected exhibited a detection of any dissolved metal at concentrations above its respective PAL concentration.

Mr. Marc Makela  
November 16, 2020  
Page 3

The laboratory analytical report for the September 2020 sampling event is included in Appendix B. Historical inorganic, VOC and PAH groundwater sampling results and historical inorganic soil sampling results as reported by GME are included in Appendix C.

#### **DISCUSSION**

As shown in Appendix C, various PAHs have been detected in groundwater samples collected from one or more wells since 1997, but no PAHs were detected in 2020. Lead and other inorganic compounds continue to be detected in each of the wells sampled, including MW-8 which is a background well. This likely indicates inorganic compounds are naturally occurring.

The next annual groundwater monitoring event is scheduled to occur in summer 2021. If you have any questions, please call me at 715.720.6244.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

A handwritten signature in black ink that reads "Bruce K. Olson". The signature is written in a cursive, flowing style.

Bruce K. Olson, PE  
Project Manager

MFR/Is/BKO  
c: Jayne Wade, WDNR

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**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1	MW-2	MW-3	MW-8
		Top of Riser Elevation <sup>1</sup>			
		<b>1055.81</b>	<b>1053.86</b>	<b>1053.28</b>	<b>1054.44</b>
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89	1016.80	1016.80	1017.90
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79	1016.69	1016.67	1017.82
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52	1016.43	1016.45	1017.62
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03	1016.94	1016.83	1018.25
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76	1016.68	1016.65	1018.01
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79	1016.72	1016.71	1017.84
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35	1016.28	1016.27	1017.37
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38	1016.31	1016.34	1017.12
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23	1016.16	1016.15	1016.87
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28	1017.21	1017.20	1018.65
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31	1017.23	1017.16	1018.70
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52	1016.47	1016.44	1017.83
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36	1016.29	1016.28	--
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65	1016.58	1016.56	1017.77
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90	1016.83	1016.81	1017.86
08/24/06	Depth to Water	39.68	37.80	37.22	37.33
	Groundwater Elevation	1016.13	1016.06	1016.06	1017.11
08/16/07	Depth to Water	40.25	38.41	37.80	38.28
	Groundwater Elevation	1015.56	1015.45	1015.48	1016.16
05/05/08	Depth to Water	39.38	37.51	36.91	40.26
	Groundwater Elevation	1016.43	1016.35	1016.37	1014.18
05/21/09	Depth to Water	39.82	37.95	37.36	37.80
	Groundwater Elevation	1015.99	1015.91	1015.92	1016.64
06/24/10	Depth to Water	38.81	36.94	36.35	36.97
	Groundwater Elevation	1017.00	1016.92	1016.93	1017.47
06/29/11	Depth to Water	39.07	37.21	36.64	36.64
	Groundwater Elevation	1016.74	1016.65	1016.64	1017.80
06/06/12	Depth to Water	39.45	37.57	37.00	37.46
	Groundwater Elevation	1016.36	1016.29	1016.28	1016.98
06/12/13	Depth to Water	39.46	37.58	36.99	37.70
	Groundwater Elevation	1016.35	1016.28	1016.29	1016.74
06/23/14	Depth to Water	37.76	35.87	35.33	34.80
	Groundwater Elevation	1018.05	1017.99	1017.95	1019.64
	Depth to Water	39.18	37.28	36.74	37.79
06/18/15	Groundwater Elevation	1016.63	1016.58	1016.54	1016.65
	Depth to Water	38.70	36.76	36.28	35.92
06/28/16	Groundwater Elevation	1017.11	1017.10	1017.00	1018.52
	Depth to Water	38.40	36.52	38.03	38.02
06/27/17	Groundwater Elevation	1017.41	1017.34	1015.25	1016.42
	Depth to Water	39.24	37.37	36.81	37.02
05/29/18	Groundwater Elevation	1016.57	1016.49	1016.47	1017.42
	Depth to Water	38.05	38.81	38.51	35.28
06/10/19	Groundwater Elevation	1017.76	1015.05	1014.77	1019.16
	Depth to Water	38.96	37.08	36.41	36.41
09/01/20	Groundwater Elevation	1016.85	1016.78	1016.87	1018.03

Notes:

<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary, GME Consultants, Inc. Project No. D-1596C, September 29, 1995

<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005

Compiled by: BKO Checked by: MJR June 2015 Data Compiled by: MFR Checked by: BKO

June 2010 Data Compiled by: BKO Checked by: MFR June 2016-20 Data Compiled by: MFR Checked by: BKO

June 2014 Data Compiled by: MS Checked by: BKO

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## **Appendix A**

### GME Site Figures

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005



## **Appendix B**

Analytical Report

## ANALYTICAL REPORT

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

Laboratory Job ID: 500-187328-1  
Client Project/Site: Stresau Labs  
Revision: 1

**For:**

Short Elliott Hendrickson, Inc. dba SEH  
10 North Bridge Street  
Chippewa Falls, Wisconsin 54729-3374

Attn: Mr. Bruce Olson



*Authorized for release by:  
9/21/2020 4:15:07 PM*

Sandie Fredrick, Project Manager II  
(920)261-1660  
[sandra.fredrick@eurofinset.com](mailto:sandra.fredrick@eurofinset.com)

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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

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**Job ID: 500-187328-1**

---

**Laboratory: Eurofins TestAmerica, Chicago**

---

## Narrative

**Job Narrative**  
**500-187328-1**

### Comments

No additional comments.

### Revision

The report being provided is a revision of the original report sent on 9/18/2020. The report (revision 1) is being revised due to: Client updated metals analyte list. Added lead and zinc..

### Receipt

The samples were received on 9/3/2020 10:05 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1° C.

### Receipt Exceptions

Only received 3 VOA vials for sample 5, COC is marked for PAHs too.

### GC/MS VOA

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

### GC/MS Semi VOA

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

### Metals

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

### Field Service / Mobile Lab

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

### Organic Prep

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

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

## Client Sample ID: MW-8

## Lab Sample ID: 500-187328-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	63		2.5	0.73	ug/L	1		6020A	Total Recoverable
Chromium	9.5		5.0	1.1	ug/L	1		6020A	Total Recoverable
Copper	30		2.0	0.50	ug/L	1		6020A	Total Recoverable
Lead	2.5		0.50	0.19	ug/L	1		6020A	Total Recoverable
Nickel	11		2.0	0.63	ug/L	1		6020A	Total Recoverable
Zinc	21		20	6.9	ug/L	1		6020A	Total Recoverable
Barium	5.6		2.5	0.73	ug/L	1		6020A	Dissolved
Copper	1.1	J	2.0	0.50	ug/L	1		6020A	Dissolved

## Client Sample ID: MW-3

## Lab Sample ID: 500-187328-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	22		2.5	0.73	ug/L	1		6020A	Total Recoverable
Chromium	4.6	J	5.0	1.1	ug/L	1		6020A	Total Recoverable
Copper	16		2.0	0.50	ug/L	1		6020A	Total Recoverable
Lead	0.83		0.50	0.19	ug/L	1		6020A	Total Recoverable
Nickel	4.4		2.0	0.63	ug/L	1		6020A	Total Recoverable
Zinc	11	J	20	6.9	ug/L	1		6020A	Total Recoverable
Barium	6.7		2.5	0.73	ug/L	1		6020A	Dissolved
Copper	0.85	J	2.0	0.50	ug/L	1		6020A	Dissolved

## Client Sample ID: MW-2

## Lab Sample ID: 500-187328-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	61		2.5	0.73	ug/L	1		6020A	Total Recoverable
Chromium	12		5.0	1.1	ug/L	1		6020A	Total Recoverable
Copper	58		2.0	0.50	ug/L	1		6020A	Total Recoverable
Lead	3.3		0.50	0.19	ug/L	1		6020A	Total Recoverable
Nickel	14		2.0	0.63	ug/L	1		6020A	Total Recoverable
Zinc	25		20	6.9	ug/L	1		6020A	Total Recoverable
Barium	10		2.5	0.73	ug/L	1		6020A	Dissolved
Copper	0.98	J	2.0	0.50	ug/L	1		6020A	Dissolved

## Client Sample ID: MW-1

## Lab Sample ID: 500-187328-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	71		2.5	0.73	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

## Client Sample ID: MW-1 (Continued)

Lab Sample ID: 500-187328-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	14		5.0	1.1	ug/L	1		6020A	Total Recoverable
Copper	76		2.0	0.50	ug/L	1		6020A	Total Recoverable
Lead	4.3		0.50	0.19	ug/L	1		6020A	Total Recoverable
Nickel	17		2.0	0.63	ug/L	1		6020A	Total Recoverable
Zinc	27		20	6.9	ug/L	1		6020A	Total Recoverable
Barium	8.1		2.5	0.73	ug/L	1		6020A	Dissolved
Copper	1.3	J	2.0	0.50	ug/L	1		6020A	Dissolved

## Client Sample ID: Field Blank (997)

Lab Sample ID: 500-187328-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromodichloromethane	0.65	J	1.0	0.37	ug/L	1		8260B	Total/NA
Chloroform	1.4	J	2.0	0.37	ug/L	1		8260B	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-187328-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.22	J	0.50	0.15	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago



# Method Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CHI
5030B	Purge and Trap	SW846	TAL CHI
7470A	Preparation, Mercury	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: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-187328-1	MW-8	Ground Water	09/01/20 10:00	09/03/20 10:05	
500-187328-2	MW-3	Ground Water	09/01/20 11:00	09/03/20 10:05	
500-187328-3	MW-2	Ground Water	09/01/20 11:50	09/03/20 10:05	
500-187328-4	MW-1	Ground Water	09/01/20 12:30	09/03/20 10:05	
500-187328-5	Field Blank (997)	Water	09/01/20 10:10	09/03/20 10:05	
500-187328-6	Trip Blank	Water	09/01/20 00:00	09/03/20 10:05	

