

2016 Annual Groundwater Monitoring Report

Montague, Michigan

MID 006014906

Glenn Springs Holdings, Inc.

GHD | 2055 Niagara Falls Boulevard Niagara Falls New York 14304 USA

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1. Introduction

Glenn Springs Holdings, Inc. (GSH) is performing corrective actions at the former Occidental Chemical Corporation (OCC) manufacturing facility in Montague, Michigan (the Facility). These corrective actions are being performed, in part, to comply with the requirements of an Administrative Order (AO) issued by the United States Environmental Protection Agency (USEPA) dated March 24, 1993. At the completion of the Resource Conservation and Recovery Act (RCRA) Facility Investigation and the Corrective Measures Study, the USEPA issued the Amended Final Decision and Response to Comments in October 2010 (Final Decision) stating the corrective action requirements for the Facility. On July 19, 2012, the USEPA (Mr. Ken Bardo) issued a letter stating "Remedy Construction Complete" and that operation, maintenance, and monitoring are ongoing to ensure that the constructed remedy remains protective of human health and the environment.

The Final Decision requires groundwater monitoring at the Facility. Section 4 of the Program Management Plan presents the management approach for the groundwater monitoring. The groundwater monitoring program is defined in the document entitled "Groundwater Monitoring Plan (GMP) for the OCC Site in Montague, Michigan (USEPA ID No. MID 006014906)". The GMP was approved by the USEPA in January 2002.

The 2002 GMP replaces the previous groundwater monitoring plan for the Facility. In accordance with Paragraph XV of the Consent Judgment (October 31, 1979), GSH requested approval of the 2002 GMP from the Michigan Department of Environmental Quality (MDEQ). The MDEQ Waste Management Division reviewed GSH's request for compliance with the Consent Judgment and Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act 1994, PA 451, as amended, and granted approval in a letter from the MDEQ (Mr. Jim Sygo) to GSH (Mr. Ken Price) dated July 18, 2002. The GMP was implemented following approval by the MDEQ. Prior to this date, groundwater monitoring activities were conducted in accordance with the 1979 Consent Judgment.

The Facility is located in Montague Township north of White Lake in Muskegon County, Michigan (Figure 1.1).

1.1 Objectives

The following are the objectives for the groundwater monitoring program. These objectives were defined in Section 1.1 of the GMP.

- Demonstrate that the groundwater collection system halts any unacceptable discharge of chlorinated organic compounds to White Lake.
- Demonstrate, through monitoring, that the contaminated plume is stable and that impacted groundwater remains within the original "area of contamination".
- Develop information that will be used for future demonstration that the groundwater collection system is reducing the level of contamination in the aquifer.



1.2 Report Organization

Three components have been developed within the GMP to address the three objectives presented above.

- Groundwater Collection Demonstration
- Plume Boundary Demonstration
- Concentrations Removed from Aquifer

This Annual Groundwater Monitoring Report summarizes the results of the 2016 groundwater sampling at the Montague Facility. The following four sections of this report present a summary of the monitoring components as outlined in the GMP. This report is subdivided by monitoring component, with each component divided into four subsections as follows:

- i) Program Requirements
- ii) Work Performed
- iii) Results
- iv) Data Evaluation

2. Groundwater Collection Demonstration

2.1 Program Requirements

As prescribed in the Final Decision, GSH continues to operate eight purge wells to collect and treat contaminated groundwater. The locations of the purge wells are shown on Figure 2.1. GSH is required to demonstrate that the groundwater collection system completely halts discharge of chlorinated organic compounds to White Lake in concentrations that exceed the criteria established under Rules 299.5728 and 299.5730 of Part 201, Environmental Remediation of Michigan's Natural Resources and Environmental Protection Act, MCL 324.20101 et seq.

This component of the monitoring program has been established to demonstrate that impacted groundwater is not discharging to White Lake. To accomplish this, a monitoring program has been implemented that will show that the 48-hour average water level in White Lake is at least 0.10 foot higher than the water level in the aquifer. If the water level in the aquifer is below the water level in White Lake, the groundwater gradient from the Lake tips inward toward the purge wells. When this condition exists, it can be concluded that the impacted groundwater is completely captured.

Six performance monitoring wells were installed in areas of the plume that are least likely to be influenced by the purge wells. The locations of the performance monitoring wells are shown on Figure 2.1. White Lake water levels are measured at a stilling well placed on a dock east of the performance monitoring network and shown on Figure 2.1.

A comparison of the level of White Lake to the level of water in the monitoring wells is performed on data collected at a minimum of 2 times per week, or over 100 times per year. Approximately



19,000 White Lake Level measurements are utilized in calculating average water levels (192 per event) every 12 months.

Monitoring methods and calculations are outlined in the GMP. The GMP requires that manual water level measurements be collected in each of the six performance monitoring wells and at White Lake (stilling well) at least two times per week. In addition, White Lake water levels are automatically collected every 15 minutes to calculate the corresponding average Lake levels for each semiweekly water level collection event.

Reporting requirements and actions are outlined in the GMP. Monthly reports to the USEPA and MDEQ are required. Monthly reports summarize the calculated average monthly difference between the water level in the wells and in White Lake and report any necessary actions implemented to assure that the purge system maintains at least a 0.10-foot lower water level in all of the performance monitoring wells.

2.2 Work Performed

The groundwater collection demonstration monitoring was performed in accordance with the procedures and methods described in the approved GMP. Water level measurements in each of the six performance monitoring wells were collected at least two times per week. Water levels were measured from the top of each location's surveyed reference point (top of the well casing) to the nearest 0.01 foot using an electronic water level tape.

White Lake water levels were collected every 15 minutes with a Telog water level data recorder (data logger and pressure transducer). Water level recorder data were calibrated using the manual water level measurements obtained at the White Lake stilling well. Water level elevations were calculated by subtracting the manual depth to water level measurement from the surveyed reference point elevation.

Backup files of the electronic files were generated and stored at an off-Site location.

To maintain pumping rates so the average water level difference for each performance monitoring well each month is -0.10 foot lower than the average White Lake Level, GSH compares the daily average water level difference between each performance monitoring well and White Lake. If the daily average drops below the target level of -0.10 foot, GSH implements corrective measures. Initially, GSH verifies water levels and pumping rates and may collect additional water level measurements and adjust pumping rates. Additional corrective measures include well redevelopment, well servicing, and cleaning. Additional corrective measures performed in 2016 are summarized below:

- Well Pc – removal and replacement of pump motor and wire (June 2016)
- Well Pi – cleaning of well screen and upgraded riser pipe (November 2016)
- Well Pd – cleaning of well screen (October 2016)
- Well Pe – cleaning of well screen and pump intake (October 2016)
- Well Ph – repair of failed globe valve (July 2016)
- Well Pi – removal and replacement of pump motor and wire (June 2016, September 2016)



2.3 Results

The results of the performance monitoring are evaluated and submitted to USEPA and MDEQ monthly. Each monthly report presents a tabulation of water levels collected, summarizes purge well pumping data, provides an assessment of the average monthly performance of the six monitoring wells with White Lake level elevations, and demonstrates purge well efficiency.

Over 100 water levels were collected from the performance monitoring wells for comparison to corresponding average White Lake water levels. A tabulation of water level depths and calculated elevations are presented in Appendix A.

A summary of the calculated water level performance results for 2016 is presented in Table 2.1.

2.4 Data Evaluation

Examination of Table 2.1 shows that an inward hydraulic gradient was maintained at all times during 2016. The measured water level differential did not exceed the required differential of 0.10 foot in the six performance monitoring wells in 2016. In addition, as Table 2.1 shows, all wells maintained a yearly-averaged inward gradient of more than 0.10 foot throughout 2016.

3. Plume Boundary Demonstration

3.1 Program Requirements

This component of the groundwater monitoring program has been established to demonstrate that the migration of contaminated groundwater has stabilized and that contaminated groundwater remains within the perimeter (boundary) of impacted groundwater delineated during the RCRA Facility Investigation.

The GMP requires that groundwater samples from 12 monitoring wells (B, C, MW-03-01, MW-97-02, MW-97-03, MW-97-04, MW-97-05, T, WW-2, WW-6, WW-13, and WW-24) be collected semiannually (twice per year) and analyzed for the parameters of concern listed in Table 3.1 in accordance with the approved GMP. MW-05-01 was added to the Plume Boundary Demonstration Program beginning with the May 2005 semiannual sampling event. MW-05-01 was added by GSH on a voluntary basis beyond the direct requirements of the AO to supplement the information on the plume boundary on the southwest side of the plume. The analytical results are compared to the groundwater protection standards also listed in Table 3.1. If the concentration of any parameter measured in the plume boundary monitoring well is greater than the groundwater protection standard, then contingency actions defined in the GMP are implemented, including resampling of the well for analysis of the constituent(s).

The locations of the plume boundary monitoring wells are presented on Figure 3.1.

3.2 Work Performed

Groundwater sampling occurred during May and November 2016. Groundwater sampling was performed in accordance with the procedures and analytical methods described in the approved



GMP. Samples were collected and analyzed from all Plume Boundary Demonstration wells for the constituents of concern listed in Table 3.1 in accordance with the approved GMP. All samples were submitted to TriMatrix Laboratories (TriMatrix), located in Grand Rapids, Michigan, and were analyzed using method SW-8260 for volatile organic compounds (VOCs) and SW-8121 for semi-volatile organic compounds (SVOCs). Chloride was analyzed using USEPA Method 325.2.

Prior to sample collection, each monitoring well was purged using the dedicated bladder pump. Purge water is collected and disposed of through the Site's carbon treatment system. Low-flow purging and sampling protocols were followed. During purging, field stabilization parameters were measured at 10-minute intervals using a YSI 556 meter and a flow-through cell. The following stabilization parameters were monitored: pH, temperature, conductivity, oxidation reduction potential (ORP), and dissolved oxygen (DO). Stabilization parameters were measured and recorded in the field. A summary of the final field stabilization parameters is presented in Appendix B. Groundwater samples were collected once stabilization was achieved.

Samples were collected, handled, and documented in accordance with the GMP. Appropriate sample volumes, container types, preservation procedures, and maximum holding times for the Site-specific analytical parameters were followed. Chain of custody protocol was strictly adhered to during all phases of sample collection, transport, and delivery to the analytical laboratory for analysis.

3.3 Results

Analytical results for the 2016 semiannual plume boundary demonstration monitoring events are summarized in Table 3.2. The applicable groundwater protection standards are also listed for comparison purposes.

3.4 Data Evaluation

Analytical results show that the concentrations of all constituents of concern are below applicable groundwater protection standards in all plume boundary demonstration monitoring wells. The analytical results confirm plume stability within the boundary of impacted groundwater delineated during the RCRA Facility Investigation.

Tetrachloroethene (PCE) was observed in monitoring well C (1.8 micrograms per liter [$\mu\text{g/L}$] [May] and 1.7 $\mu\text{g/L}$ [November]) at concentrations below the more conservative groundwater protection standard (5.0 $\mu\text{g/L}$). Trichloroethene (TCE) was detected in monitoring well T (2.3 $\mu\text{g/L}$ [May] and 3.0 $\mu\text{g/L}$ [November]) and in monitoring well WW-02 (1.1 $\mu\text{g/L}$ [November]) at concentrations below the more conservative groundwater protection standard (5.0 $\mu\text{g/L}$). These results are consistent with the results from previous monitoring events.

No SVOCs were detected in any of the plume boundary demonstration monitoring wells.

Chloride concentrations ranged from 1,300 $\mu\text{g/L}$ in monitoring well MW-03-01 (May 2016) to 100,000 $\mu\text{g/L}$ in MW-97-02 (May 2016). Chloride concentrations were all below the more conservative groundwater protection standards listed in Table 3.1 (125,000 $\mu\text{g/L}$).



4. Concentration Removed from the Aquifer

4.1 Program Requirements

Eight purge wells are being pumped continuously as part of the groundwater collection system to remove impacted groundwater from the aquifer. Samples of the groundwater from each purge well are collected quarterly and analyzed for the parameters in Table 3.1. These analyses are intended to provide a baseline of information on the concentrations of the compounds in the water being removed from the aquifer. These purge wells are located in a line extending across the plume of impacted groundwater, and samples from each purge well represent a view of the section of the aquifer upgradient from that purge well. The analysis of the groundwater collected at each purge well provides a basis for evaluating trends in the concentrations of contaminants in the groundwater and the rate of removal of contaminants.

The locations of the eight purge wells used to determine the concentration removed from the aquifer are shown on Figure 2.1.

4.2 Work Performed

Quarterly purge well groundwater sampling was performed in accordance with the procedures and analytical methods described in the approved GMP. Samples were collected and analyzed from all eight purge wells for the constituents of concern listed in Table 3.1. Samples were submitted to TriMatrix located in Grand Rapids, Michigan. All samples were analyzed using Method SW-8260 for VOCs and SW-8121 for SVOCs. Chloride was analyzed using USEPA Method 325.2.

Groundwater samples were collected from the purge wells on the following dates:

- i) January 28, 2016
- ii) April 29, 2016
- iii) July 29, 2016
- iv) October 28, 2016

Groundwater samples are collected from a sample tap located at each purge well pump house. Samples are collected, handled, and documented in accordance with the GMP. Appropriate sample volumes, container types, preservation procedures, and maximum holding times for the Site-specific analytical parameters were followed. Chain of custody protocol was strictly adhered to during all phases of sample collection, transport, and delivery to the analytical laboratory for analysis.

4.3 Results

A summary of the purge well pumping rates is presented in Table 4.1. The pumping rate data, along with the pumping well analytical data, were used to estimate the mass removed from the aquifer. All 2016 purge well analytical results are summarized in Table 4.2. Individual concentrations versus time graphs for each purge well are presented in Appendix C. The concentrations versus time graphs illustrate data since the inception of pumping. The calculation of the total VOCs and SVOCs



removed from the purge well system is summarized in Table 4.3, while the rate of mass removal is illustrated on Figure 4.1.

4.4 Data Evaluation

Examination of Table 4.1 shows that the average monthly flow rate of the entire purge well system was approximately 701 gallons per minute (GPM). The variation in total flow rate was small. The monthly pumping rates in the individual purge wells ranged from 10 GPM in well Pf to 135 GPM in well Ph. Overall, approximately 368 million gallons of groundwater were pumped in 2016. The operation of the purge well system is consistent with previous years as shown in the table below.

Purge Well Operation

Year	Average Pumping Rate (GPM)	Annual Total Volume (million gallons)	Average Operating Efficiency (percent)
2004	653	343	99
2005	660	348	99
2006	695	365	98
2007	674	354	99
2008	633	334	99
2009	724	381	97
2010	681	357	98
2011	687	360	95
2012	712	375	97
2013	714	375	96
2014	692	364	98
2015	705	370	99
2016	701	368	95

Examination of Table 4.2 shows that the highest VOCs concentration occurs in well Pg. PCE concentrations in well Pg ranged from 5,600 µg/L (January 2016) to 6,500 µg/L (July 2016). Carbon tetrachloride concentrations in well Pg ranged from 990 µg/L (April 2016) to 1,100 µg/L (January, July, and October 2016). PCE is the primary constituent of concern in all the purge wells. The highest PCE concentrations following Pg occurred in wells Pi (1,400 µg/L to 1,800 µg/L), Pd (1,100 µg/L to 1,200 µg/L), and Pb (910 µg/L to 1,300 µg/L). Carbon tetrachloride is typically found at the next highest concentration. The highest carbon tetrachloride concentrations following Pg occurred in wells Pd (100 µg/L to 130 µg/L), Pi (83 µg/L to 120 µg/L), and Pb (35 µg/L to 55 µg/L).

The 2016 analytical results are consistent with historical data. The purge well exhibiting the highest concentrations of these constituents is Pg. In general, the concentrations versus time graphs show a stable or decreasing trend in the constituents of concern concentrations over time. Purge well Pb had historically increasing PCE concentrations; however, concentrations have decreased since 2005. Purge well Pi had elevated PCE concentrations from 2005 to mid-2011 that fluctuated



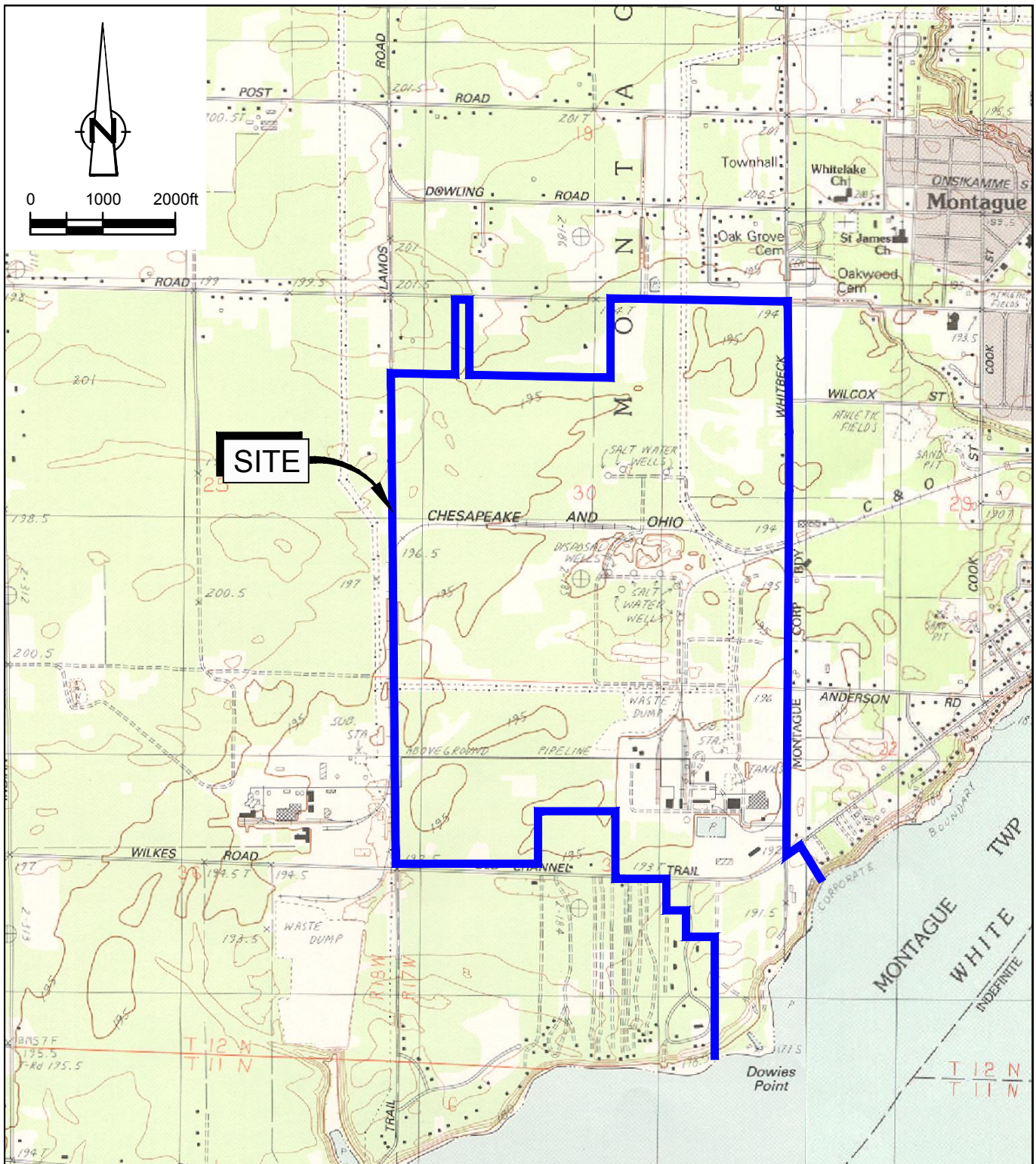
from less than 2,000 µg/L to greater than 3,000 µg/L (pre-2005 concentrations were stable from 1992 to 2004 and ranged from less than 500 µg/L to less than 2,000 µg/L). The PCE concentrations in October 2011 decreased significantly to less than 500 µg/L. Concentrations then increased in 2012 to near pre-2005 levels and have remained at those levels throughout 2016. Pi, Pb, and Pc purge wells are located in the central area of the plume. Purge well Pf continues to exhibit VOC and SVOC concentrations well below the criteria.

A summary of the total mass of VOCs and SVOCs removed in 2016 is shown in Table 4.3. Examination of this table indicates that greater than 4,800 pounds of VOCs and SVOCs were removed by the purge wells during 2016. Purge well Pf removed very little mass (0.287 pound). The majority of the mass was removed by purge wells Pg (2,138 pounds), Pi (675 pounds), Pd (676 pounds), Pb (365 pounds) and Ph (218 pounds).

In general, as shown on Figure 4.1, the rate of mass removal has declined steadily from approximately 27 pounds/day in 1990 to an annual average rate of approximately 11 pounds/day in 2016. The 2016 removal rate is shown below with the previous 12 years of removal rates.

