

2017 Annual Groundwater Monitoring Report

Montague, Michigan
MID 006014906

Glenn Springs Holding Inc



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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 2017 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 lower than the average White Lake level, 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 2017 are summarized below:

- Well Pc – removal and replacement of defective module (May 2017)
- Well Pd – cleaning of well screen (November 2017)
- Well Pe – cleaning of well screen (November 2017)
- Well Pg – adjusted operating parameters; removal and replacement of pump motor and wire (May 2017; June 2017)
- Well Ph – install new carbon dioxide distribution system (August 2017)



- Well Ph – cleaning of well screen; removal and replacement of pump motor (November 2017)
- Well Pi – install new carbon dioxide distribution system (August 2017)

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 2017 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 2017. The measured water level differential did not exceed the required differential of 0.10 foot in the six performance monitoring wells in 2017. In addition, as Table 2.1 shows, all wells maintained a yearly-averaged inward gradient of more than 0.10 foot throughout 2017.

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 2017. 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 2017 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 (1.6 micrograms per liter [$\mu\text{g/L}$] [May] and 1.5 $\mu\text{g/L}$ [November]) at concentrations below the more conservative groundwater protection standard (5.0 $\mu\text{g/L}$). Trichloroethene (TCE) was detected in monitoring well T (2.2 $\mu\text{g/L}$ [May] and 2.6 $\mu\text{g/L}$ [November]) and in monitoring well WW-02 (1.3 $\mu\text{g/L}$ [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.

Hexachlorobenzene was observed in monitoring well WW-06 (0.032 $\mu\text{g/L}$ [November]) at concentrations below the more conservative groundwater protection standard (0.2 $\mu\text{g/L}$). No SVOCs were detected in any other of the plume boundary demonstration monitoring wells.



Chloride concentrations ranged from 1,100 µg/L in monitoring well WW-02 (May 2017) to 91,000 µg/L in MW-97-02 (May 2017). Chloride concentrations were all below the more conservative groundwater protection standards listed in Table 3.1 (125,000 µg/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 31, 2017
- ii) April 27, 2017
- iii) July 31, 2017
- iv) October 30, 2017

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



2017 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 708 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 130 GPM in well Ph. Overall, approximately 372 million gallons of groundwater were pumped in 2017. 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
2017	708	372	97

Examination of Table 4.2 shows that the highest VOCs concentration occurs in well Pg. PCE concentrations in well Pg ranged from 5,120 µg/L (July 2017) to 5,500 µg/L (January 2017). Carbon tetrachloride concentrations in well Pg ranged from 802 µg/L (October 2017) to 933 µg/L (July 2017). PCE is the primary constituent of concern in all the purge wells. The highest PCE concentrations following Pg occurred in wells Pi (1,600 µg/L to 1,800 µg/L), Pb (1,200 µg/L to 1,300 µg/L), and Pd (1,030 µg/L to 1,100 µg/L). Carbon tetrachloride is typically found at the next highest concentration. The highest carbon tetrachloride concentrations following Pg occurred in wells Pd (90.7 µg/L to 120 µg/L), Pi (78.9 µg/L to 110 µg/L), and Pb (30.6 µg/L to 57 µg/L).



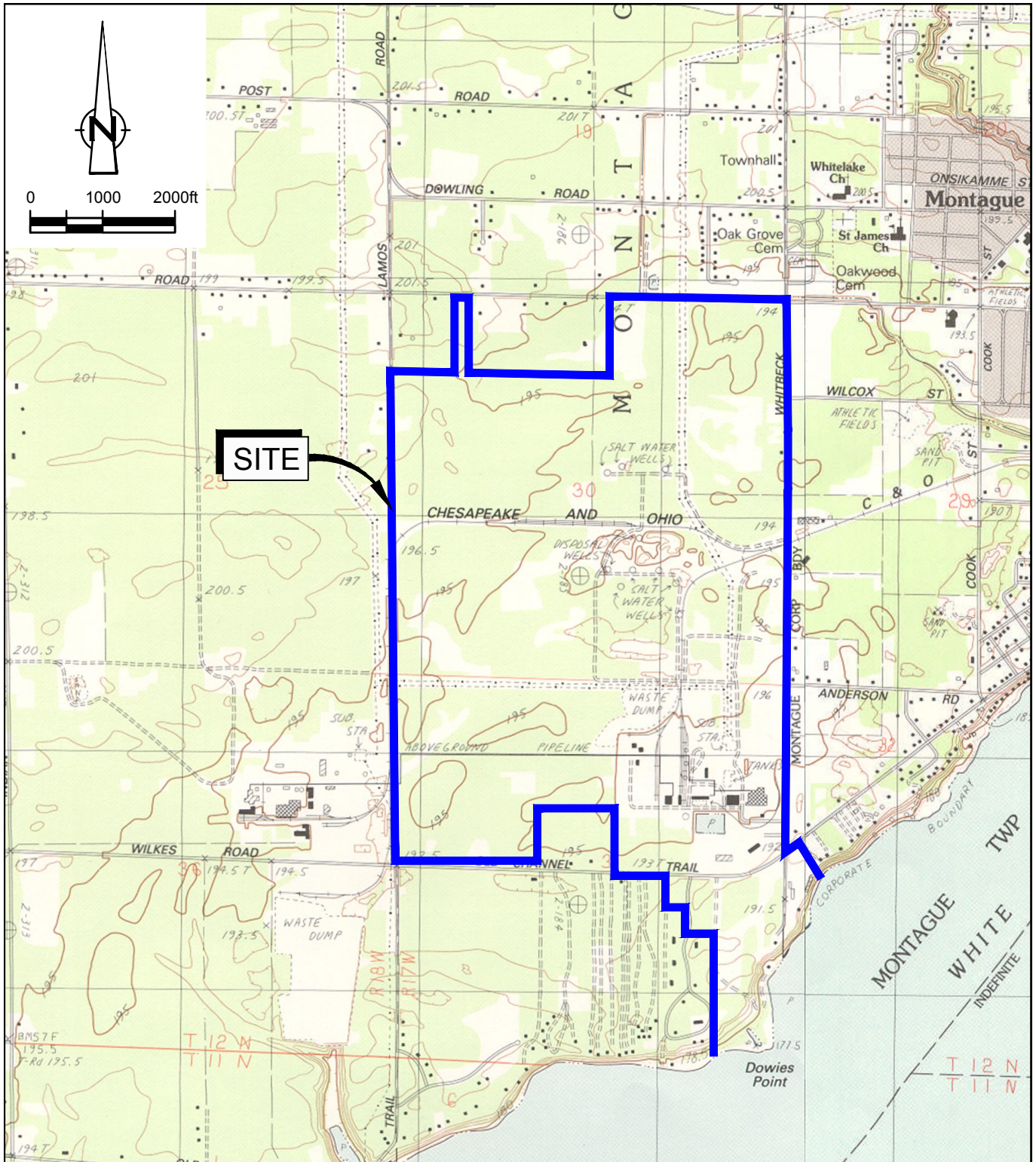
The 2017 analytical results are consistent with historical data. The purge well exhibiting the highest concentrations of these constituents is Pg. In general, the concentrations versus time graphs show a stable or decreasing trend in the constituents of concern concentrations over time. Purge well Pb 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 2017. 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 2017 is shown in Table 4.3. Examination of this table indicates that greater than 4,096 pounds of VOCs and SVOCs were removed by the purge wells during 2017. Purge well Pf removed very little mass (0.08 pound). The majority of the mass was removed by purge wells Pg (2,034 pounds), Pi (694 pounds), Pd (637 pounds), Pb (429 pounds) and Ph (234 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 2017. The 2017 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
2017	4,096	11

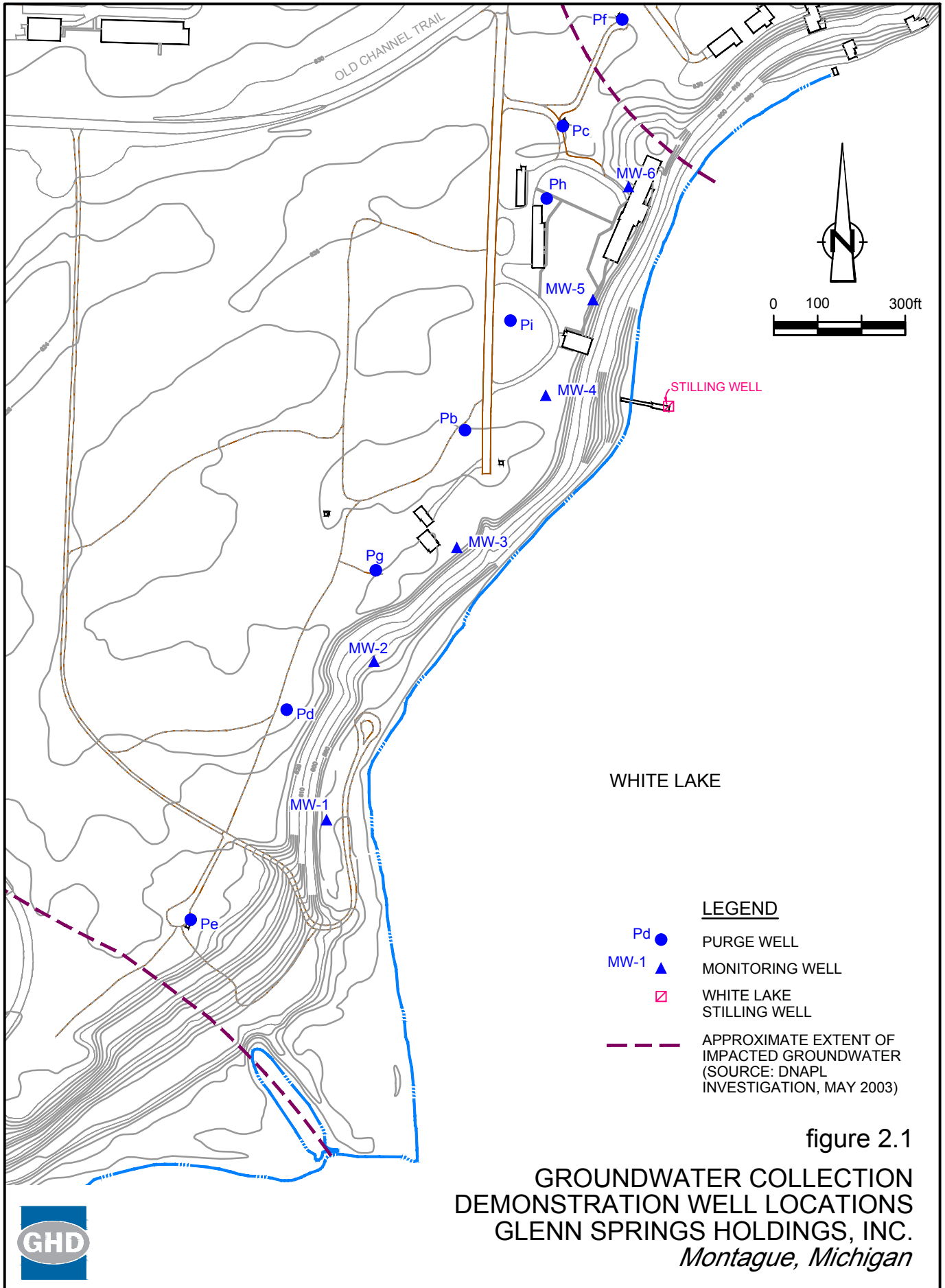


SOURCE: USGS QUADRANGLE MAPS;
MONTAGUE, FLOWER CREEK, AND MICHIGAN 1983

figure 1.1

SITE LOCATION
GLENN SPRINGS HOLDINGS, INC.
Montague, Michigan





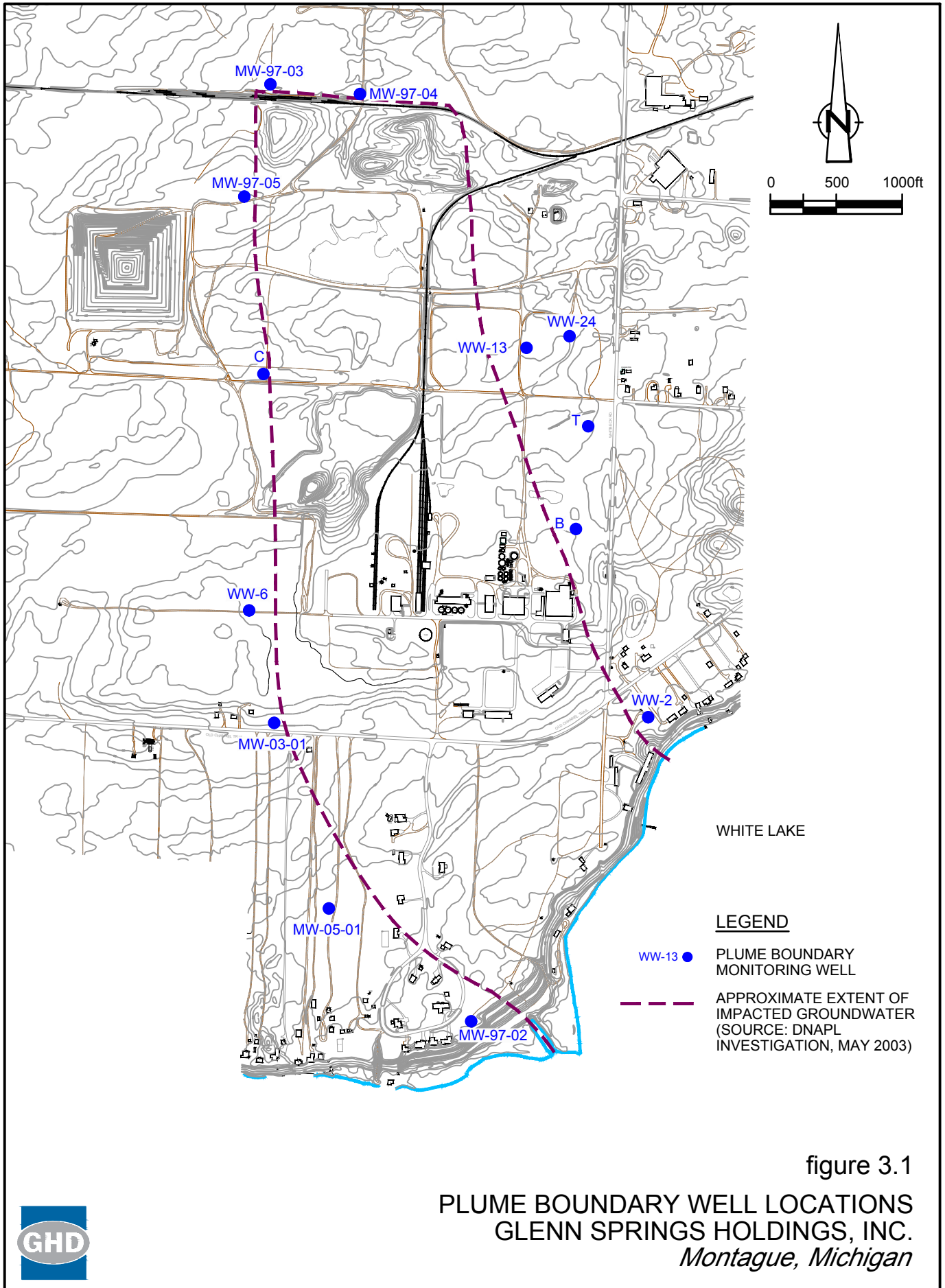


figure 3.1

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



VOC's Removed from Purge Wells
Occidental Chemical

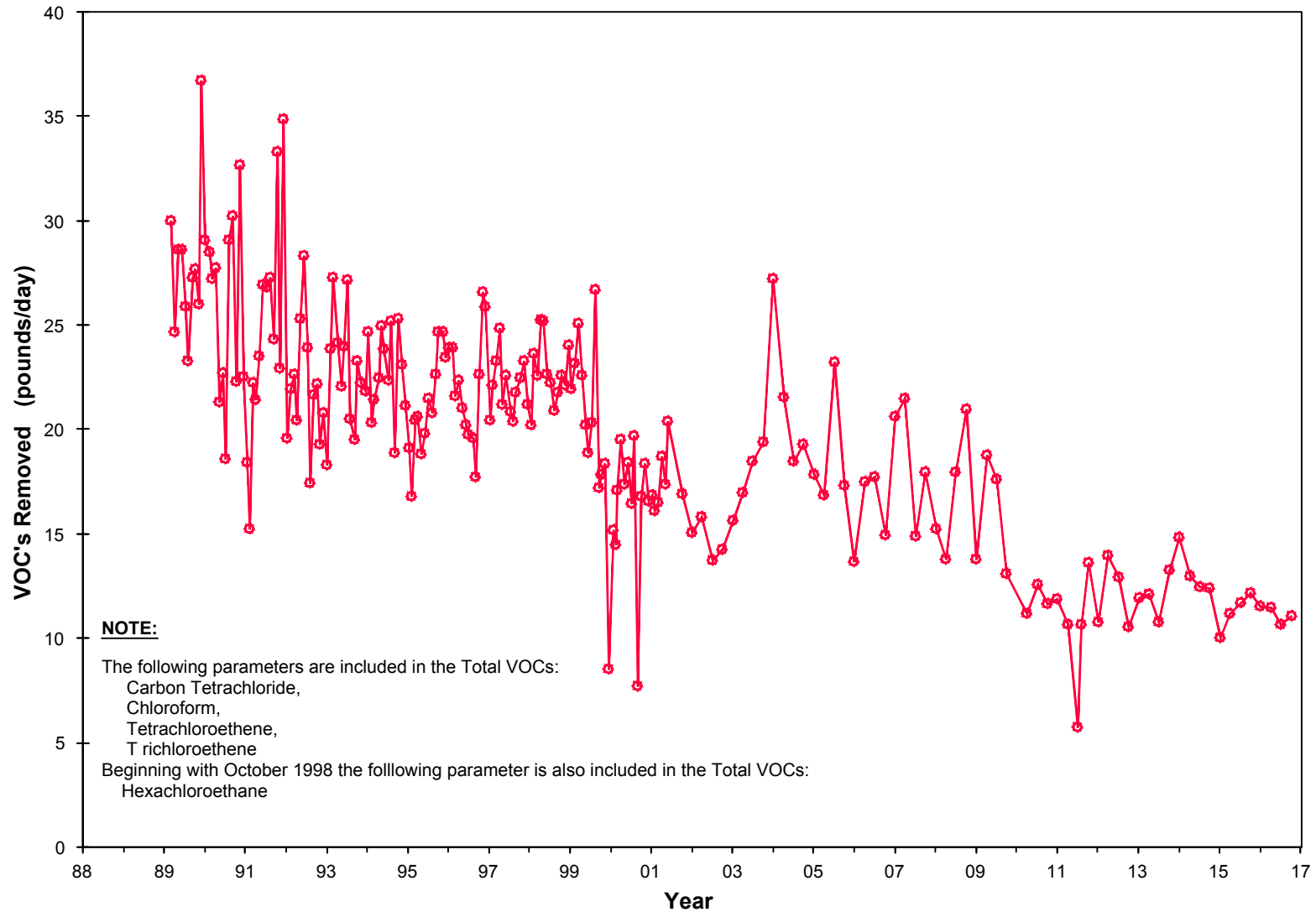


figure 4.1

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



Table 2.1

Summary of Performance Results - 2017
 Groundwater Monitoring Plan
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Month	White Lake Elevation (ft. AMSL)	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6	
		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	579.85	-0.18	579.67	-0.35	579.50	-0.28	579.57	-0.70	579.15	-0.22	579.63	-0.17	579.68
February	579.73	-0.11	579.62	-0.28	579.45	-0.19	579.54	-0.56	579.17	-0.10	579.63	-0.13	579.60
March	579.99	-0.12	579.87	-0.23	579.76	-0.10	579.89	-0.41	579.58	-0.14	579.85	-0.12	579.87
April	580.64	-0.32	580.32	-0.43	580.21	-0.30	580.34	-0.59	580.05	-0.28	580.36	-0.26	580.38
May	581.02	-0.22	580.80	-0.30	580.72	-0.19	580.83	-0.52	580.50	-0.20	580.82	-0.19	580.83
June	581.30	-0.14	581.16	-0.19	581.11	-0.13	581.17	-0.41	580.89	-0.10	581.20	-0.11	581.19
July	581.57	-0.13	581.44	-0.19	581.38	-0.11	581.46	-0.42	581.15	-0.10	581.47	-0.12	581.45
August	581.61	-0.13	581.48	-0.14	581.47	-0.10	581.51	-0.38	581.23	-0.12	581.49	-0.10	581.51
September	581.40	-0.33	581.07	-0.37	581.03	-0.31	581.09	-0.50	580.90	-0.31	581.09	-0.32	581.08
October	581.15	-0.12	581.03	-0.15	581.00	-0.12	581.03	-0.41	580.74	-0.12	581.03	-0.15	581.00
November	580.97	-0.12	580.85	-0.14	580.83	-0.10	580.87	-0.41	580.56	-0.10	580.87	-0.10	580.87
December	580.92	-0.18	580.74	-0.24	580.68	-0.11	580.81	-0.52	580.40	-0.18	580.74	-0.18	580.74
Year 2017 Average:	580.85	-0.17	580.67	-0.25	580.60	-0.17	580.68	-0.49	580.36	-0.16	580.68	-0.16	580.68