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-187328-1**

**Date Collected: 09/01/20 10:00**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 16:22	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 16:22	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 16:22	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 16:22	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 16:22	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 16:22	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 16:22	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 16:22	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 16:22	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 16:22	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 16:22	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 16:22	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 16:22	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:22	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 16:22	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 16:22	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 16:22	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 16:22	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 16:22	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 16:22	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 16:22	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 16:22	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 16:22	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 16:22	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 16:22	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 16:22	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 16:22	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 16:22	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 16:22	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 16:22	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 16:22	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 16:22	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 16:22	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 16:22	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 16:22	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 16:22	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 16:22	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-187328-1**

**Date Collected: 09/01/20 10:00**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:22	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 16:22	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:22	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 16:22	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 16:22	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 16:22	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 16:22	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 16:22	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 16:22	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 16:22	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 126		09/08/20 16:22	1
4-Bromofluorobenzene (Surr)	104		72 - 124		09/08/20 16:22	1
Dibromofluoromethane (Surr)	103		75 - 120		09/08/20 16:22	1
Toluene-d8 (Surr)	101		75 - 120		09/08/20 16:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		09/04/20 12:03	09/08/20 23:01	1
2-Methylnaphthalene	<0.049		1.5	0.049	ug/L		09/04/20 12:03	09/08/20 23:01	1
Acenaphthene	<0.23		0.76	0.23	ug/L		09/04/20 12:03	09/08/20 23:01	1
Acenaphthylene	<0.20		0.76	0.20	ug/L		09/04/20 12:03	09/08/20 23:01	1
Anthracene	<0.25		0.76	0.25	ug/L		09/04/20 12:03	09/08/20 23:01	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		09/04/20 12:03	09/08/20 23:01	1
Benzo[a]pyrene	<0.075		0.15	0.075	ug/L		09/04/20 12:03	09/08/20 23:01	1
Benzo[b]fluoranthene	<0.061		0.15	0.061	ug/L		09/04/20 12:03	09/08/20 23:01	1
Benzo[g,h,i]perylene	<0.28		0.76	0.28	ug/L		09/04/20 12:03	09/08/20 23:01	1
Benzo[k]fluoranthene	<0.048		0.15	0.048	ug/L		09/04/20 12:03	09/08/20 23:01	1
Chrysene	<0.051		0.15	0.051	ug/L		09/04/20 12:03	09/08/20 23:01	1
Dibenz(a,h)anthracene	<0.038		0.23	0.038	ug/L		09/04/20 12:03	09/08/20 23:01	1
Fluoranthene	<0.34		0.76	0.34	ug/L		09/04/20 12:03	09/08/20 23:01	1
Fluorene	<0.18		0.76	0.18	ug/L		09/04/20 12:03	09/08/20 23:01	1
Indeno[1,2,3-cd]pyrene	<0.056		0.15	0.056	ug/L		09/04/20 12:03	09/08/20 23:01	1
Naphthalene	<0.23		0.76	0.23	ug/L		09/04/20 12:03	09/08/20 23:01	1
Phenanthrene	<0.23		0.76	0.23	ug/L		09/04/20 12:03	09/08/20 23:01	1
Pyrene	<0.32		0.76	0.32	ug/L		09/04/20 12:03	09/08/20 23:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		34 - 110	09/04/20 12:03	09/08/20 23:01	1
Nitrobenzene-d5 (Surr)	63		36 - 120	09/04/20 12:03	09/08/20 23:01	1
Terphenyl-d14 (Surr)	127		40 - 145	09/04/20 12:03	09/08/20 23:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>63</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 15:50	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 15:50	1
<b>Chromium</b>	<b>9.5</b>		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 15:50	1
<b>Copper</b>	<b>30</b>		2.0	0.50	ug/L		09/03/20 17:59	09/04/20 15:50	1

Euofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-8**

**Lab Sample ID: 500-187328-1**

Date Collected: 09/01/20 10:00

Matrix: Ground Water

Date Received: 09/03/20 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>2.5</b>		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 15:50	1
<b>Nickel</b>	<b>11</b>		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 15:50	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 15:50	1
<b>Zinc</b>	<b>21</b>		20	6.9	ug/L		09/03/20 17:59	09/04/20 15:50	1

**Method: 6020A - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>5.6</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 16:04	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 16:04	1
Chromium	<1.1		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 16:04	1
<b>Copper</b>	<b>1.1</b>	<b>J</b>	2.0	0.50	ug/L		09/03/20 17:59	09/04/20 16:04	1
Lead	<0.19		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 16:04	1
Nickel	<0.63		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 16:04	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 16:04	1
Zinc	<6.9		20	6.9	ug/L		09/03/20 17:59	09/04/20 16:04	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 07:44	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 08:03	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-3**

**Lab Sample ID: 500-187328-2**

**Date Collected: 09/01/20 11:00**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 16:49	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 16:49	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 16:49	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 16:49	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 16:49	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 16:49	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 16:49	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 16:49	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 16:49	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 16:49	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 16:49	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 16:49	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 16:49	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:49	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 16:49	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 16:49	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 16:49	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 16:49	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 16:49	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 16:49	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 16:49	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 16:49	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 16:49	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 16:49	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 16:49	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 16:49	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 16:49	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 16:49	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 16:49	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 16:49	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 16:49	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 16:49	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 16:49	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 16:49	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 16:49	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 16:49	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 16:49	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-3**

**Lab Sample ID: 500-187328-2**

**Date Collected: 09/01/20 11:00**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:49	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 16:49	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 16:49	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 16:49	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 16:49	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 16:49	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 16:49	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 16:49	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 16:49	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 16:49	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		75 - 126		09/08/20 16:49	1
4-Bromofluorobenzene (Surr)	105		72 - 124		09/08/20 16:49	1
Dibromofluoromethane (Surr)	105		75 - 120		09/08/20 16:49	1
Toluene-d8 (Surr)	101		75 - 120		09/08/20 16:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		09/04/20 12:03	09/08/20 23:24	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		09/04/20 12:03	09/08/20 23:24	1
Acenaphthene	<0.24		0.77	0.24	ug/L		09/04/20 12:03	09/08/20 23:24	1
Acenaphthylene	<0.20		0.77	0.20	ug/L		09/04/20 12:03	09/08/20 23:24	1
Anthracene	<0.26		0.77	0.26	ug/L		09/04/20 12:03	09/08/20 23:24	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		09/04/20 12:03	09/08/20 23:24	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		09/04/20 12:03	09/08/20 23:24	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		09/04/20 12:03	09/08/20 23:24	1
Benzo[g,h,i]perylene	<0.29		0.77	0.29	ug/L		09/04/20 12:03	09/08/20 23:24	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		09/04/20 12:03	09/08/20 23:24	1
Chrysene	<0.052		0.15	0.052	ug/L		09/04/20 12:03	09/08/20 23:24	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		09/04/20 12:03	09/08/20 23:24	1
Fluoranthene	<0.35		0.77	0.35	ug/L		09/04/20 12:03	09/08/20 23:24	1
Fluorene	<0.19		0.77	0.19	ug/L		09/04/20 12:03	09/08/20 23:24	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		09/04/20 12:03	09/08/20 23:24	1
Naphthalene	<0.24		0.77	0.24	ug/L		09/04/20 12:03	09/08/20 23:24	1
Phenanthrene	<0.23		0.77	0.23	ug/L		09/04/20 12:03	09/08/20 23:24	1
Pyrene	<0.33		0.77	0.33	ug/L		09/04/20 12:03	09/08/20 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	61		34 - 110	09/04/20 12:03	09/08/20 23:24	1
Nitrobenzene-d5 (Surr)	41		36 - 120	09/04/20 12:03	09/08/20 23:24	1
Terphenyl-d14 (Surr)	129		40 - 145	09/04/20 12:03	09/08/20 23:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	22		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 15:53	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 15:53	1
Chromium	4.6	J	5.0	1.1	ug/L		09/03/20 17:59	09/04/20 15:53	1
Copper	16		2.0	0.50	ug/L		09/03/20 17:59	09/04/20 15:53	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-3**  
**Date Collected: 09/01/20 11:00**  
**Date Received: 09/03/20 10:05**

**Lab Sample ID: 500-187328-2**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.83</b>		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 15:53	1
<b>Nickel</b>	<b>4.4</b>		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 15:53	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 15:53	1
<b>Zinc</b>	<b>11</b>	<b>J</b>	20	6.9	ug/L		09/03/20 17:59	09/04/20 15:53	1

**Method: 6020A - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>6.7</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 16:07	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 16:07	1
Chromium	<1.1		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 16:07	1
<b>Copper</b>	<b>0.85</b>	<b>J</b>	2.0	0.50	ug/L		09/03/20 17:59	09/04/20 16:07	1
Lead	<0.19		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 16:07	1
Nickel	<0.63		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 16:07	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 16:07	1
Zinc	<6.9		20	6.9	ug/L		09/03/20 17:59	09/04/20 16:07	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 07:46	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 08:05	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-187328-3**

**Date Collected: 09/01/20 11:50**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 17:16	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 17:16	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 17:16	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 17:16	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 17:16	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 17:16	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 17:16	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 17:16	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 17:16	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 17:16	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 17:16	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 17:16	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 17:16	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:16	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 17:16	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 17:16	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 17:16	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 17:16	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 17:16	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 17:16	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 17:16	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 17:16	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 17:16	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 17:16	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 17:16	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 17:16	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 17:16	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 17:16	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 17:16	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 17:16	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 17:16	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 17:16	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 17:16	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 17:16	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 17:16	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 17:16	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 17:16	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-187328-3**

