2018 Site Management Periodic Review Report – Love Canal Site

NYSDEC Site No. 932020
Niagara Falls, New York

Glenn Springs Holdings, Inc.

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1. Introduction

Operation of the Love Canal Site (Site) was transferred from the New York State Department of Environmental Conservation (NYSDEC) to Occidental Chemical Corporation (OCC) in April 1995. Effective July 1, 1998, Site responsibility was assigned by OCC to Glenn Springs Holdings, Inc. (GSH), an affiliate of OCC. Since October 1, 2008, GHD Services, Inc. (GHD), formerly Conestoga-Rovers & Associates (CRA), has performed operation, maintenance, monitoring, and reporting activities for the Site under contract to and direct management of GSH.

This report is the twenty-fourth annual report prepared by or on behalf of OCC and covers operation, maintenance, and monitoring activities for 2018. The completed 2018 NYSDEC Institutional and Engineering Controls Certification Form is included as Appendix A.

2. Remedial Systems

Operation of remedial systems to prevent the off-Site migration of chemical contaminants from the Site began in October 1978 with the installation of a barrier drain along the east and west sides of the South Sector of the Canal. The barrier drain was later extended to completely encompass the entire area of disposed waste within the Central and North Sectors of the Canal. The barrier drain, designed to intercept the shallow overburden lateral groundwater flow, consists of a trench approximately 4 feet wide that varies in depth from approximately 12 to 25 feet deep depending on location at the Site. Installed within the trench is a perforated vitrified clay tile pipe. The pipe is 6-inch diameter in the Central and North Sectors and both 6-inch and 8-inch diameter in the South Sector. The pipe is centered in a minimum of 2 feet of uniformly sized gravel, which is overlain with coarse sand extending to the existing ground surface present at the time of construction. Thirty-two lateral trenches, approximately 12 to 19 feet deep, filled with a minimum of 2 feet of gravel and overlain with sand similar to the barrier drain, were dug perpendicular to the barrier drain in the direction of the Canal. The majority of these laterals extend into the disposed waste. The barrier drain is graded from two highpoints, one in the southeast corner and the other in the northeast corner, toward a series of manholes which drain to four pump chambers (PC-1A/PC-2A in the North/Central Sector and PC-1/PC-2 in the South Sector) where the leachate is collected. The collected leachate is pumped from the four pump chambers to two other pump chambers connected to underground holding tanks (PC-3A in the North/Central Sector and PC-3 in the South Sector) where it is temporarily stored. From that point, the leachate is pumped to the on-Site Love Canal Treatment Facility (LCTF) where it is treated and discharged to the Niagara Falls Water Board (NFWB) sanitary sewer system under the Site's Significant Industrial User (SIU) Permit #44. The locations of the remedial system components are illustrated on the Site Plan presented as Figure 2.1.

The installation of a 22-acre clay cap over the entire former Canal area was completed in October 1980 following completion of the barrier drain collection system. The purpose of the cap is to reduce infiltration of precipitation. The thickness of the clay cap is a minimum of 3 feet. In 1985, a second (40-acre) cap was installed over the initial clay cap area. The newer cap consists of a 40-mil high density polyethylene (HDPE) liner covered by 18 inches of clean soil and vegetation.

In March 1999, the adjacent 102nd Street Landfill Site leachate collection system was connected to the Love Canal Site to facilitate the transfer of leachate from the 102nd Street landfill into Love Canal's pump chamber PC-3 for treatment at the LCTF.

2.1 Operations of the Barrier Drain and Collection System

2.1.1 Barrier Drain System

The barrier drain system continues to function as designed, with no major maintenance required during 2018. Semiannual inspections of the barrier drain components, including manholes and pump chambers, are required by the Site's NYSDEC-approved Operation and Maintenance (O&M) Manual (CRA, revised March 2015). Inspections of the barrier drain manholes were conducted on June 20 and September 19, 2018, and inspections of the barrier drain pump chambers were carried out on June 19 and September 21, 2018. The visual inspections showed that the manhole flumes were flowing freely and required no further maintenance. During both inspection events, limited buildup of sludge was noted at MH-6C. However, the buildup was insufficient to warrant cleaning, as it did not impede flow through the manhole. The visual inspections were documented on the 2018 Semiannual Inspection Forms, which are presented in Appendix B. The manhole locations are presented on Figure 2.2.

2.1.2 Pumping System

The barrier drain system consists of two sectors, the Northern/Central and the Southern. Leachate from the Northern/Central Sector drains to pump chambers PC-1A and PC-2A where it is pumped to pump chamber PC-3A, while leachate from the Southern Sector is pumped from pump chambers PC-1 and PC-2 to the underground storage tank connected to pump chamber PC-3. From pump chambers PC-3 and PC-3A, the leachate is then transferred through a below ground metering chamber outside the LCTF on the southeast corner of the building and then into the LCTF for treatment. The pumping system is designed to operate continuously and was operational and functioned as designed throughout 2018.

2.1.3 102nd Street Landfill Forcemain

The leachate forcemain construction was completed in March 1999 and is used for the transfer of leachate from the 102nd Street Landfill to the LCTF. The forcemain begins at the northwest corner of the 102nd Street Landfill and extends northward beneath River Road, LaSalle Expressway, and Frontier Avenue to pump chamber PC-3 at the Site. During 2018, the leachate collection system at 102nd Street pumped 116,364 gallons of leachate to the LCTF.

3. Groundwater Treatment and Monitoring

3.1 Groundwater Treatment

3.1.1 Treatment System

The LCTF consists of clarification, bag filtration, and carbon treatment prior to discharge to the NFWB sanitary sewer system. A process schematic depicting the layout of the treatment system is presented as Figure 3.1.

Treated water from the Site is discharged essentially on a batch basis to the NFWB sanitary sewer system (i.e. when there is sufficient water in storage, the treatment system is operated); however, under seasonal high flow conditions, water is discharged continuously, The discharge is authorized under the Site's SIU Permit #44. The current permit is valid from January 9, 2015 to January 9, 2020. A copy of the NFWB permit is included as Appendix C.

3.1.2 Effluent Discharge

The LCTF discharged to the NFWB sanitary sewer system on 207 days in 2018.

Under high stormwater flow events, the NFWB periodically requires that the LCTF temporarily cease discharging to the sewer system. During an event of this type, the barrier drain pumping system will continue to operate and maintain a protective inward hydraulic gradient to capture leachate. The NFWB required the LCTF to temporarily cease discharging to the sewer system on April 16, May 24, and September 10 during 2018.

In 2018, the LCTF processed a total of 4,400,918 gallons of leachate. This total was comprised of 4,284,554 gallons of leachate from the Site and 116,364 gallons of leachate from the 102nd Street Landfill.

Table 3.1 shows the monthly total and average treated groundwater quantities from 2000 through 2018.

3.1.3 Effluent Sampling

Sampling of the effluent discharged to the NFWB sanitary sewer system occurred quarterly as required under the Site's SIU Discharge Permit #44. In accordance with the SIU permit, the quarterly monitoring periods for 2018 were as follows:

Quarter 1: December 1 – February 28
Quarter 2: March 1 – May 31
Quarter 3: June 1 – August 31
Quarter 4: September 1 – November 30

The quarterly effluent sampling for 2018 was performed on January 22, March 12, June 11, and September 12, 2018. The sample results were submitted to the NFWB quarterly as required by the permit and to the NYSDEC. The results for each event were in compliance with the requirements of the Site's SIU permit.

3.1.4 Precipitation

In 2018, precipitation in the Niagara Falls region totaled 34.93 inches (Niagara Falls International Airport, National Climatic Data Center). Table 3.1 provides historical regional precipitation data from 2000 through 2018.

3.2 Groundwater Monitoring

Groundwater monitoring consists of both chemical monitoring to determine groundwater quality and hydraulic monitoring to demonstrate that the barrier drain is creating hydraulic containment. Monitoring and analytical protocols for the Site's groundwater monitoring program have been established and are set forth in the "Sampling Manual, Love Canal Site, Long-Term Groundwater Monitoring Program" (LTGMP), revised June 2013.

The monitoring results for 2018 are presented in the following sections.

3.2.1 Groundwater Quality

Chemical monitoring is performed annually by sampling select overburden and bedrock monitoring wells at the Site. On March 25, 2009, the NYSDEC communicated via email to GSH that the NYSDEC would no longer be providing an annual well sampling list for chemical monitoring and directed GSH to use the wells sampled in 2007 and 2008 for all future sampling events. Subsequent discussions between GSH and the NYSDEC regarding the well sampling list led to this decision being documented in an August 5, 2010 memo titled "Love Canal Annual Groundwater Sampling Schedule", presented in Appendix D.

It should be noted that Overburden Well 3151 is included on the Appendix D list; however, this well was noted in 2007 as "Well no longer available – destroyed" and could not be located. Therefore, this well has not been sampled since 2007. In addition, Overburden Well 10178A and Bedrock Wells MW-01 and MW-02 were added to the annual sampling program in 2011. The sampling frequency for Overburden Well 10178A became annual in 2016.