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 GW-9970-052317-JCB-B 5/23/2017	B GW-9970-112817-JCB-B 11/28/2017	C GW-9970-052317-JCB-C 5/23/2017	C GW-9970-112817-JCB-C 11/28/2017	MW-03-01 GW-9970-052317-JCB-301 5/23/2017	MW-03-01 GW-9970-112817-JCB-301 11/28/2017	MW-05-01 GW-9970-052317-JCB-501 5/23/2017	
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	1.6	1.5	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	0.010 U	
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachlorocyclopentadiene	µg/L	50	-	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	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
Octachlorocyclopentene	µg/L	50	-	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	25000	33500	2700	2260	1400	2110	2600

- 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 Part 201 generic cleanup criteria

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-05-01 GW-9970-112817-JCB-501 11/28/2017	MW-97-02 GW-9970-052417-JCB-972 5/24/2017	MW-97-02 GW-9970-112817-JCB-972 11/28/2017	MW-97-03 GW-9970-052217-JCB-973 5/22/2017	MW-97-03 GW-9970-112717-JCB-973 11/27/2017	MW-97-04 GW-9970-052217-JCB-974 5/22/2017	MW-97-04 GW-9970-112717-JCB-974 11/27/2017	
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	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	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	1.0 U
Tetrachloroethene	µg/L	5.0	60	1.0 U	1.0 U	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	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	1.0 U
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.011 U	0.011 U	0.010 U	0.010 U	0.0097 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	0.011 U	0.011 U	0.010 U	0.010 U	0.0097 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	50	-	0.011 U	0.011 U	0.010 U	0.010 U	0.0097 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	0.011 U	0.011 U	0.010 U	0.010 U	0.0097 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	50	-	0.011 U	0.011 U	0.010 U	0.010 U	0.0097 U	0.010 U	0.010 U
General Chemistry										
Chloride	µg/L	250000	125000	2760	91000	83900	32000	20100	5300	4980

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 Part 201 generic cleanup criteria

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-97-05 GW-9970-052217-JCB-975 5/22/2017	MW-97-05 GW-9970-112717-JCB-975 11/27/2017	T GW-9970-052317-JCB-T 5/23/2017	T GW-9970-112717-JCB-T 11/27/2017	WW-02 GW-9970-052417-JCB-WW2 5/24/2017	WW-02 GW-9970-052417-JCB-DUP3 5/24/2017 (Duplicate)	
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	2.2	2.6	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	
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachlorocyclopentadiene	µg/L	50	-	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
Hexachloroethane	µg/L	7.3	6.7	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
Octachlorocyclopentene	µg/L	50	-	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	
General Chemistry									
Chloride	µg/L	250000	125000	11000	17300	12000	11700	5100	1100

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 Part 201 generic cleanup criteria

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 GW-9970-112817-JCB-WW2 11/28/2017	WW-02 GW-9970-112817-JCB-Dup3 11/28/2017 (Duplicate)	WW-06 GW-9970-052317-JCB-WW6 5/23/2017	WW-06 GW-9970-052317-JCB-DUP2 5/23/2017 (Duplicate)	WW-06 GW-9970-112817-JCB-WW6 11/28/2017	WW-06 GW-9970-112817-JCB-Dup2 11/28/2017 (Duplicate)
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	1.3	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs								
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.011 U	0.010 U	0.010 U	0.032
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	50	-	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Hexachloroethane	µg/L	7.3	6.7	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	50	-	0.010 U	0.011 U	0.010 U	0.010 U	0.011 U
General Chemistry								
Chloride	µg/L	250000	125000	5080	1000 U	2700	2900	3490

- 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 Part 201 generic cleanup criteria

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 GW-9970-052217-JCB-WW13 5/22/2017	WW-13 GW-9970-112717-JCB-WW13 11/27/2017	WW-13 GW-9970-112717-JCB-Dup1 11/27/2017 (Duplicate)	WW-24 GW-9970-052217-JCB-WW24 5/22/2017	WW-24 GW-9970-052217-JCB-DUP1 5/22/2017 (Duplicate)	WW-24 WG-9970-110116-JCB-WW24 11/1/2016
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	0.010 U	0.0099 U	0.0099 U	0.010 U	0.0099 U
Hexachlorobutadiene	µg/L	15	0.053	0.010 U	0.0099 U	0.0099 U	0.010 U	0.0099 U
Hexachlorocyclopentadiene	µg/L	50	-	0.010 U	0.0099 U	0.0099 U	0.010 U	0.0099 U
Hexachloroethane	µg/L	7.3	6.7	0.010 U	0.0099 U	0.0099 U	0.010 U	0.0099 U
Octachlorocyclopentene	µg/L	50	-	0.010 U	0.0099 U	0.0099 U	0.010 U	0.0099 U
General Chemistry								
Chloride	µg/L	250000	125000	2100	4410	4170	7000	7400

- 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 Part 201 generic cleanup criteria

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	Equipment Blank WG-9970-032117-JCB-DUP3 3/21/2017
Parameters	Units			
VOCs				
Carbon tetrachloride	µg/L	5.0	45	1.0 U
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	-
Tetrachloroethene	µg/L	5.0	60	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1500	-
Trichloroethene	µg/L	5.0	200	1.0 U
SVOCs				
Hexachlorobenzene	µg/L	1.0	0.2	0.011 U
Hexachlorobutadiene	µg/L	15	0.053	0.011 U
Hexachlorocyclopentadiene	µg/L	50	-	0.011 U
Hexachloroethane	µg/L	7.3	6.7	-
Octachlorocyclopentene	µg/L	50	-	0.011 U
General Chemistry				
Chloride	µg/L	250000	125000	1000 U

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 Part 201 generic cleanup criteria

Table 4.1

**Pumping Rates and Treatment System Efficiency
Glenn Springs Holdings, Inc.
Montague, Michigan
January to December 2017**

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		97.58%	70	68	98.21%	70	69	98.12%	70	69	98.06%	70	69	97.72%	70	68	98.06%	70	69
Pc		97.98%	120	118	98.21%	120	118	98.12%	120	118	98.06%	120	118	95.83%	125	120	97.64%	125	122
Pd		97.58%	115	112	98.21%	115	113	97.98%	115	113	98.06%	115	113	97.58%	105	102	98.06%	105	103
Pe		97.58%	115	112	98.21%	115	113	98.12%	115	113	98.06%	115	113	97.72%	115	112	98.06%	115	113
Pf		98.12%	10	10	98.21%	10	10	98.12%	10	10	98.06%	10	10	83.33%	10	8	95.83%	10	10
Pg		97.58%	70	68	98.21%	70	69	98.12%	70	69	98.06%	70	69	96.24%	70	67	81.53%	70	57
Ph		97.98%	130	127	98.21%	130	128	98.12%	130	128	98.06%	130	127	97.72%	120	117	97.78%	120	117
Pi		98.12%	85	83	98.21%	85	83	98.12%	85	83	98.06%	85	83	97.72%	70	68	97.78%	70	68
Total:			715	699		715	702		715	701		715	701		685	664		685	659

Notes:

GPM - Gallons per minute

Table 4.1

Pumping Rates and Treatment System Efficiency
 Glenn Springs Holdings, Inc.
 Montague, Michigan
 January to December 2017

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		97.98%	70	69	97.98%	70	69	97.78%	70	68	97.31%	70	68	98.19%	70	69	97.58%	70	68	70	69
Pc		97.72%	125	122	97.72%	125	122	98.06%	125	123	96.91%	125	121	97.92%	120	118	98.12%	125	123	123	120
Pd		97.98%	115	113	97.98%	115	113	97.78%	120	117	92.47%	120	111	98.19%	115	113	97.58%	120	117	115	112
Pe		97.98%	115	113	97.98%	115	113	97.78%	110	108	97.31%	110	107	98.19%	115	113	97.58%	110	107	114	111
Pf		97.72%	10	10	97.72%	10	10	98.06%	10	10	96.77%	10	10	97.92%	10	10	98.12%	10	10	10	10
Pg		97.98%	70	69	97.98%	70	69	97.78%	70	68	97.31%	70	68	98.19%	70	69	97.58%	70	68	70	67
Ph		97.72%	125	122	97.72%	125	122	98.06%	125	123	96.91%	125	121	97.92%	130	127	98.12%	125	123	126	124
Pi		97.72%	70	68	97.72%	70	68	98.06%	85	83	96.91%	85	82	81.81%	85	70	98.12%	85	83	80	77
	Total:		700	685		700	685		715	700		715	689		715	687		715	700	708	689

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-013117-PB 01/31/2017	WG-9970-BFB-042717-PB 04/27/2017	WG-9970-BFB-073117-PB 07/31/2017	WG-9970-BFB-103017-PB 10/30/2017	WG-9970-BFB-013117-PC 01/31/2017	WG-9970-BFB-042717-PC 04/27/2017	WG-9970-BFB-073117-PC 07/31/2017
VOCs										
Carbon tetrachloride	µg/L	5.0	45	48	57	47.6	30.6	4.1	5.7	4.2
Chloroform (Trichloromethane)	µg/L	80	350	22	22	19.9	18.0	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	10 U	10 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5.0	60	1200	1300	1250	1280	29	33	31.1
trans-1,2-Dichloroethene	µg/L	100	1500	10 U	10 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	12	10 U	10.0 U	10.0 U	1.1	1.2	1.1
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.0095 U	0.0097 U	0.010 U	0.010 U	0.0095 U
Hexachlorobutadiene	µg/L	15	0.053	0.061	0.065	0.0095 U	0.097	2.0	1.7	1.4
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.0095 U	0.0097 U	0.010 U	0.010 U	0.0095 U
Hexachloroethane	µg/L	7.3	6.7	62	47	61.4	113	4.2	4.0	4.0
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.0095 U	0.0097 U	0.010 U	0.010 U	0.0095 U
General Chemistry										
Chloride	µg/L	250000	125000	16000	14000	13000	13100	10000	10000	11900

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

Parameters	Units	Sample Location:		Pc	Pd	Pd	Pd	Pd	Pe	Pe
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-103017-PC 10/30/2017	WG-9970-BFB-013117-PD 01/31/2017	WG-9970-BFB-042717-PD 04/27/2017	WG-9970-BFB-073117-PD 07/31/2017	WG-9970-BFB-103017-PD 10/30/2017	WG-9970-BFB-013117-PE 01/31/2017	WG-9970-BFB-042717-PE 04/27/2017
VOCs										
Carbon tetrachloride	µg/L	5.0	45	2.5	120	120	113	90.7	4.6	4.2
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	22	21	20.7	19.6	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	620	1.0 U	10 U	10 U	10.0 U	10.0 U	2.7	2.4
Tetrachloroethene	µg/L	5.0	60	32.1	1100	1100	1050	1030	84	80
trans-1,2-Dichloroethene	µg/L	100	1500	1.0 U	10 U	10 U	10.0 U	10.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5.0	200	1.0 U	15	14	16.4	12.4	2.7	2.7
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.0096 U	0.010 U	0.010 U	0.0095 U	0.0095 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	1.5	0.098	0.058	0.010	0.010	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	50	NA	0.0096 U	0.010 U	0.010 U	0.0095 U	0.0095 U	0.010 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	4.1	43	35	24.8	42.0	1.9	1.7
Octachlorocyclopentene	µg/L	50	NA	0.0096 U	0.010 U	0.010 U	0.0095 U	0.0095 U	0.010 U	0.010 U
General Chemistry										
Chloride	µg/L	250000	125000	11700	170000	180000	172000	168000	96000	94000

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:		Pe	Pe	Pf	Pf	Pf	Pf	Pg
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-073117-PE 07/31/2017	WG-9970-BFB-103017-PE 10/30/2017	WG-9970-BFB-013117-PF 01/31/2017	WG-9970-BFB-042717-PF 04/27/2017	WG-9970-BFB-073117-PF 07/31/2017	WG-9970-BFB-103017-PF 10/30/2017	WG-9970-BFB-013117-PG 01/31/2017
VOCs										
Carbon tetrachloride	µg/L	5.0	45	3.9	3.0	1.0 U	1.0 U	1.0 U	1.0 U	900
Chloroform (Trichloromethane)	µg/L	80	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	100
cis-1,2-Dichloroethene	µg/L	70	620	2.4	2.3	1.0 U	1.0 U	1.0 U	1.0 U	50 U
Tetrachloroethene	µg/L	5.0	60	74.0	78.0	1.9	2.0	1.6	1.7	5500
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	50 U
Trichloroethene	µg/L	5.0	200	2.5	2.2	1.0 U	1.0 U	1.0 U	1.0 U	50 U
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.0095 U	0.0096 U	0.010 U	0.010 U	0.0096 U	0.0096 U	0.010 U
Hexachlorobutadiene	µg/L	15	0.053	0.027	0.0096 U	0.010 U	0.010 U	0.014	0.0096 U	4.9
Hexachlorocyclopentadiene	µg/L	50	NA	0.0095 U	0.0096 U	0.010 U	0.010 U	0.0096 U	0.0096 U	0.010 U
Hexachloroethane	µg/L	7.3	6.7	1.6	2.0	0.11	0.092	0.10	0.10	400
Octachlorocyclopentene	µg/L	50	NA	0.0095 U	0.0096 U	0.010 U	0.010 U	0.0096 U	0.0096 U	0.014
General Chemistry										
Chloride	µg/L	250000	125000	87600	89200	2600	2400	2650	2880	24000

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:		Pg	Pg	Pg	Ph	Ph	Ph	Ph
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-042717-PG 04/27/2017	WG-9970-BFB-073117-PG 07/31/2017	WG-9970-BFB-103017-PG 10/30/2017	WG-9970-BFB-013117-PH 01/31/2017	WG-9970-BFB-042717-PH 04/27/2017	WG-9970-BFB-073117-PH 07/31/2017	WG-9970-BFB-103017-PH 10/30/2017
VOCs										
Carbon tetrachloride	µg/L	5.0	45	850	933	802	30	30	24.2	16.8
Chloroform (Trichloromethane)	µg/L	80	350	88	89.2	89.4	7.4	8.0	7.2	6.4
cis-1,2-Dichloroethene	µg/L	70	620	50 U	50.0 U	50.0 U	3.2	3.4	3.6	3.2
Tetrachloroethene	µg/L	5.0	60	5300	5120	5250	350	390	336	347
trans-1,2-Dichloroethene	µg/L	100	1500	50 U	50.0 U	50.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	µg/L	5.0	200	50 U	50.0 U	50.0 U	6.1	6.3	6.2	5.0
SVOCs										
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.0097 U	0.0097 U	0.010 U	0.010 U	0.0096 U	0.0097 U
Hexachlorobutadiene	µg/L	15	0.053	5.8	5.1	6.7	3.6	3.1	1.1	3.1
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.0097 U	0.0097 U	0.010 U	0.010 U	0.0096 U	0.0097 U
Hexachloroethane	µg/L	7.3	6.7	330	382	385	22	18	18.2	19.3
Octachlorocyclopentene	µg/L	50	NA	0.011	0.0097 U	0.0097 U	0.010 U	0.010 U	0.0096 U	0.0097 U
General Chemistry										
Chloride	µg/L	250000	125000	24000	22200	21400	87000	88000	84900	82600

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:		Pi	Pi	Pi	Pi
		Residential and Commercial Drinking Water Criteria	Groundwater Surface Water Interface Criteria	WG-9970-BFB-013117-PI 01/31/2017	WG-9970-BFB-042717-PI 04/27/2017	WG-9970-BFB-073117-PI 07/31/2017	WG-9970-BFB-103017-PI 10/30/2017
VOCs							
Carbon tetrachloride	µg/L	5.0	45	100	110	108	78.9
Chloroform (Trichloromethane)	µg/L	80	350	60	64	59.5	51.0
cis-1,2-Dichloroethene	µg/L	70	620	37	36	38.2	32.6
Tetrachloroethene	µg/L	5.0	60	1700	1800	1600	1630
trans-1,2-Dichloroethene	µg/L	100	1500	10 U	10 U	10.0 U	10.0 U
Trichloroethene	µg/L	5.0	200	32	36	32.5	26.2
SVOCs							
Hexachlorobenzene	µg/L	1.0	0.2	0.010 U	0.010 U	0.0096 U	0.0097 U
Hexachlorobutadiene	µg/L	15	0.053	11	11	8.8	10.5
Hexachlorocyclopentadiene	µg/L	50	NA	0.010 U	0.010 U	0.033	0.055
Hexachloroethane	µg/L	7.3	6.7	34	23	31.3	31.6
Octachlorocyclopentene	µg/L	50	NA	0.010 U	0.010 U	0.0096 U	0.0097 U
General Chemistry							
Chloride	µg/L	250000	125000	460000	320000	409000	441000

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 2017
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	90	1043	102	5	161	12	0.02	522	59	181
Second	91	1049	109	6	162	11	0.02	503	65	193
Third	92	983	107	6	156	11	0.02	505	55	145
Fourth	92	1021	111	6	158	11	0.02	505	55	175
Total:		4096	429	23	637	45	0.08	2034	234	694