Historical Rate of Mass Removal

Year	Annual Total Mass Removed (pounds)	Mass Removal Rate (pounds/day)
2004	6,400	18
2005	7,883	22
2006	6,868	19
2007	5,862	16
2008	6,800	19
2009	6,200	17
2010	5,803	16
2011	4,369	12
2012	4,835	13
2013	4,418	12
2014	4,423	12
2015	4,830	13
2016	4,145	11

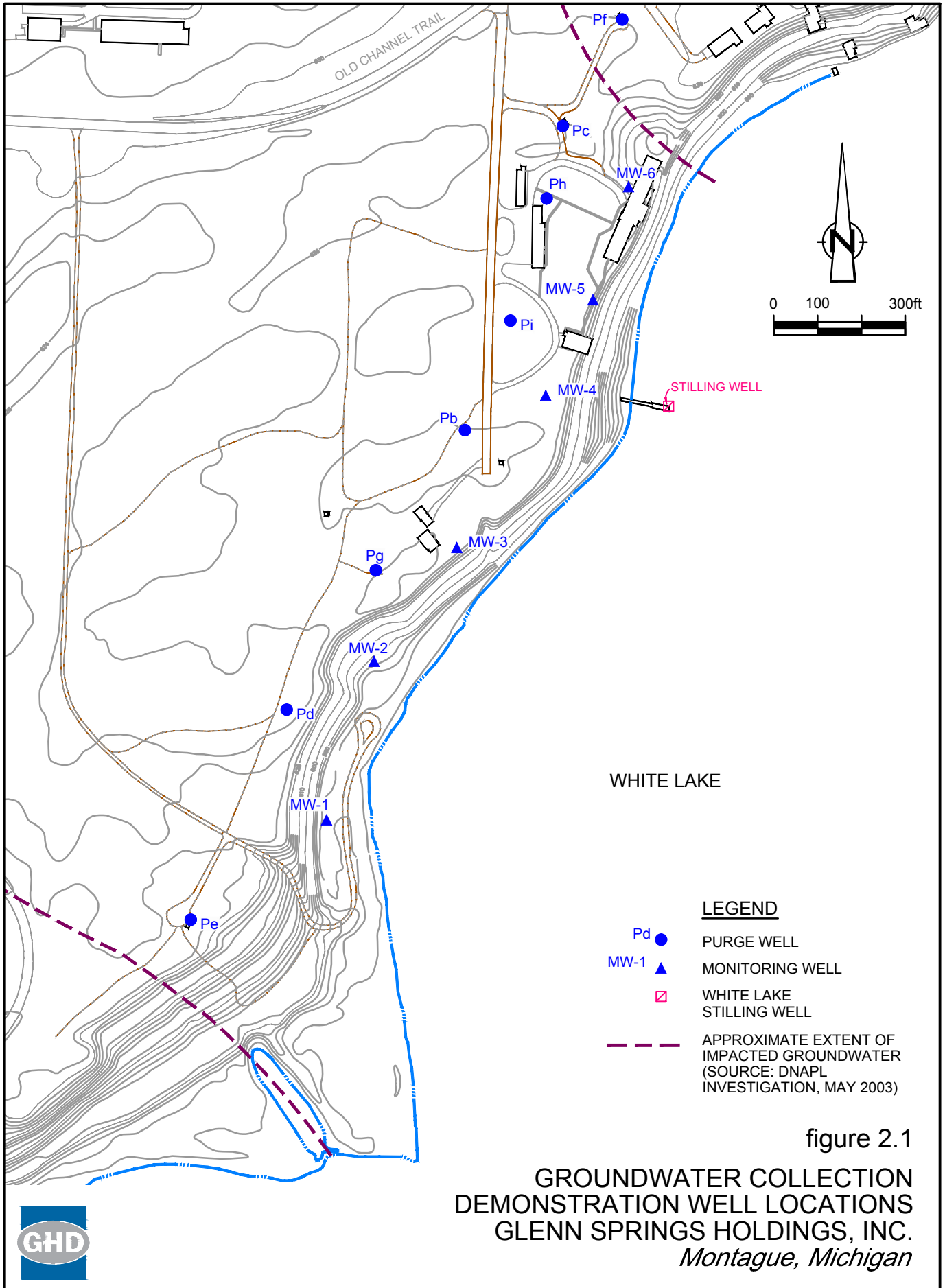


SOURCE: USGS QUADRANGLE MAPS;
MONTAGUE, FLOWER CREEK, AND MICHIGAN 1983

figure 1.1

SITE LOCATION
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan





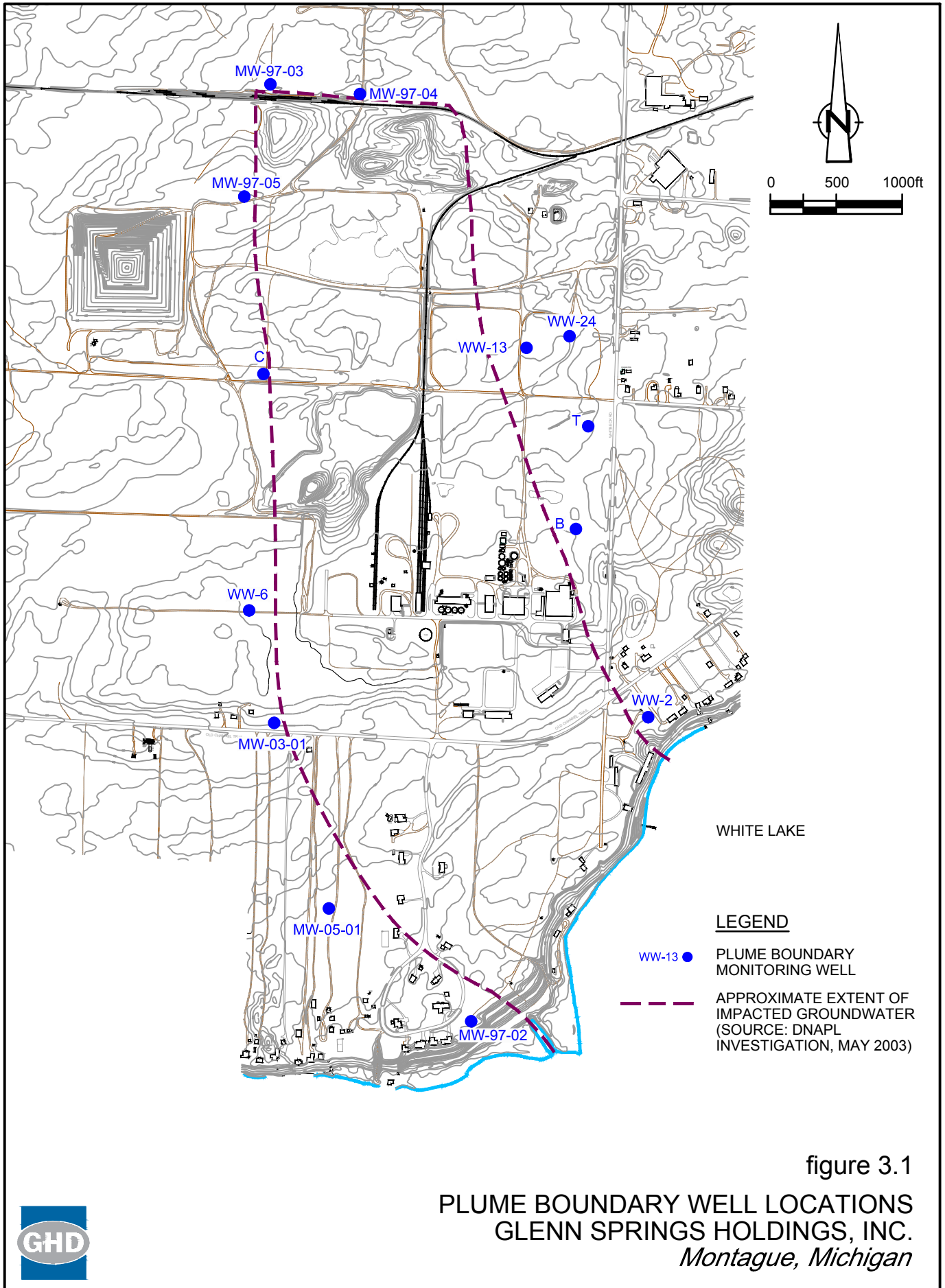


figure 3.1

PLUME BOUNDARY WELL LOCATIONS
 GLENN SPRINGS HOLDINGS, INC.
 Montague, Michigan



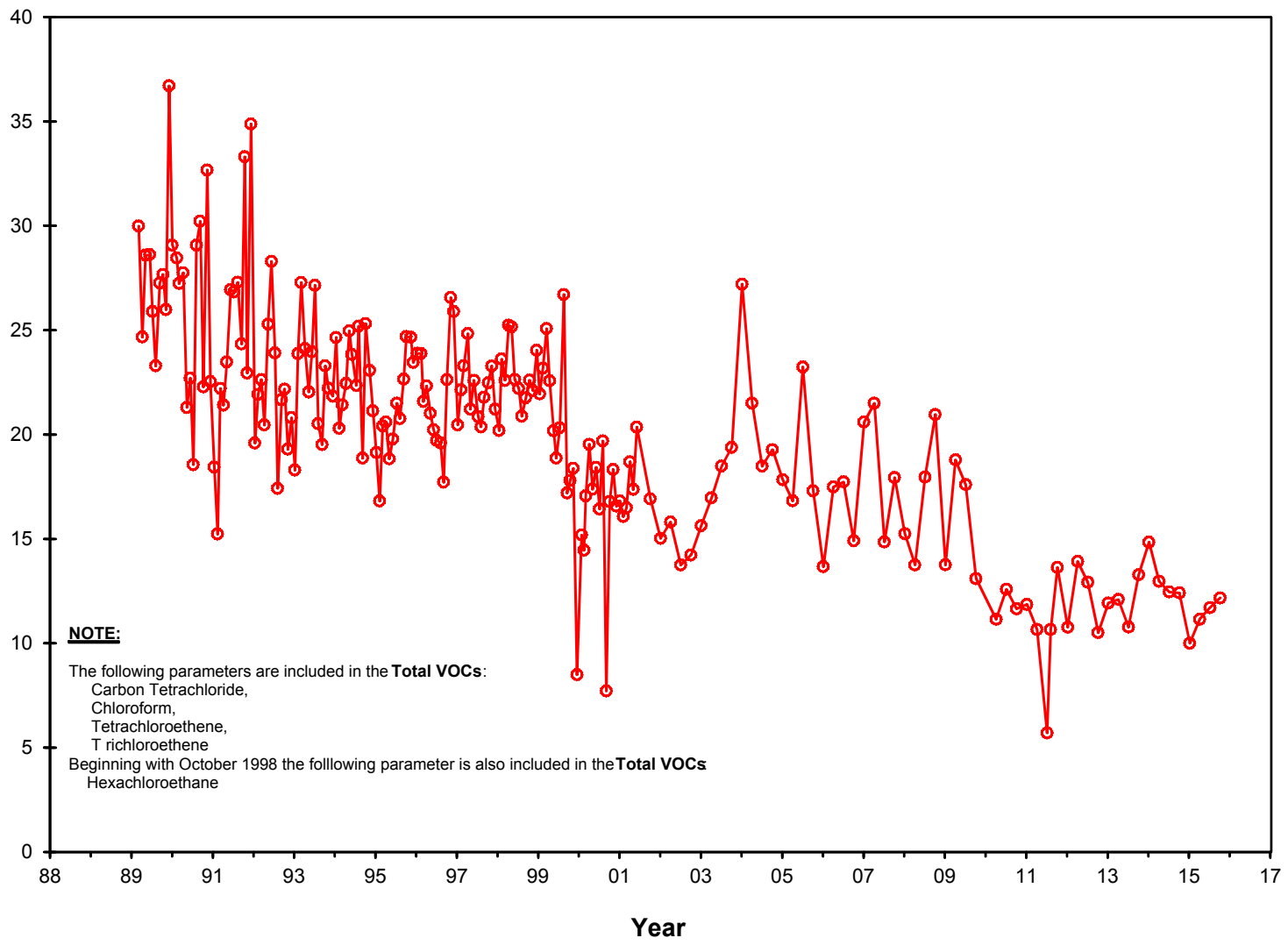


figure 4.1

ORGANICS REMOVED DAILY VS TIME
 GLENN SPRINGS HOLDINGS, INC.
 Montague, Michigan



Table 2.1

Summary of Performance Results - 2016
Groundwater Monitoring Plan
Glenn Springs Holdings, Inc.
Montague, Michigan

Month	White Lake	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6	
	Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)	Avg. Difference (feet)	Avg. Elevation (ft. AMSL)
January	580.27	-0.35	579.92	-0.63	579.64	-0.31	579.96	-0.69	579.58	-0.38	579.89	-0.35	579.92
February	580.16	-0.20	579.96	-0.24	579.92	-0.12	580.04	-0.51	579.65	-0.19	579.97	-0.18	579.98
March	580.50	-0.23	580.27	-0.35	580.15	-0.24	580.26	-0.58	579.92	-0.31	580.19	-0.26	580.24
April	581.17	-0.57	580.60	-0.50	580.67	-0.42	580.75	-0.76	580.41	-0.41	580.76	-0.39	580.78
May	581.19	-0.22	580.97	-0.25	580.94	-0.20	580.99	-0.55	580.64	-0.23	580.96	-0.24	580.95
June	581.22	-0.24	580.98	-0.30	580.92	-0.21	581.01	-0.58	580.64	-0.17	581.05	-0.21	581.01
July	581.18	-0.22	580.96	-0.29	580.89	-0.19	580.99	-0.57	580.61	-0.18	581.00	-0.13	581.05
August	581.05	-0.12	580.93	-0.29	580.76	-0.23	580.82	-0.64	580.41	-0.25	580.80	-0.27	580.78
September	580.85	-0.11	580.74	-0.19	580.66	-0.13	580.72	-0.47	580.38	-0.12	580.73	-0.16	580.69
October	580.71	-0.10	580.61	-0.28	580.43	-0.22	580.49	-0.54	580.17	-0.19	580.52	-0.24	580.47
November	580.35	-0.22	580.13	-0.31	580.04	-0.23	580.12	-0.54	579.81	-0.17	580.18	-0.19	580.16
December	579.89	-0.20	579.69	-0.21	579.68	-0.12	579.77	-0.46	579.43	-0.14	579.75	-0.12	579.77
Year 2016 Average:	580.71	-0.23	580.48	-0.32	580.39	-0.22	580.49	-0.57	580.14	-0.23	580.48	-0.23	580.48

Notes:

ft. AMSL - Feet Above Mean Sea Level

Table 3.1

**Analytical Parameters
Groundwater Monitoring Plan
Glenn Springs Holdings, Inc.
Montague, Michigan**

Compound	Short Name	Analytical Method Number	Reporting Limit (µg/L)	Residential and Commercial Drinking Water Criteria (µg/L)	Groundwater Surface Water Interface Criteria (µg/L)
Hexachlorobenzene	C-66	8121	0.01	1.0	0.2
Hexachlorocyclopentadiene	C-56	8121	0.01	50	ID
Octachlorocyclopentene	C-58	8121	1.0	50	ID
Hexachlorobutadiene	C-46	8121	0.01	15	0.053
Hexachloroethane		8121	2.0	7.3	6.7
Tetrachloroethene	PCE	8260	1.0	5.0	60
Trichloroethene	TCE	8260	1.0	5.0	200
Carbon tetrachloride		8260	1.0	5.0	45
Chloroform		8260	1.0	80	350
Chloride		325.3	1000	250000	125000
cis-1,2-Dichloroethylene		8260	0.5	70	620
trans-1,2-Dichloroethylene		8260	0.5	100	1500

Notes:

- **Bold** numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria
- µg/L - Microgram per liter
- ID - Inadequate data

Table 3.2

Analytical Results Summary
 Plume Boundary Demonstration
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location: Sample ID: Sample Date:	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	B WG-9970-050216-JCB-B 5/2/2016	B WG-9970-110316-JCB-B 11/3/2016	C WG-9970-050216-JCB-C 5/2/2016	C WG-9970-110316-JCB-C 11/3/2016	MW-03-01 WG-9970-050316-JCB-301 5/3/2016	MW-03-01 WG-9970-110316-JCB-301 11/3/2016	MW-05-01 WG-9970-050316-JCB-501 5/3/2016	
Parameters	Units									
VOCs										
Carbon tetrachloride	µg/L	5.0	45	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	1.8	1.7	1.0 U	1.0 U	
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Trichloroethene	µg/L	5.0	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	
Hexachlorocyclopentadiene	µg/L	50	-	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	
Hexachloroethane	µg/L	7.3	6.7	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	
Octachlorocyclopentene	µg/L	50	-	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	
General Chemistry										
Chloride	µg/L	250000	125000	25000	21000	2100	2100	1300	1400	3000

Notes:

- - Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of

Table 3.2
Analytical Results Summary
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan

Sample Location:	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-05-01 WG-9970-110316-JCB-501 11/3/2016	MW-97-02 WG-9970-050316-JCB-972 5/3/2016	MW-97-02 WG-9970-110316-JCB-972 11/3/2016	MW-97-03 WG-9970-050216-JCB-973 5/2/2016	MW-97-03 WG-9970-110116-JCB-973 11/1/2016	MW-97-04 WG-9970-050216-JCB-974 5/2/2016	
Sample ID:									
Sample Date:									
Parameters	Units								
VOCs									
Carbon tetrachloride	µg/L	5.0	45	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Trichloroethene	µg/L	5.0	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
SVOCs									
Hexachlorobenzene	µg/L	1.0	0.2	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachlorobutadiene	µg/L	15	0.053	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachlorocyclopentadiene	µg/L	50	-	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachloroethane	µg/L	7.3	6.7	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	
Octachlorocyclopentene	µg/L	50	-	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U	
General Chemistry									
Chloride	µg/L	250000	125000	2700	100000	80000	25000	26000	4700

Notes:

- - Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of

Table 3.2
Analytical Results Summary
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan

Sample Location: Sample ID: Sample Date:	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-97-04 WG-9970-110116-JCB-974 11/1/2016	MW-97-05 WG-9970-050216-JCB-975 5/2/2016	MW-97-05 WG-9970-110116-JCB-975 11/1/2016	T WG-9970-050216-JCB-T 5/2/2016	T WG-9970-110116-JCB-T 11/1/2016	WW-02 WG-9970-050316-JCB-WW2 5/3/2016
Parameters	Units							
VOCs								
Carbon tetrachloride	µg/L	5.0	45	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	1.0 U	1.0 U	1.0 U	2.3	3.0
SVOCs								
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	50	-	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	50	-	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry								
Chloride	µg/L	250000	125000	5300	16000	15000	10000	11000
				4700				

Notes:

- Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of

Table 3.2

Analytical Results Summary
 Plume Boundary Demonstration
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location: Sample ID: Sample Date:	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WW-02 WG-9970-110316-JCB-WW2 11/3/2016	WW-06 WG-9970-050316-JCB-WW6 5/3/2016	WW-06 WG-9970-050316-JCB-Dup2 5/3/2016 (Duplicate)	WW-06 WG-9970-110316-JCB-WW6 11/3/2016	WW-06 WG-9970-110316-JCB-Dup2 11/3/2016 (Duplicate)	WW-13 WG-9970-050216-JCB-WW13 5/2/2016	
Parameters	Units								
VOCs									
Carbon tetrachloride	µg/L	5.0	45	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Trichloroethene	µg/L	5.0	200	1.1	1.0 U	1.0 U	1.0 U	1.0 U	
SVOCs									
Hexachlorobenzene	µg/L	1.0	0.2	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	
Hexachlorobutadiene	µg/L	15	0.053	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	
Hexachlorocyclopentadiene	µg/L	50	-	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	
Hexachloroethane	µg/L	7.3	6.7	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	
Octachlorocyclopentene	µg/L	50	-	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	
General Chemistry									
Chloride	µg/L	250000	125000	5300	2200	2500	3100	3100	8500

Notes:

- Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
-
 - Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of

Table 3.2
Analytical Results Summary
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan

Sample Location: Sample ID: Sample Date:	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WW-13 WG-9970-110116-JCB-WW13 11/1/2016	WW-24 WG-9970-050216-JCB-WW24 5/2/2016	WW-24 WG-9970-050216-JCB-Dup1 5/2/2016 (Duplicate)	WW-24 WG-9970-110116-JCB-WW24 11/1/2016	WW-24 WG-9970-110116-JCB-Dup1 11/1/2016 (Duplicate)	Equipment Blank WG-9970-050316-JCB-Dup3 5/3/2016
Parameters	Units							
VOCs								
Carbon tetrachloride	µg/L	5.0	45	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs								
Hexachlorobenzene	µg/L	1.0	0.2	0.011 U	0.010 U	0.010 U	0.010 U	0.012 U
Hexachlorobutadiene	µg/L	15	0.053	0.011 U	0.010 U	0.010 U	0.010 U	0.012 U
Hexachlorocyclopentadiene	µg/L	50	-	0.011 U	0.010 U	0.010 U	0.010 U	0.012 U
Hexachloroethane	µg/L	7.3	6.7	0.011 U	0.010 U	0.010 U	0.010 U	0.012 U
Octachlorocyclopentene	µg/L	50	-	0.011 U	0.010 U	0.010 U	0.010 U	0.012 U
General Chemistry								
Chloride	µg/L	250000	125000	5300	3300	3300	3800	4300

Notes:

- - Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of Michigan

Table 4.1

Pumping Rates and Treatment System Efficiency
 Glenn Springs Holdings, Inc.
 Montague, Michigan
 January to December 2016

Purge Well	Month:	January			February			March			April			May			June		
		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)	
			Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective
Pb		98.25%	60	59	91.80%	66	61	90.05%	66	59	94.89%	66	63	94.89%	66	63	97.78%	66	65
Pc		97.31%	120	117	90.19%	117	106	81.85%	117	96	89.92%	117	105	89.92%	117	105	78.33%	117	92
Pd		98.25%	110	108	91.80%	115	106	90.05%	115	104	94.89%	115	109	94.89%	115	109	97.78%	115	112
Pe		98.25%	110	108	91.80%	110	101	90.05%	110	99	94.89%	110	104	94.89%	110	104	97.78%	110	108
Pf		97.98%	10	10	98.13%	10	10	96.26%	10	10	98.06%	10	10	98.06%	10	10	97.78%	10	10
Pg		98.25%	60	59	91.80%	65	60	90.05%	65	59	94.89%	65	62	94.89%	65	62	97.78%	65	64
Ph		92.34%	130	120	91.80%	129	118	90.05%	129	116	94.89%	129	122	94.89%	129	122	94.58%	129	122
Pi		97.98%	80	78	91.80%	80	73	90.05%	80	72	94.89%	80	76	94.89%	80	76	95.97%	80	77
	Total:		680	659		692	634		692	614		692	651		692	651		692	648

Notes:
 GPM - Gallons per minute

Table 4.1

Pumping Rates and Treatment System Efficiency
 Glenn Springs Holdings, Inc.
 Montague, Michigan
 January to December 2016

Purge Well	Month:	July			August			September			October			November			December			Monthly Average	
		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		%Run	Pumping Rate (GPM)		Pumping Rate (GPM)	
			Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective		Actual	Effective	Actual	Effective
Pb		99.73%	66	66	97.98%	70	69	97.64%	70	68	97.18%	70	68	98.19%	70	69	97.58%	70	68	67	65
Pc		99.86%	117	117	98.12%	120	118	97.50%	120	117	97.45%	120	117	97.92%	120	118	97.98%	120	118	119	110
Pd		99.73%	115	115	97.98%	115	113	97.64%	115	112	84.41%	115	97	98.19%	115	113	97.58%	115	112	115	109
Pe		99.73%	110	110	97.98%	115	113	97.64%	115	112	90.32%	115	104	98.19%	115	113	97.58%	115	112	112	107
Pf		99.86%	10	10	98.12%	10	10	97.50%	10	10	97.45%	10	10	97.92%	10	10	98.12%	10	10	10	10
Pg		99.73%	65	65	97.98%	70	69	97.64%	70	68	97.18%	70	68	98.19%	70	69	97.58%	70	68	67	64
Ph		99.86%	129	129	98.12%	130	128	97.50%	130	127	97.45%	130	127	97.92%	130	127	97.98%	130	127	130	124
Pi		99.86%	80	80	98.12%	85	83	86.25%	85	73	97.45%	85	83	81.81%	85	70	98.12%	85	83	82	77
Total:			692	691		715	701		715	688		715	673		715	687		715	699	701	666