**Date Collected: 09/01/20 11:50**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:16	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 17:16	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:16	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 17:16	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 17:16	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 17:16	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 17:16	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 17:16	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 17:16	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 17:16	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		75 - 126		09/08/20 17:16	1
4-Bromofluorobenzene (Surr)	104		72 - 124		09/08/20 17:16	1
Dibromofluoromethane (Surr)	103		75 - 120		09/08/20 17:16	1
Toluene-d8 (Surr)	102		75 - 120		09/08/20 17:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		09/04/20 12:03	09/08/20 23:48	1
2-Methylnaphthalene	<0.051		1.6	0.051	ug/L		09/04/20 12:03	09/08/20 23:48	1
Acenaphthene	<0.24		0.79	0.24	ug/L		09/04/20 12:03	09/08/20 23:48	1
Acenaphthylene	<0.21		0.79	0.21	ug/L		09/04/20 12:03	09/08/20 23:48	1
Anthracene	<0.26		0.79	0.26	ug/L		09/04/20 12:03	09/08/20 23:48	1
Benzo[a]anthracene	<0.044		0.16	0.044	ug/L		09/04/20 12:03	09/08/20 23:48	1
Benzo[a]pyrene	<0.078		0.16	0.078	ug/L		09/04/20 12:03	09/08/20 23:48	1
Benzo[b]fluoranthene	<0.063		0.16	0.063	ug/L		09/04/20 12:03	09/08/20 23:48	1
Benzo[g,h,i]perylene	<0.29		0.79	0.29	ug/L		09/04/20 12:03	09/08/20 23:48	1
Benzo[k]fluoranthene	<0.050		0.16	0.050	ug/L		09/04/20 12:03	09/08/20 23:48	1
Chrysene	<0.054		0.16	0.054	ug/L		09/04/20 12:03	09/08/20 23:48	1
Dibenz(a,h)anthracene	<0.040		0.24	0.040	ug/L		09/04/20 12:03	09/08/20 23:48	1
Fluoranthene	<0.36		0.79	0.36	ug/L		09/04/20 12:03	09/08/20 23:48	1
Fluorene	<0.19		0.79	0.19	ug/L		09/04/20 12:03	09/08/20 23:48	1
Indeno[1,2,3-cd]pyrene	<0.059		0.16	0.059	ug/L		09/04/20 12:03	09/08/20 23:48	1
Naphthalene	<0.24		0.79	0.24	ug/L		09/04/20 12:03	09/08/20 23:48	1
Phenanthrene	<0.24		0.79	0.24	ug/L		09/04/20 12:03	09/08/20 23:48	1
Pyrene	<0.33		0.79	0.33	ug/L		09/04/20 12:03	09/08/20 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	48		34 - 110	09/04/20 12:03	09/08/20 23:48	1
Nitrobenzene-d5 (Surr)	51		36 - 120	09/04/20 12:03	09/08/20 23:48	1
Terphenyl-d14 (Surr)	114		40 - 145	09/04/20 12:03	09/08/20 23:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>61</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 15:57	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 15:57	1
<b>Chromium</b>	<b>12</b>		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 15:57	1
<b>Copper</b>	<b>58</b>		2.0	0.50	ug/L		09/03/20 17:59	09/04/20 15:57	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-187328-3**

Date Collected: 09/01/20 11:50

Matrix: Ground Water

Date Received: 09/03/20 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>3.3</b>		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 15:57	1
<b>Nickel</b>	<b>14</b>		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 15:57	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 15:57	1
<b>Zinc</b>	<b>25</b>		20	6.9	ug/L		09/03/20 17:59	09/04/20 15:57	1

**Method: 6020A - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>10</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 16:11	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 16:11	1
Chromium	<1.1		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 16:11	1
<b>Copper</b>	<b>0.98</b>	<b>J</b>	2.0	0.50	ug/L		09/03/20 17:59	09/04/20 16:11	1
Lead	<0.19		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 16:11	1
Nickel	<0.63		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 16:11	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 16:11	1
Zinc	<6.9		20	6.9	ug/L		09/03/20 17:59	09/04/20 16:11	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 07:48	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 08:07	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-187328-4**

**Date Collected: 09/01/20 12:30**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 17:42	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 17:42	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 17:42	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 17:42	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 17:42	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 17:42	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 17:42	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 17:42	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 17:42	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 17:42	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 17:42	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 17:42	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 17:42	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:42	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 17:42	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 17:42	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 17:42	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 17:42	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 17:42	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 17:42	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 17:42	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 17:42	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 17:42	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 17:42	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 17:42	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 17:42	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 17:42	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 17:42	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 17:42	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 17:42	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 17:42	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 17:42	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 17:42	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 17:42	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 17:42	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 17:42	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 17:42	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-187328-4**

**Date Collected: 09/01/20 12:30**

**Matrix: Ground Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:42	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 17:42	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 17:42	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 17:42	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 17:42	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 17:42	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 17:42	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 17:42	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 17:42	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 17:42	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 17:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 126		09/08/20 17:42	1
4-Bromofluorobenzene (Surr)	103		72 - 124		09/08/20 17:42	1
Dibromofluoromethane (Surr)	105		75 - 120		09/08/20 17:42	1
Toluene-d8 (Surr)	103		75 - 120		09/08/20 17:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.23		1.5	0.23	ug/L		09/04/20 12:03	09/09/20 00:12	1
2-Methylnaphthalene	<0.050		1.5	0.050	ug/L		09/04/20 12:03	09/09/20 00:12	1
Acenaphthene	<0.24		0.77	0.24	ug/L		09/04/20 12:03	09/09/20 00:12	1
Acenaphthylene	<0.20		0.77	0.20	ug/L		09/04/20 12:03	09/09/20 00:12	1
Anthracene	<0.26		0.77	0.26	ug/L		09/04/20 12:03	09/09/20 00:12	1
Benzo[a]anthracene	<0.043		0.15	0.043	ug/L		09/04/20 12:03	09/09/20 00:12	1
Benzo[a]pyrene	<0.076		0.15	0.076	ug/L		09/04/20 12:03	09/09/20 00:12	1
Benzo[b]fluoranthene	<0.062		0.15	0.062	ug/L		09/04/20 12:03	09/09/20 00:12	1
Benzo[g,h,i]perylene	<0.29		0.77	0.29	ug/L		09/04/20 12:03	09/09/20 00:12	1
Benzo[k]fluoranthene	<0.049		0.15	0.049	ug/L		09/04/20 12:03	09/09/20 00:12	1
Chrysene	<0.052		0.15	0.052	ug/L		09/04/20 12:03	09/09/20 00:12	1
Dibenz(a,h)anthracene	<0.039		0.23	0.039	ug/L		09/04/20 12:03	09/09/20 00:12	1
Fluoranthene	<0.35		0.77	0.35	ug/L		09/04/20 12:03	09/09/20 00:12	1
Fluorene	<0.19		0.77	0.19	ug/L		09/04/20 12:03	09/09/20 00:12	1
Indeno[1,2,3-cd]pyrene	<0.057		0.15	0.057	ug/L		09/04/20 12:03	09/09/20 00:12	1
Naphthalene	<0.24		0.77	0.24	ug/L		09/04/20 12:03	09/09/20 00:12	1
Phenanthrene	<0.23		0.77	0.23	ug/L		09/04/20 12:03	09/09/20 00:12	1
Pyrene	<0.33		0.77	0.33	ug/L		09/04/20 12:03	09/09/20 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		34 - 110	09/04/20 12:03	09/09/20 00:12	1
Nitrobenzene-d5 (Surr)	48		36 - 120	09/04/20 12:03	09/09/20 00:12	1
Terphenyl-d14 (Surr)	115		40 - 145	09/04/20 12:03	09/09/20 00:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>71</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 16:00	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 16:00	1
<b>Chromium</b>	<b>14</b>		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 16:00	1
<b>Copper</b>	<b>76</b>		2.0	0.50	ug/L		09/03/20 17:59	09/04/20 16:00	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-187328-4**

Date Collected: 09/01/20 12:30

Matrix: Ground Water

Date Received: 09/03/20 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>4.3</b>		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 16:00	1
<b>Nickel</b>	<b>17</b>		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 16:00	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 16:00	1
<b>Zinc</b>	<b>27</b>		20	6.9	ug/L		09/03/20 17:59	09/04/20 16:00	1

**Method: 6020A - Metals (ICP/MS) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>8.1</b>		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 16:14	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 16:14	1
Chromium	<1.1		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 16:14	1
<b>Copper</b>	<b>1.3</b>	<b>J</b>	2.0	0.50	ug/L		09/03/20 17:59	09/04/20 16:14	1
Lead	<0.19		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 16:14	1
Nickel	<0.63		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 16:14	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 16:14	1
Zinc	<6.9		20	6.9	ug/L		09/03/20 17:59	09/04/20 16:14	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 08:01	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 08:09	1

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-187328-5**

Date Collected: 09/01/20 10:10

Matrix: Water

Date Received: 09/03/20 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 18:09	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 18:09	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 18:09	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 18:09	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 18:09	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 18:09	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 18:09	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 18:09	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 18:09	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 18:09	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 18:09	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 18:09	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 18:09	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:09	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 18:09	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 18:09	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 18:09	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 18:09	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 18:09	1
<b>Bromodichloromethane</b>	<b>0.65</b>	<b>J</b>	1.0	0.37	ug/L			09/08/20 18:09	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 18:09	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 18:09	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 18:09	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 18:09	1
<b>Chloroform</b>	<b>1.4</b>	<b>J</b>	2.0	0.37	ug/L			09/08/20 18:09	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 18:09	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 18:09	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 18:09	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 18:09	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 18:09	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 18:09	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 18:09	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 18:09	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 18:09	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 18:09	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 18:09	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 18:09	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1