11.22

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 - 2017
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)
01/03/17	7.81	579.84	10.08	579.70	51.13	579.77	51.89	579.32	49.98	579.81	50.22	579.88	6.33	580.14	580.10
01/06/17	8.11	579.54	10.40	579.38	51.32	579.58	52.16	579.05	50.23	579.56	50.53	579.57	6.72	579.75	579.61
01/09/17	8.13	579.52	10.43	579.35	51.48	579.42	52.17	579.04	50.28	579.51	50.53	579.57	6.71	579.76	579.62
01/11/17	7.84	579.81	10.14	579.64	51.25	579.65	51.96	579.25	50.09	579.70	50.39	579.71	6.43	580.04	579.90
01/12/17	7.93	579.72	10.24	579.54	51.28	579.62	52.03	579.18	50.13	579.66	50.38	579.72	6.55	579.92	579.87
01/18/17	8.00	579.65	10.32	579.46	51.40	579.50	52.10	579.11	50.19	579.60	50.42	579.68	6.65	579.82	579.98
01/19/17	8.01	579.64	10.33	579.45	51.42	579.48	52.12	579.09	50.21	579.58	50.44	579.66	6.64	579.83	579.87
02/01/17	7.96	579.69	10.26	579.52	51.30	579.60	51.97	579.24	50.07	579.72	50.54	579.56	6.55	579.92	579.74
02/04/17	8.13	579.52	10.42	579.36	51.42	579.48	52.13	579.08	50.25	579.54	50.59	579.51	6.75	579.72	579.45
02/07/17	7.92	579.73	10.22	579.56	51.25	579.65	51.93	579.28	50.09	579.70	50.37	579.73	6.19	580.28	579.92
02/08/17	7.95	579.70	10.25	579.53	51.27	579.63	51.95	579.26	50.10	579.69	50.39	579.71	6.47	580.00	579.92
02/13/17	8.10	579.55	10.40	579.38	51.47	579.43	52.12	579.09	50.20	579.59	50.57	579.53	6.82	579.65	579.70
02/15/17	8.11	579.54	10.41	579.37	51.45	579.45	52.12	579.09	50.23	579.56	50.57	579.53	6.71	579.76	579.65
02/16/17	8.10	579.55	10.40	579.38	51.45	579.45	52.12	579.09	50.22	579.57	50.56	579.54	6.68	579.79	579.62
02/21/17	7.95	579.70	10.27	579.51	51.27	579.63	51.98	579.23	50.10	579.69	50.42	579.68	6.43	580.04	579.88
02/23/17	8.00	579.65	10.31	579.47	51.34	579.56	52.02	579.19	50.15	579.64	50.48	579.62	6.43	580.04	579.87
02/27/17	8.03	579.62	10.33	579.45	51.35	579.55	51.99	579.22	50.15	579.64	50.52	579.58	6.60	579.87	579.87
03/01/17	7.73	579.92	10.07	579.71	51.02	579.88	51.71	579.50	49.89	579.90	50.14	579.96	6.01	580.46	580.29
03/03/17	7.81	579.84	10.03	579.75	51.03	579.87	51.73	579.48	50.05	579.74	50.34	579.76	6.45	580.02	579.93
03/08/17	7.80	579.85	10.02	579.76	51.02	579.88	51.69	579.52	49.99	579.80	50.30	579.80	6.46	580.01	579.86
03/10/17	7.89	579.76	10.12	579.66	51.17	579.73	51.71	579.50	50.16	579.63	50.36	579.74	6.48	579.99	579.70
03/13/17	7.83	579.82	10.04	579.74	51.03	579.87	51.63	579.58	49.88	579.91	50.18	579.92	6.33	580.14	579.99
03/14/17	7.70	579.95	9.93	579.85	50.92	579.98	51.52	579.69	49.98	579.81	50.28	579.82	6.17	580.30	580.08
03/20/17	7.75	579.90	9.98	579.80	50.98	579.92	51.55	579.66	49.81	579.98	50.13	579.97	6.33	580.14	579.93
03/24/17	7.71	579.94	9.94	579.84	50.92	579.98	51.49	579.72	49.77	580.02	50.08	580.02	6.12	580.35	580.15
03/27/17	7.59	580.06	9.83	579.95	50.83	580.07	51.43	579.78	49.67	580.12	49.97	580.13	6.22	580.25	580.42
04/05/17	7.55	580.10	9.80	579.98	50.81	580.09	51.38	579.83	49.65	580.14	49.97	580.13	6.21	580.26	580.37
04/07/17	7.56	580.09	9.81	579.97	50.82	580.08	51.38	579.83	49.68	580.11	49.98	580.12	6.20	580.27	580.27
04/10/17	7.45	580.20	9.69	580.09	50.67	580.23	51.27	579.94	49.53	580.26	49.83	580.27	5.93	580.54	580.54
04/12/17	7.40	580.25	9.64	580.14	50.64	580.26	51.27	579.94	49.50	580.29	49.79	580.31	6.05	580.42	580.63
04/18/17	7.25	580.40	9.52	580.26	50.49	580.41	51.11	580.10	49.35	580.44	49.63	580.47	5.68	580.79	580.90
04/19/17	7.17	580.48	9.45	580.33	50.42	580.48	51.02	580.19	49.29	580.50	49.56	580.54	5.48	580.99	580.97
04/27/17	7.07	580.58	9.28	580.50	50.28	580.62	50.92	580.29	49.15	580.64	49.46	580.64	5.58	580.89	580.79
04/28/17	7.20	580.45	9.36	580.42	50.39	580.51	50.92	580.29	49.29	580.50	49.58	580.52	5.85	580.62	580.65
05/02/17	6.90	580.75	9.15	580.63	50.17	580.73	50.81	580.40	49.03	580.76	49.34	580.76	5.53	580.94	580.95

Table A.1

**Water Level Depths and Elevations
Groundwater Collection Demonstration - 2017
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)
05/03/17	7.00	580.65	9.23	580.55	50.24	580.66	50.87	580.34	49.11	580.68	49.44	580.66	5.65	580.82	580.83
05/09/17	6.95	580.70	9.17	580.61	50.18	580.72	50.80	580.41	49.05	580.74	49.36	580.74	5.54	580.93	580.81
05/11/17	6.90	580.75	9.09	580.69	50.09	580.81	50.69	580.52	49.00	580.79	49.27	580.83	5.31	581.16	581.00
05/18/17	6.85	580.80	9.05	580.73	50.05	580.85	50.65	580.56	48.94	580.85	49.24	580.86	5.29	581.18	581.18
05/19/17	6.80	580.85	8.95	580.83	49.98	580.92	50.78	580.43	48.97	580.82	49.28	580.82	5.45	581.02	581.18
05/23/17	6.70	580.95	8.93	580.85	49.94	580.96	50.58	580.63	48.83	580.96	49.15	580.95	5.34	581.13	581.04
05/30/17	6.72	580.93	8.94	580.84	49.94	580.96	50.50	580.71	48.80	580.99	49.12	580.98	5.37	581.10	581.14
06/02/17	6.67	580.98	8.88	580.90	49.90	581.00	50.55	580.66	48.77	581.02	49.07	581.03	5.32	581.15	581.02
06/07/17	6.68	580.97	8.85	580.93	49.88	581.02	50.52	580.69	48.75	581.04	49.08	581.02	5.29	581.18	581.07
06/14/17	6.53	581.12	8.70	581.08	49.79	581.11	50.38	580.83	48.65	581.14	48.95	581.15	5.15	581.32	581.34
06/16/17	6.50	581.15	8.67	581.11	49.71	581.19	50.34	580.87	48.60	581.19	48.95	581.15	5.25	581.22	581.36
06/19/17	6.53	581.12	8.70	581.08	49.78	581.12	50.35	580.86	48.64	581.15	48.94	581.16	5.18	581.29	581.40
06/21/17	6.55	581.10	8.72	581.06	49.70	581.20	50.32	580.89	48.60	581.19	48.94	581.16	5.13	581.34	581.33
06/29/17	6.21	581.44	8.44	581.34	49.59	581.31	49.98	581.23	48.37	581.42	48.69	581.41	4.79	581.68	581.42
06/30/17	6.23	581.42	8.43	581.35	49.46	581.44	50.10	581.11	48.38	581.41	48.70	581.40	4.85	581.62	581.48
07/03/17	6.24	581.41	8.45	581.33	49.46	581.44	50.09	581.12	48.35	581.44	48.67	581.43	4.89	581.58	581.36
07/07/17	6.24	581.41	8.42	581.36	49.46	581.44	50.08	581.13	48.35	581.44	48.70	581.40	4.89	581.58	581.44
07/11/17	6.24	581.41	8.41	581.37	49.46	581.44	50.08	581.13	48.34	581.45	48.67	581.43	4.88	581.59	581.52
07/12/17	6.17	581.48	8.42	581.36	49.46	581.44	50.08	581.13	48.40	581.39	48.70	581.40	4.66	581.81	581.64
07/14/17	6.24	581.41	8.42	581.36	49.46	581.44	50.08	581.13	48.35	581.44	48.70	581.40	4.89	581.58	581.73
07/19/17	6.22	581.43	8.37	581.41	49.54	581.36	50.05	581.16	48.29	581.50	48.60	581.50	4.85	581.62	581.54
07/20/17	6.17	581.48	8.35	581.43	49.36	581.54	50.02	581.19	48.29	581.50	48.60	581.50	4.78	581.69	581.59
07/27/17	6.14	581.51	8.34	581.44	49.33	581.57	50.02	581.19	48.23	581.56	48.57	581.53	4.80	581.67	581.70
07/31/17	6.25	581.40	8.44	581.34	49.44	581.46	50.11	581.10	48.32	581.47	48.66	581.44	4.90	581.57	581.57
08/02/17	6.19	581.46	8.40	581.38	49.40	581.50	50.00	581.21	48.28	581.51	48.62	581.48	4.79	581.68	581.59
08/04/17	5.97	581.68	8.19	581.59	49.18	581.72	49.87	581.34	48.11	581.68	48.41	581.69	4.47	582.00	581.79
08/07/17	6.24	581.41	8.38	581.40	49.30	581.60	49.87	581.34	48.34	581.45	48.65	581.45	4.71	581.76	581.64
08/11/17	6.19	581.46	8.24	581.54	49.43	581.47	49.93	581.28	48.15	581.64	48.48	581.62	4.70	581.77	581.64
08/16/17	6.17	581.48	8.32	581.46	49.39	581.51	50.07	581.14	48.34	581.45	48.60	581.50	4.78	581.69	581.55
08/21/17	6.10	581.55	8.23	581.55	49.35	581.55	50.01	581.20	48.25	581.54	48.56	581.54	4.77	581.70	581.60
08/28/17	6.23	581.42	8.33	581.45	49.54	581.36	50.02	581.19	48.45	581.34	48.70	581.40	4.74	581.73	581.56
08/31/17	6.24	581.41	8.40	581.38	49.57	581.33	50.07	581.14	48.50	581.29	48.70	581.40	4.76	581.71	581.49
09/06/17	6.55	581.10	8.68	581.10	49.80	581.10	50.20	581.01	48.70	581.09	49.01	581.09	4.86	581.61	581.51
09/08/17	6.57	581.08	8.70	581.08	49.81	581.09	50.26	580.95	48.70	581.09	49.02	581.08	4.91	581.56	581.49
09/13/17	6.64	581.01	8.86	580.92	49.89	581.01	50.26	580.95	48.78	581.01	49.10	581.00	5.02	581.45	581.42

Table A.1

**Water Level Depths and Elevations
Groundwater Collection Demonstration - 2017
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)
09/15/17	6.65	581.00	8.87	580.91	49.90	581.00	50.32	580.89	48.78	581.01	49.10	581.00	5.08	581.39	581.41
09/18/17	6.56	581.09	8.75	581.03	49.81	581.09	50.35	580.86	48.70	581.09	49.02	581.08	5.06	581.41	581.49
09/21/17	6.52	581.13	8.65	581.13	49.74	581.16	50.33	580.88	48.60	581.19	48.91	581.19	5.02	581.45	581.42
09/26/17	6.48	581.17	8.68	581.10	49.68	581.22	50.35	580.86	48.57	581.22	48.87	581.23	5.07	581.40	581.36
09/29/17	6.68	580.97	8.79	580.99	49.89	581.01	50.42	580.79	48.81	580.98	49.11	580.99	5.17	581.30	581.12
10/02/17	6.62	581.03	8.82	580.96	49.83	581.07	50.44	580.77	48.80	580.99	49.01	581.09	5.24	581.23	581.18
10/06/17	6.69	580.96	8.83	580.95	49.88	581.02	50.52	580.69	48.76	581.03	49.19	580.91	5.33	581.14	581.07
10/12/17	6.52	581.13	8.74	581.04	49.76	581.14	50.46	580.75	48.69	581.10	48.97	581.13	5.17	581.30	581.23
10/16/17	6.63	581.02	8.85	580.93	49.89	581.01	50.55	580.66	48.79	581.00	49.12	580.98	5.11	581.36	581.34
10/20/17	6.86	580.79	8.92	580.86	49.96	580.94	50.61	580.60	48.87	580.92	49.38	580.72	5.33	581.14	580.86
10/24/17	6.54	581.11	8.68	581.10	49.83	581.07	50.49	580.72	48.75	581.04	49.09	581.01	5.25	581.22	581.17
10/27/17	6.49	581.16	8.60	581.18	49.84	581.06	50.33	580.88	48.60	581.19	48.98	581.12	4.85	581.62	581.24
10/29/17	6.58	581.07	8.79	580.99	49.98	580.92	50.37	580.84	48.84	580.95	49.09	581.01	5.20	581.27	581.13
11/07/17	6.80	580.85	8.83	580.95	50.00	580.90	50.57	580.64	48.87	580.92	49.14	580.96	5.35	581.12	581.08
11/14/17	6.87	580.78	8.95	580.83	50.08	580.82	50.64	580.57	48.94	580.85	49.20	580.90	5.52	580.95	580.84
11/17/17	6.78	580.87	8.93	580.85	49.99	580.91	50.64	580.57	48.92	580.87	49.23	580.87	5.44	581.03	580.94
11/19/17	6.74	580.91	8.87	580.91	50.09	580.81	50.61	580.60	48.87	580.92	49.17	580.93	5.41	581.06	580.91
11/21/17	6.75	580.90	8.95	580.83	50.05	580.85	50.64	580.57	48.89	580.90	49.24	580.86	5.32	581.15	580.87
11/22/17	6.84	580.81	9.02	580.76	50.06	580.84	50.70	580.51	48.97	580.82	49.31	580.79	5.47	581.00	581.06
11/27/17	6.86	580.79	9.04	580.74	50.04	580.86	50.73	580.48	48.99	580.80	49.34	580.76	5.44	581.03	581.01
11/30/17	6.78	580.87	8.98	580.80	49.96	580.94	50.68	580.53	48.93	580.86	49.23	580.87	5.40	581.07	581.09
12/06/17	6.86	580.79	9.04	580.74	50.04	580.86	50.82	580.39	49.05	580.74	49.34	580.76	5.44	581.03	580.84
12/08/17	6.93	580.72	9.08	580.70	50.07	580.83	50.84	580.37	49.03	580.76	49.39	580.71	5.64	580.83	580.81
12/11/17	6.85	580.80	8.97	580.81	50.03	580.87	50.75	580.46	49.00	580.79	49.32	580.78	5.43	581.04	580.99
12/13/17	6.93	580.72	9.13	580.65	50.14	580.76	50.81	580.40	49.05	580.74	49.39	580.71	5.60	580.87	580.96
12/14/17	6.81	580.84	9.03	580.75	50.05	580.85	50.81	580.40	48.97	580.82	49.26	580.84	5.40	581.07	581.11
12/21/17	6.98	580.67	9.19	580.59	50.17	580.73	50.85	580.36	49.11	580.68	49.42	580.68	5.45	581.02	580.79
12/22/17	6.87	580.78	9.10	580.68	50.05	580.85	50.78	580.43	49.00	580.79	49.30	580.80	5.32	581.15	581.05
12/28/17	7.06	580.59	9.29	580.49	50.17	580.73	50.86	580.35	49.18	580.61	49.48	580.62	5.62	580.85	580.82

Notes:

ft. AMSL - Feet Above Mean Sea Level

Appendix B

Field Stabilization Parameters

**2017 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	05/23/2017	1215	10.91	0.224	2.46	6.99	-212.2	
B	05/23/2017	1220	10.42	0.227	1.26	7.43	-192.5	
B	05/23/2017	1225	10.36	0.223	1.16	7.64	-189.6	
B	05/23/2017	1230	10.25	0.225	1.05	7.53	-187.3	
B	05/23/2017	1235	10.2	0.224	0.99	7.42	-187.6	
B	05/23/2017	1240	10.19	0.223	0.94	7.38	-186.5	GW-9970-052317-JCB-B
B	11/28/2017	910	10.05	0.245	1.29	7.45	237.3	
B	11/28/2017	915	9.94	0.238	0.99	7.43	236.6	
B	11/28/2017	920	9.81	0.231	1.06	7.97	222.7	
B	11/28/2017	925	9.74	0.229	0.96	8.07	222	GW-9970-052317-JCB-C
C	05/23/2017	1120	10.08	0.219	2.51	7.26	-194.9	
C	05/23/2017	1125	9.93	0.193	1.57	7.04	-159.9	
C	05/23/2017	1130	9.91	0.181	1.34	6.99	-138.3	
C	05/23/2017	1135	9.84	0.175	1.2	6.82	-124.6	
C	05/23/2017	1140	9.91	0.173	1.19	6.78	-113.3	GW-9970-052317-JCB-C
C	11/28/2017	1000	9.59	0.184	6.59	7.52	235.8	
C	11/28/2017	1005	9.53	0.191	1.07	7.17	230.5	
C	11/28/2017	1010	9.5	0.182	1.04	6.6	245	
C	11/28/2017	1015	9.52	0.177	1.14	6.78	234.2	
C	11/28/2017	1020	--	--	--	--	--	
C	11/28/2017	1025	9.48	0.163	2.35	7.2	227.3	
C	11/28/2017	1030	9.5	0.161	3.16	7.47	218	GW-9970-052317-JCB-B
MW-03-01	05/23/2017	1425	9.01	0.251	10.43	7.39	-107.1	
MW-03-01	05/23/2017	1430	8.91	0.245	10.33	7.41	-88.1	
MW-03-01	05/23/2017	1435	8.89	0.243	10.24	7.41	-81.9	
MW-03-01	05/23/2017	1440	8.89	0.242	10.17	7.43	-76.2	GW-9970-052317-JCB-301
MW-03-01	11/28/2017	1230	8.78	0.231	6.51	7.82	232.6	
MW-03-01	11/28/2017	1235	8.72	0.229	6.23	7.76	231	
MW-03-01	11/28/2017	1240	8.7	0.228	6.35	7.75	229.1	
MW-03-01	11/28/2017	1245	8.69	0.228	6.12	7.73	228.1	
MW-03-01	11/28/2017	1250	8.68	0.228	6.51	7.73	227.1	GW-9970-052317-JCB-301
MW-05-01	05/23/2017	1510	8.91	0.246	11.17	7.47	-114.2	
MW-05-01	05/23/2017	1515	8.85	0.246	11.07	7.58	-93.2	
MW-05-01	05/23/2017	1520	8.85	0.247	10.92	7.54	-83.2	
MW-05-01	05/23/2017	1525	8.81	0.247	10.88	7.52	-77.7	GW-9970-052317-JCB-501
MW-05-01	11/28/2017	1320	8.77	0.233	8	7.78	234.6	
MW-05-01	11/28/2017	1325	8.74	0.235	8.1	7.73	231.5	
MW-05-01	11/28/2017	1330	8.66	0.234	8.12	7.73	229.8	GW-9970-052317-JCB-501
MW-97-02	05/24/2017	935	10.17	0.58	10.21	7.42	-117.2	
MW-97-02	05/24/2017	940	9.97	0.577	10.16	7.18	-105.7	
MW-97-02	05/24/2017	945	9.96	0.577	10.05	7.05	-109.4	
MW-97-02	05/24/2017	950	9.94	0.58	9.97	6.99	-136.9	
MW-97-02	05/24/2017	955	9.89	0.582	9.84	6.94	-132.5	