Notes:

GPM - Gallons per minute

Table 4.2

Analytical Results Summary - Purge Wells
Glenn Springs Holdings, Inc.
Montague, Michigan

Parameters	Units	Sample Location:		Pb	Pb	Pb	Pb	Pc	Pc	Pc
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-012816-PB 1/28/2016	WG-9970-BFB-042916-PB 4/29/2016	WG-9970-BFB-072916-PB 7/29/2016	WG-9970-BFB-102816-PB 10/28/2016	WG-9970-BFB-012816-PC 1/28/2016	WG-9970-BFB-042916-PC 4/29/2016	WG-9970-BFB-072916-PC 7/29/2016
VOCs										
Carbon tetrachloride	µg/L	5.0	45	37	36	35	55	4.1	3.5	2.9
Chloroform (Trichloromethane)	µg/L	80	350	23	21	18	24	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	12	10 U	10 U	10 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.0	60	910	1200	1100	1300	40	34	30
trans-1,2-Dichloroethene	µg/L	100	1500	10 U	10 U	10 U	10 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	12	10 U	10 U	10	1.2	1.0	1.2
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	0.020 U	0.020 U	0.020 U	0.020	1.7	1.6	1.7
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	64	56	57	66	4.0	4.3	4.3
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry										
Chloride	µg/L	250000	125000	17000	14000	13000	12000	11000	11000	13000

- Notes:
- NA - Not applicable
 - U - Not detected at the associated reporting limit
 - VOCs - Volatile Organic Compounds
 - SVOCs - Semi-volatile Organic Compounds
 - Exceeds the Part 201 Criteria
 - Bold numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria

Table 4.2
Analytical Results Summary - Purge Wells
Glenn Springs Holdings, Inc.
Montague, Michigan

Parameters	Units	Sample Location:		Pc	Pd	Pd	Pd	Pd	Pe
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-102816-PC 10/28/2016	WG-9970-BFB-012816-PD 1/28/2016	WG-9970-BFB-042916-PD 4/29/2016	WG-9970-BFB-072916-PD 7/29/2016	WG-9970-BFB-102816-PD 10/28/2016	WG-9970-BFB-012816-PE 1/28/2016
VOCs									
Carbon tetrachloride	µg/L	5.0	45	3.5	120	120	100	130	4.6
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	25	22	22	27	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	10 U	10 U	10 U	10 U	2.9
Tetrachloroethene	µg/L	5.0	60	32	1100	1200	1100	1200	78
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	10 U	10 U	10 U	10 U	1.0 U
Trichloroethene	µg/L	5.0	200	1.3	13	14	13	15	2.7
SVOCs									
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	1.7	0.030	0.10	0.022	0.099	0.010 U
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	4.2	49	43	51	43	1.9
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry									
Chloride	µg/L	250000	125000	11000	190000	210000	180000	170000	96000

Notes:

- NA - Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria

Table 4.2

Analytical Results Summary - Purge Wells
Glenn Springs Holdings, Inc.
Montague, Michigan

Parameters	Units	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Sample Location:		Sample ID:		Sample Date:		
				Pe	Pe	Pe	Pf	Pf	Pf	Pf
				WG-9970-BFB-042916-PE	WG-9970-BFB-072916-PE	WG-9970-BFB-102816-PE	WG-9970-BFB-012816-PF	WG-9970-BFB-042916-PF	WG-9970-BFB-072916-PF	WG-9970-BFB-102816-PF
				4/29/2016	7/29/2016	10/28/2016	1/28/2016	4/29/2016	7/29/2016	10/28/2016
VOCs										
Carbon tetrachloride	µg/L	5.0	45	4.2	4.1	5.4	12	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	6.5	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	2.0	2.3	3.5	3.8	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.0	60	83	84	98	190	1.5	2.0	2.1
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	2.2	2.5	3.5	4.1	1.0 U	1.0 U	1.0 U
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.010 U	0.010 U	1.7	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	1.7	1.9	1.6	7.6	0.11	0.094	0.12
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry										
Chloride	µg/L	250000	125000	98000	95000	120000	64000	2700	2400	2500

- Notes:
- NA - Not applicable
 - U - Not detected at the associated reporting limit
 - VOCs - Volatile Organic Compounds
 - SVOCs - Semi-volatile Organic Compounds
 - [Box]** - Exceeds the Part 201 Criteria
 - **Bold** numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria

Table 4.2
Analytical Results Summary - Purge Wells
Glenn Springs Holdings, Inc.
Montague, Michigan

Parameters	Units	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Sample Location:		Sample ID:		Sample Date:	
				Pg	Ph	Pg	Ph	Pg	Ph
				WG-9970-BFB-012816-PG	WG-9970-BFB-042916-PG	WG-9970-BFB-072916-PG	WG-9970-BFB-102816-PG	WG-9970-BFB-012816-PH	WG-9970-BFB-042916-PH
				1/28/2016	4/29/2016	7/29/2016	10/28/2016	1/28/2016	4/29/2016
VOCs									
Carbon tetrachloride	µg/L	5.0	45	1100	990	1100	1100	20	17
Chloroform (Trichloromethane)	µg/L	80	350	110	100	100	120	7.2	7.6
cis-1,2-Dichloroethene	µg/L	70	620	50 U	50 U	50 U	50 U	3.4	2.5 U
Tetrachloroethene	µg/L	5.0	60	5600	5800	6500	5700	310	330
trans-1,2-Dichloroethene	µg/L	100	1500	50 U	50 U	50 U	50 U	2.5 U	2.5 U
Trichloroethene	µg/L	5.0	200	50 U	50 U	50 U	50 U	5.9	6.4
SVOCs									
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	3.3	3.4	3.4	3.8	3.2	2.9
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	420	400	400	390	20	18
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry									
Chloride	µg/L	250000	125000	24000	25000	25000	24000	88000	96000

Notes:

- NA - Not applicable
- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- Exceeds the Part 201 Criteria
- **Bold** numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria

Table 4.2
Analytical Results Summary - Purge Wells
Glenn Springs Holdings, Inc.
Montague, Michigan

Parameters	Units	Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Sample Location:	Ph	Ph	Pi	Pi	Pi	Pi
				Sample ID:	WG-9970-BFB-072916-PH	WG-9970-BFB-102816-PH	WG-9970-BFB-012816-PI	WG-9970-BFB-042916-PI	WG-9970-BFB-072916-PI	WG-9970-BFB-102816-PI
				Sample Date:	7/29/2016	10/28/2016	1/28/2016	4/29/2016	7/29/2016	10/28/2016
VOCs										
Carbon tetrachloride	µg/L	5.0	45		17	34	83	93	100	120
Chloroform (Trichloromethane)	µg/L	80	350		8.0	9.4	58	51	61	68
cis-1,2-Dichloroethene	µg/L	70	620		3.0	4.1	36	31	33	39
Tetrachloroethene	µg/L	5.0	60		300	350	1400	1600	1800	1700
trans-1,2-Dichloroethene	µg/L	100	1500		2.5 U	2.5 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	5.0	200		5.6	7.2	32	29	31	34
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053		2.8	2.6	9.9	9.4	10	9.6
Hexachlorocyclopentadiene	µg/L	50	NA		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7		16	19	32	27	29	30
Octachlorocyclopentene	µg/L	50	NA		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry										
Chloride	µg/L	250000	125000		91000	95000	450000	470000	450000	400000

- Notes:
- NA - Not applicable
 - U - Not detected at the associated reporting limit
 - VOCs - Volatile Organic Compounds
 - SVOCs - Semi-volatile Organic Compounds
 - Exceeds the Part 201 Criteria
 - **Bold** numbers indicate the more stringent criteria derived from State of Michigan Part 201 generic cleanup criteria

Table 4.3

**Total VOCs and SVOCs Removed in 2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Quarter	Days	Total Removed (pounds)	Mass Removed by Purge Well (pounds)							
			Pb	Pc	Pd	Pe	Pf	Pg	Ph	Pi
First	91	917	69	7	157	11	2.46	474	52	144
Second	91	1019	95	6	176	11	0.02	518	54	161
Third	92	1082	88	5	163	12	0.02	581	50	182
Fourth	92	1126	112	6	180	14	0.02	565	61	188
	Total:	4145	365	23	676	48	2.53	2138	218	675

Notes:

- VOC - Volatile Organic Compounds
SVOC - Semi-volatile Organic Compounds

Appendices

Appendix A

Performance Monitoring Water Levels

Table A.1
Water Level Depths and Elevations
Groundwater Collection Demonstration - 2016
Glenn Springs Holdings, Inc.
Montague, Michigan

Date	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		White Lake (observed)		White Lake (average)
	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Elevation (ft. AMSL)
01/04/16	7.50	580.15	9.62	580.16	50.58	580.32	51.39	579.82	49.67	580.12	50.01	580.09	5.93	580.54	580.42
01/08/16	7.67	579.98	10.88	578.90	50.89	580.01	51.62	579.59	49.84	579.95	50.13	579.97	6.09	580.38	580.47
01/12/16	7.83	579.82	9.97	579.81	51.09	579.81	51.74	579.47	50.03	579.76	50.21	579.89	5.86	580.61	580.37
01/14/16	7.66	579.99	9.80	579.98	50.91	579.99	51.47	579.74	49.85	579.94	50.19	579.91	5.87	580.60	580.34
01/21/16	7.75	579.90	10.90	578.88	50.94	579.96	51.69	579.52	49.90	579.89	50.20	579.90	5.93	580.54	580.32
01/22/16	7.80	579.85	9.96	579.82	50.99	579.91	51.72	579.49	49.95	579.84	50.28	579.82	6.24	580.23	580.21
01/27/16	7.83	579.82	9.97	579.81	51.09	579.81	51.74	579.47	50.03	579.76	50.21	579.89	6.40	580.07	580.10
01/29/16	7.80	579.85	9.99	579.79	51.01	579.89	51.70	579.51	49.90	579.89	50.22	579.88	6.44	580.03	579.96
02/02/16	7.70	579.95	9.90	579.88	50.94	579.96	51.65	579.56	49.88	579.91	50.20	579.90	6.20	580.27	580.14
02/05/16	7.75	579.90	9.86	579.92	50.85	580.05	51.59	579.62	49.84	579.95	50.15	579.95	6.24	580.23	580.20
02/08/16	7.60	580.05	9.80	579.98	50.80	580.10	51.53	579.68	49.78	580.01	50.08	580.02	6.07	580.40	580.25
02/12/16	7.60	580.05	9.77	580.01	50.76	580.14	51.42	579.79	49.74	580.05	50.00	580.10	6.06	580.41	580.12
02/15/16	7.66	579.99	9.84	579.94	50.84	580.06	51.53	579.68	49.77	580.02	50.03	580.07	6.16	580.31	580.19
02/19/16	7.68	579.97	9.86	579.92	50.85	580.05	51.58	579.63	49.82	579.97	50.12	579.98	6.22	580.25	580.15
02/25/16	7.72	579.93	9.89	579.89	50.91	579.99	51.60	579.61	49.86	579.93	50.18	579.92	6.27	580.20	580.19
02/26/16	7.78	579.87	9.97	579.81	50.94	579.96	51.59	579.62	49.88	579.91	50.18	579.92	6.39	580.08	580.01
02/29/16	7.70	579.95	9.87	579.91	50.87	580.03	51.53	579.68	49.79	580.00	50.13	579.97	6.20	580.27	580.08
03/03/16	7.74	579.91	9.87	579.91	50.90	580.00	51.54	579.67	49.83	579.96	50.17	579.93	6.17	580.30	580.18
03/08/16	7.72	579.93	9.89	579.89	50.91	579.99	51.58	579.63	49.84	579.95	50.17	579.93	6.14	580.33	580.16
03/10/16	7.65	580.00	9.84	579.94	50.84	580.06	51.55	579.66	49.80	579.99	50.10	580.00	6.14	580.33	580.26
03/14/16	7.63	580.02	9.83	579.95	50.81	580.09	51.51	579.70	49.77	580.02	50.07	580.03	6.12	580.35	580.55
03/15/16	7.58	580.07	9.77	580.01	50.76	580.14	51.43	579.78	49.67	580.12	50.10	580.00	6.10	580.37	580.49
03/24/16	6.88	580.77	9.25	580.53	50.26	580.64	50.92	580.29	49.42	580.37	49.50	580.60	5.31	581.16	580.82
03/25/16	6.77	580.88	9.32	580.46	50.39	580.51	50.87	580.34	49.34	580.45	49.38	580.72	5.38	581.09	580.78
03/31/16	7.08	580.57	9.29	580.49	50.28	580.62	50.91	580.30	49.14	580.65	49.39	580.71	5.42	581.05	580.77
04/08/16	7.05	580.60	9.21	580.57	50.22	580.68	50.92	580.29	49.13	580.66	49.43	580.67	5.68	580.79	581.04
04/11/16	6.92	580.73	9.14	580.64	50.08	580.82	50.81	580.40	49.05	580.74	49.32	580.78	5.38	581.09	580.97
04/14/16	6.92	580.73	9.14	580.64	50.13	580.77	50.84	580.37	49.08	580.71	49.36	580.74	5.49	580.98	581.04
04/20/16	6.82	580.83	9.02	580.76	50.13	580.77	50.74	580.47	48.96	580.83	49.26	580.84	5.36	581.11	581.27
04/25/16	6.89	580.76	9.05	580.73	50.19	580.71	50.78	580.43	48.99	580.80	49.30	580.80	5.38	581.09	581.45
04/29/16	6.90	580.75	9.10	580.68	50.17	580.73	50.74	580.47	48.99	580.80	49.27	580.83	5.42	581.05	581.25
05/02/16	6.68	580.97	8.88	580.90	49.90	581.00	50.62	580.59	48.84	580.95	49.17	580.93	5.41	581.06	581.05
05/06/16	6.83	580.82	8.92	580.86	50.18	580.72	50.53	580.68	48.95	580.84	49.20	580.90	5.49	580.98	581.02
05/10/16	6.71	580.94	8.84	580.94	49.87	581.03	50.58	580.63	48.83	580.96	49.15	580.95	5.20	581.27	581.31
05/13/16	6.61	581.04	8.80	580.98	49.83	581.07	50.56	580.65	48.78	581.01	49.13	580.97	5.26	581.21	581.21
05/17/16	6.61	581.04	8.80	580.98	49.83	581.07	50.56	580.65	48.78	581.01	49.10	581.00	5.34	581.13	581.28
05/18/16	6.67	580.98	8.83	580.95	49.85	581.05	50.58	580.63	48.80	580.99	49.14	580.96	5.37	581.10	581.25
05/23/16	6.67	580.98	8.84	580.94	49.88	581.02	50.58	580.63	48.80	580.99	49.14	580.96	5.37	581.10	581.10
05/27/16	6.64	581.01	8.85	580.93	49.88	581.02	50.50	580.71	48.73	581.06	49.03	581.07	5.33	581.14	581.31
06/02/16	6.67	580.98	8.85	580.93	49.88	581.02	50.52	580.69	48.78	581.01	49.08	581.02	5.38	581.09	581.24
06/03/16	6.65	581.00	8.84	580.94	49.87	581.03	50.52	580.69	48.78	581.01	49.08	581.02	5.29	581.18	581.21
06/06/16	6.70	580.95	8.88	580.90	49.88	581.02	50.57	580.64	48.70	581.09	49.08	581.02	5.44	581.03	581.20
06/07/16	6.73	580.92	8.92	580.86	49.93	580.97	50.62	580.59	48.76	581.03	49.12	580.98	5.38	581.09	581.10
06/14/16	6.65	581.00	8.87	580.91	49.88	581.02	50.62	580.59	48.76	581.03	49.12	580.98	5.23	581.24	581.21

Table A.1
Water Level Depths and Elevations
Groundwater Collection Demonstration - 2016
Glenn Springs Holdings, Inc.
Montague, Michigan

Date	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		White Lake (observed)		White Lake (average)
	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Elevation (ft. AMSL)
06/15/16	6.60	581.05	8.86	580.92	49.90	581.00	50.57	580.64	48.72	581.07	49.08	581.02	5.12	581.35	581.31
06/21/16	6.70	580.95	8.88	580.90	49.88	581.02	50.59	580.62	48.76	581.03	49.12	580.98	5.32	581.15	581.22
06/24/16	6.67	580.98	8.82	580.96	49.88	581.02	50.58	580.63	48.70	581.09	49.07	581.03	5.28	581.19	581.28
07/01/16	6.67	580.98	8.85	580.93	49.88	581.02	50.64	580.57	48.70	581.09	48.97	581.13	5.31	581.16	581.15
07/06/16	6.67	580.98	8.85	580.93	49.88	581.02	50.65	580.56	48.70	581.09	48.97	581.13	5.35	581.12	581.14
07/08/16	6.68	580.97	8.87	580.91	49.90	581.00	50.63	580.58	48.80	580.99	49.14	580.96	5.31	581.16	581.26
07/11/16	6.67	580.98	8.87	580.91	49.88	581.02	50.60	580.61	48.78	581.01	49.12	580.98	5.28	581.19	581.20
07/14/16	6.78	580.87	8.93	580.85	49.95	580.95	50.68	580.53	48.87	580.92	49.22	580.88	5.44	581.03	581.16
07/15/16	6.78	580.87	8.93	580.85	49.95	580.95	50.68	580.53	48.87	580.92	49.20	580.90	5.35	581.12	581.18
07/18/16	6.73	580.92	8.86	580.92	49.90	581.00	50.68	580.53	48.85	580.94	49.18	580.92	5.38	581.09	581.18
07/22/16	6.80	580.85	8.94	580.84	49.97	580.93	50.24	580.97	48.79	581.00	48.63	581.47	5.36	581.11	581.16
07/28/16	6.63	581.02	8.82	580.96	49.89	581.01	50.61	580.60	48.78	581.01	49.12	580.98	5.30	581.17	581.34
08/01/16	6.68	580.97	8.82	580.96	49.95	580.95	50.66	580.55	48.84	580.95	49.18	580.92	5.35	581.12	581.12
08/03/16	6.79	580.86	8.92	580.86	49.99	580.91	50.70	580.51	48.90	580.89	49.21	580.89	5.39	581.08	581.11
08/09/16	6.93	580.72	9.09	580.69	50.09	580.81	50.84	580.37	49.05	580.74	49.37	580.73	5.51	580.96	580.97
08/11/16	6.91	580.74	9.09	580.69	50.13	580.77	50.84	580.37	49.03	580.76	49.37	580.73	5.52	580.95	580.99
08/16/16	6.91	580.74	9.16	580.62	50.20	580.70	50.91	580.30	49.12	580.67	49.45	580.65	5.52	580.95	581.15
08/18/16	6.84	580.81	9.09	580.69	50.09	580.81	50.84	580.37	49.04	580.75	49.35	580.75	5.38	581.09	581.11
08/23/16	6.85	580.80	9.01	580.77	50.12	580.78	50.81	580.40	49.00	580.79	49.34	580.76	5.52	580.95	580.94
08/25/16	6.81	580.84	8.99	580.79	50.05	580.85	50.79	580.42	48.95	580.84	49.30	580.80	5.47	581.00	581.03
08/29/16	6.91	580.74	9.12	580.66	50.09	580.81	50.83	580.38	49.08	580.71	49.34	580.76	5.40	581.07	581.00
09/02/16	6.88	580.77	9.06	580.72	50.10	580.80	50.83	580.38	49.00	580.79	49.35	580.75	5.42	581.05	580.92
09/07/16	6.85	580.80	9.06	580.72	50.13	580.77	50.84	580.37	49.05	580.74	49.36	580.74	5.50	580.97	580.92
09/09/16	6.82	580.83	9.02	580.76	50.11	580.79	50.75	580.46	48.97	580.82	49.32	580.78	5.47	581.00	580.98
09/14/16	6.94	580.71	9.14	580.64	50.21	580.69	50.84	580.37	49.08	580.71	49.44	580.66	5.57	580.90	580.82
09/16/16	6.92	580.73	9.11	580.67	50.18	580.72	50.81	580.40	49.08	580.71	49.44	580.66	5.59	580.88	580.82
09/19/16	7.02	580.63	9.19	580.59	50.25	580.65	50.89	580.32	49.14	580.65	49.50	580.60	5.67	580.80	580.72
09/21/16	7.02	580.63	9.19	580.59	50.25	580.65	50.89	580.32	49.14	580.65	49.50	580.60	5.67	580.80	580.81
09/29/16	6.98	580.67	9.18	580.60	50.20	580.70	50.79	580.42	49.02	580.77	49.40	580.70	5.53	580.94	580.79
09/30/16	6.95	580.70	9.14	580.64	50.16	580.74	50.79	580.42	48.99	580.80	49.36	580.74	5.50	580.97	580.83
10/03/16	7.01	580.64	9.20	580.58	50.24	580.66	50.85	580.36	49.07	580.72	49.45	580.65	5.65	580.82	581.02
10/13/16	7.03	580.62	9.22	580.56	50.30	580.60	50.96	580.25	49.19	580.60	49.52	580.58	5.50	580.97	580.75
10/17/16	7.03	580.62	9.22	580.56	50.30	580.60	50.96	580.25	49.19	580.60	49.52	580.58	5.50	580.97	580.78
10/20/16	7.08	580.57	9.28	580.50	50.35	580.55	51.04	580.17	49.25	580.54	49.58	580.52	5.71	580.76	580.76
10/25/16	7.48	580.17	9.63	580.15	50.69	580.21	51.23	579.98	49.57	580.22	49.94	580.16	6.12	580.35	580.52
10/26/16	7.33	580.32	9.53	580.25	50.60	580.30	51.23	579.98	49.45	580.34	49.83	580.27	5.97	580.50	580.58
10/27/16	7.04	580.61	9.28	580.50	50.30	580.60	50.93	580.28	49.15	580.64	49.53	580.57	5.60	580.87	580.72
10/28/16	7.24	580.41	9.45	580.33	50.50	580.40	51.11	580.10	49.32	580.47	49.68	580.42	6.15	580.32	580.55
10/31/16	7.33	580.32	9.53	580.25	50.56	580.34	51.24	579.97	49.43	580.36	49.78	580.32	6.08	580.39	580.47
11/03/16	7.49	580.16	9.65	580.13	50.70	580.20	51.32	579.89	49.60	580.19	49.89	580.21	6.16	580.31	580.63
11/04/16	7.36	580.29	9.57	580.21	50.60	580.30	51.26	579.95	49.45	580.34	49.80	580.30	6.15	580.32	580.51
11/09/16	7.44	580.21	9.64	580.14	50.68	580.22	51.33	579.88	49.53	580.26	49.87	580.23	6.17	580.30	580.44
11/11/16	7.54	580.11	9.76	580.02	50.82	580.08	51.42	579.79	49.62	580.17	49.97	580.13	6.30	580.17	580.25
11/12/16	7.54	580.11	9.76	580.02	50.82	580.08	51.42	579.79	49.62	580.17	49.97	580.13	6.20	580.27	580.22