Eurofins TestAmerica, Chicago

# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-187328-5**

**Date Collected: 09/01/20 10:10**

**Matrix: Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:09	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 18:09	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:09	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 18:09	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 18:09	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 18:09	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 18:09	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 18:09	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 18:09	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 18:09	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		75 - 126		09/08/20 18:09	1
4-Bromofluorobenzene (Surr)	105		72 - 124		09/08/20 18:09	1
Dibromofluoromethane (Surr)	105		75 - 120		09/08/20 18:09	1
Toluene-d8 (Surr)	101		75 - 120		09/08/20 18:09	1



# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-187328-6**

**Date Collected: 09/01/20 00:00**

**Matrix: Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 18:36	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 18:36	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 18:36	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 18:36	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 18:36	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 18:36	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 18:36	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 18:36	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 18:36	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 18:36	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 18:36	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 18:36	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 18:36	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:36	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 18:36	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 18:36	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 18:36	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 18:36	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 18:36	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 18:36	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 18:36	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 18:36	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 18:36	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 18:36	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 18:36	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 18:36	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 18:36	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 18:36	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 18:36	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 18:36	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 18:36	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 18:36	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 18:36	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 18:36	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 18:36	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 18:36	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 18:36	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1

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# Client Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-187328-6**

**Date Collected: 09/01/20 00:00**

**Matrix: Water**

**Date Received: 09/03/20 10:05**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:36	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 18:36	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 18:36	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 18:36	1
<b>Toluene</b>	<b>0.22</b>	<b>J</b>	0.50	0.15	ug/L			09/08/20 18:36	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 18:36	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 18:36	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 18:36	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 18:36	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 18:36	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		75 - 126		09/08/20 18:36	1
4-Bromofluorobenzene (Surr)	106		72 - 124		09/08/20 18:36	1
Dibromofluoromethane (Surr)	103		75 - 120		09/08/20 18:36	1
Toluene-d8 (Surr)	103		75 - 120		09/08/20 18:36	1

# Definitions/Glossary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

## GC/MS VOA

### Analysis Batch: 560284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Total/NA	Ground Water	8260B	
500-187328-2	MW-3	Total/NA	Ground Water	8260B	
500-187328-3	MW-2	Total/NA	Ground Water	8260B	
500-187328-4	MW-1	Total/NA	Ground Water	8260B	
500-187328-5	Field Blank (997)	Total/NA	Water	8260B	
500-187328-6	Trip Blank	Total/NA	Water	8260B	
MB 500-560284/6	Method Blank	Total/NA	Water	8260B	
LCS 500-560284/4	Lab Control Sample	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 560136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Total/NA	Ground Water	3510C	
500-187328-2	MW-3	Total/NA	Ground Water	3510C	
500-187328-3	MW-2	Total/NA	Ground Water	3510C	
500-187328-4	MW-1	Total/NA	Ground Water	3510C	
MB 500-560136/1-A	Method Blank	Total/NA	Water	3510C	
LCS 500-560136/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 560438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Total/NA	Ground Water	8270D	560136
500-187328-2	MW-3	Total/NA	Ground Water	8270D	560136
500-187328-3	MW-2	Total/NA	Ground Water	8270D	560136
500-187328-4	MW-1	Total/NA	Ground Water	8270D	560136

### Analysis Batch: 560504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-560136/1-A	Method Blank	Total/NA	Water	8270D	560136
LCS 500-560136/2-A	Lab Control Sample	Total/NA	Water	8270D	560136

## Metals

### Prep Batch: 559965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Dissolved	Ground Water	3005A	
500-187328-1	MW-8	Total Recoverable	Ground Water	3005A	
500-187328-2	MW-3	Dissolved	Ground Water	3005A	
500-187328-2	MW-3	Total Recoverable	Ground Water	3005A	
500-187328-3	MW-2	Dissolved	Ground Water	3005A	
500-187328-3	MW-2	Total Recoverable	Ground Water	3005A	
500-187328-4	MW-1	Dissolved	Ground Water	3005A	
500-187328-4	MW-1	Total Recoverable	Ground Water	3005A	
MB 500-559965/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-559965/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 560349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Dissolved	Ground Water	6020A	559965
500-187328-1	MW-8	Total Recoverable	Ground Water	6020A	559965
500-187328-2	MW-3	Dissolved	Ground Water	6020A	559965

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# QC Association Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

## Metals (Continued)

### Analysis Batch: 560349 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-2	MW-3	Total Recoverable	Ground Water	6020A	559965
500-187328-3	MW-2	Dissolved	Ground Water	6020A	559965
500-187328-3	MW-2	Total Recoverable	Ground Water	6020A	559965
500-187328-4	MW-1	Dissolved	Ground Water	6020A	559965
500-187328-4	MW-1	Total Recoverable	Ground Water	6020A	559965
MB 500-559965/1-A	Method Blank	Total Recoverable	Water	6020A	559965
LCS 500-559965/2-A	Lab Control Sample	Total Recoverable	Water	6020A	559965

### Prep Batch: 560561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Dissolved	Ground Water	7470A	
500-187328-1	MW-8	Total/NA	Ground Water	7470A	
500-187328-2	MW-3	Dissolved	Ground Water	7470A	
500-187328-2	MW-3	Total/NA	Ground Water	7470A	
500-187328-3	MW-2	Dissolved	Ground Water	7470A	
500-187328-3	MW-2	Total/NA	Ground Water	7470A	
500-187328-4	MW-1	Dissolved	Ground Water	7470A	
500-187328-4	MW-1	Total/NA	Ground Water	7470A	
MB 500-560561/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-560561/20-A	Lab Control Sample	Total/NA	Water	7470A	
500-187328-3 MS	MW-2	Total/NA	Ground Water	7470A	
500-187328-3 MSD	MW-2	Total/NA	Ground Water	7470A	
500-187328-3 DU	MW-2	Total/NA	Ground Water	7470A	

### Analysis Batch: 560808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-187328-1	MW-8	Dissolved	Ground Water	7470A	560561
500-187328-1	MW-8	Total/NA	Ground Water	7470A	560561
500-187328-2	MW-3	Dissolved	Ground Water	7470A	560561
500-187328-2	MW-3	Total/NA	Ground Water	7470A	560561
500-187328-3	MW-2	Dissolved	Ground Water	7470A	560561
500-187328-3	MW-2	Total/NA	Ground Water	7470A	560561
500-187328-4	MW-1	Dissolved	Ground Water	7470A	560561
500-187328-4	MW-1	Total/NA	Ground Water	7470A	560561
MB 500-560561/12-A	Method Blank	Total/NA	Water	7470A	560561
LCS 500-560561/20-A	Lab Control Sample	Total/NA	Water	7470A	560561
500-187328-3 MS	MW-2	Total/NA	Ground Water	7470A	560561
500-187328-3 MSD	MW-2	Total/NA	Ground Water	7470A	560561
500-187328-3 DU	MW-2	Total/NA	Ground Water	7470A	560561

# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

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

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-126)	BFB (72-124)	DBFM (75-120)	TOL (75-120)
500-187328-1	MW-8	111	104	103	101
500-187328-2	MW-3	113	105	105	101
500-187328-3	MW-2	112	104	103	102
500-187328-4	MW-1	111	103	105	103

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (75-126)	BFB (72-124)	DBFM (75-120)	TOL (75-120)
500-187328-5	Field Blank (997)	114	105	105	101
500-187328-6	Trip Blank	111	106	103	103
LCS 500-560284/4	Lab Control Sample	104	107	99	105
MB 500-560284/6	Method Blank	108	107	101	101

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (34-110)	NBZ (36-120)	TPHL (40-145)
500-187328-1	MW-8	73	63	127
500-187328-2	MW-3	61	41	129
500-187328-3	MW-2	48	51	114
500-187328-4	MW-1	66	48	115

### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (34-110)	NBZ (36-120)	TPHL (40-145)
LCS 500-560136/2-A	Lab Control Sample	72	96	97
MB 500-560136/1-A	Method Blank	77	108	121

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# Surrogate Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

## Surrogate Legend

---

FBP = 2-Fluorobiphenyl (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

1

2

3

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6

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15

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

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

**Lab Sample ID: MB 500-560284/6**  
**Matrix: Water**  
**Analysis Batch: 560284**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			09/08/20 10:34	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			09/08/20 10:34	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			09/08/20 10:34	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			09/08/20 10:34	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			09/08/20 10:34	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			09/08/20 10:34	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			09/08/20 10:34	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/L			09/08/20 10:34	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			09/08/20 10:34	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			09/08/20 10:34	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			09/08/20 10:34	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			09/08/20 10:34	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			09/08/20 10:34	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			09/08/20 10:34	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			09/08/20 10:34	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			09/08/20 10:34	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			09/08/20 10:34	1
Benzene	<0.15		0.50	0.15	ug/L			09/08/20 10:34	1
Bromobenzene	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			09/08/20 10:34	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			09/08/20 10:34	1
Bromoform	<0.48		1.0	0.48	ug/L			09/08/20 10:34	1
Bromomethane	<0.80		3.0	0.80	ug/L			09/08/20 10:34	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			09/08/20 10:34	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
Chloroethane	<0.51		1.0	0.51	ug/L			09/08/20 10:34	1
Chloroform	<0.37		2.0	0.37	ug/L			09/08/20 10:34	1
Chloromethane	<0.32		1.0	0.32	ug/L			09/08/20 10:34	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			09/08/20 10:34	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			09/08/20 10:34	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			09/08/20 10:34	1
Dibromomethane	<0.27		1.0	0.27	ug/L			09/08/20 10:34	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/L			09/08/20 10:34	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			09/08/20 10:34	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			09/08/20 10:34	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			09/08/20 10:34	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			09/08/20 10:34	1
Naphthalene	<0.34		1.0	0.34	ug/L			09/08/20 10:34	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			09/08/20 10:34	1



# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

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

**Lab Sample ID: MB 500-560284/6**  
**Matrix: Water**  
**Analysis Batch: 560284**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 10:34	1
Styrene	<0.39		1.0	0.39	ug/L			09/08/20 10:34	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			09/08/20 10:34	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			09/08/20 10:34	1
Toluene	<0.15		0.50	0.15	ug/L			09/08/20 10:34	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			09/08/20 10:34	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			09/08/20 10:34	1
Trichloroethene	<0.16		0.50	0.16	ug/L			09/08/20 10:34	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			09/08/20 10:34	1
Vinyl chloride	<0.20		1.0	0.20	ug/L			09/08/20 10:34	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			09/08/20 10:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	108		75 - 126		09/08/20 10:34	1
4-Bromofluorobenzene (Surr)	107		72 - 124		09/08/20 10:34	1
Dibromofluoromethane (Surr)	101		75 - 120		09/08/20 10:34	1
Toluene-d8 (Surr)	101		75 - 120		09/08/20 10:34	1

**Lab Sample ID: LCS 500-560284/4**  
**Matrix: Water**  
**Analysis Batch: 560284**

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1,2-Tetrachloroethane	50.0	47.6		ug/L		95	70 - 125
1,1,1-Trichloroethane	50.0	50.0		ug/L		100	70 - 125
1,1,1,2-Tetrachloroethane	50.0	48.3		ug/L		97	62 - 140
1,1,2-Trichloroethane	50.0	52.9		ug/L		106	71 - 130
1,1-Dichloroethane	50.0	47.0		ug/L		94	70 - 125
1,1-Dichloroethene	50.0	48.3		ug/L		97	67 - 122
1,1-Dichloropropene	50.0	50.2		ug/L		100	70 - 121
1,2,3-Trichlorobenzene	50.0	44.4		ug/L		89	51 - 145
1,2,3-Trichloropropane	50.0	56.5		ug/L		113	50 - 133
1,2,4-Trichlorobenzene	50.0	44.9		ug/L		90	57 - 137
1,2,4-Trimethylbenzene	50.0	50.4		ug/L		101	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	49.7		ug/L		99	56 - 123
1,2-Dibromoethane	50.0	52.0		ug/L		104	70 - 125
1,2-Dichlorobenzene	50.0	48.9		ug/L		98	70 - 125
1,2-Dichloroethane	50.0	52.1		ug/L		104	68 - 127
1,2-Dichloropropane	50.0	50.9		ug/L		102	67 - 130
1,3,5-Trimethylbenzene	50.0	51.1		ug/L		102	70 - 123
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	70 - 125
1,3-Dichloropropane	50.0	49.8		ug/L		100	62 - 136
1,4-Dichlorobenzene	50.0	50.0		ug/L		100	70 - 120
2,2-Dichloropropane	50.0	51.6		ug/L		103	58 - 139
2-Chlorotoluene	50.0	50.0		ug/L		100	70 - 125
4-Chlorotoluene	50.0	51.2		ug/L		102	68 - 124
Benzene	50.0	48.7		ug/L		97	70 - 120

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

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

**Lab Sample ID: LCS 500-560284/4**  
**Matrix: Water**  
**Analysis Batch: 560284**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	50.8		ug/L		102	70 - 122
Bromochloromethane	50.0	49.4		ug/L		99	65 - 122
Bromodichloromethane	50.0	49.7		ug/L		99	69 - 120
Bromoform	50.0	52.1		ug/L		104	56 - 132
Bromomethane	50.0	35.7		ug/L		71	40 - 152
Carbon tetrachloride	50.0	49.6		ug/L		99	59 - 133
Chlorobenzene	50.0	52.0		ug/L		104	70 - 120
Chloroethane	50.0	64.9		ug/L		130	48 - 136
Chloroform	50.0	46.8		ug/L		94	70 - 120
Chloromethane	50.0	34.2		ug/L		68	56 - 152
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	70 - 125
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	64 - 127
Dibromochloromethane	50.0	50.9		ug/L		102	68 - 125
Dibromomethane	50.0	49.4		ug/L		99	70 - 120
Dichlorodifluoromethane	50.0	28.0		ug/L		56	40 - 159
Ethylbenzene	50.0	51.0		ug/L		102	70 - 123
Hexachlorobutadiene	50.0	44.4		ug/L		89	51 - 150
Isopropylbenzene	50.0	51.2		ug/L		102	70 - 126
Methyl tert-butyl ether	50.0	44.8		ug/L		90	55 - 123
Methylene Chloride	50.0	48.0		ug/L		96	69 - 125
Naphthalene	50.0	47.2		ug/L		94	53 - 144
n-Butylbenzene	50.0	50.9		ug/L		102	68 - 125
N-Propylbenzene	50.0	52.2		ug/L		104	69 - 127
p-Isopropyltoluene	50.0	51.7		ug/L		103	70 - 125
sec-Butylbenzene	50.0	51.3		ug/L		103	70 - 123
Styrene	50.0	53.6		ug/L		107	70 - 120
tert-Butylbenzene	50.0	51.5		ug/L		103	70 - 121
Tetrachloroethene	50.0	54.0		ug/L		108	70 - 128
Toluene	50.0	52.2		ug/L		104	70 - 125
trans-1,2-Dichloroethene	50.0	48.8		ug/L		98	70 - 125
trans-1,3-Dichloropropene	50.0	50.3		ug/L		101	62 - 128
Trichloroethene	50.0	54.6		ug/L		109	70 - 125
Trichlorofluoromethane	50.0	42.9		ug/L		86	55 - 128
Vinyl chloride	50.0	43.3		ug/L		87	64 - 126
Xylenes, Total	100	97.1		ug/L		97	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		75 - 126
4-Bromofluorobenzene (Surr)	107		72 - 124
Dibromofluoromethane (Surr)	99		75 - 120
Toluene-d8 (Surr)	105		75 - 120

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

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

Lab Sample ID: MB 500-560136/1-A

Matrix: Water

Analysis Batch: 560504

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 560136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.24		1.6	0.24	ug/L		09/04/20 12:03	09/09/20 02:37	1
2-Methylnaphthalene	<0.052		1.6	0.052	ug/L		09/04/20 12:03	09/09/20 02:37	1
Acenaphthene	<0.25		0.80	0.25	ug/L		09/04/20 12:03	09/09/20 02:37	1
Acenaphthylene	<0.21		0.80	0.21	ug/L		09/04/20 12:03	09/09/20 02:37	1
Anthracene	<0.27		0.80	0.27	ug/L		09/04/20 12:03	09/09/20 02:37	1
Benzo[a]anthracene	<0.045		0.16	0.045	ug/L		09/04/20 12:03	09/09/20 02:37	1
Benzo[a]pyrene	<0.079		0.16	0.079	ug/L		09/04/20 12:03	09/09/20 02:37	1
Benzo[b]fluoranthene	<0.065		0.16	0.065	ug/L		09/04/20 12:03	09/09/20 02:37	1
Benzo[g,h,i]perylene	<0.30		0.80	0.30	ug/L		09/04/20 12:03	09/09/20 02:37	1
Benzo[k]fluoranthene	<0.051		0.16	0.051	ug/L		09/04/20 12:03	09/09/20 02:37	1
Chrysene	<0.055		0.16	0.055	ug/L		09/04/20 12:03	09/09/20 02:37	1
Dibenz(a,h)anthracene	<0.041		0.24	0.041	ug/L		09/04/20 12:03	09/09/20 02:37	1
Fluoranthene	<0.36		0.80	0.36	ug/L		09/04/20 12:03	09/09/20 02:37	1
Fluorene	<0.20		0.80	0.20	ug/L		09/04/20 12:03	09/09/20 02:37	1
Indeno[1,2,3-cd]pyrene	<0.060		0.16	0.060	ug/L		09/04/20 12:03	09/09/20 02:37	1
Naphthalene	<0.25		0.80	0.25	ug/L		09/04/20 12:03	09/09/20 02:37	1
Phenanthrene	<0.24		0.80	0.24	ug/L		09/04/20 12:03	09/09/20 02:37	1
Pyrene	<0.34		0.80	0.34	ug/L		09/04/20 12:03	09/09/20 02:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	77		34 - 110	09/04/20 12:03	09/09/20 02:37	1
Nitrobenzene-d5 (Surr)	108		36 - 120	09/04/20 12:03	09/09/20 02:37	1
Terphenyl-d14 (Surr)	121		40 - 145	09/04/20 12:03	09/09/20 02:37	1

Lab Sample ID: LCS 500-560136/2-A

Matrix: Water

Analysis Batch: 560504

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 560136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	32.0	20.7		ug/L		65	38 - 110
2-Methylnaphthalene	32.0	20.6		ug/L		64	34 - 110
Acenaphthene	32.0	23.8		ug/L		74	46 - 110
Acenaphthylene	32.0	23.9		ug/L		75	47 - 113
Anthracene	32.0	30.3		ug/L		95	67 - 118
Benzo[a]anthracene	32.0	30.5		ug/L		95	70 - 126
Benzo[a]pyrene	32.0	35.7		ug/L		112	70 - 135
Benzo[b]fluoranthene	32.0	36.5		ug/L		114	69 - 136
Benzo[g,h,i]perylene	32.0	34.2		ug/L		107	70 - 135
Benzo[k]fluoranthene	32.0	37.7		ug/L		118	70 - 133
Chrysene	32.0	31.5		ug/L		99	68 - 129
Dibenz(a,h)anthracene	32.0	35.6		ug/L		111	70 - 134
Fluoranthene	32.0	31.0		ug/L		97	68 - 126
Fluorene	32.0	26.3		ug/L		82	53 - 120
Indeno[1,2,3-cd]pyrene	32.0	35.2		ug/L		110	65 - 133
Naphthalene	32.0	20.0		ug/L		62	36 - 110
Phenanthrene	32.0	29.9		ug/L		93	65 - 120
Pyrene	32.0	32.1		ug/L		100	70 - 126