**2017 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-97-02	05/24/2017	1000	9.78	0.584	9.82	6.9	-122.9	GW-9970-052417-JCB-972
MW-97-02	11/28/2017	1405	9.53	0.534	7.42	7.52	227.3	
MW-97-02	11/28/2017	1410	9.42	0.547	7.89	7.51	224	
MW-97-02	11/28/2017	1415	9.41	0.549	7.45	7.51	223.1	
MW-97-02	11/28/2017	1420	9.4	0.55	7.37	7.5	222.4	GW-9970-052417-JCB-972
MW-97-03	05/22/2017	1125	9.99	0.343	4.49	9.04	-15	
MW-97-03	05/22/2017	1130	9.86	0.325	4.15	9.13	23.7	
MW-97-03	05/22/2017	1135	9.95	0.326	4.12	9.04	49.6	
MW-97-03	05/22/2017	1140	10.01	0.328	4.15	8.91	68.6	
MW-97-03	05/22/2017	1145	10.11	0.329	4.11	8.8	71.6	
MW-97-03	05/22/2017	1150	10.1	0.33	4.14	8.61	95.5	GW-9970-052217-JCB-973
MW-97-03	11/27/2017	1200	10.12	0.302	2.76	-2.3	536.7	
MW-97-03	11/27/2017	1205	9.98	0.284	2.34	7.68	249.5	
MW-97-03	11/27/2017	1210	9.99	0.283	2.29	7.64	242.8	
MW-97-03	11/27/2017	1215	10	0.285	2.29	7.66	241.3	GW-9970-052217-JCB-973
MW-97-04	05/22/2017	1225	9.34	0.166	3.95	8.88	14	
MW-97-04	05/22/2017	1230	9.14	0.213	2.54	9.39	13.1	
MW-97-04	05/22/2017	1235	9.12	0.217	2.36	9.4	36.8	
MW-97-04	05/22/2017	1240	9.12	0.218	2.25	9.39	30.9	GW-9970-052217-JCB-974
MW-97-04	11/27/2017	1235	9.45	0.136	2.6	6.85	252.1	
MW-97-04	11/27/2017	1240	9.11	0.163	0.82	6.9	251.6	
MW-97-04	11/27/2017	1245	8.94	0.196	0.62	7.19	250.3	
MW-97-04	11/27/2017	1250	8.92	0.199	0.6	7.39	248.5	
MW-97-04	11/27/2017	1255	8.91	0.199	0.49	7.48	244.4	
MW-97-04	11/27/2017	1300	8.88	0.2	0.45	7.52	242.9	GW-9970-052217-JCB-974
MW-97-05	05/22/2017	1330	10.18	0.238	4.15	10.03	-146.6	
MW-97-05	05/22/2017	1335	9.84	0.215	2.85	10	-93.1	
MW-97-05	05/22/2017	1340	9.75	0.209	2.44	9.77	-69.7	
MW-97-05	05/22/2017	1345	9.78	0.208	2.27	9.53	-73	
MW-97-05	05/22/2017	1350	9.79	0.207	2.18	9.32	-61.1	
MW-97-05	05/22/2017	1355	9.79	0.207	2.11	9.08	-45.1	GW-9970-052217-JCB-975
MW-97-05	11/27/2017	1340	9.37	0.214	3.48	7.66	247.8	
MW-97-05	11/27/2017	1345	9.23	0.223	3.51	7.82	243.6	
MW-97-05	11/27/2017	1350	9.29	0.227	3.46	7.89	242.2	
MW-97-05	11/27/2017	1355	9.28	0.23	3.5	7.93	240.7	GW-9970-052217-JCB-975
T	05/23/2017	1005	9.92	0.231	3.03	7.96	-306.6	
T	05/23/2017	1010	9.63	0.218	1.89	7.82	-293.2	
T	05/23/2017	1015	9.65	0.216	1.52	7.74	-284.9	
T	05/23/2017	1020	9.7	0.216	1.37	7.71	-264.8	
T	05/23/2017	1025	9.74	0.216	1.3	7.05	-194.7	
T	05/23/2017	1030	9.7	0.215	1.19	7.01	-179.6	
T	05/23/2017	1035	9.67	0.215	1.14	6.92	-173.2	GW-9970-052317-JCB-T
T	11/27/2017	1610	9.1	0.197	2.35	8.7	247.5	
T	11/27/2017	1615	8.97	0.199	1.04	8.25	244	
T	11/27/2017	1620	8.96	0.199	0.78	8.15	242.8	
T	11/27/2017	1625	8.96	0.2	0.68	8.1	242.4	GW-9970-052317-JCB-T

**2017 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-13	05/22/2017	1540	10.45	0.112	8.20	11.39	-214	
WW-13	05/22/2017	1545	10.32	0.114	8.32	11.33	-149.8	
WW-13	05/22/2017	1550	10.26	0.126	8.23	11.05	-119.7	
WW-13	05/22/2017	1555	10.22	0.131	7.87	10.73	-91	
WW-13	05/22/2017	1600	10.21	0.138	7.50	10.44	-76.4	
WW-13	05/22/2017	1605	10.19	0.138	7.08	10.19	-79.1	
WW-13	05/22/2017	1610	10.14	0.145	6.91	10.05	-48.2	
WW-13	05/22/2017	1615	10.11	0.147	6.62	9.9	-36.3	GW-9970-052217-JCB-WW13
WW-13	11/27/2017	1515	9.92	0.137	6.05	8.29	258.2	
WW-13	11/27/2017	1520	9.92	0.136	6.94	8.39	256.7	
WW-13	11/27/2017	1525	9.93	0.147	6.63	8.4	253.3	
WW-13	11/27/2017	1530	9.91	0.149	6.1	8.39	244.1	
WW-13	11/27/2017	1535	9.94	0.154	5.28	8.36	247.2	
WW-13	11/27/2017	1540	9.91	0.159	5.24	8.34	248.6	GW-9970-052217-JCB-WW13
WW-2	05/24/2017	1035	10.06	0.156	3.93	7.61	-154.3	
WW-2	05/24/2017	1040	9.9	0.154	2.16	7.43	-149.2	
WW-2	05/24/2017	1045	9.85	0.156	1.56	7.43	-153.4	
WW-2	05/24/2017	1050	9.86	0.161	1.38	7.46	-152.3	
WW-2	05/24/2017	1055	9.82	0.164	1.3	7.46	-162.2	GW-9970-052417-JCB-WW2
WW-2	11/28/2017	1455	9.58	0.153	2.15	8.82	232.7	
WW-2	11/28/2017	1500	9.59	0.15	1.34	8.44	232.1	
WW-2	11/28/2017	1505	9.59	0.149	1.27	8.46	231.8	
WW-2	11/28/2017	1510	9.6	0.15	1.19	8.51	231.2	GW-9970-052417-JCB-WW2
WW-24	05/22/2017	1430	11.27	0.219	3.22	8.85	-192.6	
WW-24	05/22/2017	1435	10.63	0.213	1.63	9.25	-135.2	
WW-24	05/22/2017	1440	10.52	0.212	1.35	8.95	-105.7	
WW-24	05/22/2017	1445	10.58	0.213	1.24	8.55	-93.5	
WW-24	05/22/2017	1450	10.66	0.213	1.2	8.21	-78.6	
WW-24	05/22/2017	1455	10.71	0.213	1.19	9.98	-68.4	GW-9970-052217-JCB-WW24
WW-24	11/27/2017	1430	9.59	0.18	4.43	7.22	255.2	
WW-24	11/27/2017	1435	9.44	0.186	0.94	7.64	248.7	
WW-24	11/27/2017	1440	9.4	0.188	0.78	7.86	247	
WW-24	11/27/2017	1445	9.38	0.19	0.71	7.93	245.8	
WW-24	11/27/2017	1450	9.37	0.19	0.68	7.95	244.6	GW-9970-052217-JCB-WW24
WW-6	05/23/2017	1320	9.2	0.187	4.03	7.39	-175.8	
WW-6	05/23/2017	1325	9.01	0.192	2.58	7.57	-160.6	
WW-6	05/23/2017	1330	8.97	0.229	6.76	7.45	-100.6	
WW-6	05/23/2017	1335	8.96	0.239	8.26	7.39	-80.6	
WW-6	05/23/2017	1340	8.98	0.24	8.57	7.4	-74.3	
WW-6	05/23/2017	1345	8.97	0.24	8.77	7.35	-70.3	GW-9970-052317-JCB-WW6
WW-6	11/28/2017	1110	8.92	0.171	2.09	8.13	230.5	
WW-6	11/28/2017	1115	8.92	0.201	1.88	7.92	228.6	
WW-6	11/28/2017	1120	8.92	0.215	4.35	8.16	226.2	
WW-6	11/28/2017	1125	8.92	0.224	5.53	8.2	223.9	
WW-6	11/28/2017	1130	8.93	0.231	6.04	8.15	222.8	
WW-6	11/28/2017	1135	8.92	0.234	5.93	8.12	221.6	GW-9970-052317-JCB-WW6

Notes:

- * - 24-hour clock (military time)
- - Measurement not taken
- 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