Table A.1
Water Level Depths and Elevations
Groundwater Collection Demonstration - 2016
Glenn Springs Holdings, Inc.
Montague, Michigan

Date	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		White Lake (observed)		White Lake (average)
	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Depth (feet)	Elevation (ft. AMSL)	Elevation (ft. AMSL)
11/17/16	7.60	580.05	9.85	579.93	50.90	580.00	51.47	579.74	49.68	580.11	50.03	580.07	6.30	580.17	580.29
11/23/16	7.60	580.05	9.83	579.95	50.84	580.06	51.47	579.74	49.68	580.11	49.98	580.12	6.26	580.21	580.25
11/28/16	7.63	580.02	9.87	579.91	50.89	580.01	51.53	579.68	49.73	580.06	50.03	580.07	6.30	580.17	580.20
11/29/16	7.52	580.13	9.87	579.91	50.73	580.17	51.42	579.79	49.55	580.24	49.85	580.25	6.13	580.34	580.34
12/03/16	7.77	579.88	9.95	579.83	51.02	579.88	51.62	579.59	49.90	579.89	50.19	579.91	6.38	580.09	580.00
12/05/16	7.65	580.00	9.88	579.90	50.90	580.00	51.58	579.63	49.79	580.00	50.10	580.00	6.32	580.15	580.12
12/06/16	7.68	579.97	9.90	579.88	50.92	579.98	51.60	579.61	49.84	579.95	50.14	579.96	6.33	580.14	580.10
12/12/16	7.99	579.66	9.91	579.87	51.03	579.87	51.62	579.59	49.93	579.86	50.23	579.87	6.37	580.10	579.98
12/17/16	8.19	579.46	10.14	579.64	51.18	579.72	51.88	579.33	50.19	579.60	50.46	579.64	6.41	580.06	579.67
12/18/16	8.12	579.53	10.30	579.48	51.38	579.52	52.06	579.15	50.16	579.63	50.53	579.57	6.64	579.83	579.82
12/21/16	8.37	579.28	10.45	579.33	51.52	579.38	52.04	579.17	50.56	579.23	50.76	579.34	6.55	579.92	579.38
12/26/16	7.89	579.76	10.30	579.48	51.12	579.78	51.85	579.36	49.93	579.86	50.26	579.84	6.34	580.13	580.03

Notes:

ft. AMSL - Feet Above Mean Sea Level

Appendix B

Field Stabilization Parameters

Table B.1

**2016 Field Stabilization Parameter
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan**

Well ID	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)*	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	pH (s.u.)	ORP (millivolts)	Sample ID
B	05/02/2016	1630	11.09	0.237	7.21	8.33	179.4	
B	05/02/2016	1635	10.12	0.231	2.35	6.9	192	
B	05/02/2016	1640	10.04	0.229	2.16	6.77	191.2	
B	05/02/2016	1645	10.02	0.23	1.9	6.98	186.1	
B	05/02/2016	1650	10.02	0.229	1.86	7.09	185.8	
B	05/02/2016	1655	10.06	0.231	1.7	7.21	183.8	
B	05/02/2016	1700	10.08	0.228	1.66	7.32	182.6	
B	05/02/2016	1705	10.02	0.227	1.91	7.32	183.3	
B	05/02/2016	1710	10.15	0.227	1.76	7.37	182.2	GW-9970-050216-JCB-B
B	11/03/2016	1115	10.17	0.213	1.38	6.77	5.8	
B	11/03/2016	1120	10.08	0.216	1.29	6.55	3.3	
B	11/03/2016	1125	10.08	0.216	0.92	6.56	1.5	
B	11/03/2016	1130	10.17	0.216	0.73	6.7	0.9	
B	11/03/2016	1135	10.17	0.218	0.65	8.24	0.8	
B	11/03/2016	1140	10.14	0.219	0.62	8.24	-1.2	
B	11/03/2016	1145	10.13	0.217	0.59	8.24	-2.6	GW-9970-110316-JCB-B
C	05/02/2016	1750	10.12	0.165	1.19	7.46	185.5	
C	05/02/2016	1755	9.84	0.161	0.93	6.39	187.7	
C	05/02/2016	1800	9.84	0.16	0.91	6.61	186	
C	05/02/2016	1805	9.85	0.16	0.89	6.68	184.8	
C	05/02/2016	1810	9.82	0.16	0.85	6.81	184.0	GW-9970-050216-JCB-C
C	11/03/2016	1220	10.66	0.189	2.93	7.84	2.6	
C	11/03/2016	1225	10.22	0.18	1.03	7.42	0.9	
C	11/03/2016	1230	10.1	0.175	0.86	8.3	-2	
C	11/03/2016	1235	10.09	0.172	0.74	8.29	-2.3	
C	11/03/2016	1240	10.08	0.17	0.72	8.28	-2.7	GW-9970-110316-JCB-C
MW-03-01	05/03/2016	1050	9.28	0.248	17.3	7.68	205.6	
MW-03-01	05/03/2016	1055	8.83	0.243	16.63	6.73	213.9	
MW-03-01	05/03/2016	1100	8.8	0.241	16.67	6.66	213.7	
MW-03-01	05/03/2016	1105	8.78	0.24	16.58	6.83	213	
MW-03-01	05/03/2016	1010	8.81	0.24	16.45	6.86	212.5	
MW-03-01	05/03/2016	1015	8.81	0.24	16.39	6.9	212.7	GW-9970-050316-JCB-301
MW-03-01	11/03/2016	1415	9.71	0.251	10.23	8.37	47.1	
MW-03-01	11/03/2016	1420	9.16	0.247	8.66	8.32	50.6	
MW-03-01	11/03/2016	1425	9.08	0.245	8.7	8.29	50.6	
MW-03-01	11/03/2016	1430	9.04	0.244	8.71	8.27	52.4	
MW-03-01	11/03/2016	1435	9.04	0.244	8.8	8.26	51.9	GW-9970-110316-JCB-301
MW-05-01	05/03/2016	1140	9.5	0.26	19.46	7.83	197.1	
MW-05-01	05/03/2016	1145	9.03	0.268	17.85	7.08	210.1	
MW-05-01	05/03/2016	1150	8.98	0.268	18.1	6.83	211.8	
MW-05-01	05/03/2016	1155	8.97	0.268	17.9	6.94	211.9	
MW-05-01	05/03/2016	1200	8.95	0.268	17.91	7.04	212	GW-9970-050316-JCB-501
MW-05-01	11/03/2016	1505	9.82	0.264	9.88	8.28	46.4	
MW-05-01	11/03/2016	1510	9.3	0.261	9.58	8.26	49.9	
MW-05-01	11/03/2016	1515	9.23	0.26	9.62	8.25	50.6	
MW-05-01	11/03/2016	1520	9.22	0.26	9.66	8.25	50	GW-9970-110316-JCB-501
MW-97-02	05/03/2016	1305	10.33	0.57	11.55	7.82	193.0	
MW-97-02	05/03/2016	1310	10.08	0.58	11.38	7.7	201	
MW-97-02	05/03/2016	1315	10.11	0.587	11.11	7.62	202.7	
MW-97-02	05/03/2016	1320	10.04	0.593	10.93	7.59	203.6	
MW-97-02	05/03/2016	1325	10.06	0.594	10.84	7.59	204	GW-9970-050316-JCB-972
MW-97-02	11/03/2016	1555	9.99	0.557	9.87	8.28	49.9	
MW-97-02	11/03/2016	1600	9.92	0.562	9.83	8.27	51.4	
MW-97-02	11/03/2016	1605	9.87	0.564	9.82	8.26	51.5	
MW-97-02	11/03/2016	1610	9.84	0.567	9.76	8.25	48.9	
MW-97-02	11/03/2016	1515	9.81	0.571	9.74	8.24	49	GW-9970-110316-JCB-972
MW-97-03	05/02/2016	1055	10.05	0.394	3.6	6.39	204.7	
MW-97-03	05/02/2016	1100	9.93	0.324	3.68	6.04	208	
MW-97-03	05/02/2016	1105	9.88	0.32	3.81	6.12	206.7	
MW-97-03	05/02/2016	1110	9.86	0.319	3.84	6.24	205.7	
MW-97-03	05/02/2016	1115	9.74	0.318	3.9	6.32	205.1	GW-9970-050216-JCB-973

Table B.1

**2016 Field Stabilization Parameter
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan**

Well ID	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)*	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	pH (s.u.)	ORP (millivolts)	Sample ID
MW-97-03	11/01/2016	1205	10.93	0.333	4.54	6.98	203.1	
MW-97-03	11/01/2016	1210	10.51	0.32	4.32	6.13	191.2	
MW-97-03	11/01/2016	1215	10.43	0.317	4.12	6.03	215.3	
MW-97-03	11/01/2016	1220	10.31	0.315	4.03	6.06	244.5	
MW-97-03	11/01/2016	1225	10.34	0.314	3.92	6.15	243.8	
MW-97-03	11/01/2016	1230	10.42	0.317	3.66	6.28	231.3	
MW-97-03	11/01/2016	1235	11.31	0.325	3.53	6.4	245.4	
MW-97-03	11/01/2016	1240	10.41	0.315	3.79	6.47	245.1	GW-9970-110116-JCB-973
MW-97-04	05/02/2016	1140	9.77	0.139	2.48	6.67	200.1	
MW-97-04	05/02/2016	1145	9.42	0.185	1.42	6.37	194.7	
MW-97-04	05/02/2016	1150	9.40	0.207	1.13	6.2	190.0	
MW-97-04	05/02/2016	1155	9.36	0.209	1.08	6.24	189	
MW-97-04	05/02/2016	1200	9.27	0.212	1	6.33	187.3	
MW-97-04	05/02/2016	1205	9.37	0.21	1	6.35	186.6	GW-9970-050216-JCB-974
MW-97-04	11/01/2016	1305	11.51	0.18	9.91	7.49	199.3	
MW-97-04	11/01/2016	1310	10.03	0.176	1.33	6.67	188.1	
MW-97-04	11/01/2016	1315	9.86	0.221	0.82	6.37	196	
MW-97-04	11/01/2016	1320	9.78	0.224	0.76	6.39	191.0	
MW-97-04	11/01/2016	1325	9.72	0.226	0.69	6.48	184	
MW-97-04	11/01/2016	1330	9.71	0.227	0.65	6.55	180.4	GW-9970-110116-JCB-974
MW-97-05	05/02/2016	1240	10.35	0.246	1.59	6.49	196.7	
MW-97-05	05/02/2016	1245	10.25	0.244	1.38	6.07	193.5	
MW-97-05	05/02/2016	1250	10.2	0.242	1.22	6.27	190.9	
MW-97-05	05/02/2016	1255	9.81	0.239	1.2	6.43	190.1	
MW-97-05	05/02/2016	1300	9.69	0.238	1.16	6.47	189.5	GW-9970-050216-JCB-975
MW-97-05	11/01/2016	1405	11.32	0.247	2.41	7.51	216.6	
MW-97-05	11/01/2016	1410	11.12	0.242	2.15	7.06	232.4	
MW-97-05	11/01/2016	1415	11.06	0.24	1.96	7.08	231.5	
MW-97-05	11/01/2016	1420	11.05	0.239	1.91	7.17	230.4	GW-9970-110116-JCB-975
T	05/02/2016	1515	10.36	0.212	1.69	8.52	183.5	
T	05/02/2016	1520	9.79	0.21	1.02	6.98	189.5	
T	05/02/2016	1525	9.68	0.211	0.92	6.67	188.1	
T	05/02/2016	1530	9.65	0.211	0.88	6.8	185.4	
T	05/02/2016	1535	9.66	0.211	0.84	6.89	184.5	
T	05/02/2016	1540	9.65	0.211	0.82	6.95	182.9	
T	05/02/2016	1545	9.66	0.211	0.81	6.98	182	GW-9970-050216-JCB-T
T	11/01/2016	1705	10.29	0.214	1.4	8.25	194.3	
T	11/01/2016	1710	10.04	0.214	0.96	7.36	196	
T	11/01/2016	1715	9.99	0.215	0.78	7.1	201.6	
T	11/01/2016	1720	9.94	0.215	0.72	7.68	189.4	
T	11/01/2016	1725	9.92	0.214	0.68	7.74	187.0	
T	11/01/2016	1730	9.87	0.214	0.63	7.76	182.3	GW-9970-110116-JCB-T
WW-13	05/02/2016	1430	11.37	0.122	7.08	8.56	192.6	
WW-13	05/02/2016	1435	10.51	0.117	8.68	7.75	210	
WW-13	05/02/2016	1440	10.33	0.118	8.95	7.73	209.8	
WW-13	05/02/2016	1445	10.24	0.117	9.04	7.75	209.3	
WW-13	05/02/2016	1450	10.23	0.122	8.99	7.7	209.2	GW-9970-050216-JCB-WW13
WW-13	11/01/2016	1600	11.21	0.151	10.22	7.62	145.8	
WW-13	11/01/2016	1605	11.16	0.145	10.1	7.33	244.7	
WW-13	11/01/2016	1610	11.13	0.144	9.47	7.38	203.8	
WW-13	11/01/2016	1615	11.11	0.15	8.52	7.34	238.9	
WW-13	11/01/2016	1620	11.09	0.148	7.94	7.35	239.2	
WW-13	11/01/2016	1625	11.03	0.151	7.65	7.39	238.1	
WW-13	11/01/2016	1630	10.98	0.151	7.29	7.41	239.4	GW-9970-110116-JCB-WW13
WW-2	05/03/2016	1355	10.71	0.188	2.63	8.73	185.2	
WW-2	05/03/2016	1400	10.12	0.171	1.6	6.63	194.6	
WW-2	05/03/2016	1405	10.01	0.171	1.4	6.5	191.4	
WW-2	05/03/2016	1410	9.93	0.172	1.34	6.7	188	
WW-2	05/03/2016	1415	10	0.174	1.31	6.82	186.4	
WW-2	05/03/2016	1420	10.01	0.175	1.27	6.93	185.3	GW-9970-050316-JCB-WW2

Table B.1

**2016 Field Stabilization Parameter
Plume Boundary Demonstration
Glenn Springs Holdings, Inc.
Montague, Michigan**

Well ID	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)*	Temp. (°C)	Cond. (mS/cm)	DO (mg/L)	pH (s.u.)	ORP (millivolts)	Sample ID
WW-2	11/03/2016	1645	10.30	0.148	2.67	8.33	11.8	
WW-2	11/03/2016	1650	10.17	0.164	1.51	8.3	7	
WW-2	11/03/2016	1655	10.13	0.162	1.07	8.28	2.6	
WW-2	11/03/2016	1700	10.15	0.168	1	8.28	0.6	GW-9970-110316-JCB-WW2
WW-24	05/02/2016	1330	10.3	0.217	1.21	7.26	193.5	
WW-24	05/02/2016	1335	9.95	0.214	1.05	6.56	190.2	
WW-24	05/02/2016	1340	9.86	0.212	0.95	6.6	188.0	
WW-24	05/02/2016	1345	9.76	0.212	0.94	6.75	187.5	
WW-24	05/02/2016	1350	9.71	0.211	0.9	6.84	186.5	
WW-24	05/02/2016	1355	9.65	0.211	0.89	6.92	185.7	
WW-24	05/02/2016	1400	9.71	0.211	0.87	9.96	184.9	GW-9970-050216-JCB-WW24
WW-24	11/01/2016	1455	10.92	0.224	1.4	7.78	191.4	
WW-24	11/01/2016	1500	10.46	0.219	0.92	6.62	204.8	
WW-24	11/01/2016	1505	10.37	0.219	0.78	6.56	200.1	
WW-24	11/01/2016	1510	10.31	0.218	0.7	6.64	188.7	
WW-24	11/01/2016	1515	10.28	0.217	0.66	6.73	181.7	
WW-24	11/01/2016	1520	10.27	0.217	0.62	6.83	178.1	GW-9970-110116-JCB-WW24
WW-6	05/03/2016	945	9.2	0.178	8.29	7.4	212.8	
WW-6	05/03/2016	950	9.05	0.81	8.58	7.22	211.8	
WW-6	05/03/2016	955	9.04	0.206	13.51	7.27	213.9	
WW-6	05/03/2016	1000	9.04	0.215	15.63	7.24	214.5	
WW-6	05/03/2016	1005	9.1	0.216	15.85	7.28	213.4	
WW-6	05/03/2016	1010	9.05	0.216	15.86	7.3	213	
WW-6	05/03/2016	1015	9.02	0.216	15.8	7.3	212.5	GW-9970-050316-JCB-WW6
WW-6	11/03/2016	1315	9.56	0.176	4.16	8.37	16.8	
WW-6	11/03/2016	1320	9.29	0.194	3.68	8.34	27.7	
WW-6	11/03/2016	1325	9.26	0.201	4.63	8.3	42.5	
WW-6	11/03/2016	1330	9.26	0.21	6.84	8.28	52.1	
WW-6	11/03/2016	1335	9.28	0.212	7.35	8.27	49.6	
WW-6	11/03/2016	1340	9.29	0.211	7.42	8.26	50.4	GW-9970-110316-JCB-WW6

Notes:

- * - 24-hour clock (military time)
- s.u. - Standard Unit
- DO - Dissolved Oxygen
- ORP - Oxidation-Reduction Potential
- mS/cm - Millisiemens/centimeter
- mg/L - Milligrams per liter
- °C - Degrees Celsius

Appendix C

Concentration versus Time Graphs

Occidental Chemical Pa

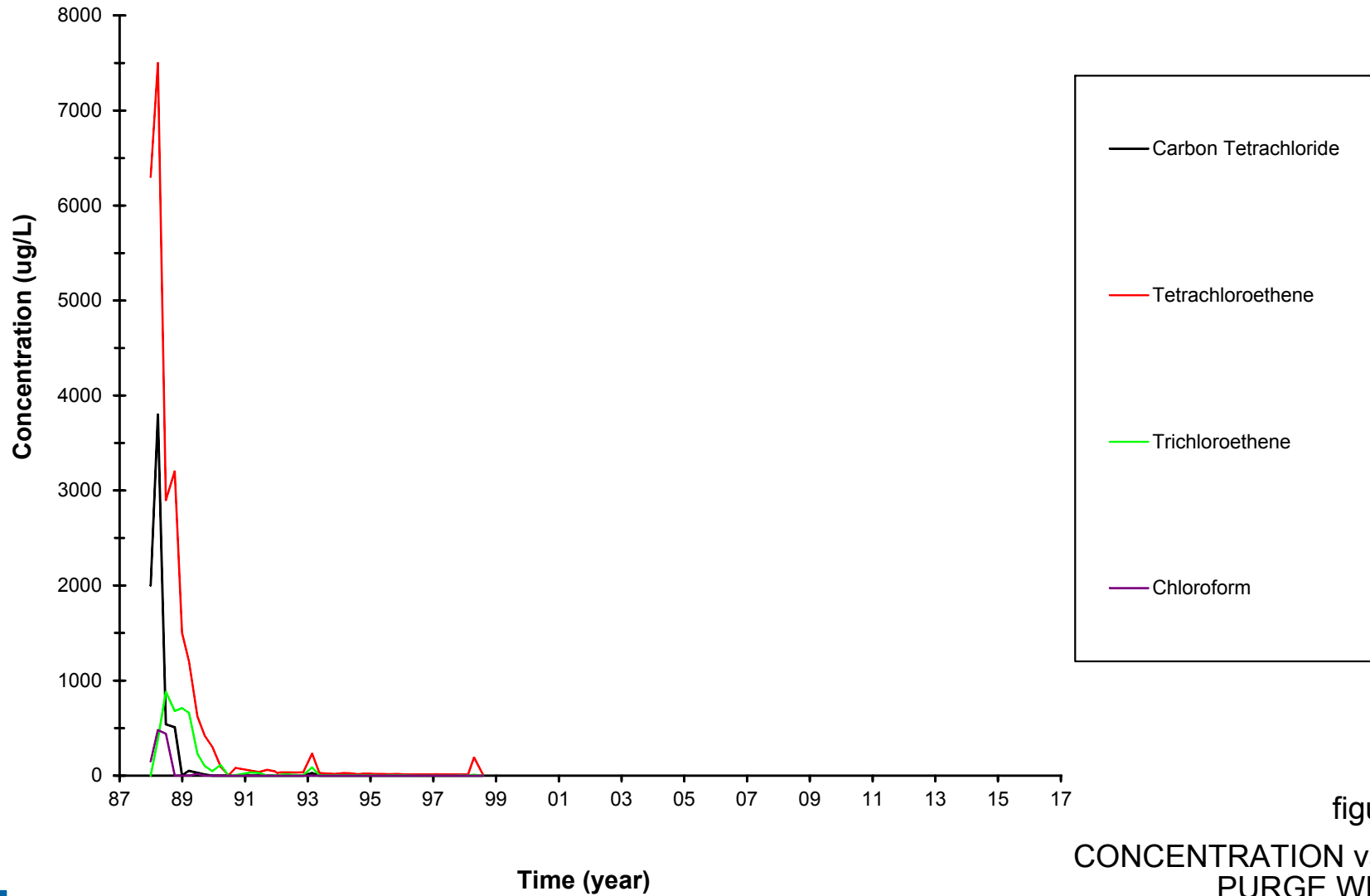


figure C.1

CONCENTRATION vs TIME
PURGE WELL Pa
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical *Pb*