Eurofins TestAmerica, Chicago

# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

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

**Lab Sample ID: LCS 500-560136/2-A**  
**Matrix: Water**  
**Analysis Batch: 560504**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 560136**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	72		34 - 110
Nitrobenzene-d5 (Surr)	96		36 - 120
Terphenyl-d14 (Surr)	97		40 - 145

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-559965/1-A**  
**Matrix: Water**  
**Analysis Batch: 560349**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 559965**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.73		2.5	0.73	ug/L		09/03/20 17:59	09/04/20 15:05	1
Cadmium	<0.17		0.50	0.17	ug/L		09/03/20 17:59	09/04/20 15:05	1
Chromium	<1.1		5.0	1.1	ug/L		09/03/20 17:59	09/04/20 15:05	1
Copper	<0.50		2.0	0.50	ug/L		09/03/20 17:59	09/04/20 15:05	1
Lead	<0.19		0.50	0.19	ug/L		09/03/20 17:59	09/04/20 15:05	1
Nickel	<0.63		2.0	0.63	ug/L		09/03/20 17:59	09/04/20 15:05	1
Silver	<0.12		0.50	0.12	ug/L		09/03/20 17:59	09/04/20 15:05	1
Zinc	<6.9		20	6.9	ug/L		09/03/20 17:59	09/04/20 15:05	1

**Lab Sample ID: LCS 500-559965/2-A**  
**Matrix: Water**  
**Analysis Batch: 560349**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 559965**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Barium	500	505		ug/L		101		80 - 120
Cadmium	50.0	48.5		ug/L		97		80 - 120
Chromium	200	207		ug/L		104		80 - 120
Copper	250	262		ug/L		105		80 - 120
Lead	100	102		ug/L		102		80 - 120
Nickel	500	520		ug/L		104		80 - 120
Selenium	100	98.3		ug/L		98		80 - 120
Silver	50.0	48.3		ug/L		97		80 - 120
Zinc	500	532		ug/L		106		80 - 120

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-560561/12-A**  
**Matrix: Water**  
**Analysis Batch: 560808**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 560561**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.098		0.20	0.098	ug/L		09/09/20 08:35	09/10/20 07:09	1

**Lab Sample ID: LCS 500-560561/20-A**  
**Matrix: Water**  
**Analysis Batch: 560808**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 560561**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Mercury	2.00	1.87		ug/L		93		80 - 120

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# QC Sample Results

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: 500-187328-3 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 560808**

**Client Sample ID: MW-2**  
**Prep Type: Total/NA**  
**Prep Batch: 560561**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.098		1.00	1.02		ug/L		102	75 - 125

**Lab Sample ID: 500-187328-3 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 560808**

**Client Sample ID: MW-2**  
**Prep Type: Total/NA**  
**Prep Batch: 560561**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.098		1.00	0.955		ug/L		96	75 - 125	6	20

**Lab Sample ID: 500-187328-3 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 560808**

**Client Sample ID: MW-2**  
**Prep Type: Total/NA**  
**Prep Batch: 560561**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	<0.098		<0.098		ug/L		NC	20

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

## Client Sample ID: MW-8

## Lab Sample ID: 500-187328-1

Date Collected: 09/01/20 10:00

Matrix: Ground Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 16:22	PMF	TAL CHI
Total/NA	Prep	3510C			560136	09/04/20 12:03		TAL CHI
Total/NA	Analysis	8270D		1	560438	09/08/20 23:01	SS	TAL CHI
Dissolved	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Dissolved	Analysis	6020A		1	560349	09/04/20 16:04	FXG	TAL CHI
Total Recoverable	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	560349	09/04/20 15:50	FXG	TAL CHI
Dissolved	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Dissolved	Analysis	7470A		1	560808	09/10/20 08:03	MJG	TAL CHI
Total/NA	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	560808	09/10/20 07:44	MJG	TAL CHI

## Client Sample ID: MW-3

## Lab Sample ID: 500-187328-2

Date Collected: 09/01/20 11:00

Matrix: Ground Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 16:49	PMF	TAL CHI
Total/NA	Prep	3510C			560136	09/04/20 12:03		TAL CHI
Total/NA	Analysis	8270D		1	560438	09/08/20 23:24	SS	TAL CHI
Dissolved	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Dissolved	Analysis	6020A		1	560349	09/04/20 16:07	FXG	TAL CHI
Total Recoverable	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	560349	09/04/20 15:53	FXG	TAL CHI
Dissolved	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Dissolved	Analysis	7470A		1	560808	09/10/20 08:05	MJG	TAL CHI
Total/NA	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	560808	09/10/20 07:46	MJG	TAL CHI

## Client Sample ID: MW-2

## Lab Sample ID: 500-187328-3

Date Collected: 09/01/20 11:50

Matrix: Ground Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 17:16	PMF	TAL CHI
Total/NA	Prep	3510C			560136	09/04/20 12:03		TAL CHI
Total/NA	Analysis	8270D		1	560438	09/08/20 23:48	SS	TAL CHI
Dissolved	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Dissolved	Analysis	6020A		1	560349	09/04/20 16:11	FXG	TAL CHI
Total Recoverable	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	560349	09/04/20 15:57	FXG	TAL CHI
Dissolved	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Dissolved	Analysis	7470A		1	560808	09/10/20 08:07	MJG	TAL CHI
Total/NA	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	560808	09/10/20 07:48	MJG	TAL CHI

Eurofins TestAmerica, Chicago

# Lab Chronicle

Client: Short Elliott Hendrickson, Inc. dba SEH  
 Project/Site: Stresau Labs

Job ID: 500-187328-1

**Client Sample ID: MW-1**

**Lab Sample ID: 500-187328-4**

Date Collected: 09/01/20 12:30

Matrix: Ground Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 17:42	PMF	TAL CHI
Total/NA	Prep	3510C			560136	09/04/20 12:03		TAL CHI
Total/NA	Analysis	8270D		1	560438	09/09/20 00:12	SS	TAL CHI
Dissolved	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Dissolved	Analysis	6020A		1	560349	09/04/20 16:14	FXG	TAL CHI
Total Recoverable	Prep	3005A			559965	09/03/20 17:59	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	560349	09/04/20 16:00	FXG	TAL CHI
Dissolved	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Dissolved	Analysis	7470A		1	560808	09/10/20 08:09	MJG	TAL CHI
Total/NA	Prep	7470A			560561	09/09/20 08:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	560808	09/10/20 08:01	MJG	TAL CHI

**Client Sample ID: Field Blank (997)**

**Lab Sample ID: 500-187328-5**

Date Collected: 09/01/20 10:10

Matrix: Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 18:09	PMF	TAL CHI

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-187328-6**

Date Collected: 09/01/20 00:00

Matrix: Water

Date Received: 09/03/20 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	560284	09/08/20 18:36	PMF	TAL CHI

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Short Elliott Hendrickson, Inc. dba SEH  
Project/Site: Stresau Labs

Job ID: 500-187328-1

## Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-21

- 1
- 2
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# Chain of Custody Record

397346



Environment Testing  
TestAmerica

Address: \_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other:

TAL-8210

Client Contact		Project Manager: <b>Bruce Olson</b>			Site Contact:		Date:		COC No:		
Company Name: <b>SEH</b>		Tel/Email:			Lab Contact:		Carrier:		_____ of _____ COCs		
Address: <b>10 N Bridge ST</b>		Analysis Turnaround Time									
City/State/Zip: <b>Ch. Falls VA 54729</b>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS									
Phone: <b>715 720 6200</b>		TAT if different from Below _____									
Fax:		<input type="checkbox"/> 2 weeks									
Project Name: <b>Stresac Labs</b>		<input type="checkbox"/> 1 week									
Site:		<input type="checkbox"/> 2 days									
P O #		<input type="checkbox"/> 1 day									
Sample Identific		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix		# of Cont.	
500-187328 COC											
1	MW-8	9/1/2020	10:00	G	GW	7					
2	MW-3	↓	11:00	↓	↓	↓					
3	MW-2	↓	11:50	↓	↓	↓					
4	MW-1	↓	12:30	↓	↓	↓					
5	Field Blank (997)	↓	10:10	↓	↓	3					
6	Trip Blank	↓		↓	↓	1					
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temp. (°C): Obs'd: <b>1.1</b> Corr'd: <b>2.1</b>		Therm ID No.:				
Relinquished by: <b>[Signature]</b>		Company: <b>SEH</b>		Date/Time: <b>9/2/2020</b>		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by: <b>[Signature]</b>		Company: <b>TH-LTT</b>		Date/Time: <b>9/3/20 1005</b>	

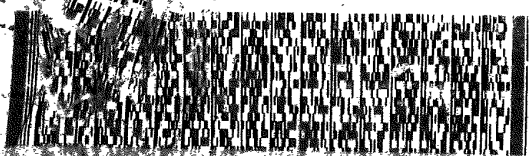


500-187328 Wayt

SHIP DATE: 02/03/20  
ACTWGT: 10.00 LB M  
CAD: 0562071,CAFE331

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ARK IL 604843101

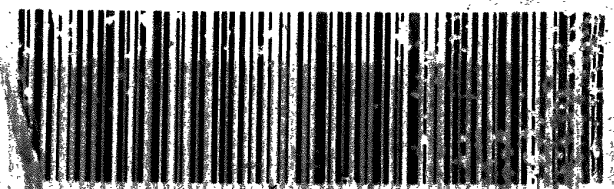


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PRIORITY OVERNIGHT

NA JCTA

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48qt.