The 2018 annual groundwater chemical monitoring event was performed between July 5 and July 23, 2018. As part of the annual groundwater chemical monitoring in 2018, 32 monitoring wells were sampled, comprised of 12 overburden and 20 bedrock monitoring wells. As part of the LTGMP, the NYSDEC has the option of collecting split samples during the annual event and having those samples analyzed independently to verify data. No split samples were collected by NYSDEC during the 2018 annual sampling event.

Groundwater samples were submitted to ALS Environmental Group USA, Corp (ALS), located in Rochester, New York. ALS is a New York State Department of Health (NYSDOH) approved laboratory certified under the National Environmental Laboratory Approval Program (NELAP). The samples were analyzed for Site-specific volatiles, semi-volatiles, pesticides, and polychlorinated biphenyls (PCBs). The raw data laboratory packages are presented in Appendix E. A GHD chemist performed the analytical Quality Assurance/Quality Control (QA/QC) review and data validation. The QA/QC report for this event is presented in Appendix F.

Figure 3.2 identifies the wells sampled and their locations. The Love Canal Annual Groundwater Sampling Schedule is presented in Appendix D. Table 3.2 provides a summary of the overburden

wells that were sampled, the analytical data, and a summation of the number of compounds found at or above the detection limits in each well. Table 3.3 provides a summary of the bedrock wells that were sampled, the analytical data, and a summation of the number of compounds found at or above the detection limits in each well.

3.2.1.1 Overburden Monitoring Wells

The 2018 groundwater analytical results for the overburden monitoring wells (Table 3.2) are consistent with previous long-term monitoring analytical results. The analytical results were non-detect or were detected at low levels consistent with concentrations detected during previous monitoring events (with the exception of groundwater from Well 10135, which is installed in an area of known Site impacts).

Historically, Well 10135 has had the most detected compounds and the highest concentrations. This well is located in the southwestern portion of the Site and within the fenced boundaries of the Site. Although located outside the barrier drain, Well 10135 is within the influence of the barrier drain based on hydraulic monitoring conducted at adjacent nested piezometer string 1160, as demonstrated on Figures 3.5 (1160 cross-section) and 3.9 (groundwater contours). As stated in the LTGMP, Well 10135, located in an isolated area of known contamination, is sampled as an indicator well. In 2018, Well 10135 had 17 compounds detected. Table 3.4 presents a summary of detected compounds. In 2018, bromodichloromethane was detected at Well 10135 for the first time at a concentration of 38 micrograms per liter (μg/L). This detection does not warrant additional evaluation, based on the relatively low concentration detected (below the NYSDEC Class GA Groundwater Guidance Value of 50 μg/L) and the lack of this detection in nearby wells. It should be noted that overburden and bedrock monitoring wells located further west of 10135 (10178A and 10278, respectively) are sampled annually and have shown no impact, further confirming that the contamination at 10135 is isolated to the immediate area around the well.

3.2.1.2 Bedrock Monitoring Wells

The 2018 groundwater analytical results for the bedrock monitoring wells (Table 3.3) are consistent with previous long-term monitoring analytical results. Parameter concentrations were either non-detect or detected at low levels consistent with concentrations detected during previous monitoring events. In 2012, hexachlorobenzene was detected at Monitoring Well 10225A for the first time historically at a concentration of 3.6 μg/L. A concentration of 3.6 μg/L is within the historical non-detect range of 1.9 U μg/L to 10 U μg/L. In 2014, 2015, 2016, 2017, and again in 2018, hexachlorobenzene was non-detect at Well 10225A (1.9 U μg/L in 2014, 9.6 U μg/L in 2015, 9.4 U μg/L in 2016, and 9.4 U μg/L in 2017 and 2018). In addition, hexachlorobenzene was not detected in adjacent Bedrock Wells 10225B and 10225C. Based on these data, the 2012 detection appears to be an anomalous data point and does not warrant additional evaluation. Well 10225A will continue to be monitored annually for groundwater quality in accordance with the NYSDEC-approved LTGMP. Table 3.4 presents a summary of detected compounds.

3.2.1.3 Historical Compound Detections

Table 3.5 presents a summary of detected compounds of four long-term monitoring wells, consisting of three bedrock wells and one overburden well (Bedrock Wells 10210A, 10210B, and 10210C, and Overburden Well 10135) from 1990 to 2018. The data from these four wells are presented because

they have the most consistent historical record of compound detections compared to the other overburden and bedrock wells. The data from the additional Site wells not presented in Table 3.5 are typically non-detect or demonstrate sporadic low level detections and, therefore, do not present useful data in regards to a discussion of historical analytical trends at the Site. An evaluation of the 2018 sampling data for the four wells mentioned above shows that the compounds detected in 2018 are present at sporadic low- level concentrations or concentrations consistent with historical trends, with the exception of bromodichloromethane, which was detected for the first time in 2018 at Well 10135. As indicated in Section 3.2.1.1, this detection does not warrant additional evaluation.

3.2.2 Hydraulic Containment

Hydraulic monitoring consists of water level measurements conducted quarterly from six nested piezometer strings (1140, 1150, 1160, 1170, 1180, and 1190) per the NYSDEC-approved LTGMP, as well as NYSDEC-requested water level measurements collected from three wells (7161, 9130, and 9140). In 2018, water levels were measured in March, May, September, and December. These water level data are presented in Tables 3.6A to 3.6F. The wells on the tables are ordered from left to right on the table, beginning with the well furthest from the outside of the barrier drain to the well inside the area enclosed by the barrier drain. They are also ordered based on screen depth corresponding with the geologic stratum (i.e. fractured clay, soft, clay, and glacial till) as requested by NYSDEC in their letter dated October 21, 2016. Figures 3.3 to 3.8 show the overburden groundwater flow conditions for May 2018 at the six nested piezometers string locations based on geologic stratum consistent with the above.

Piezometer string groundwater elevation data from the remaining three quarters (March, September, and December 2018) demonstrate that the data from those monitoring periods are consistent with the May 2018 data.

In addition to the above-mentioned information, a groundwater contour figure was prepared using the May 2018 water levels from the six nested piezometer strings and three additional wells (7161, 9130, and 9140) as requested by NYSDEC. The May 2018 groundwater contour figure is presented as Figure 3.9.

The groundwater contour figure and Tables 3.6A to 3.6F illustrate that there is a minimum of 0.98 feet of inward gradient outside of the barrier drain at each of the six nested piezometer strings in the various geologic units. The term "feet of inward gradient" means the minimum difference in groundwater elevation between the wells on the outside of the barrier drain and the water level within the barrier drain, with the water level within the barrier drain representing the lowest water level elevation. This demonstrates that groundwater on the outside of the barrier drain (off-Site groundwater) is flowing toward and downward into the barrier drain. Based on the water level data from the six nested piezometer strings, an inward gradient can be inferred to exist around the collection drain system, demonstrating that the horizontal groundwater flow direction outside of the barrier drain is towards the barrier drain. A review of Figure 3.9 shows that groundwater flow on the inside of the barrier drain is also towards the barrier drain. Therefore, the barrier drain and lateral trenches are capturing leachate from the landfill area and a portion of groundwater outside the barrier drain, thereby preventing off-Site migration of chemicals and preventing off-Site groundwater from migrating into the landfill area. Monitoring will continue during 2019 as per the NYSDEC-approved LTGMP.

3.2.3 Colvin Boulevard Sewer System NAPL Presence

Overburden Monitoring Well MW-3 was installed on July 1, 2011, within the bedding material of a newly repaired sanitary sewer line on Colvin Boulevard (Figure 2.1). The purpose of this well was to monitor for the presence of residual non-aqueous phase liquid (NAPL) that was observed during construction/repair activities in the bedding material. Following well development, MW-3 was monitored for the presence of NAPL on a weekly basis starting on July 19, 2011, and ending on October 7, 2011. No NAPL or visible sheen was detected during these weekly monitoring events. Based on these results, it was concluded that the NAPL that had been observed sporadically during the sewer repair activities was likely limited in volume and mobility. As such, in the report "Colvin Boulevard Sewer Repair Supplemental Subsurface Investigation Report, Colvin Boulevard and 96th Street," dated October 2011, GSH recommended/requested that additional monitoring of MW-3 be continued on a quarterly basis. The NYSDEC approved this request in a letter dated June 5, 2012. The last weekly monitoring event was conducted on August 3, 2012.

Well MW-3 has been monitored on a quarterly basis for the presence of NAPL since November 5, 2012. To date, no NAPL or visible sheen has been detected in this well. As requested by the NYSDEC in an email dated August 10, 2018, the dates of all previous quarterly NAPL checks at MW-3 are listed below.

- **2012**: November 5
- **2013**: February 6, June 4, August 9, November 15
- **2014**: February 7, April 7, May 9, August 5, November 22
- **2015**: February 17, May 26, August 29, December 1
- **2016**: March 3, June 8, September 6, December 5
- **2017**: March 2, June 9, September 7, December 7
- **2018**: March 5, May 29, September 11, December 6

Starting with the Periodic Review Report for the monitoring year 2019, only the dates (and NAPL thicknesses, if observed) for the monitored year will be listed in the Periodic Review Report.

3.2.4 Well Maintenance

The 2018 well inspections identified the need for routine maintenance on several wells at the Site. Maintenance was conducted during the summer of 2018 and included the following:

- Minor maintenance work at several wells, including replacement of j-plugs and locks.