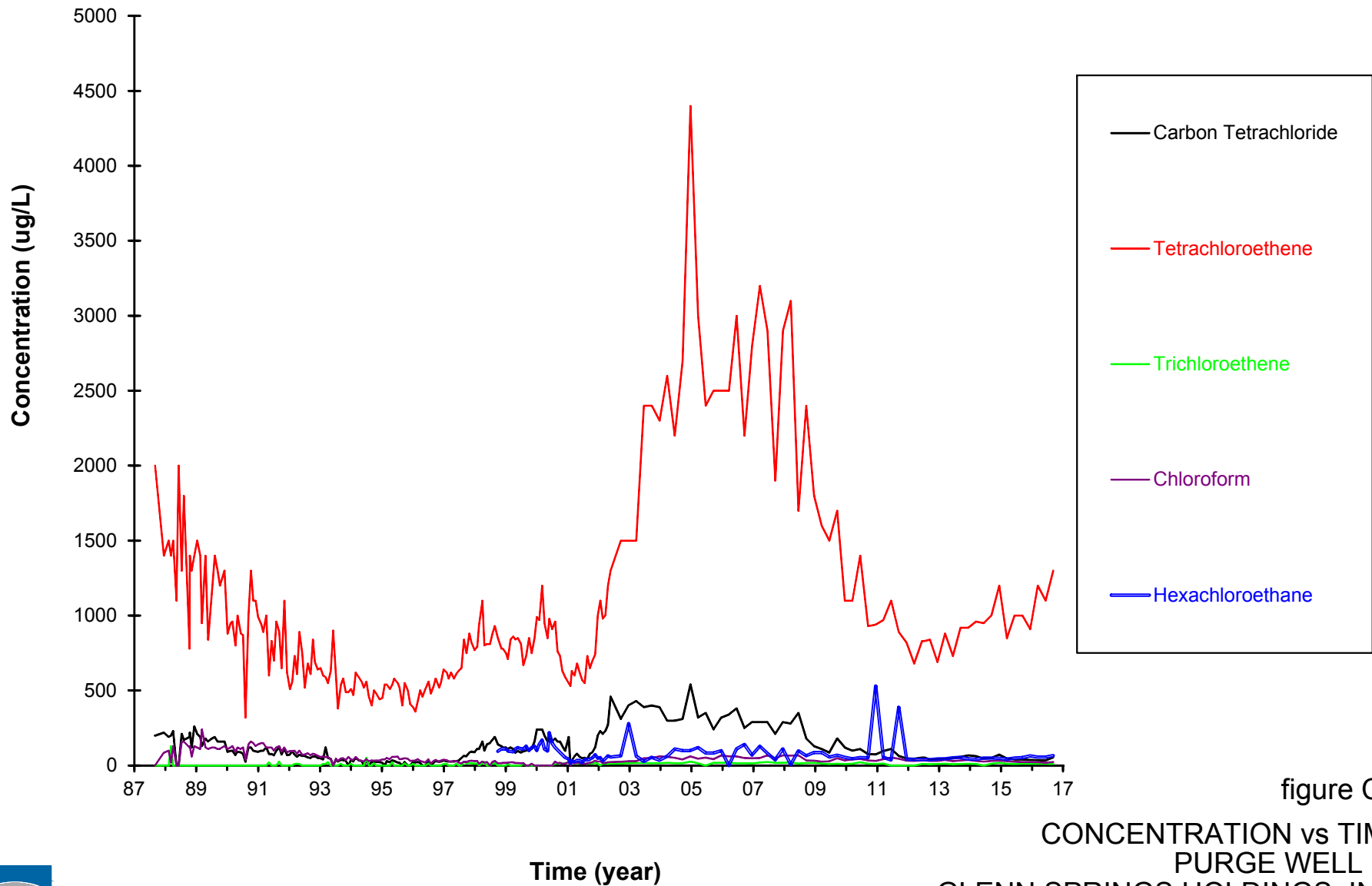


figure C.2

CONCENTRATION vs TIME
PURGE WELL Pb
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pc

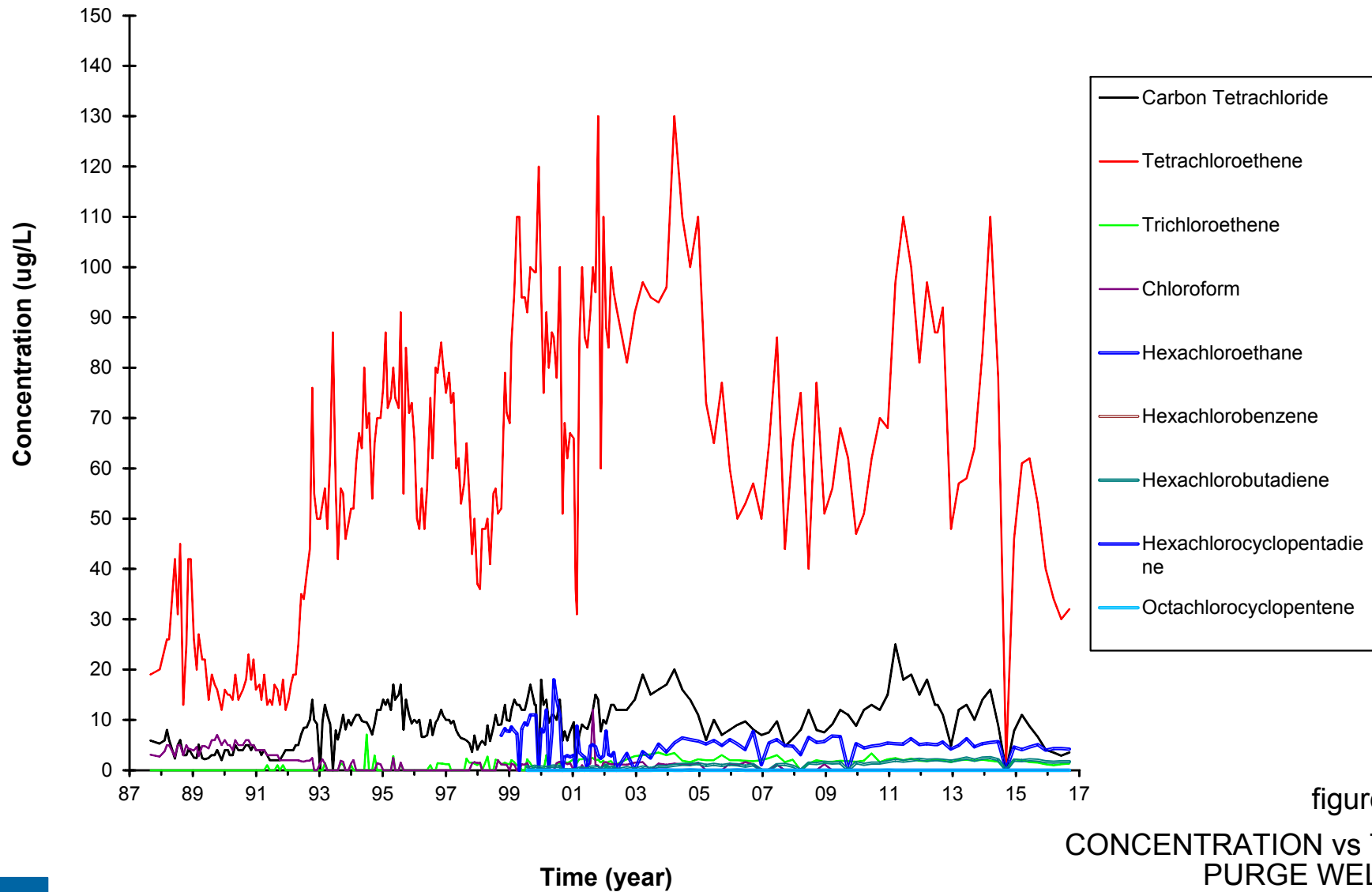


figure C.3

CONCENTRATION vs TIME
PURGE WELL Pc
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pd

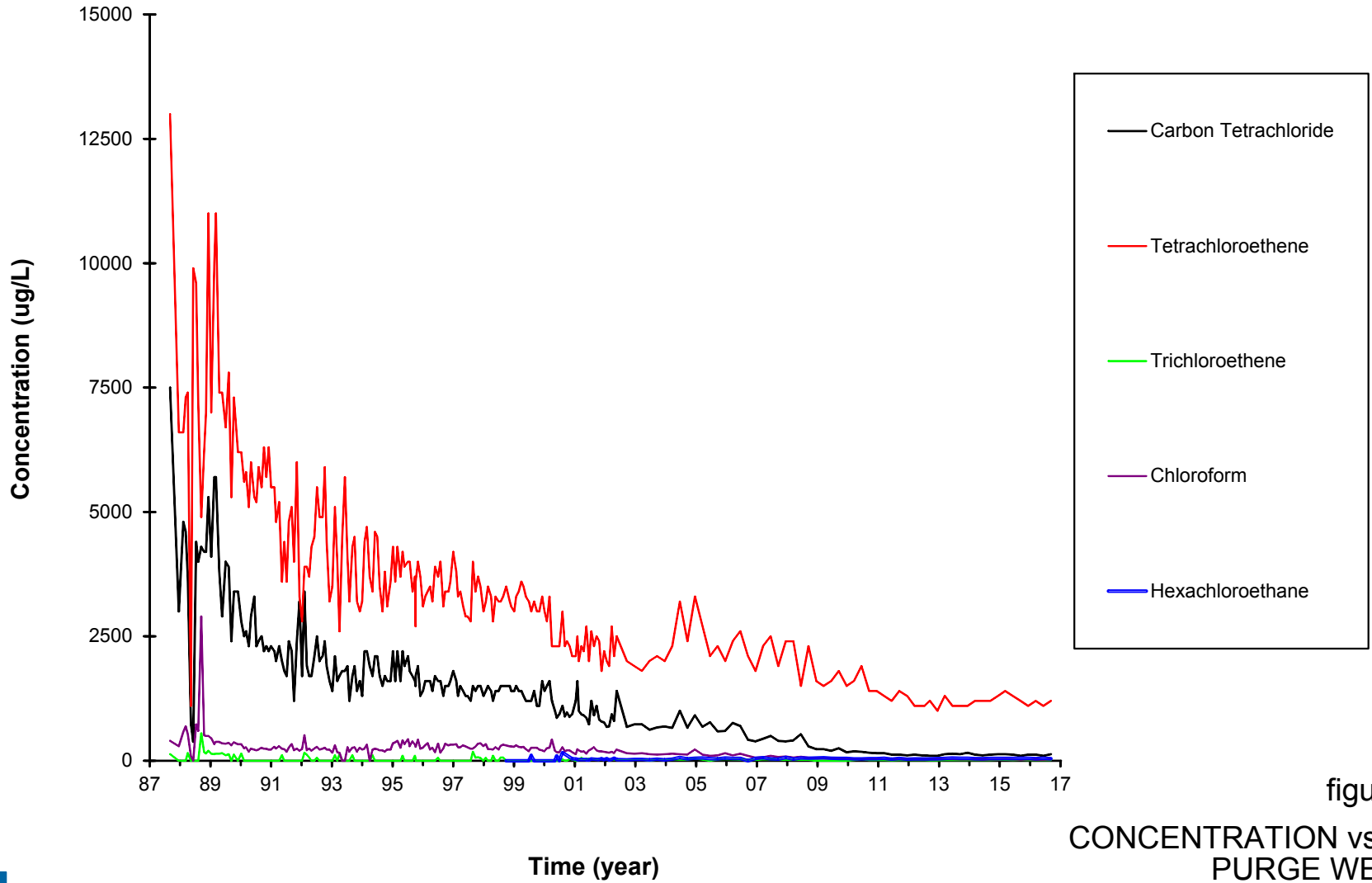


figure C.4

CONCENTRATION vs TIME
PURGE WELL Pd
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pe

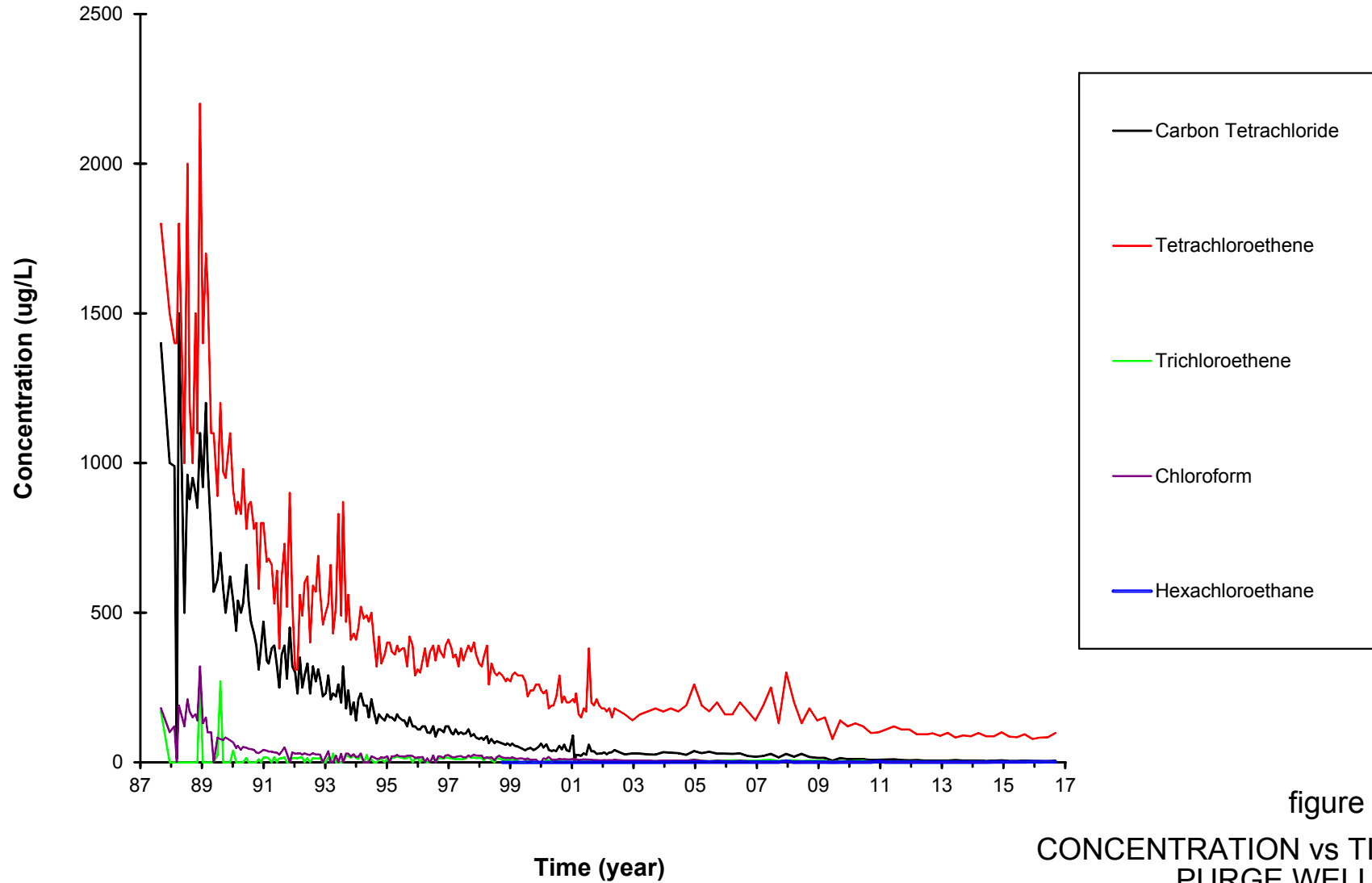


figure C.5

CONCENTRATION vs TIME
PURGE WELL Pe
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pf

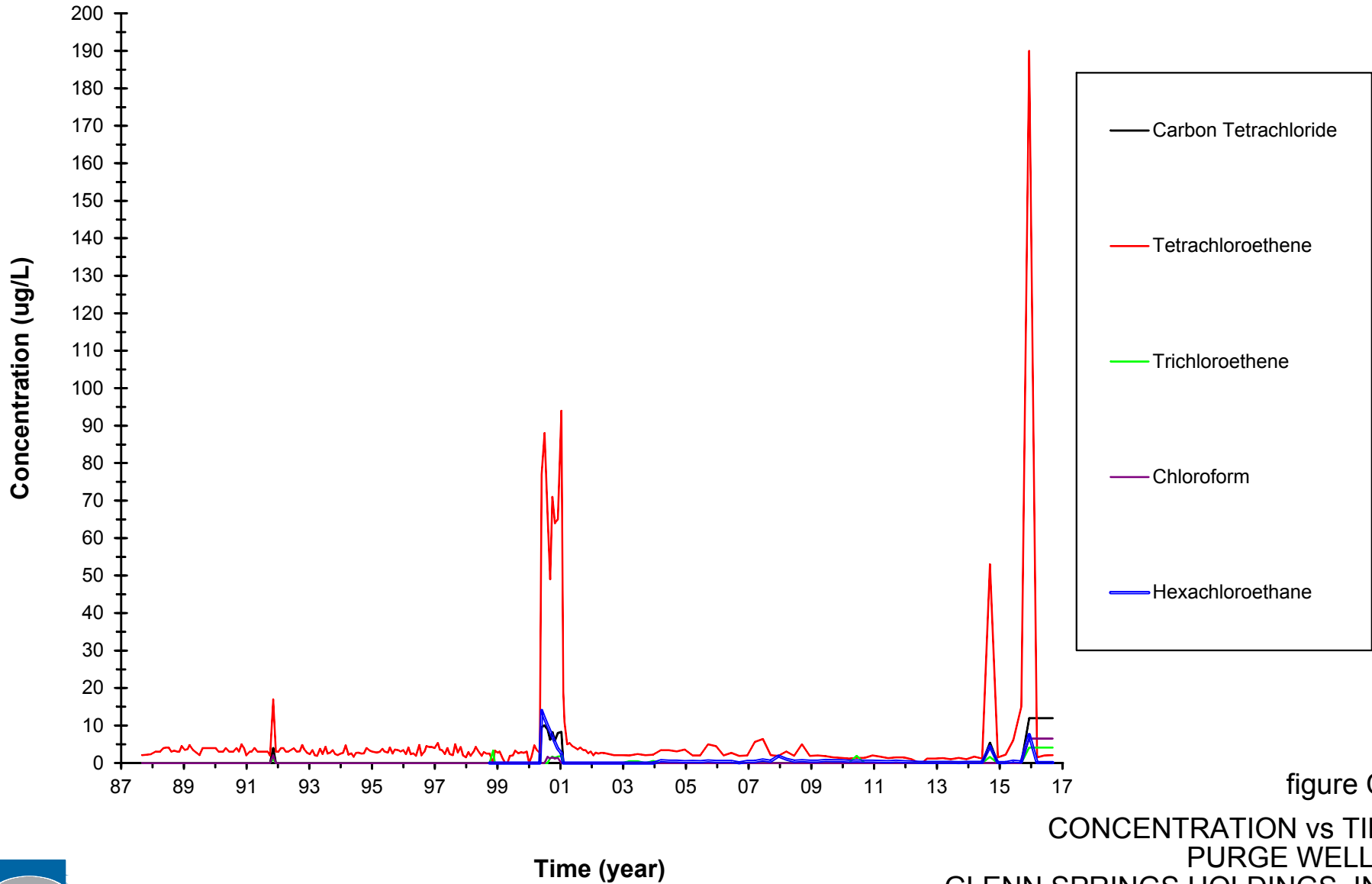


figure C.6

CONCENTRATION vs TIME
PURGE WELL Pf
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pg

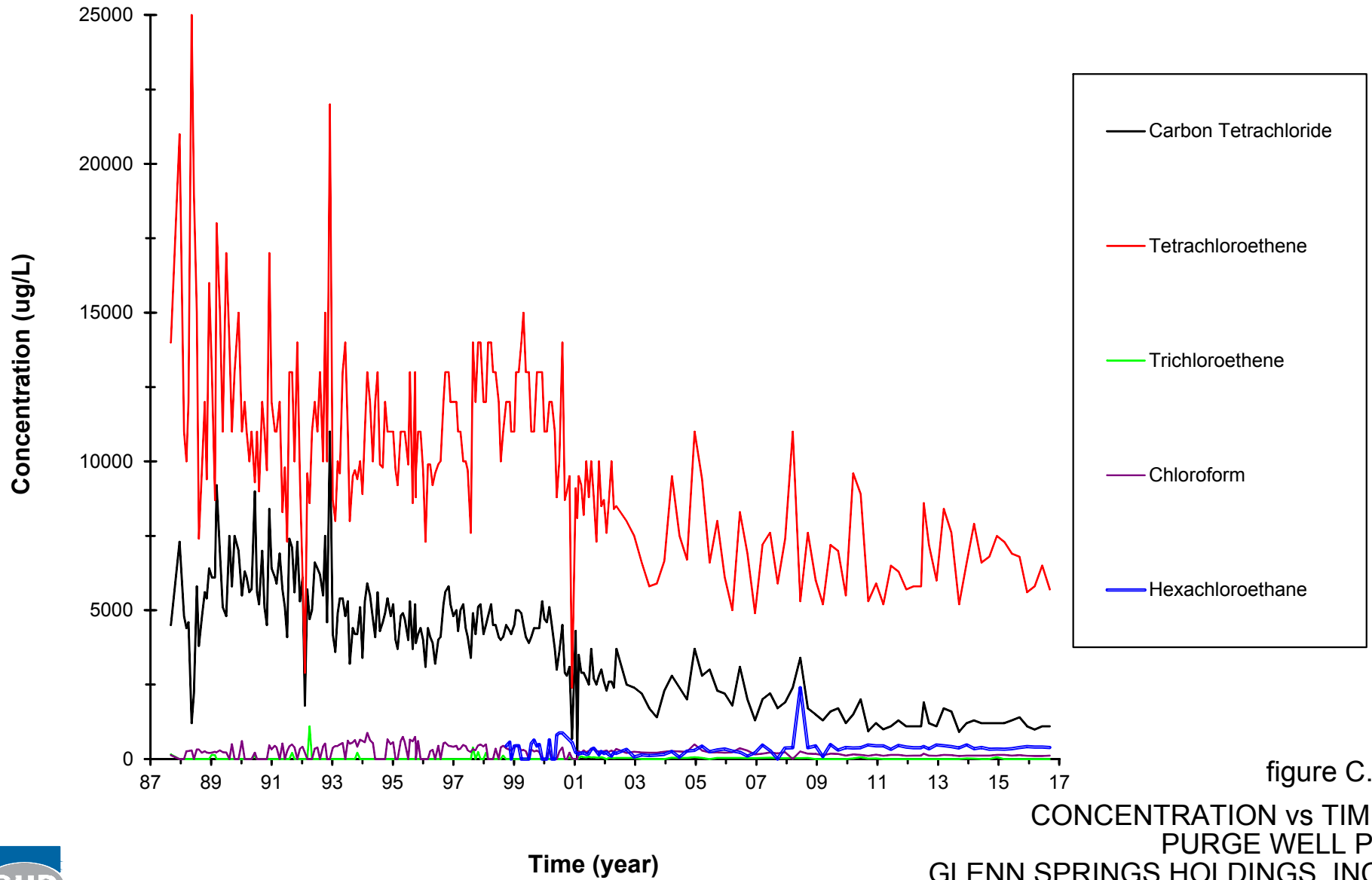


figure C.7

CONCENTRATION vs TIME
PURGE WELL Pg
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Ph