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## Login Sample Receipt Checklist

Client: Short Elliott Hendrickson, Inc. dba SEH

Job Number: 500-187328-1

**Login Number: 187328**

**List Source: Eurofins TestAmerica, Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## **Appendix C**

### GME Analytical Data Tables

From *Annual Monitoring Report for the TTU and North Site at the Stresau Laboratory facility in Spooner, Wisconsin*, GME Project No. D-1596D, GME Consultants, Inc., December 15, 2005

**TABLE 1**  
**SOIL CHEMISTRY RESULTS - METALS**

Sample	Date	Concentrations (ppm)							
		Barium	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
<b>North Site</b>									
North-1	5-2-95	44	ND	5	12	52	6	ND	33
	8-15-96	33				ND			ND
	7-31-97	34				8			13
	8-6-98	46				9			23
	8-11-99	29	ND	4		ND			11
	8-24-00	28	ND	3		11			7
	6-18-01	34	0.081	7.5		3.0			17
	9-4-03	47	0.11	7.7		7.2			21
	11-3-05	36	0.060	9.5		32			27
North-2	5-2-95	31	0.9	4	7	41	6	ND	17
North-3	5-2-95	86	1	6	31	233	10	ND	980
	8-15-96	56				ND			ND
	7-31-97	68				10			25
	8-6-98	120				19			44
	8-11-99	72	ND	5		23			37
	8-24-00	86	ND	2		41			80
	6-18-01	33	0.081	5.1		3.0			17
	9-4-03	39	0.072	7.4		4.6			18
	11-3-05	27	ND	7.1		2.5			13
North-4	5-2-95	69	2	4	8	30	6	ND	37
North-5	5-2-95	83	5	8	28	52	4	ND	19
	8-15-96	70				32			ND
	7-31-97	73				32			19
	8-6-98	140				42			28
North-6	5-2-95	39	ND	3	7	ND	5	ND	23
North-7	8-11-99	28	ND	3		ND			11
	8-24-00	20	ND	1		ND			5
	6-18-01	23	0.053	4.6		4.6			17
	9-4-03	31	0.070	7.1		4.2			18
	11-3-05	16	ND	7.4		13			32
<b>Background</b>									
Back-SW	5-1-95	34	ND	3	ND	ND	4	ND	14
Back-SE	5-1-95	27	ND	2	ND	ND	3	ND	17
<b>NR 720 Residual Contaminant Level* (1-01)</b>									
Industrial		NE	510	200	NE	500	NE	NE	NE

Notes:  
 ppm = parts per million  
 ND = not detected  
 NE = not established  
 \* Based on human health risk from direct contact  
 Surface samples collected from the top 3 inches of soil

Stresau Laboratory, Inc.  
 Spooner, Wisconsin

GME Project No. D-1596D  
 December 15, 2005

TABLE 2  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
TU:											
MW-1	Total	6-27-95	39	0.2	5	50	1		ND	ND	72
	Dissolved	6-27-95	11	ND	4	40	2		ND	ND	ND
	Total	8-8-95	ND	ND	ND	20	ND		ND	ND	37
	Dissolved	8-8-95	ND	0.2	ND	ND	ND		ND	ND	43
	Total	8-15-96	120	ND	26	150	8		ND	ND	30
	Total	7-31-97	40	0.3	5.1	40	1.8		ND	ND	ND
	Total	8-6-98	53	ND	10	52	4		15	0.2	26
	Total	8-11-99	30	ND	ND	30	1		ND	ND	30
	Total	8-24-00	20	ND	ND	20	0.6		ND	ND	ND
	Total	6-18-01	25	ND	5.2	22	1.5	ND	5.1	ND	11
	Total	8-13-02	15	ND	2.2	8.1	0.32	ND	1.9	ND	5.3
	Total	9-4-03	17	ND	2.8	15	ND	ND	2.6	ND	11
	Total	8-18-04	11	ND	1.5	2.9	ND	ND	ND	ND	7.2
	Total	11-3-05	28	ND	5.0	23	1.1	ND	7.5	0.52	11
MW-2	Total	6-27-95	19	ND	2	20	2		ND	ND	20
	Dissolved	6-27-95	9	ND	1	50	2		ND	20	120
	Total	8-8-95	ND	ND	ND	10	ND		ND	ND	30
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	ND
	Total	8-15-96	50	ND	11	40	3		ND	ND	ND
	Total	7-31-97	20	ND	5.3	ND	2.7		ND	0.2	ND
	Total	8-6-98	26	ND	ND	18	4		ND	ND	20
	Total	8-11-99	10	ND	ND	ND	0.4		ND	ND	ND
	Total	8-24-00	10	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	15	ND	3.3	16	1.4	ND	2.8	ND	14
	Total	8-13-02	11	ND	1.6	3.5	0.10	ND	0.93	ND	3.6
	Total	9-4-03	12	ND	1.2	5.9	ND	ND	1.5	ND	ND
	Total	8-18-04	10	ND	0.97	3.7	ND	ND	ND	ND	4.5
	Total	11-3-05	11	ND	1.6	3.2	ND	ND	1.5	ND	24

Stresau Laboratory, Inc.  
 Spooner, Wisconsin

GME Project No. D-1596D  
 December 15, 2005

TABLE 2 (cont.)  
 WATER CHEMISTRY RESULTS - METALS

Location	Sample	Date	Concentrations (ppb)								
			Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
MW-3	Total	6-27-95	28	ND	2	20	ND		ND	ND	20
	Dissolved	6-27-95	12	ND	2	30	2		ND	ND	32
	Total	8-8-95	ND	ND	ND	30	ND		ND	ND	67
	Dissolved	8-8-95	ND	ND	ND	ND	ND		ND	ND	79
	Total	8-15-96	30	ND	6	20	3		ND	ND	ND
	Total	7-31-97	30	ND	6.2	20	1.6		ND	ND	ND
	Total	8-6-98	23	ND	ND	17	3		ND	0.1	ND
	Total	8-11-99	10	ND	ND	10	0.2		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	17	ND	3.7	12	0.61	ND	3.1	ND	13
	Total	8-13-02	17	ND	3.2	11	0.40	ND	2.9	ND	2.1
	Total	9-4-03	11	ND	1.3	3.3	ND	ND	ND	ND	3.2
	Total	8-18-04	12	ND	1.3	2.6	ND	ND	ND	ND	4.5
Total	11-3-05	12	ND	1.5	6.4	ND	ND	2.2	ND	8.1	
Background:											
MW-8	Total	6-27-95	25	ND	4	20	3		ND	ND	20
	Dissolved	6-27-95	7	ND	1	10	ND		ND	ND	67
	Total	8-8-95	ND	ND	ND	7	ND		ND	ND	140
	Dissolved	8-8-95	ND	ND	ND	ND	2		ND	ND	20
	Total	8-15-96	88	ND	ND	50	6		ND	ND	30
	Total	7-31-97	20	ND	4.0	ND	2.2		ND	ND	20
	Total	8-6-98	37	ND	7	21	5		11	0.3	23
	Total	8-11-99	20	ND	ND	10	3.7		ND	ND	20
	Total	8-24-00	9	ND	ND	ND	ND		ND	ND	ND
	Total	6-18-01	25	ND	3.6	7.3	0.82	ND	3.3	ND	13
	Total	8-13-02	11	ND	1.4	20	0.41	ND	0.82	ND	4.7
	Total	9-4-03	13	ND	2.3	4.5	ND	ND	1.4	ND	4.5
	Total	8-18-04	9.5	ND	1.2	1.4	ND	ND	ND	ND	4.2
Total	11-3-05	39	ND	5.7	17	1.4	ND	7.7	ND	15	
PAL			400	0.5	10	130	1.5	0.2	20	10	2,500
ES			2,000	5	100	1,300	15	2	100	50	5,000

PAF = ND 140 Decontamination Action Limit (6.03)

TABLE 3  
WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-1	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.14	10
			1,3,5-Trimethylbenzene	1.0	96
			PAHs	ND	
		7-31-97	Pyrene	0.0080	50
			Benzo (a) anthracene	0.0090	NE
			Tert-Butylbenzene	1.4	NE
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.60	0.5
			2-Methylnaphthalene	0.050	NE
			Naphthalene	0.073	8
		8-13-02	VOCs	ND	
			Naphthalene	0.028	8
		9-4-03	PAHs, VOCs	ND	
		11-3-03	PAHs	ND	
		8-18-04	VOCs	ND	
			1-Methylnaphthalene	0.034	NE
			Naphthalene	0.26	8
		11-3-05	PAHs, VOCs	ND	
		TTU	MW-2	6-27-95	VOCs, Semivolatiles
8-8-95	VOCs, Semivolatiles			ND	
8-15-96	Methylene Chloride			0.18	0.5
	Styrene			0.13	10
	1,3,5-Trimethylbenzene			0.92	96
9-25-96	PAHs			ND	
7-31-97	PAHs			ND	
	1,1,1-Trichloroethane			0.37	40
8-6-98	PAHs, VOCs			ND	
8-11-99	PAHs, VOCs			ND	
8-24-00	PAHs, VOCs			ND	
6-18-01	Methylene Chloride			0.47	0.5
	2-Methylnaphthalene			0.030	NE
	Naphthalene			0.044	8
8-13-02	VOCs			ND	
	Naphthalene			0.032	8
9-4-03	Methylene Chloride			0.58	0.5
	Benzo (b) fluoranthene			0.014	0.020
	Benzo (ghi) perylene			0.060	NE
	Dibenzo (a, h) anthracene			0.051	NE
	Indeno (1,2,3-cd) pyrene			0.051	NE



TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS – ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
TTU	MW-2	11-3-03	2-Methylnaphthalene	0.020	NE
			Naphthalene	0.031	8
		8-18-04	PAHs, VOCs	ND	
		11-3-05	PAHs, VOCs	ND	
TTU	MW-3	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	1,3,5-Trimethylbenzene	0.25	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	Fluoranthene	0.067	80
			VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	VOCs	ND	
			2-Methylnaphthalene	0.039	NE
			Naphthalene	0.058	8
		8-13-02	PAHs, VOCs	ND	
		9-4-03	VOCs	ND	
			Benzo (a) anthracene	0.092	NE
			Benzo (a) pyrene	0.11	0.02
			Benzo (b) fluoranthene	0.15	0.02
			Benzo (ghi) perylene	0.15	NE
			Benzo (k) fluoranthene	0.12	NE
			Chrysene	0.087	0.020
			Dibenzo (a, h) anthracene	0.17	NE
			Indeno (1,2,3-cd) pyrene	0.15	NE
			11-3-03	1-Methylnaphthalene	0.034
		11-3-03	2-Methylnaphthalene	0.043	NE
			Naphthalene	0.060	8
		8-18-04	PAHs, VOCs	ND	
11-3-04	2-Methylnaphthalene	0.014	NE		
11-3-05	VOCs	ND			
Background	MW-8	6-27-95	VOCs, Semivolatiles	ND	
		8-8-95	VOCs, Semivolatiles	ND	
		8-15-96	Styrene	0.15	10
			1,3,5-Trimethylbenzene	1.0	96
		9-25-96	PAHs	ND	
		7-31-97	PAHs, VOCs	ND	
		8-6-98	PAHs, VOCs	ND	
		8-11-99	PAHs, VOCs	ND	
		8-24-00	PAHs, VOCs	ND	
		6-18-01	Methylene Chloride	0.77	0.5
			Naphthalene	0.033	8

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TABLE 3 (cont.)  
WATER CHEMISTRY RESULTS - ORGANIC COMPOUNDS

Location	Sample	Date	Parameter	Concentration (ppb)	PAL (ppb)
<i>Background</i>	<i>MW-8</i>	<i>8-13-02</i>	<i>VOCs</i>	<i>ND</i>	
			<i>Naphthalene</i>	<i>0.039</i>	<i>8</i>
		<i>9-4-03</i>	<i>PAHs, VOCs</i>	<i>ND</i>	
		<i>8-18-04</i>	<i>PAHs, VOCs</i>	<i>ND</i>	
		<i>11-3-05</i>	<i>PAHs, VOCs</i>	<i>ND</i>	

Notes: ppb = parts per billion  
ND = not detected  
VOCs = volatile organic compounds  
PAL = NR 140 Preventive Action Limit (2-04)  
NE = not established  
PAHs = polynuclear aromatic hydrocarbons

**TABLE 4**  
**QUALITY CONTROL CHEMISTRY RESULTS**

Sample	Date	Parameter	Concentration (ppb)
Trip Blank	6-27-95	1, 2, 3-Trimethylbenzene	0.19
		Naphthalene	0.31
Field Blank	6-27-95	Toluene	0.38
Trip Blank	8-8-95	VOCs	ND
Field Blank	8-8-95	Methylene Chloride	4.0
		Toluene	0.74
		Xylenes	0.30
		1, 2, 3-Trimethylbenzene	0.40
		Naphthalene	0.52
Trip Blank	8-15-96	VOCs	ND
Field Blank	8-15-96	Methylene Chloride	0.94
		Toluene	0.16
Trip Blank	7-31-97	VOCs	ND
Field Blank	7-31-97	Methylene Chloride	1.1
		1, 1, 1-Trichloroethane	0.39
Trip Blank	8-6-98	VOCs	ND
Field Blank	8-6-98	VOCs	ND
Trip Blank	8-11-99	Chloromethane	0.10
Field Blank	8-11-99	Methylene Chloride	1.3
Trip Blank	8-24-00	VOCs	ND
Field Blank	8-24-00	Methylene Chloride	41
Trip Blank	6-18-01	Methylene Chloride	0.93
		Toluene	0.19
Field Blank	6-18-01	Methylene Chloride	16
		Naphthalene	0.33
		Toluene	0.38
		1, 1, 1-Trichloroethane	34
Trip Blank	8-13-02	VOCs	ND
Field Blank	8-13-02	Methylene Chloride	10
Trip Blank	9-4-03	Methylene Chloride	7.9
Field Blank	9-4-03	Methylene Chloride	0.67
Laboratory Blank	11-3-03	1-Methylnaphthalene	0.067
		2-Methylnaphthalene	0.097
		Naphthalene	0.264
Trip Blank	8-18-04	VOCs	ND
Field Blank	8-18-04	Methylene Chloride	35
		1, 1, 1-Trichloroethane	21
Trip Blank	11-3-05	Chloroform	0.48
Field Blank	11-3-05	Methylene Chloride	130

Notes: ppb = parts per billion  
 VOCs = volatile organic compounds  
 ND = not detected

**Table 1  
Groundwater Elevation Data**

Date	Parameter	MW-1		MW-2		MW-3		MW-8	
		Top of Riser Elevation <sup>1</sup>							
		<b>1055.81</b>		<b>1053.86</b>		<b>1053.28</b>		<b>1054.44</b>	
06/22/95	Groundwater Elevation <sup>2</sup>	1016.89		1016.80		1016.80		1017.90	
06/27/95	Groundwater Elevation <sup>2</sup>	1016.79		1016.69		1016.67		1017.82	
08/08/95	Groundwater Elevation <sup>2</sup>	1016.52		1016.43		1016.45		1017.62	
08/15/96	Groundwater Elevation <sup>2</sup>	1017.03		1016.94		1016.83		1018.25	
09/25/96	Groundwater Elevation <sup>2</sup>	1016.76		1016.68		1016.65		1018.01	
07/31/97	Groundwater Elevation <sup>2</sup>	1016.79		1016.72		1016.71		1017.84	
08/06/98	Groundwater Elevation <sup>2</sup>	1016.35		1016.28		1016.27		1017.37	
08/11/99	Groundwater Elevation <sup>2</sup>	1016.38		1016.31		1016.34		1017.12	
08/24/00	Groundwater Elevation <sup>2</sup>	1016.23		1016.16		1016.15		1016.87	
06/18/01	Groundwater Elevation <sup>2</sup>	1017.28		1017.21		1017.20		1018.65	
08/13/02	Groundwater Elevation <sup>2</sup>	1017.31		1017.23		1017.16		1018.70	
09/04/03	Groundwater Elevation <sup>2</sup>	1016.52		1016.47		1016.44		1017.83	
11/03/03	Groundwater Elevation <sup>2</sup>	1016.36		1016.29		1016.28		-	
08/18/04	Groundwater Elevation <sup>2</sup>	1016.65		1016.58		1016.56		1017.77	
11/03/05	Groundwater Elevation <sup>2</sup>	1016.90		1016.83		1016.81		1017.86	
08/24/06	Depth to Water	39.68		37.80		37.22		37.33	
	Groundwater Elevation	1016.13		1016.06		1016.06		1017.11	
08/16/07	Depth to Water	40.25		38.41		37.80		38.28	
	Groundwater Elevation	1015.56		1015.45		1015.48		1016.16	
05/05/08	Depth to Water	39.38		37.51		36.91		40.26	
	Groundwater Elevation	1016.43		1016.35		1016.37		1014.18	
05/21/09	Depth to Water	39.82		37.95		37.36		37.80	
	Groundwater Elevation	1015.99		1015.91		1015.92		1016.64	
06/24/10	Depth to Water	38.81		36.94		36.35		36.97	
	Groundwater Elevation	1017.00		1016.92		1016.93		1017.47	
06/29/11	Depth to Water	39.07		37.21		36.64		36.64	
	Groundwater Elevation	1016.74		1016.65		1016.64		1017.80	
06/06/12	Depth to Water	39.45		37.57		37.00		37.46	
	Groundwater Elevation	1016.36		1016.29		1016.28		1016.98	
06/12/13	Depth to Water	39.46		37.58		36.99		37.70	
	Groundwater Elevation	1016.35		1016.28		1016.29		1016.74	
06/23/14	Depth to Water	37.76		35.87		35.33		34.80	
	Groundwater Elevation	1018.05		1017.99		1017.95		1019.64	
06/18/15	Depth to Water	39.18		37.28		36.74		37.79	
	Groundwater Elevation	1016.63		1016.58		1016.54		1016.65	
06/28/16	Depth to Water	38.70		36.76		36.28		35.92	
	Groundwater Elevation	1017.11		1017.10		1017.00		1018.52	
06/27/17	Depth to Water	38.40		36.52		38.03		38.02	
	Groundwater Elevation	1017.41		1017.34		1015.25		1016.42	

Notes:

<sup>1</sup> = Top of Riser Elevation data from Release Assessment Report, Table 2, Monitoring Well Construction Summary,

GME Consultants, Inc. Project No. D-1596C, September 29, 1995

<sup>2</sup> = Groundwater elevation data prior to 8/24/06 from Annual Monitoring Report, Table 5, Groundwater Elevation Summary, GME Consultants, Inc. Project No. D-1596D, December 15, 2005

Compiled by: BKO Checked by: MJR June 2015 Data Compiled by: MFR Checked by: BKO  
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