3.2.5 Summary of Treatment and Monitoring Results

The volume of effluent discharge from the LCTF decreased from 5,738,453 gallons in 2017 to 4,400,918 in 2018, a number consistent with volumes from previous years with similar precipitation levels. Quarterly sampling and analysis results submitted to both the NFWB and NYSDEC indicated that all chemistry detected in the effluent samples for each event was either non-detect or present at very low levels within historical ranges and well below Site's SIU Discharge Permit #44 discharge limits.

The inward hydraulic gradient observed at each of the six nested piezometer strings demonstrates that the barrier drain is effectively capturing leachate from the Site and preventing off-Site migration of chemicals. The analytical results from the monitoring wells sampled indicate that compounds were either not detected, or were detected at low levels below or consistent with concentrations from previous years (with the exception of groundwater from well 10135, discussed in Section 3.2.1.1), further illustrating containment.

The presence of an overall inward hydraulic gradient towards the barrier drain and a review of groundwater quality for the groundwater monitoring wells demonstrate overall Site containment.

4. Activities

Summaries of normal activities and repairs performed in 2018 are presented below.

4.1 Process Activities

Process activities that occurred during the year included the following:

- Removal and disposal of hazardous waste
- Cleaning of all pump chambers
- Cleaning of all storage tanks
- Cleaning of sludge from clarifier

4.2 Non-Process Activities

Non-process activities that occurred during the year included the following:

- Preventative maintenance
- Repair and maintenance of pump chambers and flow meters
- Landscape maintenance including grass cutting and tree and flower bed maintenance
- Heating and cooling system maintenance
- Installation of a new front door on the treatment building
- Replacement of the leak detection switch float balls in manholes 8 and 9
- Replacement of the backflow preventer in the drum barn
- Replacement of lights and exit lights

4.3 Community Outreach

Community Outreach programs have included such activities as beautification of the area surrounding the Site and tours of the facility.

4.3.1 Beautification

The following beautification activities were conducted at Love Canal in 2018:

- Maintenance and landscaping of the Site and surrounding areas
- Maintenance of flower beds and shrubs along Colvin Boulevard, 95th Street, and Frontier Avenue
- Cleanup of discarded debris along fence line

4.3.2 Tours

Tours of the facility have been given throughout the years to representatives of various environmental agencies (domestic and foreign) and educational groups. The tours include an informational orientation, accompanied with visual aids, followed by a guided tour of the treatment facility and landfill. Two tours were given in 2018 as follows:

- PBS Newshour on July 24, 2018
- University at Buffalo's student chapter of the New York Water Environment Associate (UB-NYWEA) on December 5, 2018

4.3.3 Communications

All required reports were prepared and submitted to various agencies throughout the year. Reports included the 2017 Annual Hazardous Waste Report to the NYSDEC, the 2017 Periodic Review Report (formerly titled the Annual Operations and Monitoring Report) to various agencies, quarterly SIU analytical reports to the NFWB and NYSDEC, and monthly SIU reports to the NFWB.

The Love Canal Annual Newsletter for 2017 was issued to surrounding citizens and agencies in August 2018. The report summarizes items such as the amount of groundwater treated on Site and then discharged to NFWB's sanitary sewer system, maintenance activities, and other non-operational activities for the year.

4.4 Waste Generation

Throughout 2018, both hazardous and nonhazardous waste was generated from various activities and disposed of off Site in accordance with applicable laws and regulations.

The tracking of hazardous waste is performed by regulated hazardous waste manifests. A summary of the Site's annual hazardous waste generation is reported to the NYSDEC in the Annual Hazardous Waste Report. The Annual Hazardous Waste Report summarizes the quantities, transporters, and disposal methods.

A total of 29,705 pounds of hazardous waste was generated from the activities listed below. The waste materials were sent off Site for disposal in accordance with applicable laws and regulations. Wastes generated in 2018 were disposed of through incineration or landfill impoundment by Clean Harbors, LLC.

The hazardous waste disposed of in 2018 consisted of soil/debris, spent carbon, and NAPL as follows:

- Soil/Debris: 1,625 pounds (consisting of personal protective equipment [PPE], spent filter bags, and debris from the drum barn)

- Spent Carbon: 5,280 pounds (collected from LCTF process)
- NAPL Sludge: 22,800 pounds (collected from LCTF process)

4.5 Routine Operations, Inspections, and Monitoring

A daily inspection of the system operations was performed for each day in 2018 in accordance with the O&M Manual for the Love Canal Site, dated March 2015. Inspection records are available upon request.

Monthly inspections, including fire extinguishers and carbon vapor phase vents for breakthrough were also completed in accordance with the O&M Manual. Inspection records are available upon request.

The NFWB performed an annual inspection of the LCTF and performed verification sampling of the effluent discharge on January 17, 2018. The inspection and the annual effluent verification sampling concluded that the Site is being maintained and operated in accordance with the Site's SIU discharge permit and other local, State, and Federal requirements. The completed NFWB 2018 Inspection Form is included in Appendix G.

The United States Environmental Protection Agency (USEPA) conducted their 5-Year review inspection of the Site on November 6, 2018. Representatives of the USEPA, NYSDEC, Niagara County Department of Health, GSH, and GHD were in attendance. No issues were identified. The USEPA's Five-Year Review Report is expected to be published in 2019.

The NYSDEC conducted a Site inspection (landfill and treatment system) on July 12, 2018. No issues were identified and there were no requests for additional actions to be taken.

The backflow preventer system on the potable water supply lines was inspected and tested by CamTech Plumbing and Mechanical (CamTech) on March 15, 2018. CamTech is licensed and certified by the NFWB to perform the backflow preventer system inspections. All five backflow prevention devices were found to be operational with no maintenance required. A copy of the 2017 Test and Maintenance of Backflow Prevention Device Report for each device is presented in Appendix H.

The annual fire system inspection was conducted on May 18, 2018. No issues were identified.

5. Conclusion

The 2018 monitoring results show that there has been no significant change in chemical concentration conditions and that the barrier drain system is successfully capturing leachate from the Site and preventing off-Site migration of contamination. The barrier drain continues to create an inward hydraulic gradient and capture leachate from the Site, preventing off-Site migration of chemicals, as evidenced by the groundwater gradients depicted on Figures 3.3 to 3.9 and analytical data from observation wells around the perimeter of the Site. The collection system is functioning as designed based on groundwater monitoring results and third party inspections by the NYSDEC. The treatment system is functioning as designed based on inspections and sampling by the NFWB and sampling by GSH. Effluent quality is compliant with the Site's SIU discharge permit. There were

4,400,918 gallons of leachate collected, treated, and discharged from the Site, of which 4,284,554 gallons of leachate were collected from the Site, and 116,364 gallons were collected from the 102nd Street Site and pumped to the LCTF for treatment. Monitoring results continue to confirm that the remediation and containment system (i.e., the leachate collection and treatment system) is functioning as designed.

about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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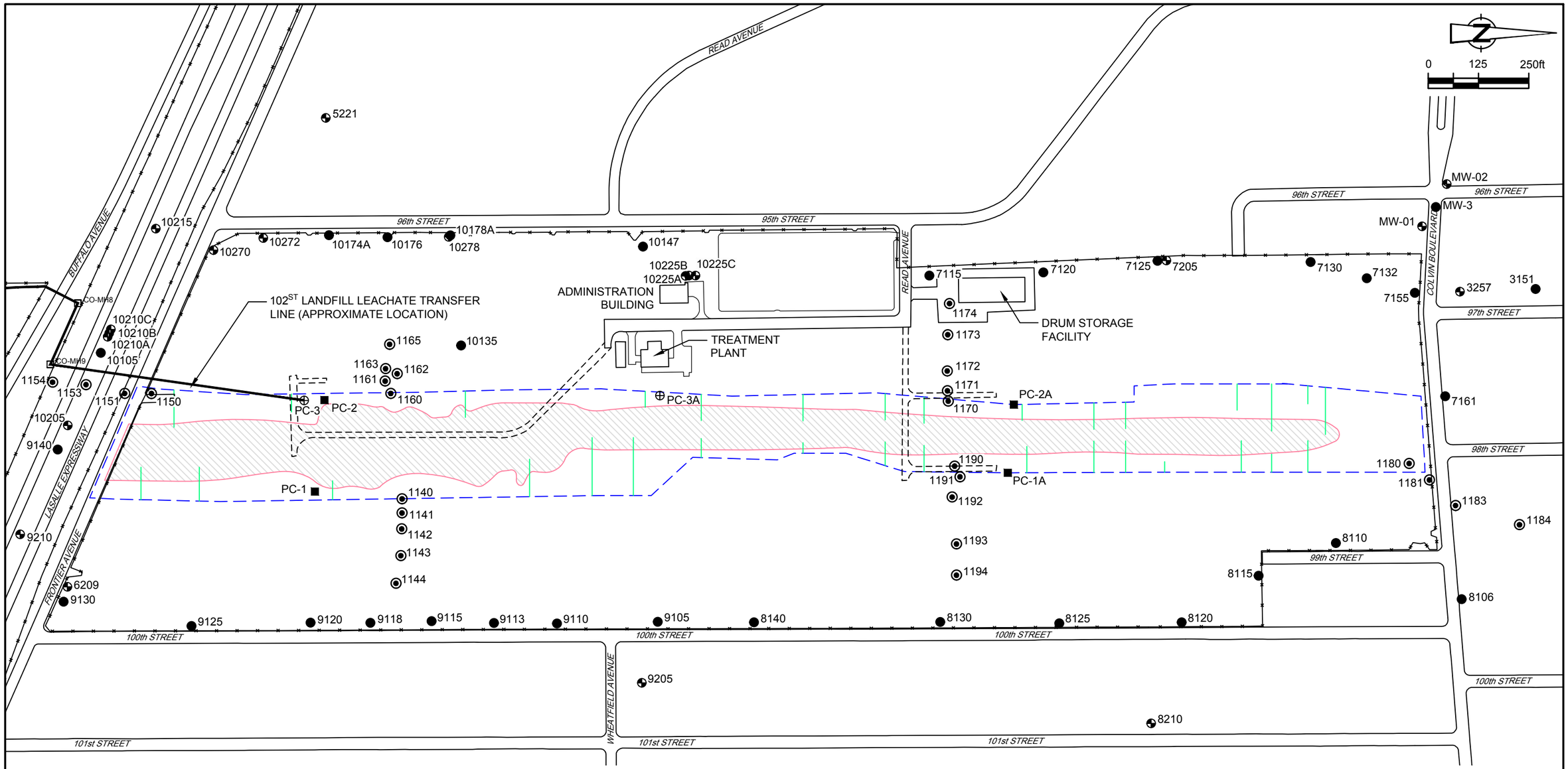