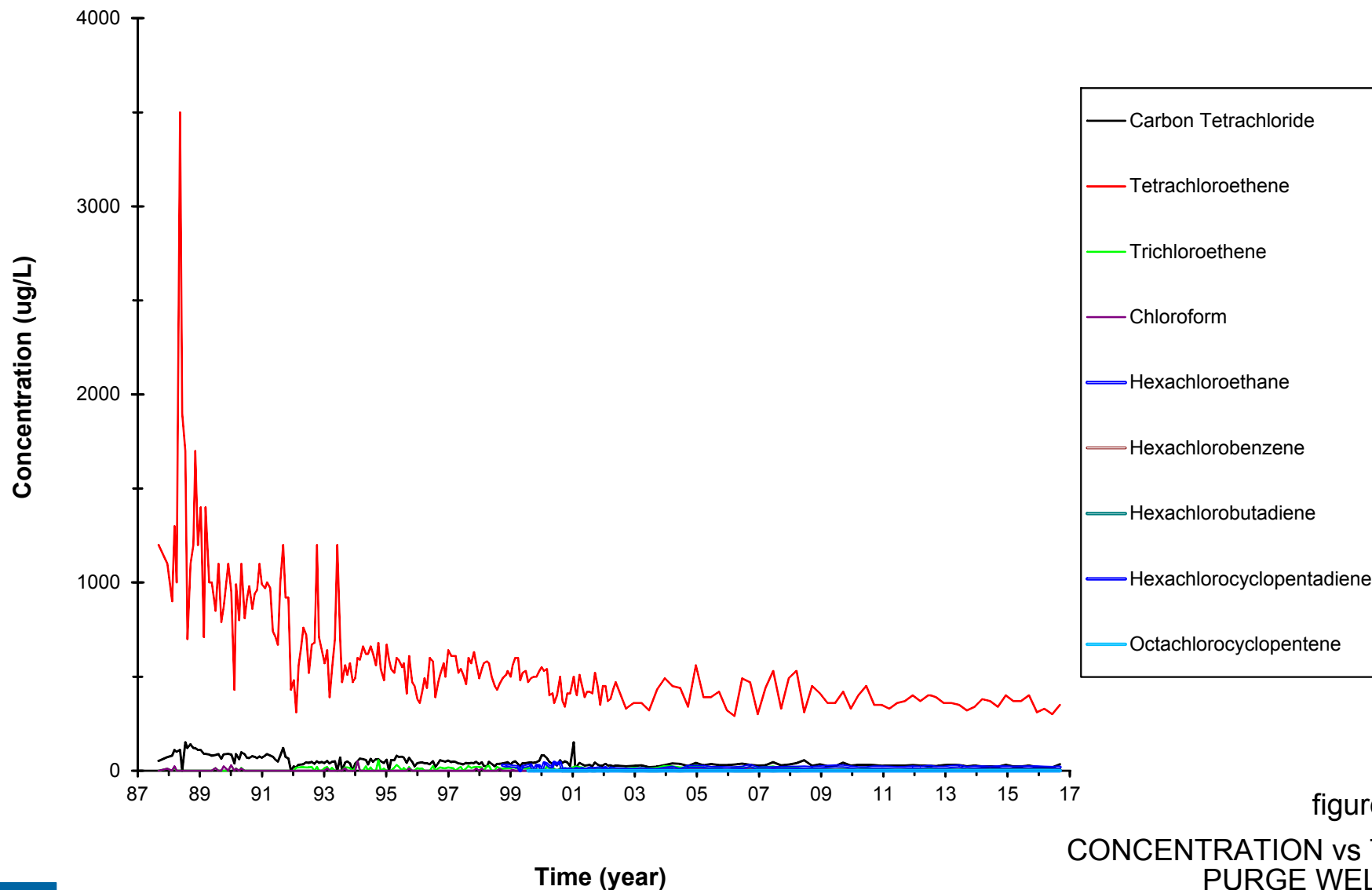


figure C.8

CONCENTRATION vs TIME
PURGE WELL Ph
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Occidental Chemical Pi

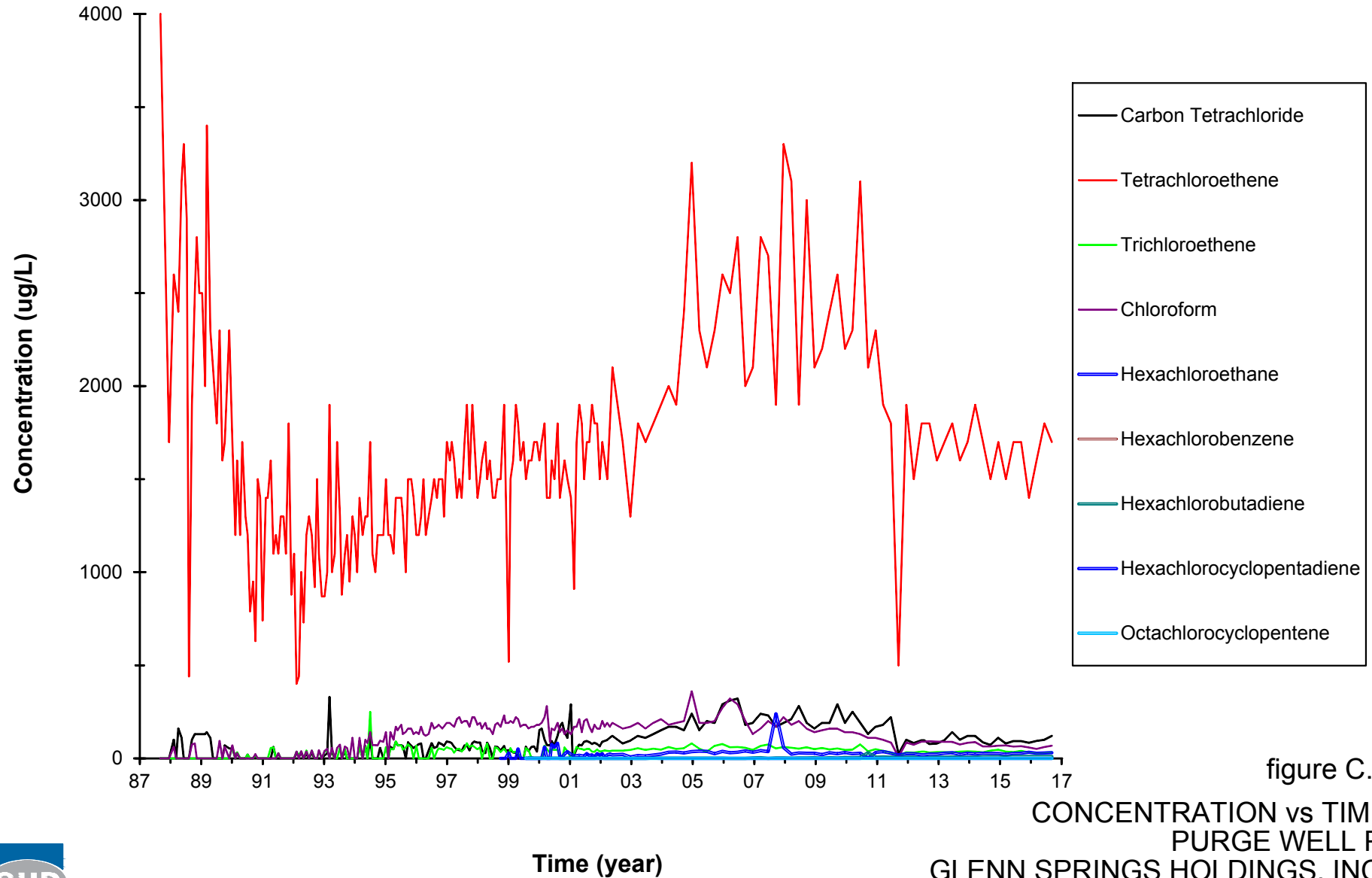


figure C.9

CONCENTRATION vs TIME
PURGE WELL Pi
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan



Appendix D
Historic Plume and Purge Well Concentrations -
2010-2016

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	B	B	B	B	B
Sample ID:	GW-9970-052810-BFB-B	GW-9970-110410-BFB-B	GW-9970-052311-JCB-B	GW-9970-111011-JCB-B	GW-9970-051712-JCB-MW-B
Sample Date:	5/28/2010	11/4/2010	5/23/2011	11/10/2011	5/17/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	0.50 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	0.50 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.011 U	1.1 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	22000	21000	27000	19000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	B	B	B	B	B
Sample ID:	GW-9970-112912-JCB-MW-B	GW-9970-052913-JCB-MW-B	WG-9970-112713-JCB-MW-B	WG-9970-112713-JCB--DUP1	GW-9970-052714-JCB-MW-B
Sample Date:	11/29/2012	5/29/2013	11/27/2013	11/27/2013 (Duplicate)	5/27/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	14000	20000	17000	18000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	B	B	B	B	B
Sample ID:	WG-9970-110414-JCB-MW-B	WG-9970-052715-JCB-MW-B	WG-9970-052715-JCB-DUP-1	GW-9970-110315-JCB-B	WG-9970-050216-JCB-B
Sample Date:	11/4/2014	5/27/2015	5/27/2015 (Duplicate)	11/3/2015	5/2/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	21000	30000	32000	20000
Total organic carbon (TOC)	µg/L				25000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	B	C	C	C	C
Sample ID:	WG-9970-110316-JCB-B	GW-9970-052610-BFB-C	GW-9970-110310-BFB-C	GW-9970-052311-JCB-C	GW-9970-111011-JCB-MW-C
Sample Date:	11/3/2016	5/26/2010	11/3/2010	5/23/2011	11/10/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	3.3	2.6	3.3
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	1.0 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	21000	7200	6900	6800
Total organic carbon (TOC)	µg/L		-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	C	C	C	C	C
Sample ID:	GW-9970-051712-JCB-MW-C	GW-9970-112912-JCB-MW-C	GW-9970-052913-JCB-MW-C	WG-9970-112613-JCB-MW-C	GW-9970-052714-JCB-MW-C
Sample Date:	5/17/2012	11/29/2012	5/29/2013	11/26/2013	5/27/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.8	1.4	1.0 U	1.7
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	4700	4400	4600	3700
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	C	C	C	C	C
Sample ID:	WG-9970-110414-JCB-MW-C	WG-9970-052715-JCB-MW-C	GW-9970-110315-JCB-C	WG-9970-050216-JCB-C	WG-9970-110316-JCB-C
Sample Date:	11/4/2014	5/27/2015	11/3/2015	5/2/2016	11/3/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0	2.0	1.8	1.8
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2500	2600	2100	2100
Total organic carbon (TOC)	µg/L				

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	MW-2	MW-03-01	MW-03-01	MW-03-01	MW-03-01
Sample ID:	GW-9970-BFB-102913-MW2	GW-9970-052710-BFB-301	GW-9970-052710-BFB-DUP1	GW-9970-110310-BFB-301	GW-9970-052011-JCB-301
Sample Date:	10/29/2013	5/27/2010	5/27/2010 (Duplicate)	11/3/2010	5/20/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	3.3	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.012 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.012 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.012 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.15	0.012 U	0.011 U	1.0 U
Octachlorocyclopentene	µg/L	0.012	0.012 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	17000	1300	1600	1700
Total organic carbon (TOC)	µg/L	4700	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-03-01	MW-03-01	MW-03-01	MW-03-01	MW-03-01
Sample ID:	WG-9970-110911-JCB-301	GW-9970-051812-JCB-MW-03-01	GW-9970-112912-JCB-MW03-01	GW-9970-052913-JCB-MW-03-01	WG-9970-112713-JCB-MW-03-01
Sample Date:	11/10/2011	5/18/2012	11/29/2012	5/29/2013	11/27/2013

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.011 U
General Chemistry						
Chloride	µg/L	1100	1300	1300	1500	1900
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	MW-03-01	MW-03-01	MW-03-01	MW-03-01	MW-03-01
Sample ID:	GW-9970-052814-JCB-MW-03-01	WG-9970-110414-JCB-MW-03-01	WG-9970-052715-JCB-MW-301	WG-9970-052715-JCB-DUP-2	GW-9970-110315-JCB-301
Sample Date:	5/28/2014	11/4/2014	5/27/2015	5/27/2015 (Duplicate)	11/3/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	1600	1400	1200	1300
Total organic carbon (TOC)	µg/L				

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-03-01	MW-03-01	MW-05-01	MW-05-01	MW-05-01
Sample ID:	WG-9970-050316-JCB-301	WG-9970-110316-JCB-301	GW-9970-052710-BFB-501	GW-9970-110310-BFB-501	GW-9970-110310-BFB-DUP1
Sample Date:	5/3/2016	11/3/2016	5/27/2010	11/3/2010	11/3/2010 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	1300	1400	7000	3000
Total organic carbon (TOC)	µg/L			-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-05-01	MW-05-01	MW-05-01	MW-05-01	MW-05-01
Sample ID:	GW-9970-052011-JCB-501	GW-9970-110911-JCB-501	GW-9970-110911-JCB-Dup2	GW-9970-051812-JCB-MW-05-01	GW-9970-112912-JCB-MW-05-01
Sample Date:	5/20/2011	11/9/2011	11/9/2011 (Duplicate)	5/18/2012	11/29/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.019	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.015	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.023	0.010 U	0.010	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	3700	2600	2400	2500
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-05-01	MW-05-01	MW-05-01	MW-05-01	MW-05-01
Sample ID:	GW-9970-053013-JCB-MW-05-01	WG-9970-112713-JCB-05-01	GW-9970-052814-JCB-MW-05-01	WG-9970-110414-JCB-MW05-01	WG-9970-052715-JCB-MW-501
Sample Date:	5/30/2013	11/27/2013	5/28/2014	11/4/2014	5/27/2015

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U	0.010 U
General Chemistry						
Chloride	µg/L	4500	4200	2900	1900	2000
Total organic carbon (TOC)	µg/L	-	-			

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-05-01	MW-05-01	MW-05-01	MW-97-02	MW-97-02
Sample ID:	GW-9970-110315-JCB-501	WG-9970-050316-JCB-501	WG-9970-110316-JCB-501	GW-9970-052710-BFB-972	GW-9970-052710-BFB-DUP2
Sample Date:	11/3/2015	5/3/2016	11/3/2016	5/27/2010	5/27/2010 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2600	3000	2700	96000
Total organic carbon (TOC)	µg/L				-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-02	MW-97-02	MW-97-02	MW-97-02	MW-97-02
Sample ID:	GW-9970-110410-BFB-972	GW-9970-052011-JCB-972	GW-9970-110911-JCB-972	GW-9970-051812-JCB-MW97-2	GW-9970-112912-JCB-DUP2
Sample Date:	11/4/2010	5/20/2011	11/9/2011	5/18/2012	11/29/2012 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	1.1 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	140000	120000	160000	18000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	MW-97-02	MW-97-02	MW-97-02	MW-97-02	MW-97-02
Sample ID:	GW-9970-112912-JCB-MW-97-2	GW-9970-052913-JCB-MW-97-2	WG-9970-112713-JCB-97-2	GW-9970-052814-JCB-MW-97-2	WG-9970-110414-JCB-MW97-2
Sample Date:	11/29/2012	5/29/2013	11/27/2013	5/28/2014	11/4/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	100000	77000	59000	50000
Total organic carbon (TOC)	µg/L	-	-	-	63000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-02	MW-97-02	MW-97-02	MW-97-02	MW-97-03
Sample ID:	WG-9970-052815-JCB-MW-972	GW-9970-110315-JCB-972	WG-9970-050316-JCB-972	WG-9970-110316-JCB-972	GW-9970-052610-BFB-973
Sample Date:	5/28/2015	11/3/2015	5/3/2016	11/3/2016	5/26/2010

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
General Chemistry						
Chloride	µg/L	110000	120000	100000	80000	27000
Total organic carbon (TOC)	µg/L					-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-03	MW-97-03	MW-97-03	MW-97-03	MW-97-03
Sample ID:	GW-9970-110310-BFB-973	GW-9970-051811-JCB-973	GW-9970-110811-JCB-973	GW-9970-051612-JCB-97-3	GW-9970-112812-JCB-97-3
Sample Date:	11/3/2010	5/18/2011	11/8/2011	5/16/2012	11/28/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.012 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.012 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.012 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	1.2 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.012 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	28000	27000	28000	27000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-03	MW-97-03	MW-97-03	MW-97-03	MW-97-03
Sample ID:	GW-9970-052813-JCB-97-3	WG-9970-112513-JCB-97-3	GW-9970-052714-JCB-97-3	WG-9970-110314-JCB-97-3	WG-9970-052615-JCB-MW-973
Sample Date:	5/28/2013	11/25/2013	5/27/2014	11/3/2014	5/26/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	27000	31000	29000	26000
Total organic carbon (TOC)	µg/L	-	-		22000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-03	MW-97-03	MW-97-03	MW-97-04	MW-97-04
Sample ID:	GW-9970-110215-JCB-973	WG-9970-050216-JCB-973	WG-9970-110116-JCB-973	GW-9970-052610-BFB-974	GW-9970-110310-BFB-974
Sample Date:	11/2/2015	5/2/2016	11/1/2016	5/26/2010	11/3/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	18000	25000	26000	2000
Total organic carbon (TOC)	µg/L				-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-04	MW-97-04	MW-97-04	MW-97-04	MW-97-04
Sample ID:	GW-9970-051911-JCB-974	GW-9970-110811-JCB-974	GW-9970-051612-JCB-97-4	GW-9970-112812-JCB-97-4	GW-9970-052813-JCB-97-4
Sample Date:	5/19/2011	11/8/2011	5/16/2012	11/28/2012	5/28/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2600	2500	2400	2100
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-04	MW-97-04	MW-97-04	MW-97-04	MW-97-04
Sample ID:	WG-9970-112513-JCB-97-4	GW-9970-052714-JCB-97-4	WG-9970-110314-JCB-97-4	WG-9970-052615-JCB-MW-974	GW-9970-110215-JCB-974
Sample Date:	11/25/2013	5/27/2014	11/3/2014	5/26/2015	11/2/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	2700	2700	3500	4000
Total organic carbon (TOC)	µg/L	-			3600

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-04	MW-97-04	MW-97-05	MW-97-05	MW-97-05
Sample ID:	WG-9970-050216-JCB-974	WG-9970-110116-JCB-974	GW-9970-052610-BFB-975	GW-9970-110310-BFB-975	GW-9970-051911-JCB-975
Sample Date:	5/2/2016	11/1/2016	5/26/2010	11/3/2010	5/19/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	4700	5300	12000	13000
Total organic carbon (TOC)	µg/L			-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-05	MW-97-05	MW-97-05	MW-97-05	MW-97-05
Sample ID:	GW-9970-110811-JCB-975	GW-9970-110811-JCB-Dup1	GW-9970-051612-JCB-97-5	GW-9970-112812-JCB-97-5	GW-9970-052813-JCB-97-5
Sample Date:	11/8/2011	11/8/2011 (Duplicate)	5/16/2012	11/28/2012	5/28/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	13000	12000	13000	14000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-05	MW-97-05	MW-97-05	MW-97-05	MW-97-05
Sample ID:	WG-9970-112513-JCB-97-5	GW-9970-052714-JCB-97-5	WG-9970-110314-JCB-97-5	WG-9970-110314-JCB-DUP1	WG-9970-052615-JCB-MW-975
Sample Date:	11/25/2013	5/27/2014	11/3/2014	11/3/2014 (Duplicate)	5/26/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	11000	13000	13000	14000
Total organic carbon (TOC)	µg/L	-			

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	MW-97-05	MW-97-05	MW-97-05	Pb	Pb
Sample ID:	GW-9970-110215-JCB-975	WG-9970-050216-JCB-975	WG-9970-110116-JCB-975	GW-9970-BFB-012910-PB	WG-9970-BFB-042910-PB
Sample Date:	11/2/2015	5/2/2016	11/1/2016	1/29/2010	4/29/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	120
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	35
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	10 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1100
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	10 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	11
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	2.0 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	2.0 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	2.0 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	55
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	2.0 U
General Chemistry					
Chloride	µg/L	16000	16000	15000	21000
Total organic carbon (TOC)	µg/L				-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	WG-9970-BFB-073010-PB	WG-9970-BFB-102010-PB	GW-9970-BFB-012411-PB	GW-9970-BFB-042911-PB	WG-9970-BFB-072211-PB	
Sample Date:	7/30/2010	10/20/2010	1/24/2011	4/29/2011	7/22/2011	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	110	77	74	96	110
Chloroform (Trichloromethane)	µg/L	44	34	31	43	53
cis-1,2-Dichloroethene	µg/L	11	14	12	11	10 U
Tetrachloroethene	µg/L	1400	930	940	970	1100
trans-1,2-Dichloroethene	µg/L	10 U	1.0 U	10 U	10 U	10 U
Trichloroethene	µg/L	22	13	11	14	10 U
SVOCs						
Hexachlorobenzene	µg/L	2.0 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	2.0 U	0.63	0.76	0.71	0.61
Hexachlorocyclopentadiene	µg/L	2.0 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	54	52	530	55	37
Octachlorocyclopentene	µg/L	2.0 U	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry						
Chloride	µg/L	18000	18000	18000	18000	17000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	WG-9970-BFB-103111-PB	WG-9970-BFB-013112-PB	WG-9970-JCB-041812-PB	GW-9970-BFB-073112-PB	GW-9970-BFB-103112-PB	
Sample Date:	10/31/2011	1/31/2012	4/18/2012	7/31/2012	10/31/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	64	47	45	53	40
Chloroform (Trichloromethane)	µg/L	45	33	31	34	32
cis-1,2-Dichloroethene	µg/L	15	12	12	12	9.2
Tetrachloroethene	µg/L	890	820	680	830	840
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	5.0 U	5.0 U
Trichloroethene	µg/L	10 U	10 U	10 U	11	9.0
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.62	0.73	0.62	0.59	0.51
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	390	43	40	41	39
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	13000	14000	15000	14000	13000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	WG-9970-BFB-013113-PB	WG-9970-BFB-042513-PB	WG-9970-BFB-072313-PB	WG-9970-BFB-102913-PB	WG-9970-BFB-013114-PB	
Sample Date:	1/31/2013	4/25/2013	7/23/2013	10/29/2013	1/31/2014	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	41	42	48	58	68
Chloroform (Trichloromethane)	µg/L	31	37	30	34	38
cis-1,2-Dichloroethene	µg/L	12	12	12	10	12
Tetrachloroethene	µg/L	690	880	730	920	920
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	10 U	1.0 U
Trichloroethene	µg/L	10	12	9.6	10	12
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.65	0.040 U	0.040 U	0.040 U	0.040 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	44	46	52	55	44
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	16000	14000	12000	12000	13000
Total organic carbon (TOC)	µg/L	-	-	-	1400	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	WG-9970-BFB-040414-PB	WG-9970-BFB-072514-PB	WG-9970-BFB-103014-PB	WG-9970-BFB-012915-PB	WG-9970-BFB-042915-PB	
Sample Date:	4/4/2014	7/25/2014	10/30/2014	1/29/2015	4/29/2015	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	63	46	51	73	47
Chloroform (Trichloromethane)	µg/L	32	26	32	33	29
cis-1,2-Dichloroethene	µg/L	10	10 U	14	12	12
Tetrachloroethene	µg/L	960	950	1000	1200	850
trans-1,2-Dichloroethene	µg/L	1.0 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	11	10 U	12	18	13
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	43	50	50	48	42
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	12000	12000	11000	14000	13000
Total organic carbon (TOC)	µg/L					