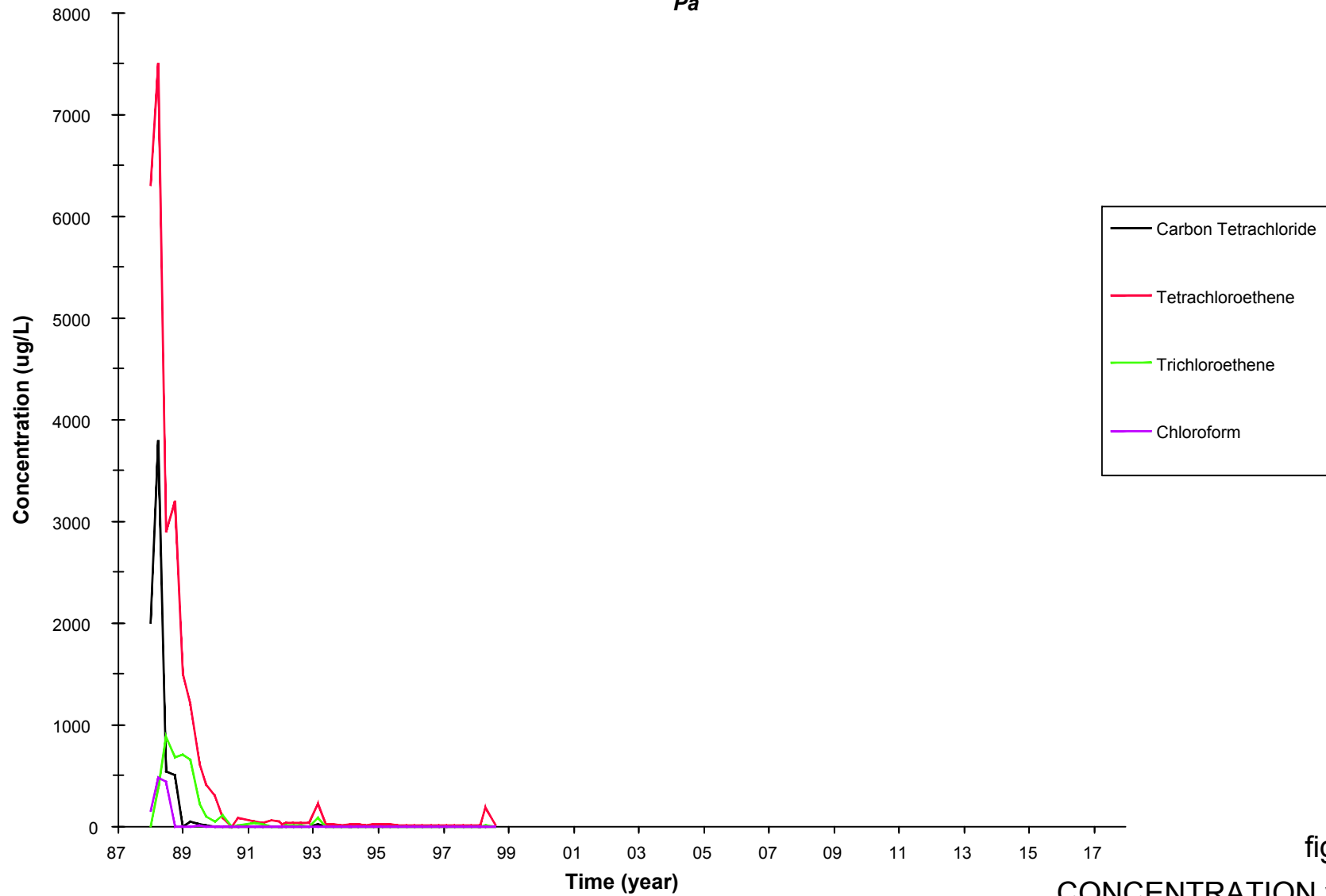


figure C.1

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



Occidental Chemical
Pb

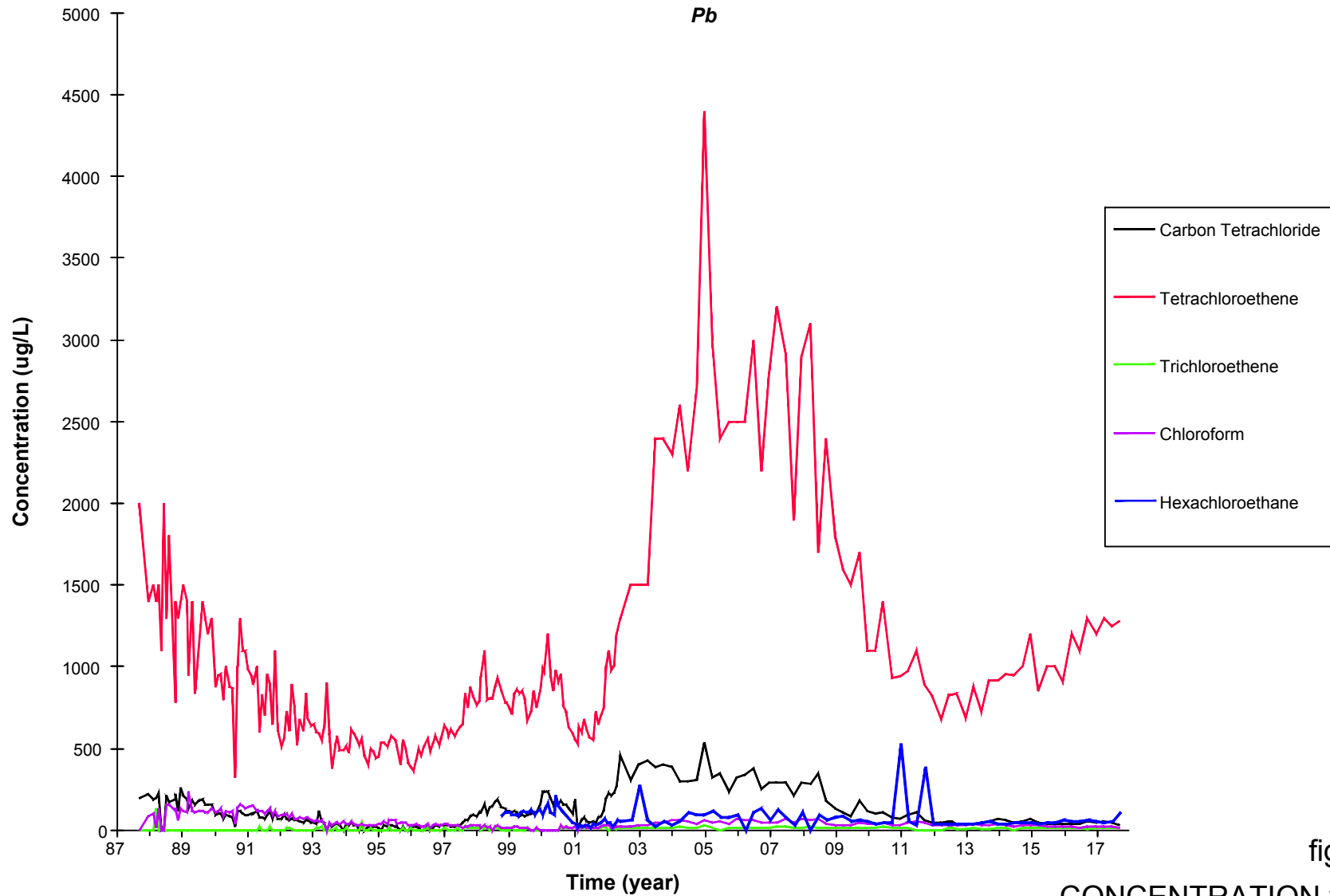


figure C.2

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



Occidental Chemical
Pc

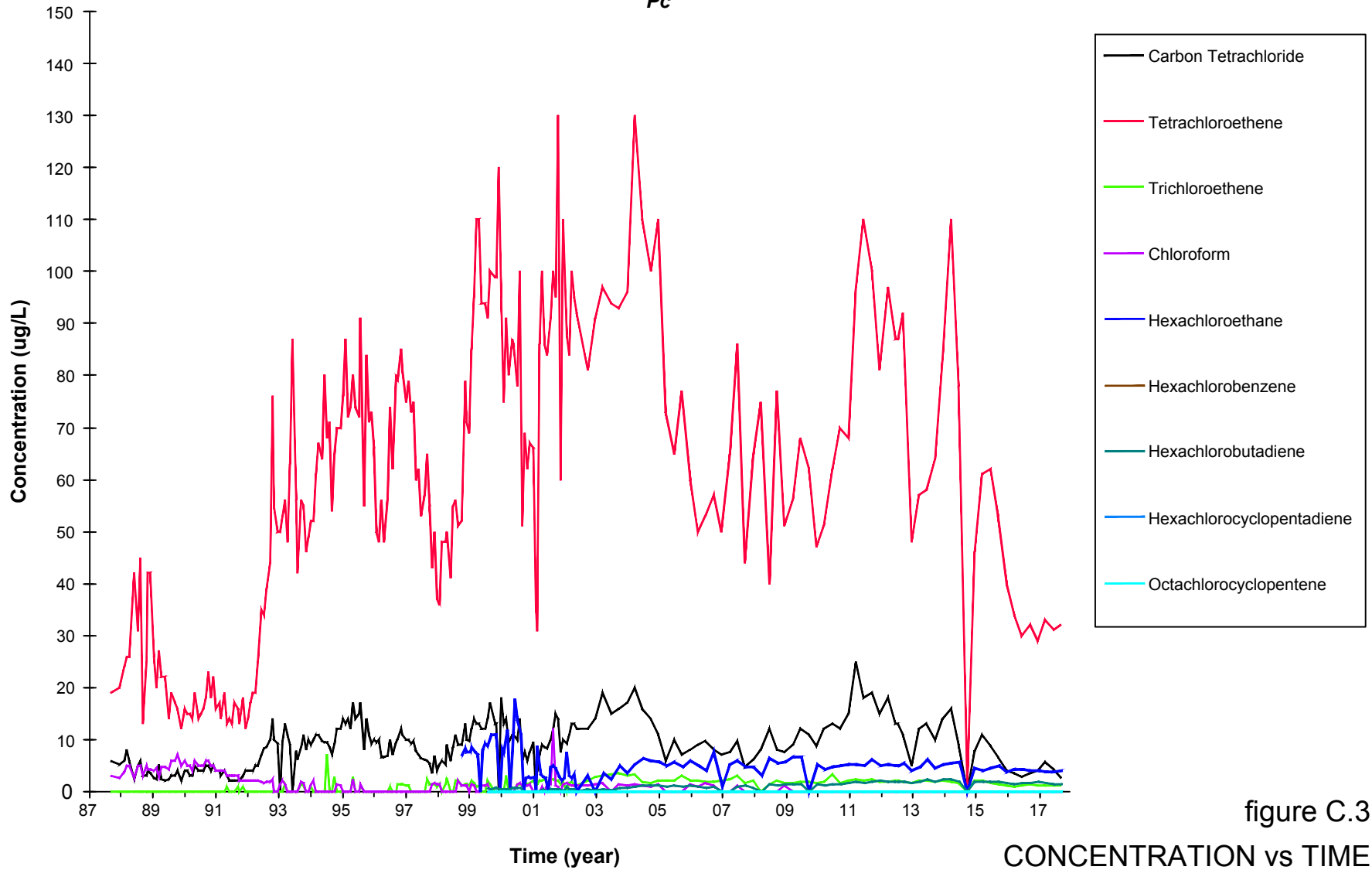


figure C.3

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



Occidental Chemical
Pd

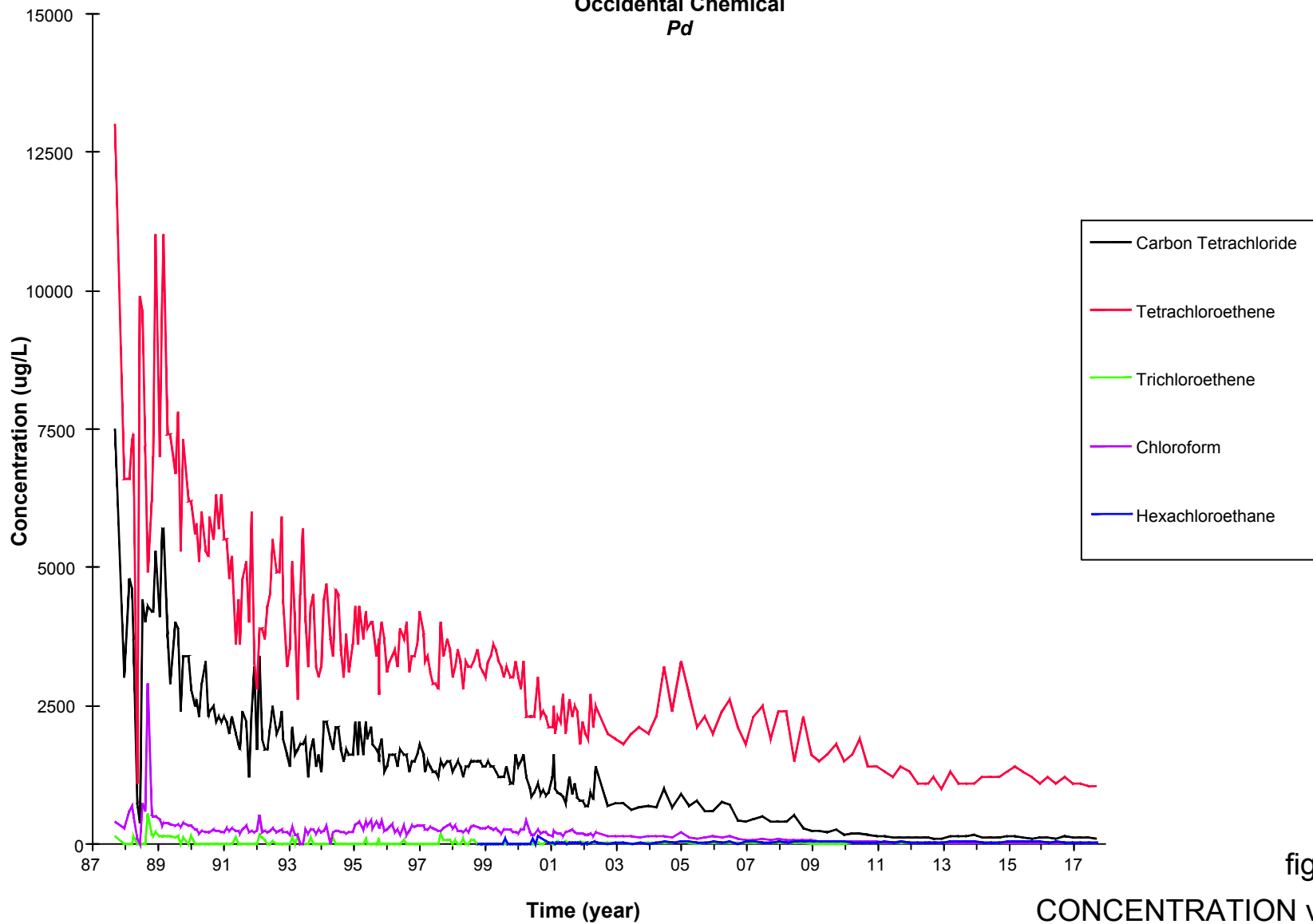


figure C.4

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



Occidental Chemical
Pe

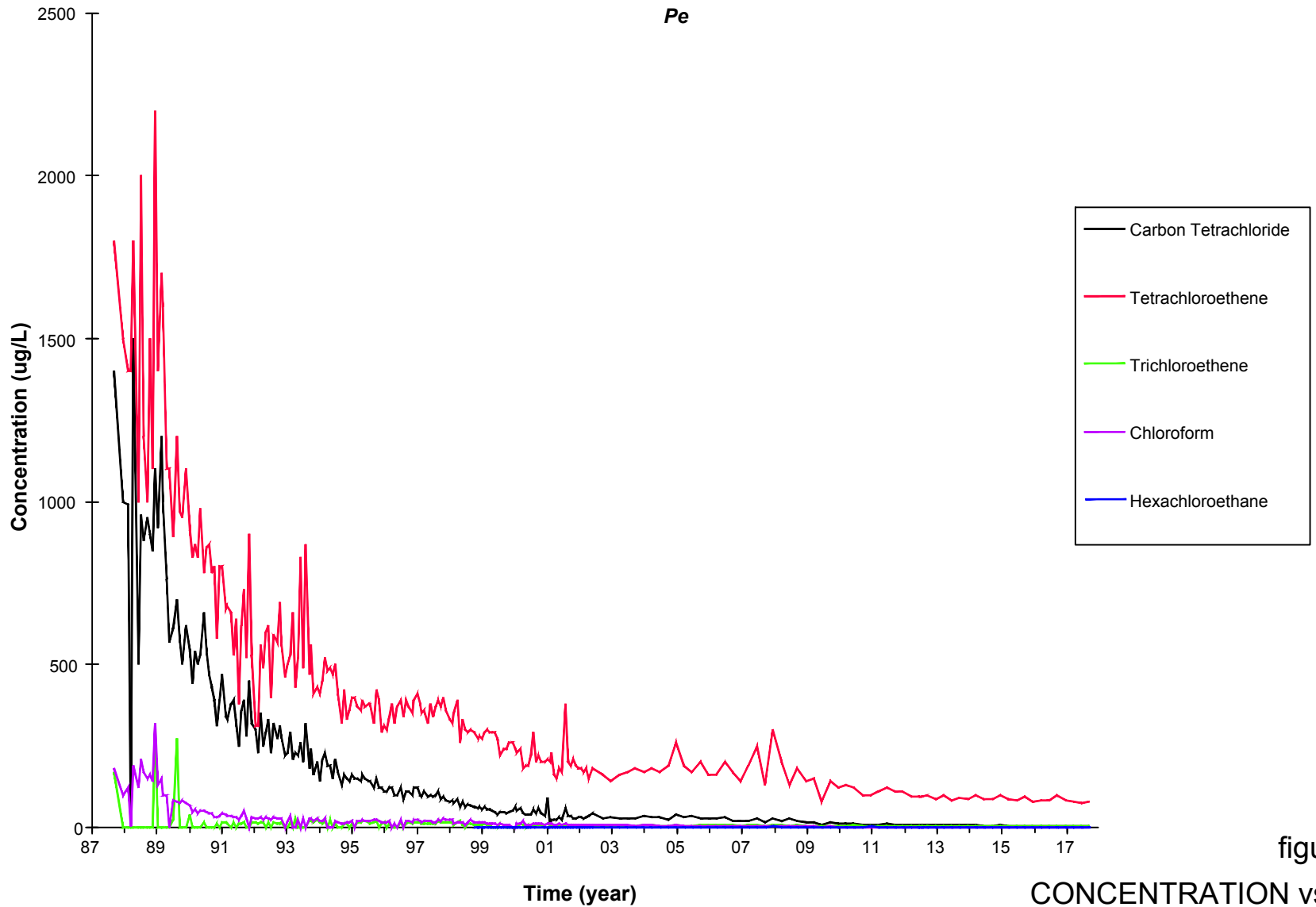


figure C.5

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



Occidental Chemical
Pf

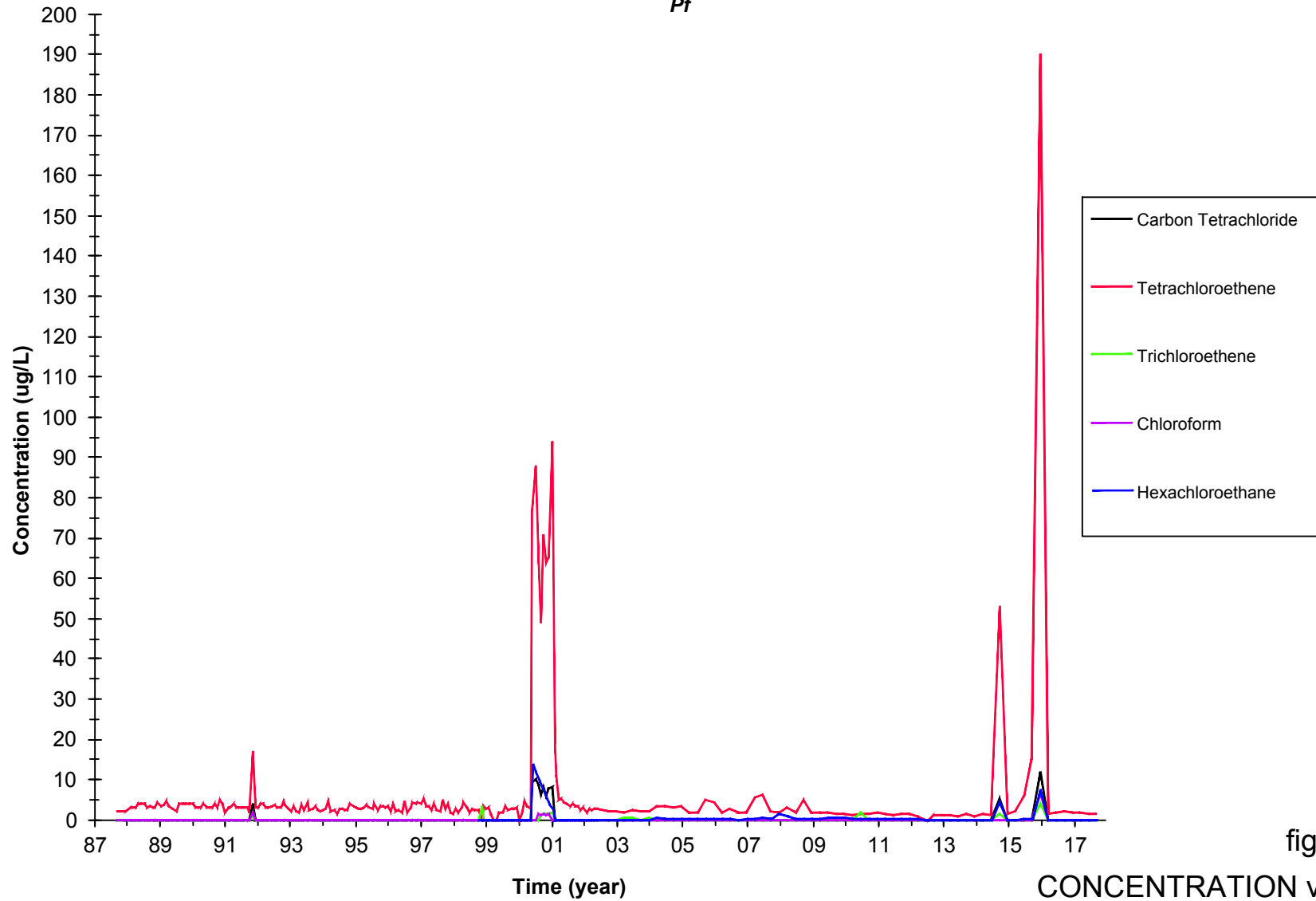


figure C.6

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



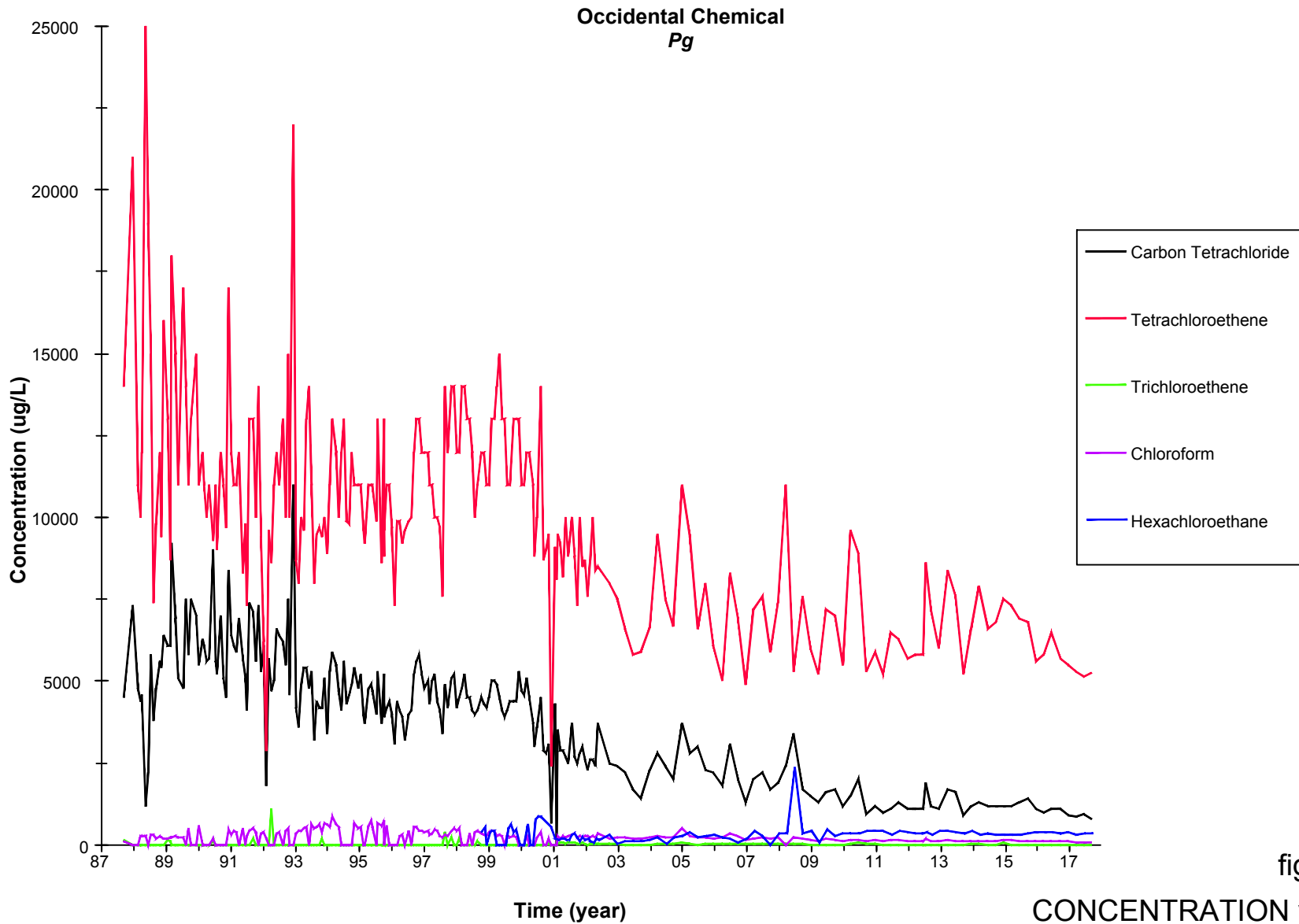


figure C.7

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



Occidental Chemical
Ph

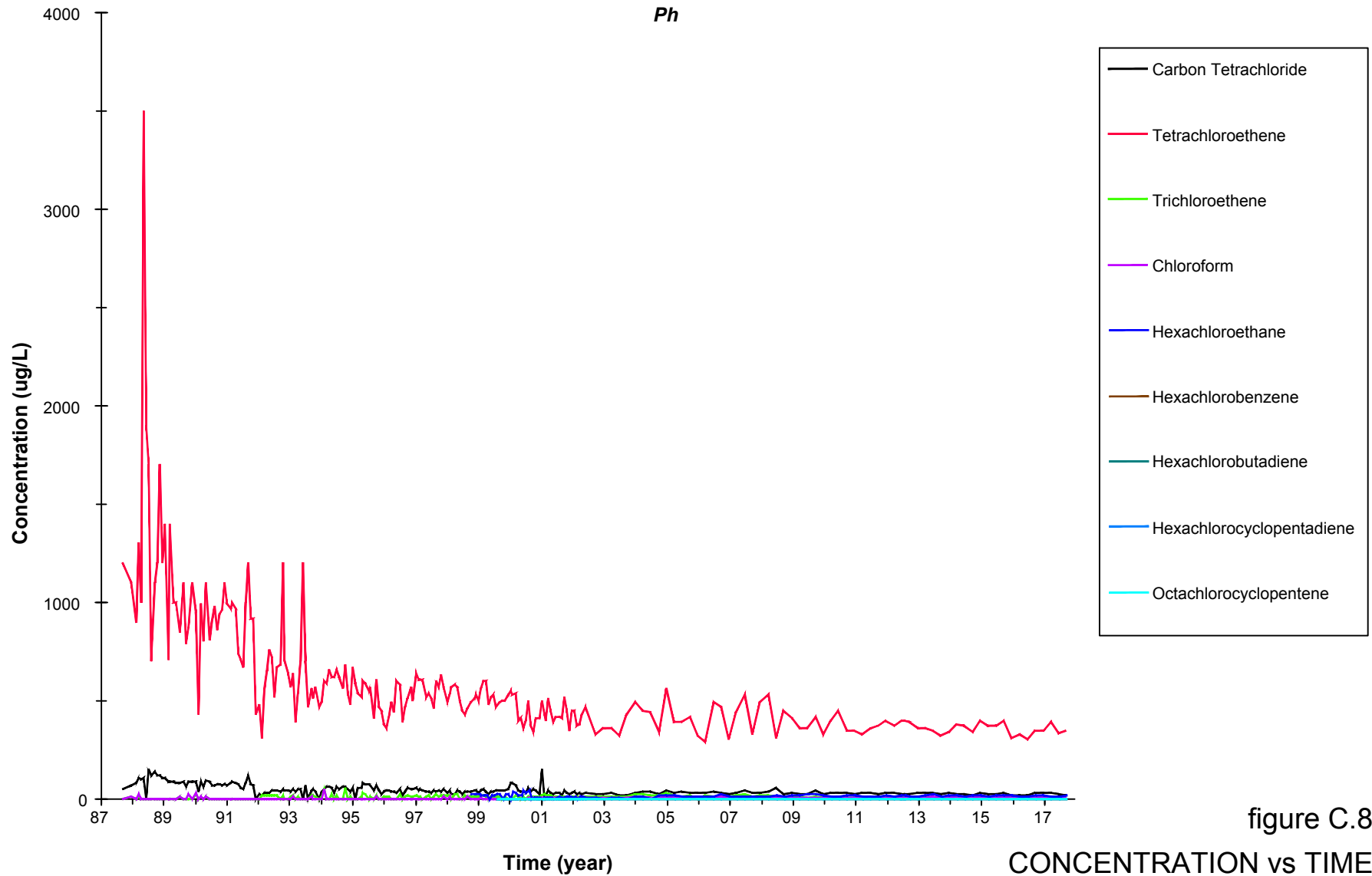


figure C.8

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



Occidental Chemical
Pi

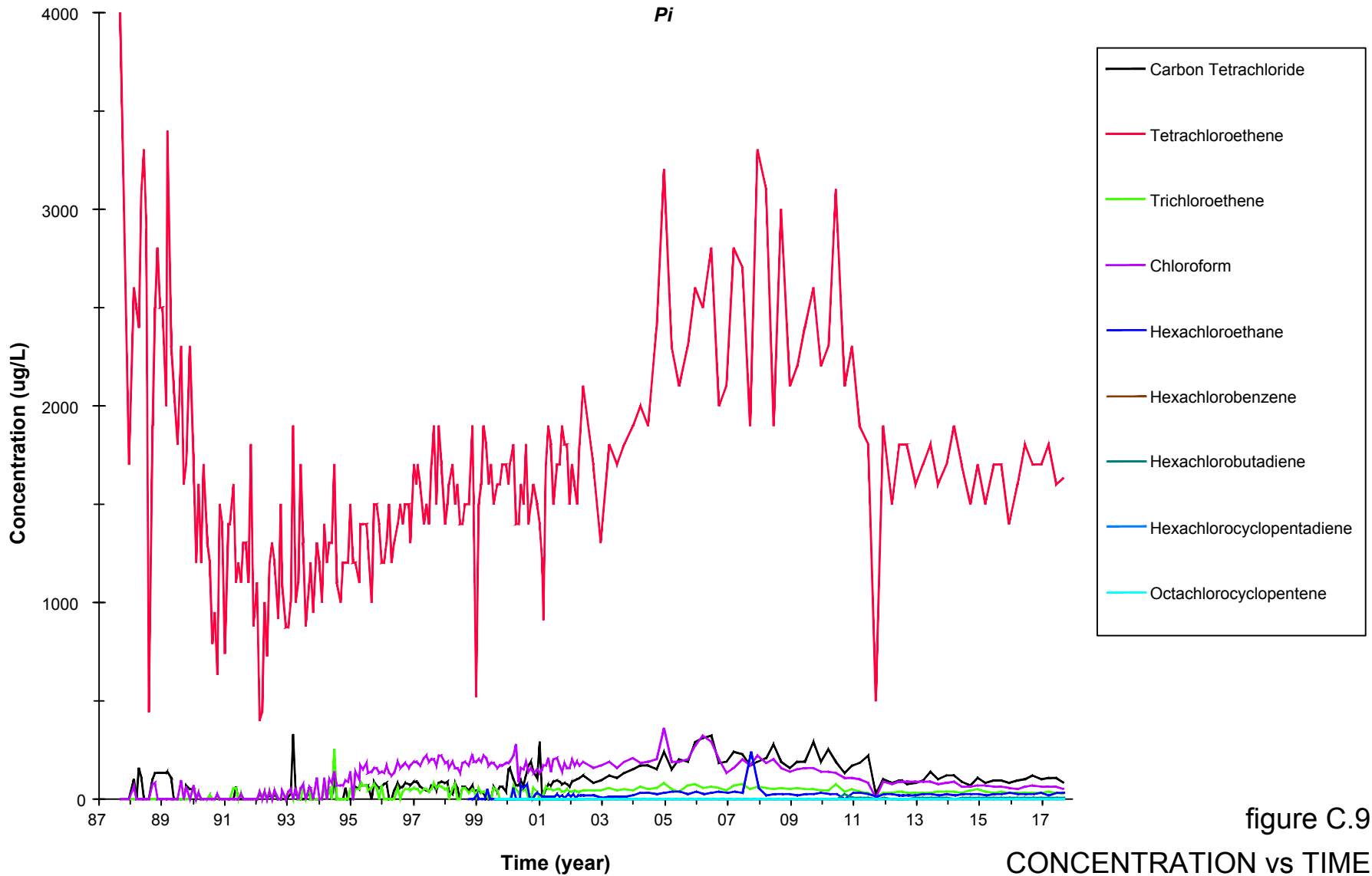


figure C.9

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



Appendix D
Historic Plume and Purge Well Concentrations
2010-2017

Table D.1

Historic Plume and Purge Well Concentrations - 2010-2017
 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 - 2010-2017
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

Historic Plume and Purge Well Concentrations - 2010-2017
 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	-	-	-	-

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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	B	B	B	C	C
Sample ID:	WG-9970-110316-JCB-B	GW-9970-052317-JCB-B	GW-9970-112817-JCB-B	GW-9970-052610-BFB-C	GW-9970-110310-BFB-C
Sample Date:	11/3/2016	5/23/2017	11/28/2017	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	3.3
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	0.010 U	0.010 U	0.010 U	1.0 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	21000	25000	33500	7200
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	C	C	C	C	C
Sample ID:	GW-9970-052311-JCB-C	GW-9970-111011-JCB-MW-C	GW-9970-051712-JCB-MW-C	GW-9970-112912-JCB-MW-C	GW-9970-052913-JCB-MW-C
Sample Date:	5/23/2011	11/10/2011	5/17/2012	11/29/2012	5/29/2013
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	3.3	2.2	1.8	1.4
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	6800	5400	4700	4400
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	C	C	C	C	C
Sample ID:	WG-9970-112613-JCB-MW-C	GW-9970-052714-JCB-MW-C	WG-9970-110414-JCB-MW-C	WG-9970-052715-JCB-MW-C	GW-9970-110315-JCB-C
Sample Date:	11/26/2013	5/27/2014	11/4/2014	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	1.7	1.1	1.0	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	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.010 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	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	3700	2800	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	C	C	C	C	MW-2
Sample ID:	WG-9970-050216-JCB-C	WG-9970-110316-JCB-C	GW-9970-052317-JCB-C	GW-9970-112817-JCB-C	GW-9970-BFB-102913-MW2
Sample Date:	5/2/2016	11/3/2016	5/23/2017	11/28/2017	10/29/2013
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	1.8	1.7	1.6	3.3
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	0.010 U	0.010 U	0.010 U	0.15
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.012
General Chemistry					
Chloride	µg/L	2100	2100	2700	2260
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 - 2010-2017
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-9970-052710-BFB-301	GW-9970-052710-BFB-DUP1	GW-9970-110310-BFB-301	GW-9970-052011-JCB-301	WG-9970-110911-JCB-301
Sample Date:	5/27/2010	5/27/2010 (Duplicate)	11/3/2010	5/20/2011	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	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	0.012 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.012 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.012 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.012 U	0.011 U	1.0 U	0.010 U
Octachlorocyclopentene	µg/L	0.012 U	0.011 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	1300	1600	1700	1400
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-03-01	MW-03-01	MW-03-01	MW-03-01
Sample ID:	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:	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
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	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 - 2010-2017
 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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-03-01	MW-03-01	MW-03-01	MW-03-01	MW-05-01
Sample ID:	WG-9970-050316-JCB-301	WG-9970-110316-JCB-301	GW-9970-052317-JCB-301	GW-9970-112817-JCB-301	GW-9970-052710-BFB-501
Sample Date:	5/3/2016	11/3/2016	5/23/2017	11/28/2017	5/27/2010
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	0.010 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	1300	1400	1400	7000
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 - 2010-2017
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-9970-110310-BFB-501	GW-9970-110310-BFB-DUP1	GW-9970-052011-JCB-501	GW-9970-110911-JCB-501	GW-9970-110911-JCB-Dup2
Sample Date:	11/3/2010	11/3/2010 (Duplicate)	5/20/2011	11/9/2011	11/9/2011 (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	0.50 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	0.50 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	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.019	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.015	0.010 U
Hexachloroethane	µg/L	1.1 U	1.0 U	0.023	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	3000	3200	3700	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 - 2010-2017
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-9970-051812-JCB-MW-05-01	GW-9970-112912-JCB-MW-05-01	GW-9970-053013-JCB-MW-05-01	GW-9970-112713-JCB-05-01	GW-9970-052814-JCB-MW-05-01
Sample Date:	5/18/2012	11/29/2012	5/30/2013	11/27/2013	5/28/2014

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	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry						
Chloride	µg/L	2500	4400	4500	4200	2900
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 - 2010-2017
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:	WG-9970-110414-JCB-MW05-01	WG-9970-052715-JCB-MW-501	GW-9970-110315-JCB-501	WG-9970-050316-JCB-501	WG-9970-110316-JCB-501	
Sample Date:	11/4/2014	5/27/2015	11/3/2015	5/3/2016	11/3/2016	
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	0.011 U	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.011 U
General Chemistry						
Chloride	µg/L	1900	2000	2600	3000	2700
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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	MW-05-01	MW-05-01	MW-97-02	MW-97-02	MW-97-02
Sample ID:	GW-9970-052317-JCB-501	GW-9970-112817-JCB-501	GW-9970-052710-BFB-972	GW-9970-052710-BFB-DUP2	GW-9970-110410-BFB-972
Sample Date:	5/23/2017	11/28/2017	5/27/2010	5/27/2010 (Duplicate)	11/4/2010
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	0.011 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	2600	2760	96000	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 - 2010-2017
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-9970-052011-JCB-972	GW-9970-110911-JCB-972	GW-9970-051812-JCB-MW97-2	GW-9970-112912-JCB-DUP2	GW-9970-112912-JCB-MW-97-2
Sample Date:	5/20/2011	11/9/2011	5/18/2012	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	0.011 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	120000	160000	18000	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 - 2010-2017
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-9970-052913-JCB-MW-97-2	WG-9970-112713-JCB-97-2	GW-9970-052814-JCB-MW-97-2	WG-9970-110414-JCB-MW97-2	WG-9970-052815-JCB-MW-972
Sample Date:	5/29/2013	11/27/2013	5/28/2014	11/4/2014	5/28/2015

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	0.011 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
General Chemistry						
Chloride	µg/L	77000	59000	50000	63000	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 - 2010-2017
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-9970-110315-JCB-972	WG-9970-050316-JCB-972	WG-9970-110316-JCB-972	GW-9970-052417-JCB-972	GW-9970-112817-JCB-972
Sample Date:	11/3/2015	5/3/2016	11/3/2016	5/24/2017	11/28/2017

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	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry						
Chloride	µg/L	120000	100000	80000	91000	83900
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 - 2010-2017
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-9970-052610-BFB-973	GW-9970-110310-BFB-973	GW-9970-051811-JCB-973	GW-9970-110811-JCB-973	GW-9970-051612-JCB-97-3
Sample Date:	5/26/2010	11/3/2010	5/18/2011	11/8/2011	5/16/2012

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	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	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	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	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.011 U	0.012 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.012 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.012 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.011 U	1.2 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.012 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	27000	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 - 2010-2017