LEGEND

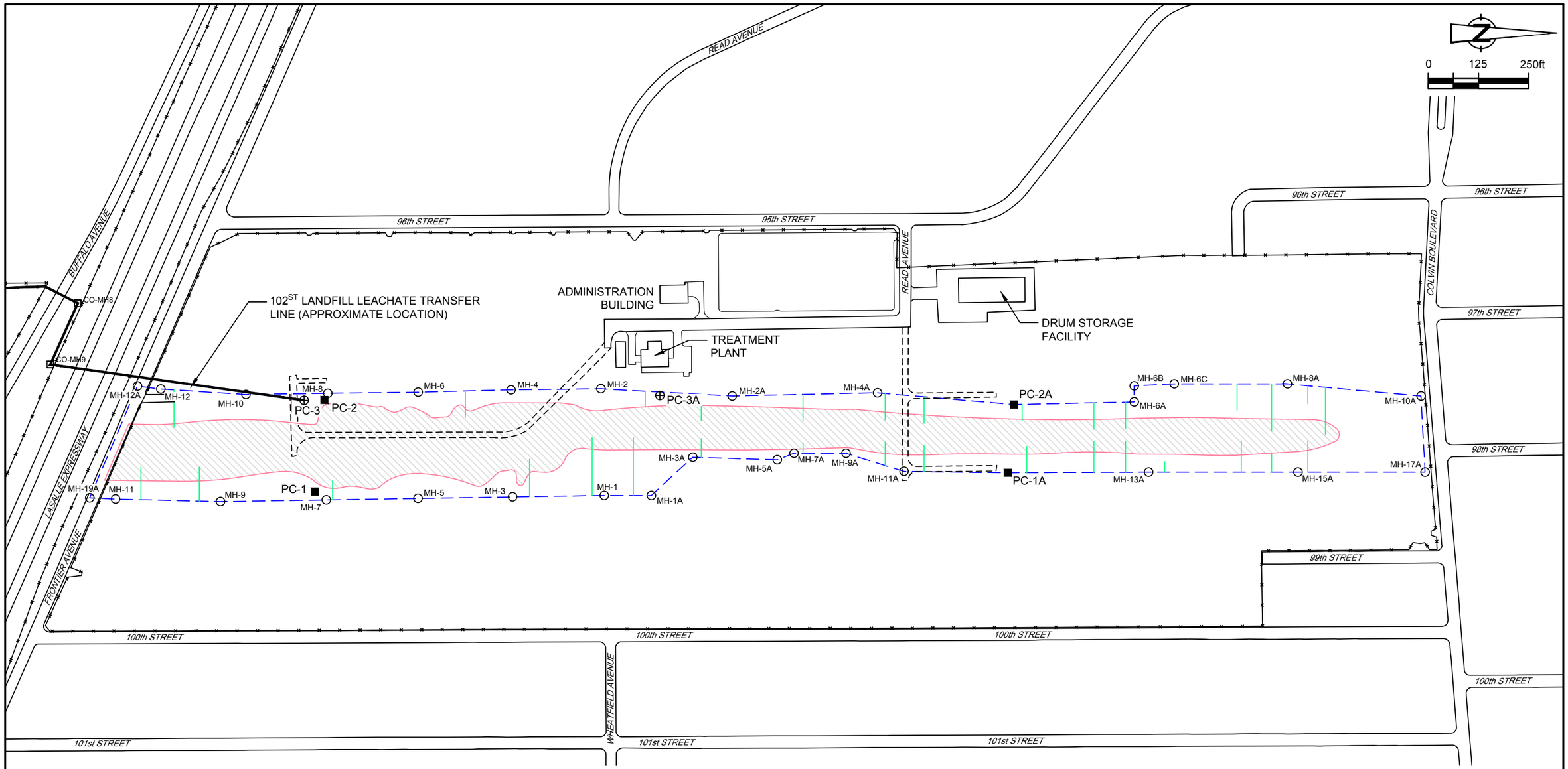
- FENCE LINE
- BARRIER DRAIN
- LATERAL TRENCH
- 7105 PIEZOMETER
- 9120 OVERBURDEN OBSERVATION WELL
- 10270 BEDROCK OBSERVATION WELL
- PC-1 PUMP CHAMBER FOR LEACHATE COLLECTION
- PC-3 PUMP CHAMBER / UNDERGROUND LEACHATE STORAGE TANK FOR LEACHATE COLLECTION AND TRANSFER
- CO-MH3 FORCEMAIN CLEAN OUT MANHOLE
- APPROXIMATE LIMITS OF DISPOSED WASTE

NOTE:
WELL 3151 IS UNABLE TO BE LOCATED
(ASSUMED TO BE PAVED OVER)

figure 2.1

SITE PLAN
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

09954-D23101(034)GN-WA001 JUN 14, 2018



LEGEND

- FENCE LINE
- BARRIER DRAIN
- LATERAL TRENCH
- MH-1 MANHOLE LOCATION
- PC-1 PUMP CHAMBER FOR LEACHATE COLLECTION
- PC-3 PUMP CHAMBER / UNDERGROUND LEACHATE STORAGE TANK FOR LEACHATE COLLECTION AND TRANSFER
- CO-MH3 FORCEMAIN CLEAN OUT MANHOLE
- APPROXIMATE LIMITS OF DISPOSED WASTE

NOTE:
WELL 3151 IS UNABLE TO BE LOCATED
(ASSUMED TO BE PAVED OVER)