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pb	Pb	Pb	Pb	Pb
Sample ID:	WG-9970-BFB-072815-PB	WG-9970-BFB-103015-PB	WG-9970-BFB-012816-PB	WG-9970-BFB-042916-PB	WG-9970-BFB-072916-PB
Sample Date:	07/28/2015	10/30/2015	1/28/2016	4/29/2016	7/29/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	40	41		
Chloroform (Trichloromethane)	µg/L	25	24	37	36
cis-1,2-Dichloroethene	µg/L	11	11	23	21
Tetrachloroethene	µg/L	1000	1000	12	10 U
trans-1,2-Dichloroethene	µg/L	10 U	10 U	910	1200
Trichloroethene	µg/L	11	13	10 U	10 U
				12	10 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U		
Hexachlorobutadiene	µg/L	0.040 U	0.040 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.020 U	0.020 U
Hexachloroethane	µg/L	50	53	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	64	56
				0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	12000	12000		
Total organic carbon (TOC)	µg/L			17000	14000
					13000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pb	Pc	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-102816-PB	GW-9970-BFB-012910-PC	WG-9970-BFB-042910-PC	WG-9970-BFB-073010-PC	WG-9970-BFB-102010-PC
Sample Date:	10/28/2016	1/29/2010	4/29/2010	7/30/2010	10/20/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	8.8	12	13	12
Chloroform (Trichloromethane)	µg/L	55	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	24	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	10 U	47	51	62
trans-1,2-Dichloroethene	µg/L	1300	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	10 U	1.7	1.9	3.3
		10			1.6
SVOCs					
Hexachlorobenzene	µg/L		0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	0.010 U	1.5	1.2	1.4
Hexachlorocyclopentadiene	µg/L	0.020	0.20 U	0.20 U	0.20 U
Hexachloroethane	µg/L	0.010 U	5.3	4.4	4.8
Octachlorocyclopentene	µg/L	66	0.20 U	0.20 U	0.20 U
		0.010 U			0.010 U
General Chemistry					
Chloride	µg/L		17000	14000	14000
Total organic carbon (TOC)	µg/L	12000	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc
Sample ID:	GW-9970-BFB-012411-PC	GW-9970-BFB-042911-PC	WG-9970-BFB-072211-PC	WG-9970-BFB-103111-PC	WG-9970-BFB-013112-PC
Sample Date:	1/24/2011	4/29/2011	7/22/2011	10/31/2011	1/31/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	15	25	18	19
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	68	97	110	100
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.2	2.4	2.0	2.3
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	1.7	2.0	1.8	2.0
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.4	5.3	5.2	6.3
Octachlorocyclopentene	µg/L	0.011	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	14000	11000	15000	17000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pc WG-9970-JCB-041812-PC 4/18/2012	Pc GW-9970-BFB-073112-PC 7/31/2012	Pc GW-9970-BFB-103112-PC 10/31/2012	Pc WG-9970-BFB-013113-PC 1/31/2013	Pc WG-9970-BFB-042513-PC 4/25/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	18	13	11	4.9
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	97	87	92	48
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.8	2.1	1.9	1.6
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.0	2.1	2.0	1.8
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.3	5.1	5.6	4.2
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	11000	15000	13000	11000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-072313-PC	WG-9970-BFB-102913-PC	WG-9970-BFB-013114-PC	WG-9970-BFB-040414-PC	WG-9970-BFB-072514-PC
Sample Date:	7/23/2013	10/29/2013	1/31/2014	4/4/2014	7/25/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	13	10	14	16
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	58	64	83	110
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.1	1.9	2.1	1.9
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.4	2.0	2.4	2.5
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	6.3	4.6	5.3	5.5
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	15000	12000	11000	9300
Total organic carbon (TOC)	µg/L	-	1200	-	

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-103014-PC	WG-9970-BFB-012915-PC	WG-9970-BFB-042915-PC	WG-9970-BFB-072815-PC	WG-9970-BFB-103015-PC
Sample Date:	10/30/2014	1/29/2015	4/29/2015	07/28/2015	10/30/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	5.4	7.8	11	8.7
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	53	46	61	62
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.6	2.2	2.0	1.6
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.1	2.0	1.9	2.1
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	4.4	4.6	4.1	4.6
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	14000	11000	12000	14000
Total organic carbon (TOC)	µg/L				

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pc	Pc	Pc	Pc	Pd
Sample ID:	WG-9970-BFB-012816-PC	WG-9970-BFB-042916-PC	WG-9970-BFB-072916-PC	WG-9970-BFB-102816-PC	GW-9970-BFB-012910-PD
Sample Date:	1/28/2016	4/29/2016	7/29/2016	10/28/2016	1/29/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L				170
Chloroform (Trichloromethane)	µg/L	4.1	3.5	2.9	38
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	20 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1500
trans-1,2-Dichloroethene	µg/L	40	34	30	20 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	20 U
		1.2	1.0	1.2	1.3
SVOCs					
Hexachlorobenzene	µg/L				2.0 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	2.0 U
Hexachlorocyclopentadiene	µg/L	1.7	1.6	1.7	2.0 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	45
Octachlorocyclopentene	µg/L	4.0	4.3	4.3	2.0 U
		0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L				130000
Total organic carbon (TOC)	µg/L	11000	11000	13000	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pd	Pd	Pd	Pd	Pd
Sample ID:	WG-9970-BFB-042910-PD	WG-9970-BFB-073010-PD	WG-9970-BFB-102010-PD	GW-9970-BFB-012411-PD	GW-9970-BFB-042911-PD
Sample Date:	4/29/2010	7/30/2010	10/20/2010	1/24/2011	4/29/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	190	180	160	150
Chloroform (Trichloromethane)	µg/L	40	41	37	35
cis-1,2-Dichloroethene	µg/L	5.7	20 U	6.0	6.4
Tetrachloroethene	µg/L	1600	1900	1400	1400
trans-1,2-Dichloroethene	µg/L	2.0 U	20 U	1.0 U	5.0 U
Trichloroethene	µg/L	14	31	14	13
SVOCs					
Hexachlorobenzene	µg/L	2.0 U	2.0 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	0.088	0.010 U
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 U	0.010 U	0.010 U
Hexachloroethane	µg/L	36	39	42	41
Octachlorocyclopentene	µg/L	2.0 U	2.0 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	140000	140000	150000	160000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pd	Pd	Pd	Pd	Pd	
Sample ID:	WG-9970-BFB-072211-PD	WG-9970-BFB-103111-PD	WG-9970-BFB-013112-PD	WG-9970-JCB-041812-PD	WG-9970-BFB-073112-PD	
Sample Date:	7/22/2011	10/31/2011	1/31/2012	4/18/2012	7/31/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	120	120	110	120	110
Chloroform (Trichloromethane)	µg/L	26	33	28	29	27
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	1200	1400	1300	1100	1100
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10	14	12	12	11
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.071	0.011 U	0.065	0.11	0.092
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	34	45	33	37	39
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	150000	130000	160000	250000	220000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pd	Pd	Pd	Pd	Pd
Sample ID:	GW-9970-BFB-103112-PD	WG-9970-BFB-013113-PD	WG-9970-BFB-042513-PD	WG-9970-BFB-072313-PD	WG-9970-BFB-102913-PD
Sample Date:	10/31/2012	1/31/2013	4/25/2013	7/23/2013	10/29/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	100	100	130	140
Chloroform (Trichloromethane)	µg/L	27	26	31	30
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	1200	1000	1300	1100
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10	10	13	12
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.084	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	35	40	47	55
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	210000	230000	240000	210000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pd	Pd	Pd	Pd	Pd	
Sample ID:	WG-9970-BFB-013114-PD	WG-9970-BFB-040414-PD	WG-9970-BFB-072514-PD	WG-9970-BFB-103014-PD	WG-9970-BFB-012915-PD	
Sample Date:	1/31/2014	4/4/2014	7/25/2014	10/30/2014	1/29/2015	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	160	120	110	120	130
Chloroform (Trichloromethane)	µg/L	28	26	24	29	27
cis-1,2-Dichloroethene	µg/L	8.2	6.3	10 U	10 U	10 U
Tetrachloroethene	µg/L	1100	1200	1200	1200	1300
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	10 U	10 U	10 U
Trichloroethene	µg/L	14	11	12	14	20
SVOCs						
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.016	0.018	0.010 U	0.11	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	49	42	40	44	47
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	220000	210000	190000	210000	190000
Total organic carbon (TOC)	µg/L	-				

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pd	Pd	Pd	Pd	Pd
Sample ID:	WG-9970-BFB-042915-PD	WG-9970-BFB-072815-PD	WG-9970-BFB-103015-PD	WG-9970-BFB-012816-PD	WG-9970-BFB-042916-PD
Sample Date:	4/29/2015	07/28/2015	10/30/2015	1/28/2016	4/29/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	130	120	100	
Chloroform (Trichloromethane)	µg/L	31	27	24	120
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	25
Tetrachloroethene	µg/L	1400	1300	1200	10 U
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	1100
Trichloroethene	µg/L	17	14	16	10 U
					13
					14
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.11	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.030
Hexachloroethane	µg/L	46	45	49	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	49
					0.010 U
					0.010 U
General Chemistry					
Chloride	µg/L	190000	180000	190000	
Total organic carbon (TOC)	µg/L				190000
					210000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pd	Pd	Pe	Pe	Pe
Sample ID:	WG-9970-BFB-072916-PD	WG-9970-BFB-102816-PD	GW-9970-BFB-012910-PE	WG-9970-BFB-042910-PE	WG-9970-BFB-073010-PE
Sample Date:	7/29/2016	10/28/2016	1/29/2010	4/29/2010	7/30/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L			11	11
Chloroform (Trichloromethane)	µg/L	100	130	1.4	1.4
cis-1,2-Dichloroethene	µg/L	22	27	4.2	4.9
Tetrachloroethene	µg/L	10 U	10 U	120	130
trans-1,2-Dichloroethene	µg/L	1100	1200	1.0 U	1.0 U
Trichloroethene	µg/L	10 U	10 U	3.4	4.2
		13	15		
SVOCs					
Hexachlorobenzene	µg/L			0.010 U	0.020 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.020 U
Hexachlorocyclopentadiene	µg/L	0.022	0.099	0.010 U	0.020 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.30	0.32
Octachlorocyclopentene	µg/L	51	43	0.010 U	0.020 U
		0.010 U	0.010 U		
General Chemistry					
Chloride	µg/L			120000	140000
Total organic carbon (TOC)	µg/L	180000	170000	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pe	Pe
Sample ID:	WG-9970-BFB-102010-PE	GW-9970-BFB-012411-PE	GW-9970-BFB-042911-PE	WG-9970-BFB-072211-PE	WG-9970-BFB-103111-PE
Sample Date:	10/20/2010	1/24/2011	4/29/2011	7/22/2011	10/31/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	8.0	8.2	9.0	10
Chloroform (Trichloromethane)	µg/L	1.0 U	1.1	1.2	1.0 U
cis-1,2-Dichloroethene	µg/L	2.6	3.2	3.6	3.6
Tetrachloroethene	µg/L	98	100	110	120
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.4	2.8	3.1	3.3
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.32	3.6	0.49	0.43
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	97000	110000	110000	120000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pe WG-9970-BFB-013112-PE 1/31/2012	Pe WG-9970-JCB-041812-PE 4/18/2012	Pe GW-9970-BFB-073112-PE 7/31/2012	Pe GW-9970-BFB-103112-PE 10/31/2012	Pe WG-9970-BFB-013113-PE 1/31/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	6.8	7.3	5.9	6.0
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0	1.1
cis-1,2-Dichloroethene	µg/L	3.1	2.8	2.3	2.2
Tetrachloroethene	µg/L	110	94	94	97
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.9	2.8	2.7	2.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.41	0.29	0.52	0.42
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	120000	110000	110000	110000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pe	Pe	
Sample ID:	GW-9970-BFB-042513-PE	WG-9970-BFB-072313-PE	WG-9970-BFB-102913-PE	WG-9970-BFB-013114-PE	WG-9970-BFB-040414-PE	
Sample Date:	4/25/2013	7/23/2013	10/29/2013	1/31/2014	4/4/2014	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	6.4	7.8	6.2	5.8	6.3
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.7	2.4	2.5	3.1	2.6
Tetrachloroethene	µg/L	99	83	90	87	98
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.9	2.5	2.5	2.9	2.6
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.55	0.71	0.68	0.81	0.85
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	110000	100000	110000	110000	110000
Total organic carbon (TOC)	µg/L	-	-	840	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pe	Pe	Pe	Pe	Pe	
Sample ID:	WG-9970-BFB-072514-PE	WG-9970-BFB-103014-PE	WG-9970-BFB-012915-PE	WG-9970-BFB-042915-PE	WG-9970-BFB-072815-PE	
Sample Date:	7/25/2014	10/30/2014	1/29/2015	4/29/2015	07/28/2015	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	4.9	5.2	6.8	4.8	4.3
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.4	2.9	3.0	3.0	2.5
Tetrachloroethene	µg/L	87	87	100	86	84
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.4	2.7	3.4	3.0	2.6
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.93	1.1	1.1	1.1	1.2
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	99000	98000	100000	110000	95000
Total organic carbon (TOC)	µg/L					

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pe	Pe	Pe	Pe	Pe
Sample ID:	WG-9970-BFB-103015-PE	WG-9970-BFB-012816-PE	WG-9970-BFB-042916-PE	WG-9970-BFB-072916-PE	WG-9970-BFB-102816-PE
Sample Date:	10/30/2015	1/28/2016	4/29/2016	7/29/2016	10/28/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	5.4			
Chloroform (Trichloromethane)	µg/L	1.0 U	4.6	4.2	4.1
cis-1,2-Dichloroethene	µg/L	3.0	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	94	2.9	2.0	2.3
trans-1,2-Dichloroethene	µg/L	1.0 U	78	83	84
Trichloroethene	µg/L	3.5	1.0 U	1.0 U	1.0 U
			2.7	2.2	2.5
SVOCs					
Hexachlorobenzene	µg/L	0.010 U			
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	1.6	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	1.9	1.7	1.9
			0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	110000			
Total organic carbon (TOC)	µg/L		96000	98000	95000
					120000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pf GW-9970-BFB-012910-PF 1/29/2010	Pf WG-9970-BFB-042910-PF 4/29/2010	Pf WG-9970-BFB-073010-PF 7/30/2010	Pf WG-9970-BFB-102010-PF 10/20/2010	Pf GW-9970-BFB-012411-PF 1/24/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.4	1.2	1.4	2.0
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.9	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.020 U	0.020 U	0.020 U	0.010 U
Hexachlorobutadiene	µg/L	0.020 U	0.020 U	0.020 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.020 U	0.020 U	0.020 U	0.010 U
Hexachloroethane	µg/L	0.62	0.50	0.54	0.51
Octachlorocyclopentene	µg/L	0.020 U	0.020 U	0.020 U	0.010 U
General Chemistry					
Chloride	µg/L	3100	3000	9900	3500
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pf GW-9970-BFB-042911-PF 4/29/2011	Pf WG-9970-BFB-072211-PF 7/22/2011	Pf WG-9970-BFB-103111-PF 10/31/2011	Pf WG-9970-BFB-013112-PF 1/31/2012	Pf WG-9970-JCB-041812-PF 4/18/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.7	1.3	1.5	1.5
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.44	0.34	0.47	0.37
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	8100	3200	5000	3000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pf GW-9970-BFB-073112-PF 7/31/2012	Pf GW-9970-BFB-103112-PF 10/31/2012	Pf WG-9970-BFB-013113-PF 1/31/2013	Pf WG-9970-BFB-042513-PF 4/25/2013	Pf WG-9970-BFB-072313-PF 7/23/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.2	1.2	1.3
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.17	0.20	0.20	0.20
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2600	2600	2900	2600
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pf WG-9970-BFB-102913-PF 10/29/2013	Pf WG-9970-BFB-013114-PF 1/31/2014	Pf WG-9970-BFB-040414-PF 4/4/2014	Pf WG-9970-BFB-072514-PF 7/25/2014	Pf WG-9970-BFB-103014-PF 10/30/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.4	1.0	1.7	1.3
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.14	0.15	0.15	0.14
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	2500	2800	2500	2200
Total organic carbon (TOC)	µg/L	750	-		

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pf	Pf	Pf	Pf	Pf
Sample ID:	WG-9970-BFB-012915-PF	WG-9970-BFB-042915-PF	WG-9970-BFB-072815-PF	WG-9970-BFB-103015-PF	WG-9970-BFB-012816-PF
Sample Date:	1/29/2015	4/29/2015	07/28/2015	10/30/2015	1/28/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.5	2.2	6.1	15
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
					12
					6.5
					3.8
					190
					2.0 U
					4.1
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.11	0.13
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.11	0.14	0.46	0.31
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
					7.6
					0.010 U
General Chemistry					
Chloride	µg/L	2300	2300	2400	3700
Total organic carbon (TOC)	µg/L				
					64000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pf	Pf	Pf	Pg	Pg
Sample ID:	WG-9970-BFB-042916-PF	WG-9970-BFB-072916-PF	WG-9970-BFB-102816-PF	GW-9970-BFB-012910-PG	WG-9970-BFB-042910-PG
Sample Date:	4/29/2016	7/29/2016	10/28/2016	1/29/2010	4/29/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L			1200	1500
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	120	160
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	50 U	5.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	5500	9600
trans-1,2-Dichloroethene	µg/L	1.5	2.0	50 U	5.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	50 U	23
		1.0 U	1.0 U		
SVOCs					
Hexachlorobenzene	µg/L			20 U	20 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	20 U	20 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	20 U	20 U
Hexachloroethane	µg/L	0.010 U	0.010 U	390	370
Octachlorocyclopentene	µg/L	0.11	0.094	20 U	20 U
		0.010 U	0.010 U		
General Chemistry					
Chloride	µg/L			34000	33000
Total organic carbon (TOC)	µg/L	2700	2400	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-BFB-073010-PG 7/30/2010	Pg WG-9970-BFB-102010-PG 10/20/2010	Pg GW-9970-BFB-012411-PG 1/24/2011	Pg GW-9970-BFB-042911-PG 4/29/2011	Pg WG-9970-BFB-072211-PG 7/22/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	2000	930	1200	1000
Chloroform (Trichloromethane)	µg/L	140	110	150	110
cis-1,2-Dichloroethene	µg/L	50 U	5.0 U	5.0 U	50 U
Tetrachloroethene	µg/L	8900	5300	5900	5200
trans-1,2-Dichloroethene	µg/L	50 U	5.0 U	5.0 U	50 U
Trichloroethene	µg/L	65	17	23	50 U
SVOCs					
Hexachlorobenzene	µg/L	20 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	20 U	4.6	4.3	3.4
Hexachlorocyclopentadiene	µg/L	20 U	0.010 U	0.010 U	0.016
Hexachloroethane	µg/L	380	470	440	440
Octachlorocyclopentene	µg/L	20 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	35000	38000	46000	60000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg GW-9970-BFB-072711-PG 7/27/2011	Pg WG-9970-BFB-103111-PG 10/31/2011	Pg WG-9970-BFB-013112-PG 1/31/2012	Pg WG-9970-JCB-041812-PG 4/18/2012	Pg GW-9970-BFB-080312-PG 8/3/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1100	1300	1100	1100
Chloroform (Trichloromethane)	µg/L	140	140	110	120
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Tetrachloroethene	µg/L	6500	6300	5700	5800
trans-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Trichloroethene	µg/L	50 U	50 U	50 U	50 U
SVOCs					
Hexachlorobenzene	µg/L	-	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	-	4.4	4.4	3.7
Hexachlorocyclopentadiene	µg/L	-	0.010 U	0.017	0.010 U
Hexachloroethane	µg/L	-	460	400	380
Octachlorocyclopentene	µg/L	-	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	-	55000	60000	56000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg GW-9970-BFB-103112-PG 10/31/2012	Pg WG-9970-BFB-013113-PG 1/31/2013	Pg WG-9970-BFB-042513-PG 4/25/2013	Pg WG-9970-BFB-072313-PG 7/23/2013	Pg WG-9970-BFB-102913-PG 10/29/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1200	1100	1700	1600
Chloroform (Trichloromethane)	µg/L	120	110	140	130
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Tetrachloroethene	µg/L	7200	6000	8400	7600
trans-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Trichloroethene	µg/L	50 U	50 U	50 U	50 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	3.6	4.8	0.22	0.20 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	340	470	450	420
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	43000	41000	37000	36000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-BFB-013114-PG 1/31/2014	Pg WG-9970-BFB-040414-PG 4/4/2014	Pg WG-9970-BFB-0725114-PG 7/25/2014	Pg WG-9970-BFB-103014-PG 10/30/2014	Pg WG-9970-BFB-012915-PG 1/29/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1200	1300	1200	1200
Chloroform (Trichloromethane)	µg/L	120	120	120	140
cis-1,2-Dichloroethene	µg/L	2.5	5.0 U	50 U	50 U
Tetrachloroethene	µg/L	6600	7900	6600	7500
trans-1,2-Dichloroethene	µg/L	1.0 U	5.0 U	50 U	50 U
Trichloroethene	µg/L	19	17	50 U	58
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.59	0.53	0.80	1.6
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.020	0.010 U
Hexachloroethane	µg/L	470	350	390	340
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.012	0.010 U
General Chemistry					
Chloride	µg/L	29000	29000	25000	25000
Total organic carbon (TOC)	µg/L	-			