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-9970-112812-JCB-97-3	GW-9970-052813-JCB-97-3	WG-9970-112513-JCB-97-3	GW-9970-052714-JCB-97-3	WG-9970-110314-JCB-97-3
Sample Date:	11/28/2012	5/28/2013	11/25/2013	5/27/2014	11/3/2014

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	0.011 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.011 U	0.011 U	0.011 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U	0.011 U
General Chemistry						
Chloride	µg/L	27000	27000	31000	29000	26000
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 - 2010-2017
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:	WG-9970-052615-JCB-MW-973	GW-9970-110215-JCB-973	WG-9970-050216-JCB-973	WG-9970-110116-JCB-973	GW-9970-052217-JCB-973
Sample Date:	5/26/2015	11/2/2015	5/2/2016	11/1/2016	5/22/2017

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	0.010 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	0.010 U	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	0.010 U
General Chemistry						
Chloride	µg/L	22000	18000	25000	26000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	MW-97-03	MW-97-04	MW-97-04	MW-97-04	MW-97-04
Sample ID:	GW-9970-112717-JCB-973	GW-9970-052610-BFB-974	GW-9970-110310-BFB-974	GW-9970-051911-JCB-974	GW-9970-110811-JCB-974
Sample Date:	11/27/2017	5/26/2010	11/3/2010	5/19/2011	11/8/2011

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	0.50 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	0.50 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	0.0097 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorobutadiene	µg/L	0.0097 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.0097 U	0.011 U	0.011 U	0.010 U	0.011 U
Hexachloroethane	µg/L	0.0097 U	0.011 U	1.1 U	0.010 U	0.011 U
Octachlorocyclopentene	µg/L	0.0097 U	0.011 U	0.011 U	0.010 U	0.011 U
General Chemistry						
Chloride	µg/L	20100	2000	2200	2600	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 - 2010-2017
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-9970-051612-JCB-97-4	GW-9970-112812-JCB-97-4	GW-9970-052813-JCB-97-4	WG-9970-112513-JCB-97-4	GW-9970-052714-JCB-97-4
Sample Date:	5/16/2012	11/28/2012	5/28/2013	11/25/2013	5/27/2014

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	0.010 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	0.010 U	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	0.010 U
General Chemistry						
Chloride	µg/L	2400	2100	2200	2700	2700
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 - 2010-2017
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-9970-110314-JCB-97-4	WG-9970-052615-JCB-MW-974	GW-9970-110215-JCB-974	WG-9970-050216-JCB-974	WG-9970-110116-JCB-974
Sample Date:	11/3/2014	5/26/2015	11/2/2015	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	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	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	3500	4000	3600	4700	5300
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 - 2010-2017
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:	GW-9970-052217-JCB-974	GW-9970-112717-JCB-974	GW-9970-052610-BFB-975	GW-9970-110310-BFB-975	GW-9970-051911-JCB-975
Sample Date:	5/22/2017	11/27/2017	5/26/2010	11/3/2010	5/19/2011

Parameters	Units	MW-97-04	MW-97-04	MW-97-05	MW-97-05	MW-97-05
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	0.50 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	0.50 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	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	1.1 U	0.011 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.011 U	0.011 U
General Chemistry						
Chloride	µg/L	5300	4980	12000	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 - 2010-2017
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 - 2010-2017
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

**Historic Plume and Purge Well Concentrations - 2010-2017
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-9970-110215-JCB-975	WG-9970-050216-JCB-975	WG-9970-110116-JCB-975	GW-9970-052217-JCB-975	GW-9970-112717-JCB-975
Sample Date:	11/2/2015	5/2/2016	11/1/2016	5/22/2017	11/27/2017

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	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	16000	16000	15000	11000	17300
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	GW-9970-BFB-012910-PB	WG-9970-BFB-042910-PB	WG-9970-BFB-073010-PB	WG-9970-BFB-102010-PB	GW-9970-BFB-012411-PB	
Sample Date:	1/29/2010	4/29/2010	7/30/2010	10/20/2010	1/24/2011	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	120	100	110	77	74
Chloroform (Trichloromethane)	µg/L	35	40	44	34	31
cis-1,2-Dichloroethene	µg/L	10 U	11	11	14	12
Tetrachloroethene	µg/L	1100	1100	1400	930	940
trans-1,2-Dichloroethene	µg/L	10 U	1.0 U	10 U	1.0 U	10 U
Trichloroethene	µg/L	11	12	22	13	11
SVOCs						
Hexachlorobenzene	µg/L	2.0 U	2.0 U	2.0 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.0 U	2.0 U	2.0 U	0.63	0.76
Hexachlorocyclopentadiene	µg/L	2.0 U	2.0 U	2.0 U	0.010 U	0.010 U
Hexachloroethane	µg/L	55	45	54	52	530
Octachlorocyclopentene	µg/L	2.0 U	2.0 U	2.0 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	21000	19000	18000	18000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	GW-9970-BFB-042911-PB	WG-9970-BFB-072211-PB	WG-9970-BFB-103111-PB	WG-9970-BFB-013112-PB	WG-9970-JCB-041812-PB	
Sample Date:	4/29/2011	7/22/2011	10/31/2011	1/31/2012	4/18/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	96	110	64	47	45
Chloroform (Trichloromethane)	µg/L	43	53	45	33	31
cis-1,2-Dichloroethene	µg/L	11	10 U	15	12	12
Tetrachloroethene	µg/L	970	1100	890	820	680
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	14	10 U	10 U	10 U	10 U
SVOCs						
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.71	0.61	0.62	0.73	0.62
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	55	37	390	43	40
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	18000	17000	13000	14000	15000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb
Sample ID:	GW-9970-BFB-073112-PB	GW-9970-BFB-103112-PB	WG-9970-BFB-013113-PB	WG-9970-BFB-042513-PB	WG-9970-BFB-072313-PB
Sample Date:	7/31/2012	10/31/2012	1/31/2013	4/25/2013	7/23/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	53	40	41	42
Chloroform (Trichloromethane)	µg/L	34	32	31	37
cis-1,2-Dichloroethene	µg/L	12	9.2	12	12
Tetrachloroethene	µg/L	830	840	690	880
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	11	9.0	10	12
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.59	0.51	0.65	0.040 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	41	39	44	46
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	14000	13000	16000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pb WG-9970-BFB-102913-PB 10/29/2013	Pb WG-9970-BFB-013114-PB 1/31/2014	Pb WG-9970-BFB-040414-PB 4/4/2014	Pb WG-9970-BFB-072514-PB 7/25/2014	Pb WG-9970-BFB-103014-PB 10/30/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	58	68	63	46
Chloroform (Trichloromethane)	µg/L	34	38	32	26
cis-1,2-Dichloroethene	µg/L	10	12	10	10 U
Tetrachloroethene	µg/L	920	920	960	950
trans-1,2-Dichloroethene	µg/L	10 U	1.0 U	1.0 U	10 U
Trichloroethene	µg/L	10	12	11	10 U
SVOCs					
Hexachlorobenzene	µg/L	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
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	55	44	43	50
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	12000	13000	12000	12000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb	
Sample ID:	WG-9970-BFB-012915-PB	WG-9970-BFB-042915-PB	WG-9970-BFB-072815-PB	WG-9970-BFB-103015-PB	WG-9970-BFB-012816-PB	
Sample Date:	1/29/2015	4/29/2015	07/28/2015	10/30/2015	1/28/2016	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	73	47	40	41	37
Chloroform (Trichloromethane)	µg/L	33	29	25	24	23
cis-1,2-Dichloroethene	µg/L	12	12	11	11	12
Tetrachloroethene	µg/L	1200	850	1000	1000	910
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	18	13	11	13	12
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.040	0.040 U	0.040 U	0.040 U	0.020 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	48	42	50	53	64
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	14000	13000	12000	12000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pb	Pb	Pb
Sample ID:	WG-9970-BFB-042916-PB	WG-9970-BFB-072916-PB	WG-9970-BFB-102816-PB	WG-9970-BFB-013117-PB	WG-9970-BFB-042717-PB
Sample Date:	4/29/2016	7/29/2016	10/28/2016	01/31/2017	04/27/2017

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	36	35	55	48	57
Chloroform (Trichloromethane)	µg/L	21	18	24	22	22
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	1200	1100	1300	1200	1300
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10 U	10 U	10	12	10 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.020 U	0.020 U	0.020	0.061	0.065
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	56	57	66	62	47
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	14000	13000	12000	16000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pb	Pb	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-073117-PB	WG-9970-BFB-103017-PB	GW-9970-BFB-012910-PC	WG-9970-BFB-042910-PC	WG-9970-BFB-073010-PC
Sample Date:	07/31/2017	10/30/2017	1/29/2010	4/29/2010	7/30/2010