figure 2.2

MANHOLE LOCATIONS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

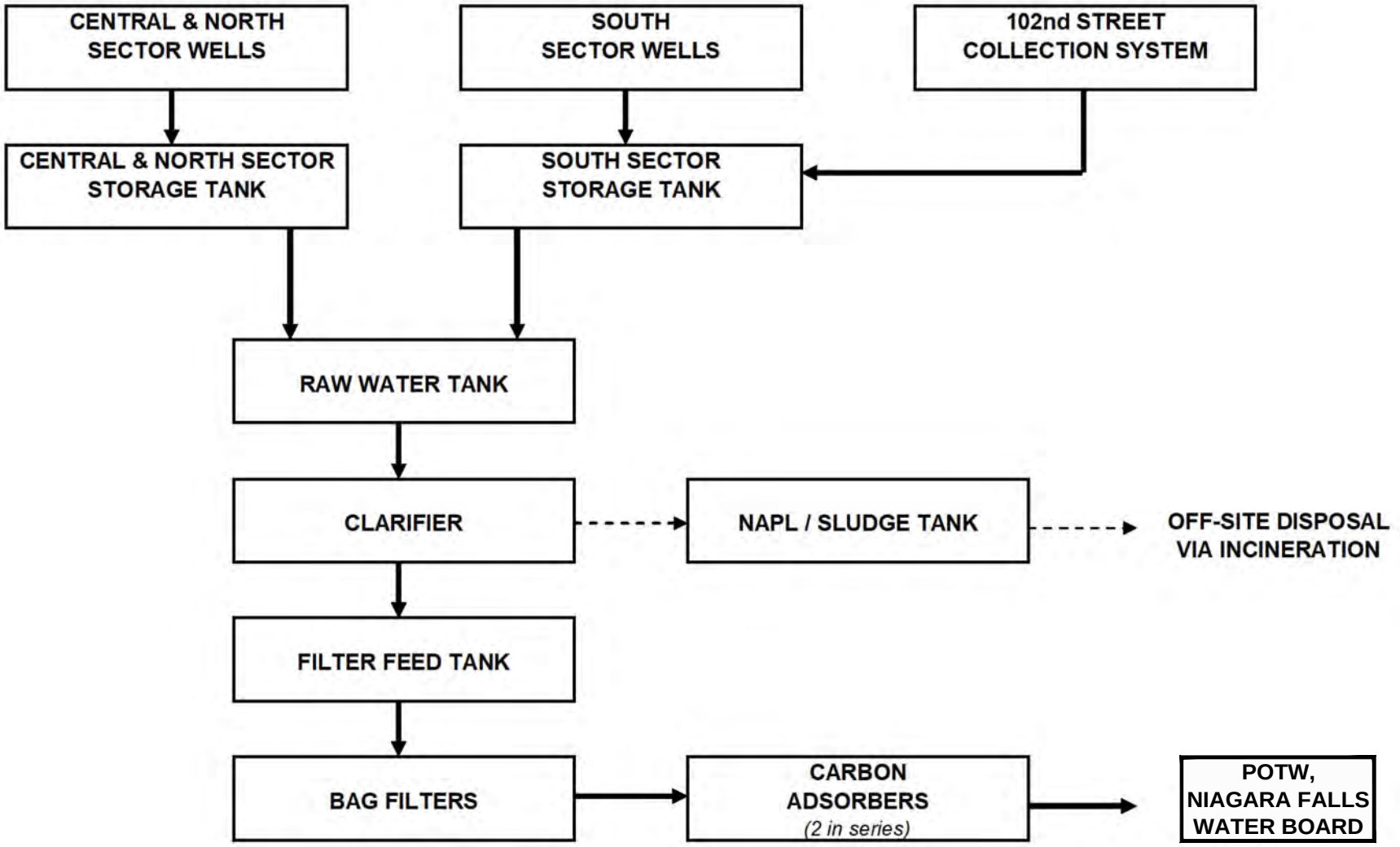
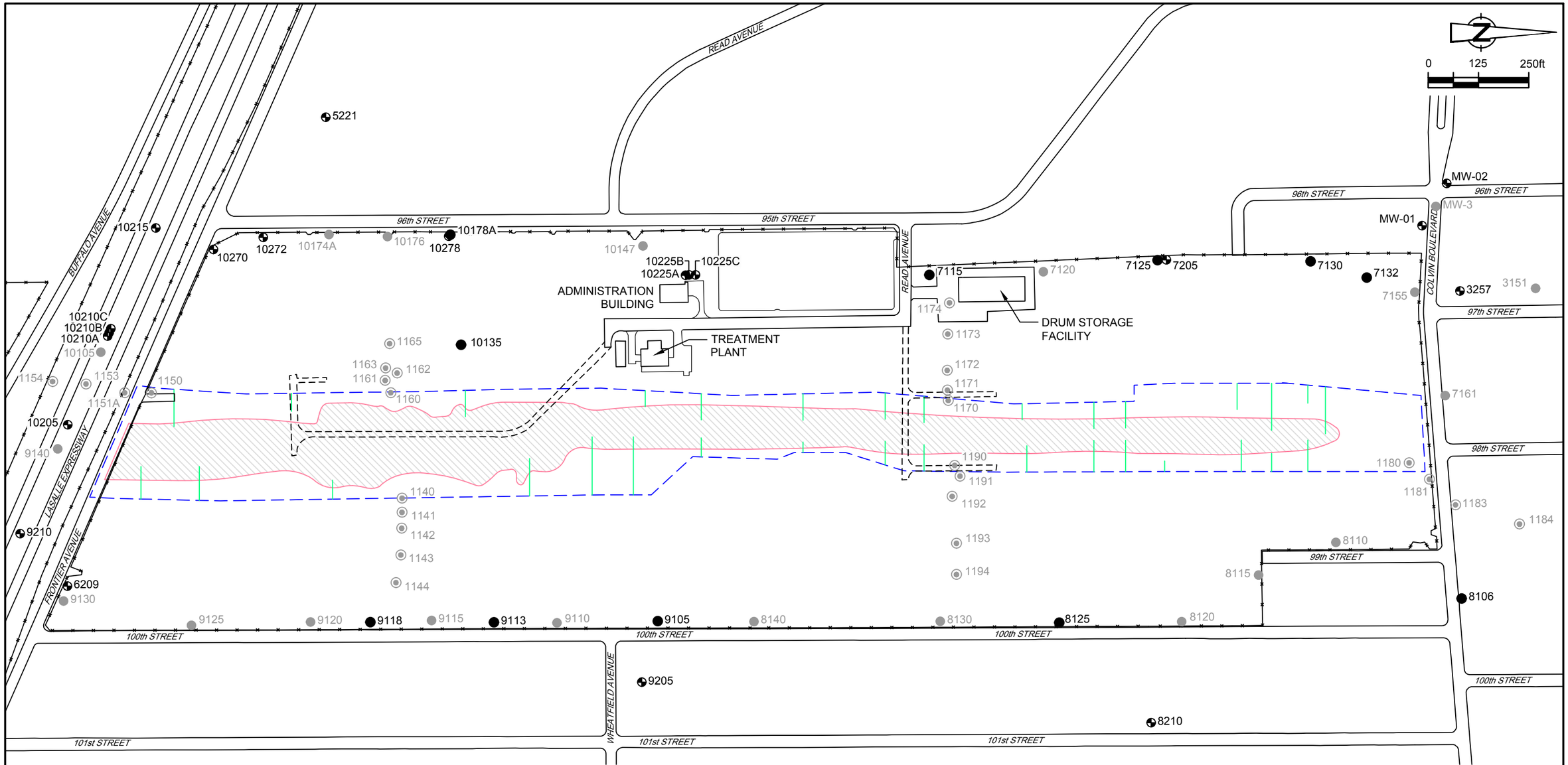


figure 3.1

PROCESS SCHEMATIC
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



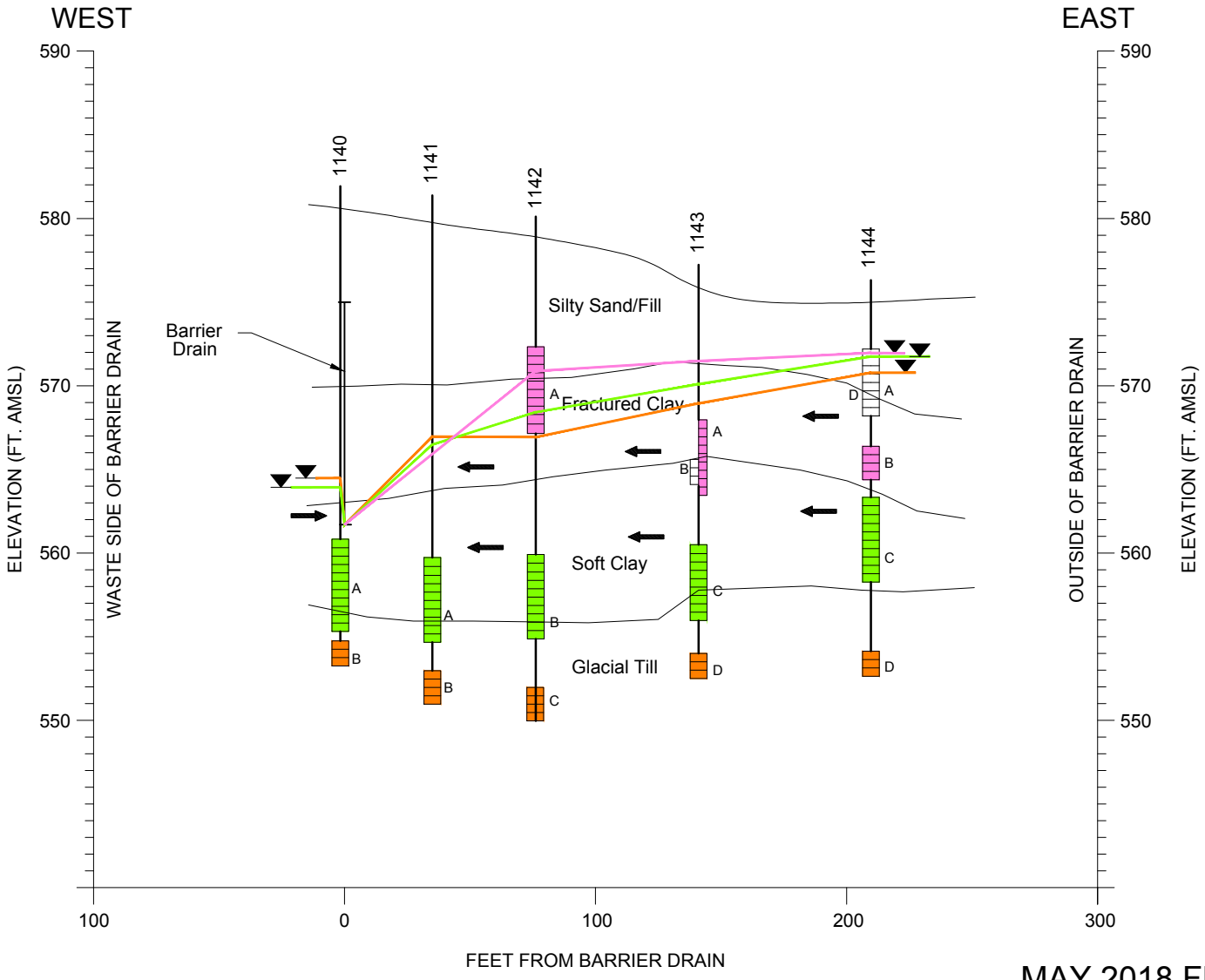
LEGEND

- FENCE LINE
- BARRIER DRAIN
- LATERAL TRENCH
- 7105 PIEZOMETER
- 9122 OVERBURDEN OBSERVATION WELL
- 5222 BEDROCK OBSERVATION WELL
- 7115 OVERBURDEN OBSERVATION WELL SAMPLED IN 2018
- 10270 BEDROCK OBSERVATION WELL SAMPLED IN 2018
- APPROXIMATE LIMITS OF DISPOSED WASTE