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-BFB-042915-PG 4/29/2015	Pg WG-9970-BFB-072815-PG 07/28/2015	Pg WG-9970-BFB-103015-PG 10/30/2015	Pg WG-9970-BFB-012816-PG 1/28/2016	Pg WG-9970-BFB-042916-PG 4/29/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1200	1300	1400	
Chloroform (Trichloromethane)	µg/L	140	120	130	1100
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	110
Tetrachloroethene	µg/L	7300	6900	6800	50 U
trans-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	5600
Trichloroethene	µg/L	50 U	50 U	50 U	50 U
					50 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	
Hexachlorobutadiene	µg/L	1.8	2.4	3.1	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	3.3
Hexachloroethane	µg/L	330	350	390	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	420
					0.010 U
					0.010 U
General Chemistry					
Chloride	µg/L	28000	24000	24000	
Total organic carbon (TOC)	µg/L				24000
					25000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-BFB-072916-PG 7/29/2016	Pg WG-9970-BFB-102816-PG 10/28/2016	Ph GW-9970-BFB-012910-PH 1/29/2010	Ph WG-9970-BFB-042910-PH 4/29/2010	Ph WG-9970-BFB-073010-PH 7/30/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L			27	31
Chloroform (Trichloromethane)	µg/L	1100	1100	6.8	7.5
cis-1,2-Dichloroethene	µg/L	100	120	5.0 U	5.0 U
Tetrachloroethene	µg/L	50 U	50 U	330	400
trans-1,2-Dichloroethene	µg/L	6500	5700	5.0 U	2.8
Trichloroethene	µg/L	50 U	50 U	7.6	8.6
		50 U	50 U		15
SVOCs					
Hexachlorobenzene	µg/L			1.0 U	0.50 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	1.9	1.6
Hexachlorocyclopentadiene	µg/L	3.4	3.8	1.0 U	0.50 U
Hexachloroethane	µg/L	0.010 U	0.010 U	20	15
Octachlorocyclopentene	µg/L	400	390	1.0 U	0.50 U
		0.010 U	0.010 U		0.50 U
General Chemistry					
Chloride	µg/L			120000	120000
Total organic carbon (TOC)	µg/L	25000	24000	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-102010-PH	GW-9970-BFB-012411-PH	GW-9970-BFB-042911-PH	WG-9970-BFB-072211-PH	WG-9970-BFB-103111-PH
Sample Date:	10/20/2010	1/24/2011	4/29/2011	7/22/2011	10/31/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	30	26	28	28
Chloroform (Trichloromethane)	µg/L	6.6	6.7	6.6	6.2
cis-1,2-Dichloroethene	µg/L	3.1	3.0	2.8	2.7
Tetrachloroethene	µg/L	350	350	330	360
trans-1,2-Dichloroethene	µg/L	2.5	2.5 U	2.5 U	2.5 U
Trichloroethene	µg/L	7.8	7.4	7.0	6.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	1.7	2.3	2.5	2.3
Hexachlorocyclopentadiene	µg/L	0.010 U	0.012	0.015	0.013
Hexachloroethane	µg/L	19	19	17	15
Octachlorocyclopentene	µg/L	0.010 U	0.011	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	120000	120000	110000	110000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Ph	Ph	Ph	Ph	Ph	
Sample ID:	WG-9970-BFB-013112-PH	WG-9970-JCB-041812-PH	GW-9970-BFB-073112-PH	GW-9970-BFB-103112-PH	WG-9970-BFB-013113-PH	
Sample Date:	1/31/2012	4/18/2012	7/31/2012	10/31/2012	1/31/2013	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	30	28	26	25	30
Chloroform (Trichloromethane)	µg/L	6.0	7.3	7.6	9.1	8.3
cis-1,2-Dichloroethene	µg/L	3.1	5.0 U	2.7	2.5	3.0
Tetrachloroethene	µg/L	400	370	400	390	360
trans-1,2-Dichloroethene	µg/L	2.5 U	5.0 U	2.5 U	2.5 U	2.5 U
Trichloroethene	µg/L	7.1	7.7	9.4	6.3	8.6
SVOCs						
Hexachlorobenzene	µg/L	0.0027	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.5	2.2	5.4	2.2	2.5
Hexachlorocyclopentadiene	µg/L	0.020	0.015	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	20	18	23	18	18
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	120000	120000	96000	91000	100000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-042513-PH	WG-9970-BFB-072313-PH	WG-9970-BFB-102913-PH	WG-9970-BFB-013114-PH	WG-9970-BFB-040414-PH
Sample Date:	4/25/2013	7/23/2013	10/29/2013	1/31/2014	4/4/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	31	30	24	28
Chloroform (Trichloromethane)	µg/L	8.1	9.0	7.3	9.0
cis-1,2-Dichloroethene	µg/L	2.9	3.3	3.4	3.8
Tetrachloroethene	µg/L	360	350	320	340
trans-1,2-Dichloroethene	µg/L	2.5 U	2.5 U	2.5 U	2.2
Trichloroethene	µg/L	8.9	6.6	7.7	7.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	3.1	3.0	3.0	2.8
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	22	25	16	20
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	97000	88000	89000	95000
Total organic carbon (TOC)	µg/L	-	-	2000	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-072514-PH	WG-9970-BFB-103014-PH	WG-9970-BFB-012915-PH	WG-9970-BFB-042915-PH	WG-9970-BFB-072815-PH
Sample Date:	7/25/2014	10/30/2014	1/29/2015	4/29/2015	07/28/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	22	21	31	23
Chloroform (Trichloromethane)	µg/L	8.0	9.0	11	9.4
cis-1,2-Dichloroethene	µg/L	3.9	3.4	5.0 U	5.0 U
Tetrachloroethene	µg/L	370	340	400	370
trans-1,2-Dichloroethene	µg/L	2.0	2.5 U	5.0 U	5.0 U
Trichloroethene	µg/L	7.1	7.6	11	9.2
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	3.0	3.2	3.4	3.1
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	18	20	20	18
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	97000	97000	100000	110000
Total organic carbon (TOC)	µg/L				91000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location: Sample ID: Sample Date:	Ph WG-9970-BFB-103015-PH 10/30/2015	Ph WG-9970-BFB-012816-PH 1/28/2016	Ph WG-9970-BFB-042916-PH 4/29/2016	Ph WG-9970-BFB-072916-PH 7/29/2016	Ph WG-9970-BFB-102816-PH 10/28/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	28			
Chloroform (Trichloromethane)	µg/L	10	20	17	34
cis-1,2-Dichloroethene	µg/L	5.0 U	7.2	7.6	9.4
Tetrachloroethene	µg/L	400	3.4	2.5 U	3.0
trans-1,2-Dichloroethene	µg/L	5.0 U	310	330	350
Trichloroethene	µg/L	8.7	2.5 U	2.5 U	2.5 U
			5.9	6.4	7.2
SVOCs					
Hexachlorobenzene	µg/L	0.010 U			
Hexachlorobutadiene	µg/L	3.6	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	3.2	2.9	2.8
Hexachloroethane	µg/L	20	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	20	18	16
			0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	97000			
Total organic carbon (TOC)	µg/L		88000	96000	91000
					95000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pi	Pi	Pi	Pi	Pi	
Sample ID:	GW-9970-BFB-012910-PI	WG-9970-BFB-042910-PI	WG-9970-BFB-073010-PI	WG-9970-BFB-102010-PI	GW-9970-BFB-012411-PI	
Sample Date:	1/29/2010	4/29/2010	7/30/2010	10/20/2010	1/24/2011	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	190	250	190	130	170
Chloroform (Trichloromethane)	µg/L	140	140	130	110	110
cis-1,2-Dichloroethene	µg/L	46	53	51	42	52
Tetrachloroethene	µg/L	2200	2300	3100	2100	2300
trans-1,2-Dichloroethene	µg/L	25 U	3.6	25 U	2.7	25 U
Trichloroethene	µg/L	45	46	75	38	49
SVOCs						
Hexachlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	4.1	3.8	4.4	30	5.7
Hexachlorocyclopentadiene	µg/L	1.0 U	1.0 U	1.0 U	4.5	0.015
Hexachloroethane	µg/L	31	25	27	0.40	31
Octachlorocyclopentene	µg/L	1.0 U	1.0 U	1.0 U	0.010 U	0.015
General Chemistry						
Chloride	µg/L	610000	500000	510000	570000	610000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pi	Pi	Pi	Pi	Pi	
Sample ID:	GW-9970-BFB-042911-PI	WG-9970-BFB-072211-PI	WG-9970-BFB-103111-PI	WG-9970-BFB-013112-PI	WG-9970-JCB-041812-PI	
Sample Date:	4/29/2011	7/22/2011	10/31/2011	1/31/2012	4/18/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	180	220	22	100	82
Chloroform (Trichloromethane)	µg/L	100	84	7.8	85	73
cis-1,2-Dichloroethene	µg/L	46	39	15	41	41
Tetrachloroethene	µg/L	1900	1800	500	1900	1500
trans-1,2-Dichloroethene	µg/L	25 U	25 U	5.0 U	10 U	20 U
Trichloroethene	µg/L	40	32	15	33	31
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	7.8	5.7	4.4	6.0	5.5
Hexachlorocyclopentadiene	µg/L	0.030	0.073	0.010 U	0.010	0.010 U
Hexachloroethane	µg/L	36	28	17	25	25
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	590000	570000	91000	550000	580000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pi	Pi	Pi	Pi	Pi	
Sample ID:	GW-9970-BFB-073112-PI	GW-9970-BFB-103112-PI	WG-9970-BFB-013113-PI	WG-9970-BFB-042513-PI	WG-9970-BFB-072313-PI	
Sample Date:	7/31/2012	10/31/2012	1/31/2013	4/25/2013	7/23/2013	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	97	77	80	97	140
Chloroform (Trichloromethane)	µg/L	90	91	90	89	88
cis-1,2-Dichloroethene	µg/L	44	39	48	41	43
Tetrachloroethene	µg/L	1800	1800	1600	1700	1800
trans-1,2-Dichloroethene	µg/L	20 U	20 U	10 U	20 U	10 U
Trichloroethene	µg/L	36	31	34	34	32
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	2.7	4.7	5.8	6.2	6.7
Hexachlorocyclopentadiene	µg/L	0.014	0.010 U	0.015	0.010 U	0.011 U
Hexachloroethane	µg/L	19	22	23	28	30
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry						
Chloride	µg/L	570000	530000	510000	530000	490000
Total organic carbon (TOC)	µg/L	-	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pi WG-9970-BFB-102913-PI 10/29/2013	Pi WG-9970-BFB-013114-PI 1/31/2014	Pi WG-9970-BFB-040414-PI 4/4/2014	Pi WG-9970-BFB-072514-PI 7/25/2014	Pi WG-9970-BFB-103014-PI 10/30/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	100	120	120	86
Chloroform (Trichloromethane)	µg/L	74	83	87	64
cis-1,2-Dichloroethene	µg/L	44	52	48	40
Tetrachloroethene	µg/L	1600	1700	1900	1700
trans-1,2-Dichloroethene	µg/L	10 U	3.1	3.0	10 U
Trichloroethene	µg/L	36	38	36	32
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	6.0	6.3	5.4	8.6
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	21	27	24	28
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011	0.010 U
General Chemistry					
Chloride	µg/L	580000	520000	570000	460000
Total organic carbon (TOC)	µg/L	2000	-		470000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pi	Pi	Pi	Pi	Pi
Sample ID:	WG-9970-BFB-012915-PI	WG-9970-BFB-042915-PI	WG-9970-BFB-072815-PI	WG-9970-BFB-103015-PI	WG-9970-BFB-012816-PI
Sample Date:	1/29/2015	4/29/2015	07/28/2015	10/30/2015	1/28/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	110	80	92	92
Chloroform (Trichloromethane)	µg/L	68	70	63	65
cis-1,2-Dichloroethene	µg/L	43	52	41	46
Tetrachloroethene	µg/L	1700	1500	1700	1700
trans-1,2-Dichloroethene	µg/L	20 U	20 U	10 U	20 U
Trichloroethene	µg/L	47	37	34	40
					10 U
					32
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	8.5	6.5	9.4	9.2
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	26	21	26	27
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
					32
					0.010 U
General Chemistry					
Chloride	µg/L	470000	540000	450000	460000
Total organic carbon (TOC)	µg/L				
					450000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pi	Pi	Pi	T	T
Sample ID:	WG-9970-BFB-042916-PI	WG-9970-BFB-072916-PI	WG-9970-BFB-102816-PI	WG-9970-052810-BFB-T	GW-9970-110410-BFB-T
Sample Date:	4/29/2016	7/29/2016	10/28/2016	5/28/2010	11/4/2010
Parameters	Units				
VOCs					
Carbon tetrachloride				1.0 U	1.0 U
Chloroform (Trichloromethane)	93	100	120	1.0 U	1.0 U
cis-1,2-Dichloroethene	51	61	68	1.0 U	0.50 U
Tetrachloroethene	31	33	39	1.0 U	1.0 U
trans-1,2-Dichloroethene	1600	1800	1700	1.0 U	0.50 U
Trichloroethene	10 U	10 U	10 U	2.4	2.7
	29	31	34		
SVOCs					
Hexachlorobenzene				0.011 U	0.011 U
Hexachlorobutadiene	0.010 U	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	9.4	10	9.6	0.011 U	0.011 U
Hexachloroethane	0.010 U	0.010 U	0.010 U	0.011 U	1.1 U
Octachlorocyclopentene	27	29	30	0.011 U	0.011 U
	0.010 U	0.010 U	0.010 U		
General Chemistry					
Chloride				8900	8500
Total organic carbon (TOC)	470000	450000	400000	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	T	T	T	T	T
Sample ID:	GW-9970-052311-JCB-T	GW-9970-111011-JCB-T	GW-9970-051712-JCB-MW-T	GW-9970-112912-JCB-MW-T	GW-9970-052813-JCB-MW-T
Sample Date:	5/23/2011	11/10/2011	5/17/2012	11/29/2012	5/28/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.3	2.2	2.0	2.2
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	7600	6900	6800	7800
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	T	T	T	T	T
Sample ID:	WG-9970-112613-JCB-MW-T	GW-9970-052714-JCB-MW-T	WG-9970-110314-JCB-MW-T	WG-9970-050216-JCB-T	WG-9970-110116-JCB-T
Sample Date:	11/26/2013	5/27/2014	11/3/2014	5/2/2016	11/1/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.5	2.4	2.8	2.3
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	8800	8400	9600	10000
Total organic carbon (TOC)	µg/L	-			11000

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	White Lake	WW-02	WW-02	WW-02	WW-02
Sample ID:	SW-9970-BFB-102913-LK	GW-9970-052710-BFB-WW2	GW-9970-110410-BFB-WW2	GW-9970-052311-JCB-Dup2	GW-9970-052311-JCB-WW2
Sample Date:	10/29/2013	5/27/2010	11/4/2010	5/23/2011 (Duplicate)	5/23/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.1	1.4	1.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.012 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.012 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.012 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	1.2 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.012 U	0.011 U
General Chemistry					
Chloride	µg/L	22000	92000	24000	57000
Total organic carbon (TOC)	µg/L	3800	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-02	WW-02	WW-02
Sample ID:	GW-9970-111011-JCB-WW2	GW-9970-051812-JCB-WW-2	GW-9970-112912-JCB-WW-2	GW-9970-053013-JCB-WW-2	WG-9970-112713-JCB-WW-2
Sample Date:	11/10/2011	5/18/2012	11/29/2012	5/30/2013	11/27/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	13000	58000	7100	32000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-02	WW-02	WW-02
Sample ID:	GW-9970-052814-JCB-WW-2	WG-9970-110414-JCB-WW-2	WG-9970-052815-JCB-WW-2	GW-9970-110415-JCB-WW2	GW-9970-110415-JCB-DUP2
Sample Date:	5/28/2014	11/4/2014	5/28/2015	11/4/2015	11/4/2015 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.011 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	110000	4900	9300	6400
Total organic carbon (TOC)	µg/L				7800

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-06	WW-06	WW-06
Sample ID:	WG-9970-050316-JCB-WW2	WG-9970-110316-JCB-WW2	GW-9970-052710-BFB-WW6	GW-9970-110310-BFB-WW6	GW-9970-052011-JCB-Dup1
Sample Date:	5/3/2016	11/3/2016	5/27/2010	11/3/2010	5/20/2011 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	1.0 U	1.1	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	4700	5300	2500	2100
Total organic carbon (TOC)	µg/L			-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-06	WW-06	WW-06	WW-06	WW-06
Sample ID:	GW-9970-052011-JCB-WW06	GW-9970-110911-JCB-WW06	GW-9970-051712-JCB-WW-06	GW-9970-112912-JCB-DUP1	GW-9970-112912-JCB-WW-06
Sample Date:	5/20/2011	11/9/2011	5/17/2012	11/29/2012 (Duplicate)	11/29/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	1900	1900	2200	3200
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-06	WW-06	WW-06	WW-06	WW-06
Sample ID:	GW-9970-052913-JCB-WW-6	GW-9970-JCB-DUP2	WG-9970-112713-JCB-WW-6	WG-9970-112713-JCB--DUP2	GW-9970-052814-JCB-WW-6
Sample Date:	5/29/2013	5/29/2013 (Duplicate)	11/27/2013	11/27/2013 (Duplicate)	5/28/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	2900	3500	3400	3500
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-06	WW-06	WW-06	WW-06	WW-06
Sample ID:	GW-9970-052814-JCB-Dup2	WG-9970-110414-JCB-WW-6	WG-9970-110414-JCB-DUP2	WG-9970-052715-JCB-WW-6	WG-9970-110315-JCB-WW6
Sample Date:	5/28/2014 (Duplicate)	11/4/2014	11/4/2014 (Duplicate)	5/27/2015	11/3/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.011 U	0.011 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	2600	1700	1900	1700
Total organic carbon (TOC)	µg/L				

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-06	WW-06	WW-06	WW-06	WW-13
Sample ID:	WG-9970-050316-JCB-WW6	WG-9970-050316-JCB-Dup2	WG-9970-110316-JCB-WW6	WG-9970-110316-JCB-Dup2	WG-9970-052810-BFB-WW13
Sample Date:	5/3/2016	5/3/2016 (Duplicate)	11/3/2016	11/3/2016 (Duplicate)	5/28/2010
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2200	2500	3100	4900
Total organic carbon (TOC)	µg/L				-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	GW-9970-110510-BFB-WW13	GW-9970-051911-JCB-WW13	GW-9970-110911-JCB-WW13	GW-9970-051712-JCB-DUP2	GW-9970-051712-JCB-WW-13
Sample Date:	11/5/2010	5/19/2011	11/9/2011	5/17/2012 (Duplicate)	5/17/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	1.1 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	4000	3100	1300	1000 U
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	GW-9970-112812-JCB-WW-13	GW-9970-052813-JCB-WW-13	WG-9970-112613-JCB-WW-13	GW-9970-052714-JCB-WW-13	GW-9970-052714-JCB-Dup1
Sample Date:	11/28/2012	5/28/2013	11/26/2013	5/27/2014	5/27/2014 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	1400	1900	1700	1900
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	WG-9970-110314-JCB-WW-13	WG-9970-052615-JCB-WW-13	GW-9970-110215-JCB-WW13	GW-9970-110215-JCB-DUP1	WG-9970-050216-JCB-WW13
Sample Date:	11/3/2014	5/26/2015	11/2/2015	11/2/2015 (Duplicate)	5/2/2016
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	5500	4000	2700	2000
Total organic carbon (TOC)	µg/L				8500

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-24	WW-24	WW-24	WW-24
Sample ID:	WG-9970-110116-JCB-WW13	WG-9970-052810-BFB-WW24	GW-9970-110510-BFB-DUP2	GW-9970-110510-BFB-WW24	GW-9970-051911-JCB-WW24
Sample Date:	11/1/2016	5/28/2010	11/5/2010 (Duplicate)	11/5/2010	5/19/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	0.50 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.011 U	0.011 U	1.1 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	5300	11000	11000	11000
Total organic carbon (TOC)	µg/L		-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	GW-9970-110811-JCB-WW24	GW-9970-051712-JCB-DUP1	GW-9970-051712-JCB-WW-24	GW-9970-112812-JCB-WW-24	GW-9970-052813-JCB-WW-24
Sample Date:	11/8/2011	5/17/2012 (Duplicate)	5/17/2012	11/28/2012	5/28/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	7700	11000	12000	11000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

Historic Plume and Purge Well Concentrations - 2010-2016
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	GW-9970-JCB-DUP1	WG-9970-112613-JCB-WW-24	GW-9970-052714-JCB-WW-24	WG-9970-110314-JCB-WW-24	WG-9970-052615-JCB-WW24
Sample Date:	5/28/2013 (Duplicate)	11/26/2013	5/27/2014	11/3/2014	5/26/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	13000	11000	10000	6400
Total organic carbon (TOC)	µg/L	-	-		8500

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2016
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	GW-9970-110215-JCB-WW24	WG-9970-050216-JCB-WW24	WG-9970-050216-JCB-Dup1	WG-9970-110116-JCB-WW24	WG-9970-110116-JCB-Dup1
Sample Date:	11/2/2015	5/2/2016	5/2/2016 (Duplicate)	11/1/2016	11/1/2016 (Duplicate)
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.012 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.012 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.012 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.012 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.012 U
General Chemistry					
Chloride	µg/L	9500	3300	3300	3800
Total organic carbon (TOC)	µg/L				4300

Notes:

- U - Not detected at the associated reporting limit
- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

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