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	47.6	30.6	8.8	12	13
Chloroform (Trichloromethane)	µg/L	19.9	18.0	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1250	1280	47	51	62
trans-1,2-Dichloroethene	µg/L	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	10.0 U	10.0 U	1.7	1.9	3.3
SVOCs						
Hexachlorobenzene	µg/L	0.0095 U	0.0097 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	µg/L	0.0095 U	0.097	1.5	1.2	1.4
Hexachlorocyclopentadiene	µg/L	0.0095 U	0.0097 U	0.20 U	0.20 U	0.20 U
Hexachloroethane	µg/L	61.4	113	5.3	4.4	4.8
Octachlorocyclopentene	µg/L	0.0095 U	0.0097 U	0.20 U	0.20 U	0.20 U
General Chemistry						
Chloride	µg/L	13000	13100	17000	14000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-102010-PC	GW-9970-BFB-012411-PC	GW-9970-BFB-042911-PC	WG-9970-BFB-072211-PC	WG-9970-BFB-103111-PC
Sample Date:	10/20/2010	1/24/2011	4/29/2011	7/22/2011	10/31/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	12	15	25	18
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	70	68	97	110
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	2.4	2.0
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	1.4	1.7	2.0	1.8
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.0	5.4	5.3	5.2
Octachlorocyclopentene	µg/L	0.010 U	0.011	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	14000	14000	11000	15000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pc WG-9970-BFB-013112-PC 1/31/2012	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	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	15	18	13	11	4.9
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	81	97	87	92	48
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.9	1.8	2.1	1.9	1.6
SVOCs						
Hexachlorobenzene	µg/L	0.0022 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.2	2.0	2.1	2.0	1.8
Hexachlorocyclopentadiene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.1	5.3	5.1	5.6	4.2
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	13000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc
Sample ID:	WG-9970-BFB-042513-PC	WG-9970-BFB-072313-PC	WG-9970-BFB-102913-PC	WG-9970-BFB-013114-PC	WG-9970-BFB-040414-PC
Sample Date:	4/25/2013	7/23/2013	10/29/2013	1/31/2014	4/4/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	12	13	10	14
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	57	58	64	83
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.0	2.1	1.9	2.1
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.1	2.4	2.0	2.4
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	4.9	6.3	4.6	5.3
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	11000	15000	12000	11000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pc WG-9970-BFB-072514-PC 7/25/2014	Pc WG-9970-BFB-103014-PC 10/30/2014	Pc WG-9970-BFB-012915-PC 1/29/2015	Pc WG-9970-BFB-042915-PC 4/29/2015	Pc WG-9970-BFB-072815-PC 07/28/2015	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	8.9	5.4	7.8	11	8.7
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	78	53	46	61	62
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.7	1.6	2.2	2.0	1.6
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.1	2.1	2.0	1.9	2.1
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.7	4.4	4.6	4.1	4.6
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	15000	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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pc	
Sample ID:	WG-9970-BFB-103015-PC	WG-9970-BFB-012816-PC	WG-9970-BFB-042916-PC	WG-9970-BFB-072916-PC	WG-9970-BFB-102816-PC	
Sample Date:	10/30/2015	1/28/2016	4/29/2016	7/29/2016	10/28/2016	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	6.6	4.1	3.5	2.9	3.5
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	53	40	34	30	32
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.5	1.2	1.0	1.2	1.3
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.0	1.7	1.6	1.7	1.7
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	5.1	4.0	4.3	4.3	4.2
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	14000	11000	11000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pc	Pc	Pc	Pc	Pd	
Sample ID:	WG-9970-BFB-013117-PC	WG-9970-BFB-042717-PC	WG-9970-BFB-073117-PC	WG-9970-BFB-103017-PC	GW-9970-BFB-012910-PD	
Sample Date:	01/31/2017	04/27/2017	07/31/2017	10/30/2017	1/29/2010	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	4.1	5.7	4.2	2.5	170
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	38
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	20 U
Tetrachloroethene	µg/L	29	33	31.1	32.1	1500
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	20 U
Trichloroethene	µg/L	1.1	1.2	1.1	1.0 U	20 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.0095 U	0.0096 U	2.0 U
Hexachlorobutadiene	µg/L	2.0	1.7	1.4	1.5	2.0 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.0095 U	0.0096 U	2.0 U
Hexachloroethane	µg/L	4.2	4.0	4.0	4.1	45
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.0095 U	0.0096 U	2.0 U
General Chemistry						
Chloride	µg/L	10000	10000	11900	11700	130000
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 - 2010-2017
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:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
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	GW-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 - 2010-2017
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	-	-	-	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 - 2010-2017
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

**Historic Plume and Purge Well Concentrations - 2010-2017
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	120
Chloroform (Trichloromethane)	µg/L	31	27	24	22
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	1400	1300	1200	1100
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	17	14	16	13
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.11	0.030
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Hexachloroethane	µg/L	46	45	49	43
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	190000	180000	190000	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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pd	Pd	Pd	Pd	Pd	
Sample ID:	WG-9970-BFB-072916-PD	WG-9970-BFB-102816-PD	WG-9970-BFB-013117-PD	WG-9970-BFB-042717-PD	WG-9970-BFB-073117-PD	
Sample Date:	7/29/2016	10/28/2016	01/31/2017	04/27/2017	07/31/2017	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	100	130	120	120	113
Chloroform (Trichloromethane)	µg/L	22	27	22	21	20.7
cis-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10.0 U
Tetrachloroethene	µg/L	1100	1200	1100	1100	1050
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10.0 U
Trichloroethene	µg/L	13	15	15	14	16.4
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.0095 U
Hexachlorobutadiene	µg/L	0.022	0.099	0.098	0.058	0.010
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.0095 U
Hexachloroethane	µg/L	51	43	43	35	24.8
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.0095 U
General Chemistry						
Chloride	µg/L	180000	170000	170000	180000	172000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pd	Pe	Pe	Pe	Pe	
Sample ID:	WG-9970-BFB-103017-PD	GW-9970-BFB-012910-PE	WG-9970-BFB-042910-PE	WG-9970-BFB-073010-PE	WG-9970-BFB-102010-PE	
Sample Date:	10/30/2017	1/29/2010	4/29/2010	7/30/2010	10/20/2010	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	90.7	11	11	11	8.0
Chloroform (Trichloromethane)	µg/L	19.6	1.4	1.4	1.4	1.0 U
cis-1,2-Dichloroethene	µg/L	10.0 U	4.2	4.9	4.3	2.6
Tetrachloroethene	µg/L	1030	120	130	120	98
trans-1,2-Dichloroethene	µg/L	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	12.4	3.4	4.2	5.5	2.4
SVOCs						
Hexachlorobenzene	µg/L	0.0095 U	0.010 U	0.020 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.010	0.010 U	0.020 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.0095 U	0.010 U	0.020 U	0.010 U	0.010 U
Hexachloroethane	µg/L	42.0	0.30	0.32	0.29	0.32
Octachlorocyclopentene	µg/L	0.0095 U	0.010 U	0.020 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	168000	120000	140000	140000	97000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pe GW-9970-BFB-012411-PE 1/24/2011	Pe GW-9970-BFB-042911-PE 4/29/2011	Pe WG-9970-BFB-072211-PE 7/22/2011	Pe WG-9970-BFB-103111-PE 10/31/2011	Pe WG-9970-BFB-013112-PE 1/31/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	8.2	9.0	10	7.9	6.8
Chloroform (Trichloromethane)	µg/L	1.1	1.2	1.0 U	1.1	1.0 U
cis-1,2-Dichloroethene	µg/L	3.2	3.6	3.6	3.3	3.1
Tetrachloroethene	µg/L	100	110	120	110	110
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.8	3.1	3.3	3.2	2.9
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	3.6	0.49	0.43	0.64	0.41
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	110000	110000	120000	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pe	Pe	
Sample ID:	WG-9970-JCB-041812-PE	GW-9970-BFB-073112-PE	GW-9970-BFB-103112-PE	WG-9970-BFB-013113-PE	GW-9970-BFB-042513-PE	
Sample Date:	4/18/2012	7/31/2012	10/31/2012	1/31/2013	4/25/2013	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	7.3	5.9	6.0	5.9	6.4
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0	1.1	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.8	2.3	2.2	2.8	2.7
Tetrachloroethene	µg/L	94	94	97	88	99
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.8	2.7	2.4	2.8	2.9
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	0.29	0.52	0.42	0.51	0.55
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	110000	110000	110000	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pe WG-9970-BFB-072313-PE 7/23/2013	Pe WG-9970-BFB-102913-PE 10/29/2013	Pe WG-9970-BFB-013114-PE 1/31/2014	Pe WG-9970-BFB-040414-PE 4/4/2014	Pe WG-9970-BFB-072514-PE 7/25/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	7.8	6.2	5.8	6.3
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.4	2.5	3.1	2.6
Tetrachloroethene	µg/L	83	90	87	98
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.5	2.5	2.9	2.6
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	0.71	0.68	0.81	0.85
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pe	Pe
Sample ID:	WG-9970-BFB-103014-PE	WG-9970-BFB-012915-PE	WG-9970-BFB-042915-PE	WG-9970-BFB-072815-PE	WG-9970-BFB-103015-PE
Sample Date:	10/30/2014	1/29/2015	4/29/2015	07/28/2015	10/30/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	5.2	6.8	4.8	4.3
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	2.9	3.0	3.0	2.5
Tetrachloroethene	µg/L	87	100	86	84
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.7	3.4	3.0	2.6
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	1.1	1.1	1.1	1.2
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pe	Pe
Sample ID:	WG-9970-BFB-012816-PE	WG-9970-BFB-042916-PE	WG-9970-BFB-072916-PE	WG-9970-BFB-102816-PE	WG-9970-BFB-013117-PE
Sample Date:	1/28/2016	4/29/2016	7/29/2016	10/28/2016	01/31/2017

Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	4.6	4.2	4.1	5.4	4.6
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	2.9	2.0	2.3	3.5	2.7
Tetrachloroethene	µg/L	78	83	84	98	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	2.7	2.2	2.5	3.5	2.7
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	1.9	1.7	1.9	1.6	1.9
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	96000	98000	95000	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pe	Pe	Pe	Pf	Pf	
Sample ID:	WG-9970-BFB-042717-PE	WG-9970-BFB-073117-PE	WG-9970-BFB-103017-PE	GW-9970-BFB-012910-PF	WG-9970-BFB-042910-PF	
Sample Date:	04/27/2017	07/31/2017	10/30/2017	1/29/2010	4/29/2010	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	4.2	3.9	3.0	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	2.4	2.4	2.3	1.0 U	1.0 U
Tetrachloroethene	µg/L	80	74.0	78.0	1.4	1.2
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	2.7	2.5	2.2	1.0 U	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.0095 U	0.0096 U	0.020 U	0.020 U
Hexachlorobutadiene	µg/L	0.010 U	0.027	0.0096 U	0.020 U	0.020 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.0095 U	0.0096 U	0.020 U	0.020 U
Hexachloroethane	µg/L	1.7	1.6	2.0	0.62	0.50
Octachlorocyclopentene	µg/L	0.010 U	0.0095 U	0.0096 U	0.020 U	0.020 U
General Chemistry						
Chloride	µg/L	94000	87600	89200	3100	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	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	Pf GW-9970-BFB-042911-PF 4/29/2011	Pf WG-9970-BFB-072211-PF 7/22/2011
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	1.4	2.0	1.7
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.9	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.020 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.020 U	0.010 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.020 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.54	0.50	0.51	0.44
Octachlorocyclopentene	µg/L	0.020 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	9900	3500	8400	8100
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pf	Pf	Pf	Pf	Pf
Sample ID:	WG-9970-BFB-103111-PF	WG-9970-BFB-013112-PF	WG-9970-JCB-041812-PF	GW-9970-BFB-073112-PF	GW-9970-BFB-103112-PF
Sample Date:	10/31/2011	1/31/2012	4/18/2012	7/31/2012	10/31/2012
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	1.5	1.5	1.0	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	0.47	0.37	0.30	0.17
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	5000	3000	2600	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pf	Pf	Pf	Pf	Pf
Sample ID:	WG-9970-BFB-013113-PF	WG-9970-BFB-042513-PF	WG-9970-BFB-072313-PF	WG-9970-BFB-102913-PF	WG-9970-BFB-013114-PF
Sample Date:	1/31/2013	4/25/2013	7/23/2013	10/29/2013	1/31/2014
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	1.2	1.3	1.0	1.4
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	0.20	0.20	0.20	0.15
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2900	2900	2600	2500
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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pf	Pf	Pf	Pf	Pf
Sample ID:	WG-9970-BFB-040414-PF	WG-9970-BFB-072514-PF	WG-9970-BFB-103014-PF	WG-9970-BFB-012915-PF	WG-9970-BFB-042915-PF
Sample Date:	4/4/2014	7/25/2014	10/30/2014	1/29/2015	4/29/2015
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	1.7	1.2	1.3	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	0.011 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	0.15	0.15	0.14	0.11
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	2500	2400	2200	2300
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pf WG-9970-BFB-072815-PF 07/28/2015	Pf WG-9970-BFB-103015-PF 10/30/2015	Pf WG-9970-BFB-012816-PF 1/28/2016	Pf WG-9970-BFB-042916-PF 4/29/2016	Pf WG-9970-BFB-072916-PF 7/29/2016
Parameters					
Units					
VOCs					
Carbon tetrachloride	µg/L	1.0 U	1.0 U	12	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	6.5	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	3.8	1.0 U
Tetrachloroethene	µg/L	6.1	15	190	1.5
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	2.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	4.1	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.11	0.13	1.7	0.010 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.46	0.31	7.6	0.11
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	2400	3700	64000	2700
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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pf	Pf	Pf	Pf	Pf
Sample ID:	WG-9970-BFB-102816-PF	WG-9970-BFB-013117-PF	WG-9970-BFB-042717-PF	WG-9970-BFB-073117-PF	WG-9970-BFB-103017-PF
Sample Date:	10/28/2016	01/31/2017	04/27/2017	07/31/2017	10/30/2017
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	2.1	1.9	2.0	1.6
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	0.0096 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.014
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.0096 U
Hexachloroethane	µg/L	0.12	0.11	0.092	0.10
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.0096 U
General Chemistry					
Chloride	µg/L	2500	2600	2400	2650
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg GW-9970-BFB-012910-PG 1/29/2010	Pg WG-9970-BFB-042910-PG 4/29/2010	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	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1200	1500	2000	930	1200
Chloroform (Trichloromethane)	µg/L	120	160	140	110	150
cis-1,2-Dichloroethene	µg/L	50 U	5.0 U	50 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5500	9600	8900	5300	5900
trans-1,2-Dichloroethene	µg/L	50 U	5.0 U	50 U	5.0 U	5.0 U
Trichloroethene	µg/L	50 U	23	65	17	23
SVOCs						
Hexachlorobenzene	µg/L	20 U	20 U	20 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	20 U	20 U	20 U	4.6	4.3
Hexachlorocyclopentadiene	µg/L	20 U	20 U	20 U	0.010 U	0.010 U
Hexachloroethane	µg/L	390	370	380	470	440
Octachlorocyclopentene	µg/L	20 U	20 U	20 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	34000	33000	35000	38000	46000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pg	Pg	Pg	Pg	Pg	
Sample ID:	GW-9970-BFB-042911-PG	WG-9970-BFB-072211-PG	GW-9970-BFB-072711-PG	WG-9970-BFB-103111-PG	WG-9970-BFB-013112-PG	
Sample Date:	4/29/2011	7/22/2011	7/27/2011	10/31/2011	1/31/2012	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1000	-	1100	1300	1100
Chloroform (Trichloromethane)	µg/L	110	-	140	140	110
cis-1,2-Dichloroethene	µg/L	50 U	-	50 U	50 U	50 U
Tetrachloroethene	µg/L	5200	-	6500	6300	5700
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	3.4	3.1	-	4.4	4.4
Hexachlorocyclopentadiene	µg/L	0.016	0.18	-	0.010 U	0.017
Hexachloroethane	µg/L	440	320	-	460	400
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	-	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	60000	64000	-	55000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-JCB-041812-PG 4/18/2012	Pg GW-9970-BFB-080312-PG 8/3/2012	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	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	1100	1900	1200	1100	1700
Chloroform (Trichloromethane)	µg/L	120	180	120	110	140
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U	50 U
Tetrachloroethene	µg/L	5800	8600	7200	6000	8400
trans-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U	50 U
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	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	3.7	3.7	3.6	4.8	0.22
Hexachlorocyclopentadiene	µg/L	0.010 U	0.026	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	380	420	340	470	450
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	56000	36000	43000	41000	37000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pg WG-9970-BFB-072313-PG 7/23/2013	Pg WG-9970-BFB-102913-PG 10/29/2013	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
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1600	910	1200	1300
Chloroform (Trichloromethane)	µg/L	130	100	120	120
cis-1,2-Dichloroethene	µg/L	50 U	50 U	2.5	5.0 U
Tetrachloroethene	µg/L	7600	5200	6600	7900
trans-1,2-Dichloroethene	µg/L	50 U	50 U	1.0 U	5.0 U
Trichloroethene	µg/L	50 U	50 U	19	17
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.20 U	0.33	0.59	0.80
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.020
Hexachloroethane	µg/L	420	370	470	390
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	36000	28000	29000	29000
Total organic carbon (TOC)	µg/L	-	1600	-	-