NOTE:
WELL 3151 IS UNABLE TO BE LOCATED
(ASSUMED TO BE PAVED OVER)

figure 3.2

2018 GROUNDWATER MONITORING LOCATIONS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

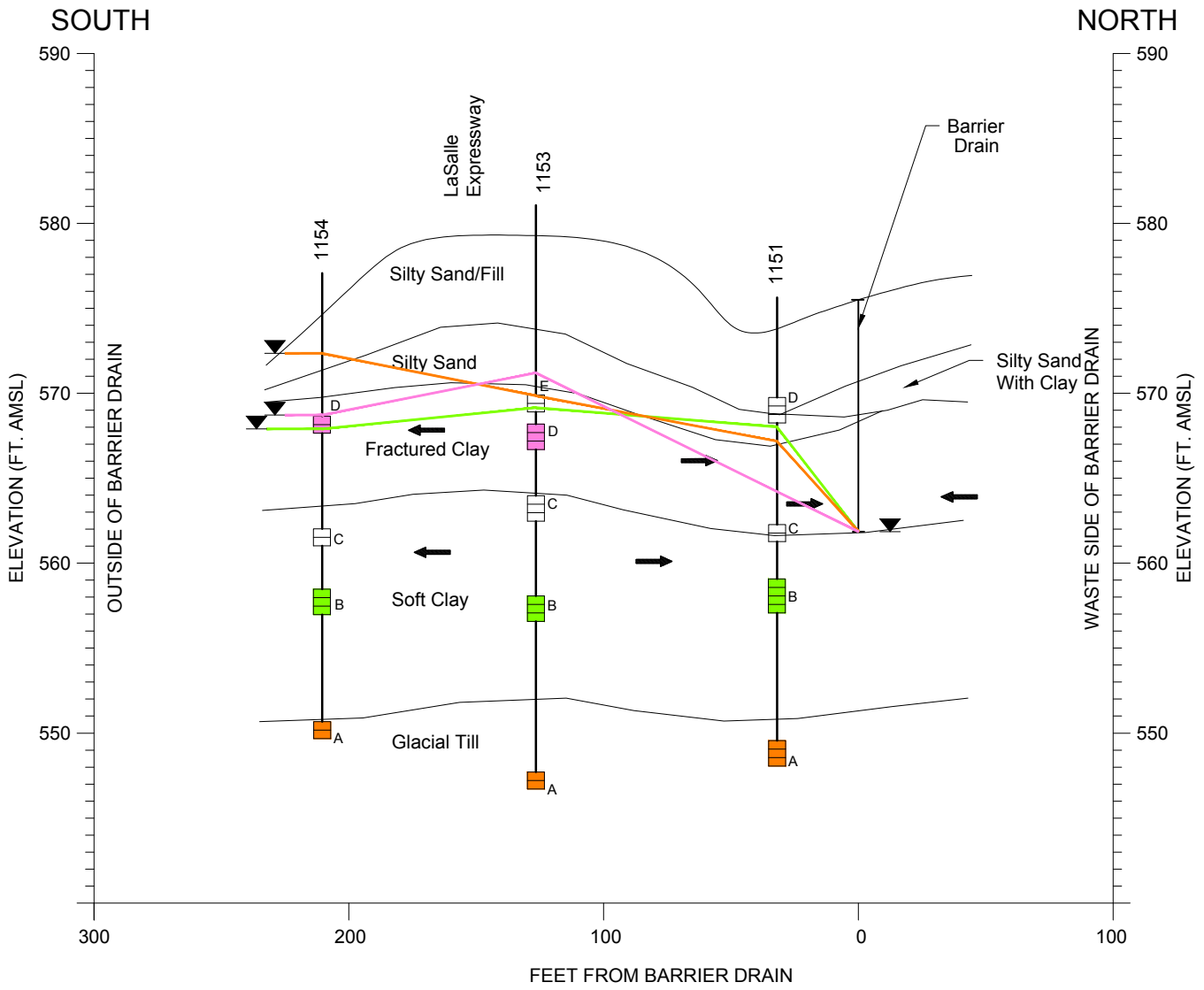
NOTES:

(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

figure 3.3

MAY 2018 FLOW DIAGRAM
1140 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

NOTES:

(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

figure 3.4

MAY 2018 FLOW DIAGRAM 1150 SERIES PIEZOMETERS LOVE CANAL SITE GLENN SPRINGS HOLDINGS, INC.

Niagara Falls, New York

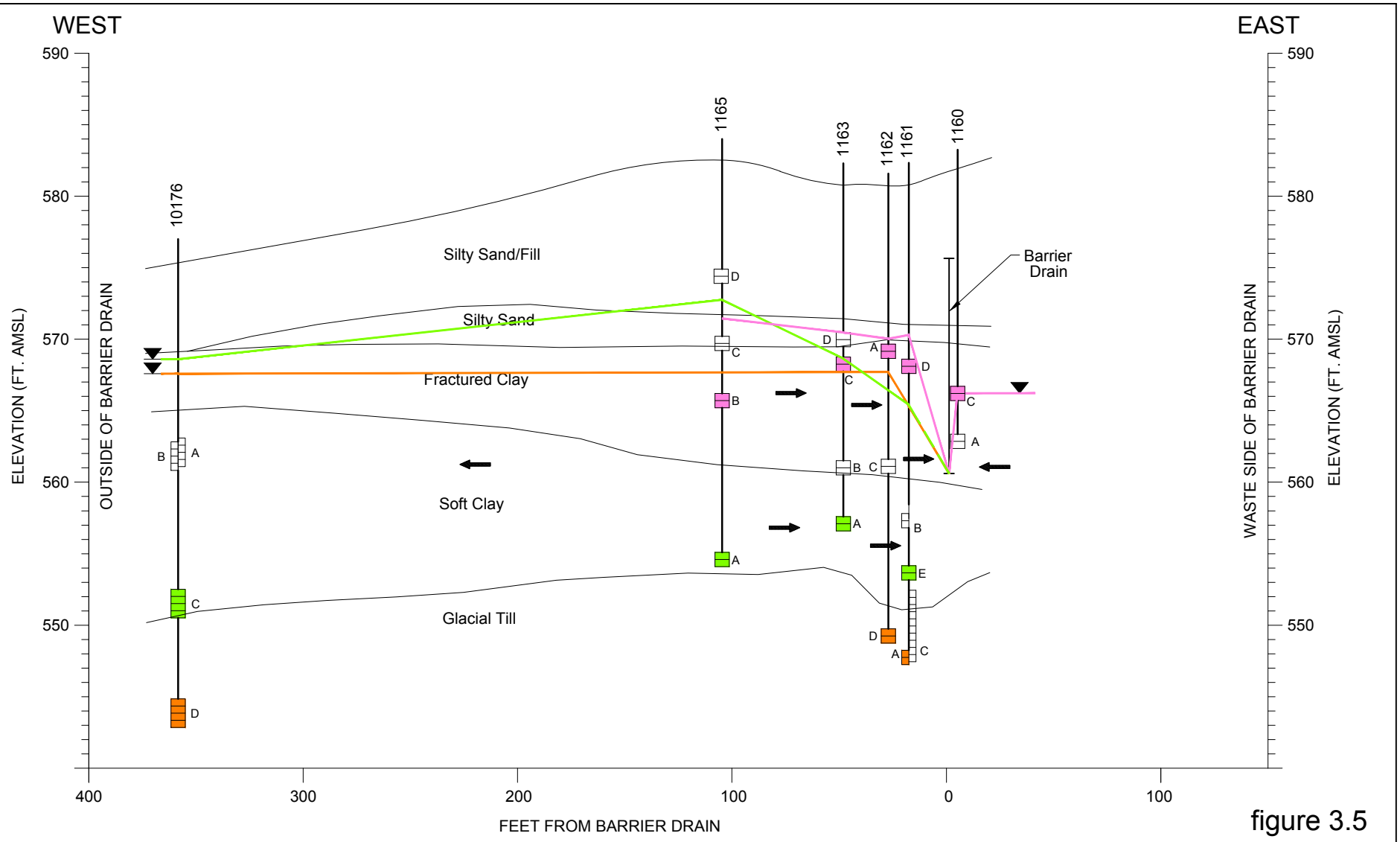


figure 3.5

MAY 2018 FLOW DIAGRAM
1160 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

NOTES:

(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

(3) WELL SCREEN 1163 D MOVED UP TO MATCH FIELD MEASUREMENTS.

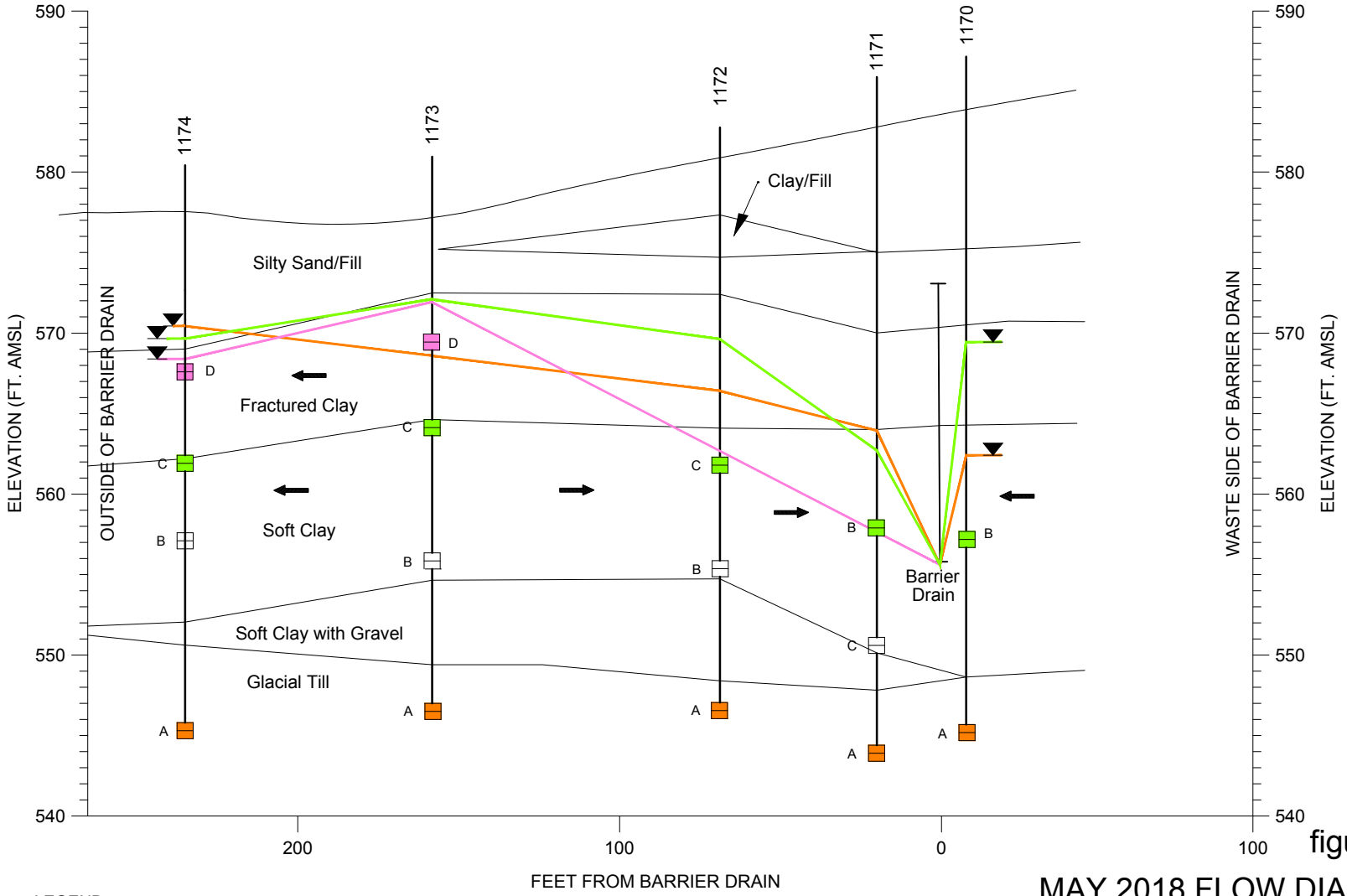


figure 3.6

LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

NOTES:
(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.
(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

MAY 2018 FLOW DIAGRAM
1170 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

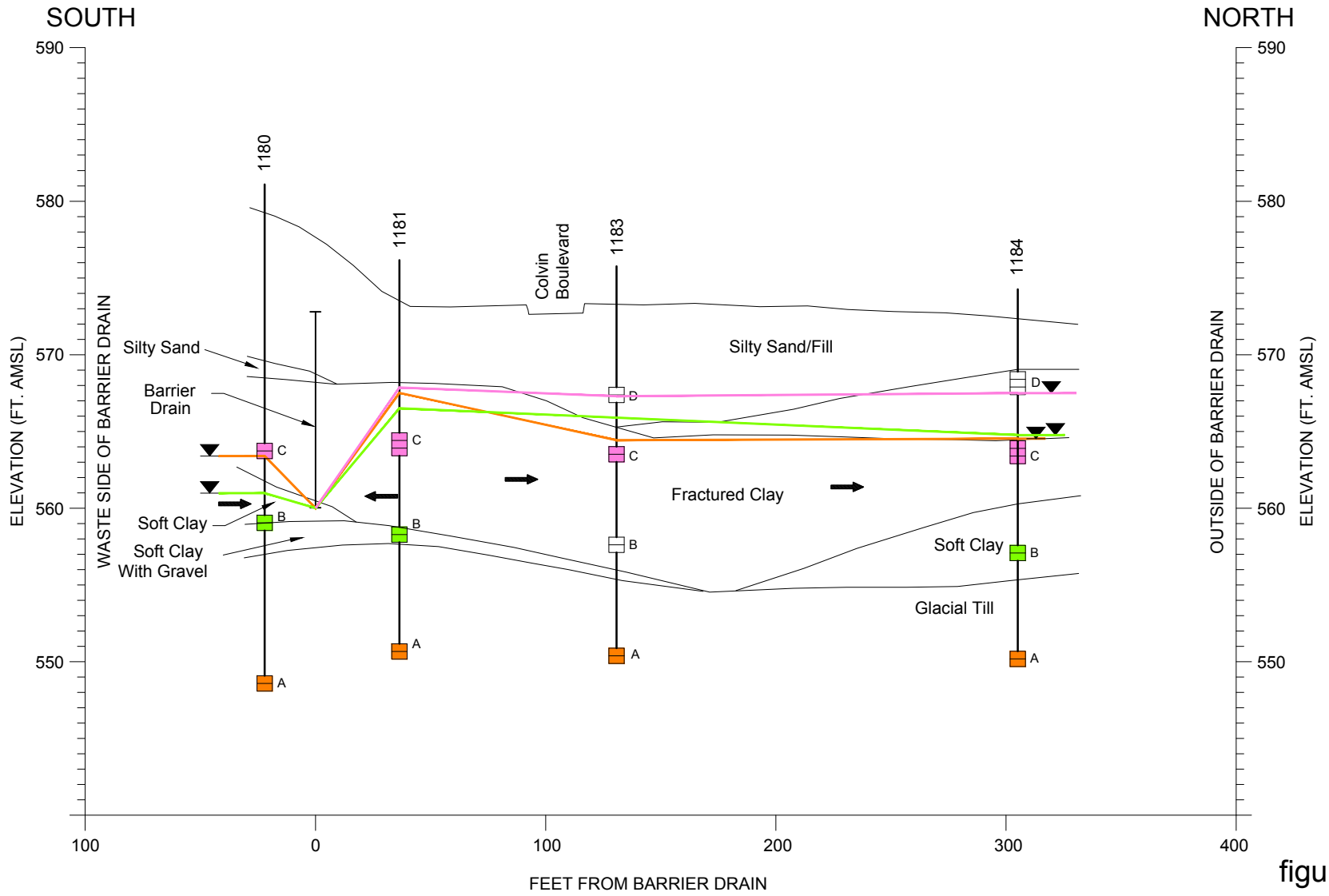


figure 3.7

MAY 2018 FLOW DIAGRAM
1180 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

NOTE:
(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.
(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