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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pg	Pg	Pg	Pg	Pg
Sample ID:	WG-9970-BFB-103014-PG	WG-9970-BFB-012915-PG	WG-9970-BFB-042915-PG	WG-9970-BFB-072815-PG	WG-9970-BFB-103015-PG
Sample Date:	10/30/2014	1/29/2015	4/29/2015	07/28/2015	10/30/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1200	1200	1200	1300
Chloroform (Trichloromethane)	µg/L	120	140	140	120
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Tetrachloroethene	µg/L	6800	7500	7300	6900
trans-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Trichloroethene	µg/L	50 U	58	50 U	50 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	1.3	1.6	1.8	2.4
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	330	340	330	350
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	25000	25000	28000	24000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pg	Pg	Pg	Pg	Pg
Sample ID:	WG-9970-BFB-012816-PG	WG-9970-BFB-042916-PG	WG-9970-BFB-072916-PG	WG-9970-BFB-102816-PG	WG-9970-BFB-013117-PG
Sample Date:	1/28/2016	4/29/2016	7/29/2016	10/28/2016	01/31/2017
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	1100	990	1100	900
Chloroform (Trichloromethane)	µg/L	110	100	100	100
cis-1,2-Dichloroethene	µg/L	50 U	50 U	50 U	50 U
Tetrachloroethene	µg/L	5600	5800	6500	5700
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	3.3	3.4	3.4	3.8
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	420	400	400	390
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	24000	25000	25000	24000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pg	Pg	Pg	Ph	Ph	
Sample ID:	WG-9970-BFB-042717-PG	WG-9970-BFB-073117-PG	WG-9970-BFB-103017-PG	GW-9970-BFB-012910-PH	WG-9970-BFB-042910-PH	
Sample Date:	04/27/2017	07/31/2017	10/30/2017	1/29/2010	4/29/2010	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	850	933	802	27	31
Chloroform (Trichloromethane)	µg/L	88	89.2	89.4	6.8	6.9
cis-1,2-Dichloroethene	µg/L	50 U	50.0 U	50.0 U	5.0 U	3.2
Tetrachloroethene	µg/L	5300	5120	5250	330	400
trans-1,2-Dichloroethene	µg/L	50 U	50.0 U	50.0 U	5.0 U	2.8
Trichloroethene	µg/L	50 U	50.0 U	50.0 U	7.6	8.6
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.0097 U	0.0097 U	1.0 U	0.50 U
Hexachlorobutadiene	µg/L	5.8	5.1	6.7	1.9	1.6
Hexachlorocyclopentadiene	µg/L	0.010 U	0.0097 U	0.0097 U	1.0 U	0.50 U
Hexachloroethane	µg/L	330	382	385	20	15
Octachlorocyclopentene	µg/L	0.011	0.0097 U	0.0097 U	1.0 U	0.50 U
General Chemistry						
Chloride	µg/L	24000	22200	21400	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-073010-PH	WG-9970-BFB-102010-PH	GW-9970-BFB-012411-PH	GW-9970-BFB-042911-PH	WG-9970-BFB-072211-PH
Sample Date:	7/30/2010	10/20/2010	1/24/2011	4/29/2011	7/22/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	31	30	26	28
Chloroform (Trichloromethane)	µg/L	7.5	6.6	6.7	6.6
cis-1,2-Dichloroethene	µg/L	5.0 U	3.1	3.0	2.8
Tetrachloroethene	µg/L	450	350	350	330
trans-1,2-Dichloroethene	µg/L	5.0 U	2.5	2.5 U	2.5 U
Trichloroethene	µg/L	15	7.8	7.4	7.0
SVOCs					
Hexachlorobenzene	µg/L	0.50 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	1.4	1.7	2.3	2.5
Hexachlorocyclopentadiene	µg/L	0.50 U	0.010 U	0.012	0.015
Hexachloroethane	µg/L	15	19	19	17
Octachlorocyclopentene	µg/L	0.50 U	0.010 U	0.011	0.010 U
General Chemistry					
Chloride	µg/L	140000	120000	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-103111-PH	WG-9970-BFB-013112-PH	WG-9970-JCB-041812-PH	GW-9970-BFB-073112-PH	GW-9970-BFB-103112-PH
Sample Date:	10/31/2011	1/31/2012	4/18/2012	7/31/2012	10/31/2012
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	27	30	28	26
Chloroform (Trichloromethane)	µg/L	8.6	6.0	7.3	7.6
cis-1,2-Dichloroethene	µg/L	3.4	3.1	5.0 U	2.7
Tetrachloroethene	µg/L	370	400	370	400
trans-1,2-Dichloroethene	µg/L	2.8	2.5 U	5.0 U	2.5 U
Trichloroethene	µg/L	7.3	7.1	7.7	9.4
SVOCs					
Hexachlorobenzene	µg/L	0.012	0.0027	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.1	2.5	2.2	5.4
Hexachlorocyclopentadiene	µg/L	0.016	0.020	0.015	0.010 U
Hexachloroethane	µg/L	16	20	18	23
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	110000	120000	120000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-013113-PH	WG-9970-BFB-042513-PH	WG-9970-BFB-072313-PH	WG-9970-BFB-102913-PH	WG-9970-BFB-013114-PH
Sample Date:	1/31/2013	4/25/2013	7/23/2013	10/29/2013	1/31/2014
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	30	31	30	24
Chloroform (Trichloromethane)	µg/L	8.3	8.1	9.0	7.3
cis-1,2-Dichloroethene	µg/L	3.0	2.9	3.3	3.4
Tetrachloroethene	µg/L	360	360	350	320
trans-1,2-Dichloroethene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	µg/L	8.6	8.9	6.6	7.7
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.5	3.1	3.0	3.0
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	18	22	25	16
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	100000	97000	88000	89000
Total organic carbon (TOC)	µg/L	-	-	-	2000

Notes:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Ph	Ph	Ph	Ph	Ph
Sample ID:	WG-9970-BFB-040414-PH	WG-9970-BFB-072514-PH	WG-9970-BFB-103014-PH	WG-9970-BFB-012915-PH	WG-9970-BFB-042915-PH
Sample Date:	4/4/2014	7/25/2014	10/30/2014	1/29/2015	4/29/2015
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	22	22	21	31
Chloroform (Trichloromethane)	µg/L	8.5	8.0	9.0	11
cis-1,2-Dichloroethene	µg/L	3.4	3.9	3.4	5.0 U
Tetrachloroethene	µg/L	380	370	340	400
trans-1,2-Dichloroethene	µg/L	1.9	2.0	2.5 U	5.0 U
Trichloroethene	µg/L	6.2	7.1	7.6	11
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.4	3.0	3.2	3.4
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	20	18	20	20
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	96000	97000	97000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Ph WG-9970-BFB-072815-PH 07/28/2015	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
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	23	28	20	17
Chloroform (Trichloromethane)	µg/L	9.4	10	7.2	7.6
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	3.4	2.5 U
Tetrachloroethene	µg/L	370	400	310	330
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	2.5 U	2.5 U
Trichloroethene	µg/L	6.7	8.7	5.9	6.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	3.3	3.6	3.2	2.9
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	19	20	20	18
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	91000	97000	88000	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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Ph	Ph	Ph	Ph	Ph	
Sample ID:	WG-9970-BFB-102816-PH	WG-9970-BFB-013117-PH	WG-9970-BFB-042717-PH	WG-9970-BFB-073117-PH	WG-9970-BFB-103017-PH	
Sample Date:	10/28/2016	01/31/2017	04/27/2017	07/31/2017	10/30/2017	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	34	30	30	24.2	16.8
Chloroform (Trichloromethane)	µg/L	9.4	7.4	8.0	7.2	6.4
cis-1,2-Dichloroethene	µg/L	4.1	3.2	3.4	3.6	3.2
Tetrachloroethene	µg/L	350	350	390	336	347
trans-1,2-Dichloroethene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	µg/L	7.2	6.1	6.3	6.2	5.0
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.0096 U	0.0097 U
Hexachlorobutadiene	µg/L	2.6	3.6	3.1	1.1	3.1
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.0096 U	0.0097 U
Hexachloroethane	µg/L	19	22	18	18.2	19.3
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.0096 U	0.0097 U
General Chemistry						
Chloride	µg/L	95000	87000	88000	84900	82600
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 - 2010-2017
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

**Historic Plume and Purge Well Concentrations - 2010-2017
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

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location: Sample ID: Sample Date:	Pi GW-9970-BFB-073112-PI 7/31/2012	Pi GW-9970-BFB-103112-PI 10/31/2012	Pi WG-9970-BFB-013113-PI 1/31/2013	Pi WG-9970-BFB-042513-PI 4/25/2013	Pi WG-9970-BFB-072313-PI 7/23/2013
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	97	77	80	97
Chloroform (Trichloromethane)	µg/L	90	91	90	89
cis-1,2-Dichloroethene	µg/L	44	39	48	41
Tetrachloroethene	µg/L	1800	1800	1600	1700
trans-1,2-Dichloroethene	µg/L	20 U	20 U	10 U	20 U
Trichloroethene	µg/L	36	31	34	34
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	2.7	4.7	5.8	6.2
Hexachlorocyclopentadiene	µg/L	0.014	0.010 U	0.015	0.010 U
Hexachloroethane	µg/L	19	22	23	28
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry					
Chloride	µg/L	570000	530000	510000	530000
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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	Pi	Pi	Pi	Pi	Pi	
Sample ID:	WG-9970-BFB-102913-PI	WG-9970-BFB-013114-PI	WG-9970-BFB-040414-PI	WG-9970-BFB-072514-PI	WG-9970-BFB-103014-PI	
Sample Date:	10/29/2013	1/31/2014	4/4/2014	7/25/2014	10/30/2014	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	100	120	120	86	72
Chloroform (Trichloromethane)	µg/L	74	83	87	64	64
cis-1,2-Dichloroethene	µg/L	44	52	48	40	38
Tetrachloroethene	µg/L	1600	1700	1900	1700	1500
trans-1,2-Dichloroethene	µg/L	10 U	3.1	3.0	10 U	20 U
Trichloroethene	µg/L	36	38	36	32	42
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	6.0	6.3	5.4	8.6	8.0
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	21	27	24	28	26
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	580000	520000	570000	460000	470000
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 - 2010-2017
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	83
Chloroform (Trichloromethane)	µg/L	68	70	63	65	58
cis-1,2-Dichloroethene	µg/L	43	52	41	46	36
Tetrachloroethene	µg/L	1700	1500	1700	1700	1400
trans-1,2-Dichloroethene	µg/L	20 U	20 U	10 U	20 U	10 U
Trichloroethene	µg/L	47	37	34	40	32
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	8.5	6.5	9.4	9.2	9.9
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	26	21	26	27	32
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	470000	540000	450000	460000	450000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pi	Pi	Pi	Pi	Pi	
Sample ID:	WG-9970-BFB-042916-PI	WG-9970-BFB-072916-PI	WG-9970-BFB-102816-PI	WG-9970-BFB-013117-PI	WG-9970-BFB-042717-PI	
Sample Date:	4/29/2016	7/29/2016	10/28/2016	01/31/2017	04/27/2017	
Parameters	Units					
VOCs						
Carbon tetrachloride	µg/L	93	100	120	100	110
Chloroform (Trichloromethane)	µg/L	51	61	68	60	64
cis-1,2-Dichloroethene	µg/L	31	33	39	37	36
Tetrachloroethene	µg/L	1600	1800	1700	1700	1800
trans-1,2-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	29	31	34	32	36
SVOCs						
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	9.4	10	9.6	11	11
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Hexachloroethane	µg/L	27	29	30	34	23
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	470000	450000	400000	460000	320000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	Pi	Pi	T	T	T
Sample ID:	WG-9970-BFB-073117-PI	WG-9970-BFB-103017-PI	WG-9970-052810-BFB-T	GW-9970-110410-BFB-T	GW-9970-052311-JCB-T
Sample Date:	07/31/2017	10/30/2017	5/28/2010	11/4/2010	5/23/2011
Parameters	Units				
VOCs					
Carbon tetrachloride	µg/L	108	78.9	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	59.5	51.0	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	38.2	32.6	1.0 U	0.50 U
Tetrachloroethene	µg/L	1600	1630	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	10.0 U	10.0 U	1.0 U	0.50 U
Trichloroethene	µg/L	32.5	26.2	2.4	2.7
SVOCs					
Hexachlorobenzene	µg/L	0.0096 U	0.0097 U	0.011 U	0.011 U
Hexachlorobutadiene	µg/L	8.8	10.5	0.011 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.033	0.055	0.011 U	0.011 U
Hexachloroethane	µg/L	31.3	31.6	0.011 U	1.1 U
Octachlorocyclopentene	µg/L	0.0096 U	0.0097 U	0.011 U	0.011 U
General Chemistry					
Chloride	µg/L	409000	441000	8900	8500
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	T	T	T	T	T
Sample ID:	GW-9970-111011-JCB-T	GW-9970-051712-JCB-MW-T	GW-9970-112912-JCB-MW-T	GW-9970-052813-JCB-MW-T	WG-9970-112613-JCB-MW-T
Sample Date:	11/10/2011	5/17/2012	11/29/2012	5/28/2013	11/26/2013
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	2.2	2.0	2.2	2.5
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	6900	6800	7800	8700
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	T	T	T	T	T
Sample ID:	GW-9970-052714-JCB-MW-T	WG-9970-110314-JCB-MW-T	WG-9970-050216-JCB-T	WG-9970-110116-JCB-T	GW-9970-052317-JCB-T
Sample Date:	5/27/2014	11/3/2014	5/2/2016	11/1/2016	5/23/2017
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	2.4	2.8	2.3	2.2
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	8400	9600	10000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	T	White Lake	WW-02	WW-02	WW-02
Sample ID:	GW-9970-112717-JCB-T	SW-9970-BFB-102913-LK	GW-9970-052710-BFB-WW2	GW-9970-110410-BFB-WW2	GW-9970-052311-JCB-Dup2
Sample Date:	11/27/2017	10/29/2013	5/27/2010	11/4/2010	5/23/2011 (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	2.6	1.0 U	1.1	1.4
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.012 U
Hexachlorobutadiene	µg/L	0.010 U	0.010 U	0.010 U	0.012 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.010 U	0.010 U	0.012 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.010 U	1.2 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.010 U	0.012 U
General Chemistry					
Chloride	µg/L	11700	22000	92000	24000
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-02	WW-02	WW-02
Sample ID:	GW-9970-052311-JCB-WW2	GW-9970-111011-JCB-WW2	GW-9970-051812-JCB-WW-2	GW-9970-112912-JCB-WW-2	GW-9970-053013-JCB-WW-2
Sample Date:	5/23/2011	11/10/2011	5/18/2012	11/29/2012	5/30/2013
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	1.4	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	58000	13000	58000	7100
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-02	WW-02	WW-02
Sample ID:	WG-9970-112713-JCB-WW-2	GW-9970-052814-JCB-WW-2	WG-9970-110414-JCB-WW-2	WG-9970-052815-JCB-WW-2	GW-9970-110415-JCB-WW2
Sample Date:	11/27/2013	5/28/2014	11/4/2014	5/28/2015	11/4/2015
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	47000	110000	4900	9300
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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	WW-02	WW-02	WW-02	WW-02	WW-02
Sample ID:	GW-9970-110415-JCB-DUP2	WG-9970-050316-JCB-WW2	WG-9970-110316-JCB-WW2	GW-9970-052417-JCB-WW2	GW-9970-052417-JCB-DUP3
Sample Date:	11/4/2015 (Duplicate)	5/3/2016	11/3/2016	5/24/2017	5/24/2017 (Duplicate)

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	1.1	1.0 U	1.0 U
SVOCs						
Hexachlorobenzene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorobutadiene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U
Hexachlorocyclopentadiene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U
Hexachloroethane	µg/L	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U
General Chemistry						
Chloride	µg/L	7800	4700	5300	5100	1100
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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-02	WW-02	WW-06	WW-06	WW-06
Sample ID:	GW-9970-112817-JCB-WW2	GW-9970-112817-JCB-Dup3	GW-9970-052710-BFB-WW6	GW-9970-110310-BFB-WW6	GW-9970-052011-JCB-Dup1
Sample Date:	11/28/2017	11/28/2017 (Duplicate)	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	1.3	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	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.011 U	0.010 U	0.011 U
General Chemistry					
Chloride	µg/L	5080	1000 U	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 - 2010-2017
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 - 2010-2017
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 - 2010-2017
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 - 2010-2017
 Glenn Springs Holdings, Inc.
 Montague, Michigan

Sample Location:	WW-06	WW-06	WW-06	WW-06	WW-06
Sample ID:	WG-9970-050316-JCB-WW6	WG-9970-050316-JCB-Dup2	WG-9970-110316-JCB-WW6	WG-9970-110316-JCB-Dup2	GW-9970-052317-JCB-WW6
Sample Date:	5/3/2016	5/3/2016 (Duplicate)	11/3/2016	11/3/2016 (Duplicate)	5/23/2017
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	2200	2500	3100	3100
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-06	WW-06	WW-06	WW-13	WW-13
Sample ID:	GW-9970-052317-JCB-DUP2	GW-9970-112817-JCB-WW6	GW-9970-112817-JCB-Dup2	WG-9970-052810-BFB-WW13	GW-9970-110510-BFB-WW13
Sample Date:	5/23/2017 (Duplicate)	11/28/2017	11/28/2017 (Duplicate)	5/28/2010	11/5/2010
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	0.032	0.010 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	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	2900	3490	3460	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	GW-9970-051911-JCB-WW13	GW-9970-110911-JCB-WW13	GW-9970-051712-JCB-DUP2	GW-9970-051712-JCB-WW-13	GW-9970-112812-JCB-WW-13
Sample Date:	5/19/2011	11/9/2011	5/17/2012 (Duplicate)	5/17/2012	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	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	3100	1300	1000 U	1400
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	GW-9970-052813-JCB-WW-13	WG-9970-112613-JCB-WW-13	GW-9970-052714-JCB-WW-13	GW-9970-052714-JCB-Dup1	WG-9970-110314-JCB-WW-13
Sample Date:	5/28/2013	11/26/2013	5/27/2014	5/27/2014 (Duplicate)	11/3/2014
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	0.011 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	1900	1700	1700	1900
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-13	WW-13
Sample ID:	WG-9970-052615-JCB-WW-13	GW-9970-110215-JCB-WW13	GW-9970-110215-JCB-DUP1	WG-9970-050216-JCB-WW13	WG-9970-110116-JCB-WW13
Sample Date:	5/26/2015	11/2/2015	11/2/2015 (Duplicate)	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	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
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	0.010 U
Hexachloroethane	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.010 U	0.010 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	4000	2700	2000	8500
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-13	WW-13	WW-13	WW-24	WW-24
Sample ID:	GW-9970-052217-JCB-WW13	GW-9970-112717-JCB-WW13	GW-9970-112717-JCB-Dup1	WG-9970-052810-BFB-WW24	GW-9970-110510-BFB-DUP2
Sample Date:	5/22/2017	11/27/2017	11/27/2017 (Duplicate)	5/28/2010	11/5/2010 (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	0.0099 U	0.0099 U	0.011 U
Hexachlorobutadiene	µg/L	0.010 U	0.0099 U	0.0099 U	0.011 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.0099 U	0.0099 U	0.011 U
Hexachloroethane	µg/L	0.010 U	0.0099 U	0.0099 U	1.1 U
Octachlorocyclopentene	µg/L	0.010 U	0.0099 U	0.0099 U	0.011 U
General Chemistry					
Chloride	µg/L	2100	4410	4170	11000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	GW-9970-110510-BFB-WW24	GW-9970-051911-JCB-WW24	GW-9970-110811-JCB-WW24	GW-9970-051712-JCB-DUP1	GW-9970-051712-JCB-WW-24
Sample Date:	11/5/2010	5/19/2011	11/8/2011	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	11000	11000	7700	11000
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	GW-9970-112812-JCB-WW-24	GW-9970-052813-JCB-WW-24	GW-9970-JCB-DUP1	WG-9970-112613-JCB-WW-24	GW-9970-052714-JCB-WW-24
Sample Date:	11/28/2012	5/28/2013	5/28/2013 (Duplicate)	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	1.0 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	11000	13000	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 - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	WG-9970-110314-JCB-WW-24	WG-9970-052615-JCB-WW24	GW-9970-110215-JCB-WW24	WG-9970-050216-JCB-WW24	WG-9970-050216-JCB-Dup1
Sample Date:	11/3/2014	5/26/2015	11/2/2015	5/2/2016	5/2/2016 (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	0.011 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	0.011 U	0.010 U
Octachlorocyclopentene	µg/L	0.011 U	0.011 U	0.011 U	0.010 U
General Chemistry					
Chloride	µg/L	6400	8500	9500	3300
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- VOCs - Volatile Organic Compounds
- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

**Historic Plume and Purge Well Concentrations - 2010-2017
Glenn Springs Holdings, Inc.
Montague, Michigan**

Sample Location:	WW-24	WW-24	WW-24	WW-24	WW-24
Sample ID:	WG-9970-110116-JCB-WW24	WG-9970-110116-JCB-Dup1	GW-9970-052217-JCB-WW24	GW-9970-052217-JCB-DUP1	WG-9970-110116-JCB-WW24
Sample Date:	11/1/2016	11/1/2016 (Duplicate)	5/22/2017	5/22/2017 (Duplicate)	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	1.0 U	1.0 U	1.0 U	1.0 U
SVOCs					
Hexachlorobenzene	µg/L	0.010 U	0.012 U	0.010 U	0.0099 U
Hexachlorobutadiene	µg/L	0.010 U	0.012 U	0.010 U	0.0099 U
Hexachlorocyclopentadiene	µg/L	0.010 U	0.012 U	0.010 U	0.0099 U
Hexachloroethane	µg/L	0.010 U	0.012 U	0.010 U	0.0099 U
Octachlorocyclopentene	µg/L	0.010 U	0.012 U	0.010 U	0.0099 U
General Chemistry					
Chloride	µg/L	3800	4300	7000	7400
Total organic carbon (TOC)	µg/L	-	-	-	-

Notes:

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- SVOCs - Semi-volatile Organic Compounds
- - Not analyzed

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