GHD

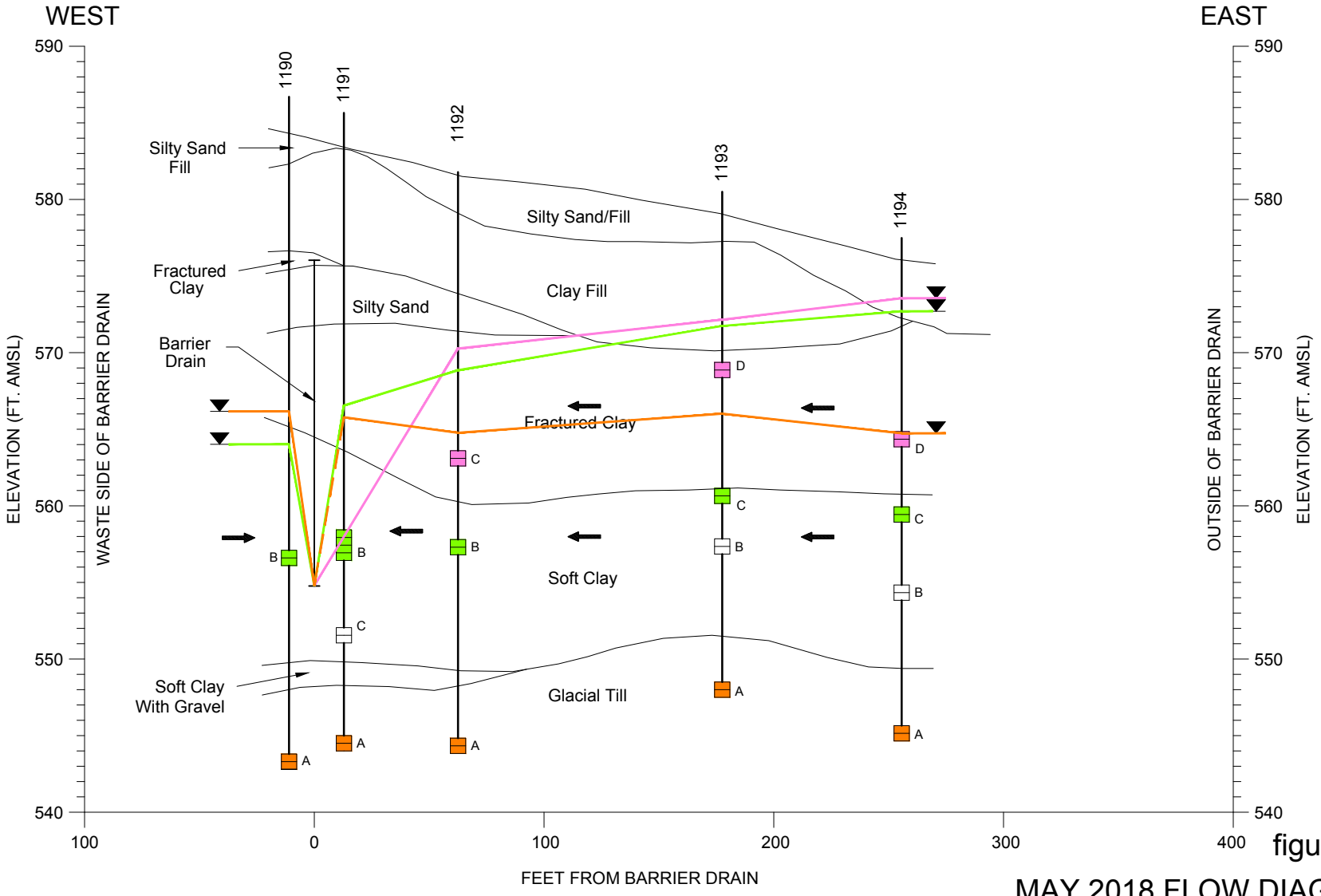


figure 3.8

LEGEND

A PIEZOMETER DESIGNATION

FLOW DIRECTION

SCREENED INTERVAL

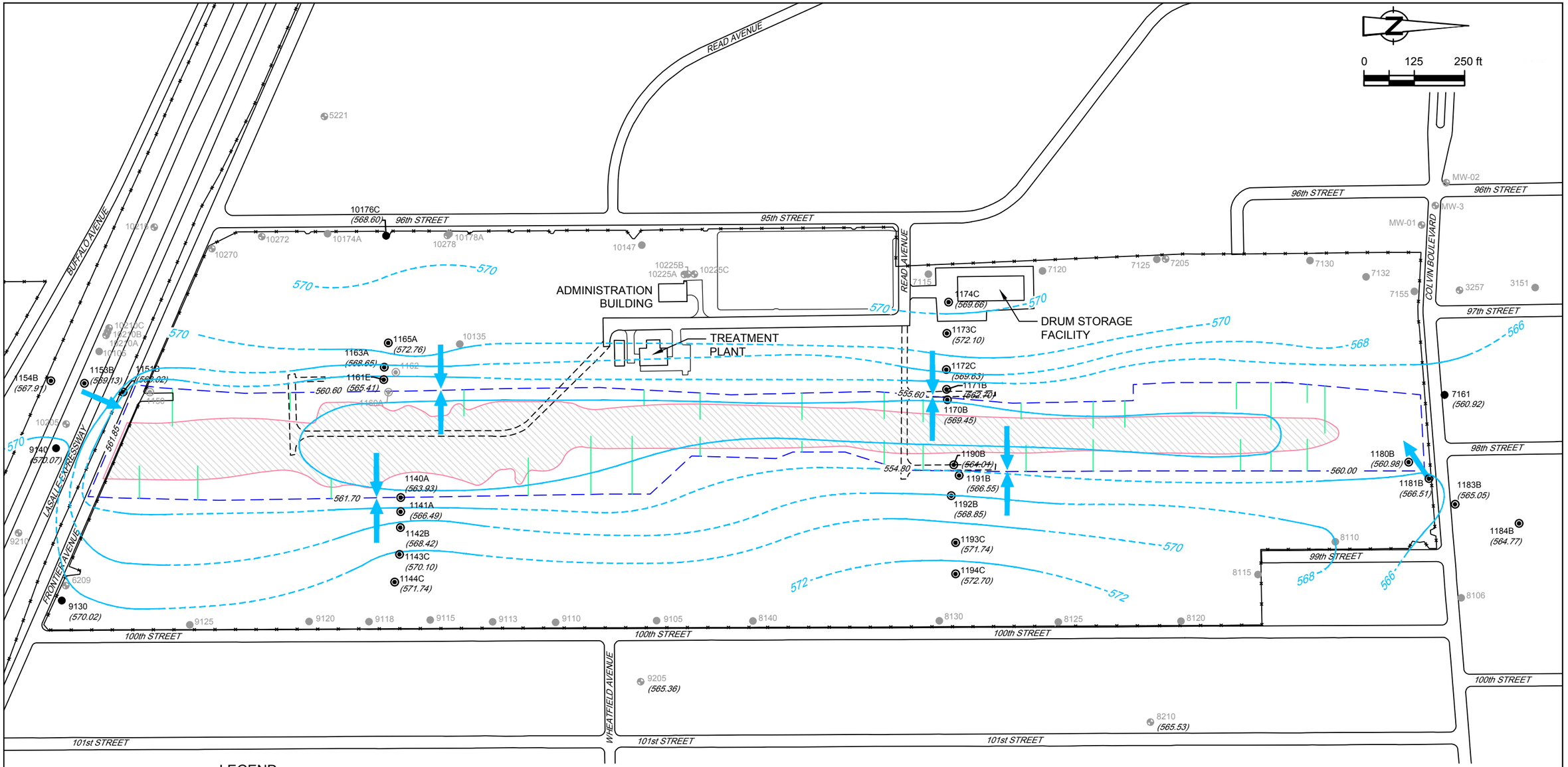
GLACIAL TILL GROUNDWATER LEVEL

FRACTURED CLAY GROUNDWATER LEVEL

SOFT CLAY GROUNDWATER LEVEL

NOTE:
(1) GROUNDWATER LEVEL SHOWN MATCH THE COLORED SCREEN INTERVAL.
(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

MAY 2018 FLOW DIAGRAM
1190 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



LEGEND

- FENCE LINE
- BARRIER DRAIN
- LATERAL TRENCH
- 7105 PIEZOMETER
- 9120 OVERBURDEN OBSERVATION WELL
- 7105 PIEZOMETER (NOT PART OF HYDRAULIC MONITORING PROGRAM)
- 9120 OVERBURDEN OBSERVATION WELL (NOT PART OF HYDRAULIC MONITORING PROGRAM)
- 5222 BEDROCK OBSERVATION WELL (NOT PART OF HYDRAULIC MONITORING PROGRAM)
- APPROXIMATE LIMITS OF DISPOSED WASTE
- (565.36) GROUNDWATER ELEVATION
- 566 GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- 554.80 ELEVATION OF THE BOTTOM OF THE BARRIER DRAIN

figure 3.9

MAY 29, 2018 GROUNDWATER CONTOURS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

Table 3.1

Monthly Volumes of Groundwater Treated
Love Canal Long-Term Monitoring Program
Glenn Springs holdings, Inc.

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
January	Gross	**495,800**	**396,900**	**488,900**	**419,400**	**309,200**	**841,400**	**855,900**	**993,400**	**674,000**	**523,500**	**534,400**	**346,900**	**571,900**	**600,400**	**519,614**	**363,043**	**385,636**	**563,854**	**499,356**
	Net [1]	280,364	282,480	422,682	374,123	260,171	796,518	817,305	970,918	649,777	495,713	471,805	322,994	546,816	575,767	499,889	346,565	370,676	548,797	487,271
	Days [2]	21	20	21	14	10	17	16	20	18	16	17	18	15	18	20	14	18	19	20
February	Gross [3]	**480,400**	**560,000**	**663,700**	**266,300**	**330,000**	**440,200**	**437,300**	**216,600**	**570,000**	**506,700**	**314,300**	**375,800**	**656,700**	**495,900**	**291,292**	**68,244**	**634,159**	**371,608**	**692,324**
	Net	368,492	468,863	608,116	231,049	291,082	401,137	405,124	174,776	539,772	485,869	276,643	349,712	634,167	478,434	277,226	55,548	619,942	357,557	680,210
	Days	21	19	20	13	9	11	9	7	16	13	10	19	16	19	15	16	19	13	24
March	Gross	**505,500**	**616,400**	**364,900**	**721,500**	**1,038,400**	**698,900**	**436,800**	**582,500**	**570,500**	**606,900**	**550,100**	**1,003,700**	**384,500**	**488,000**	**388,937**	**658,775**	**544,972**	**641,911**	**492,694**
	Net	290,501	493,476	316,696	667,337	986,332	667,105	402,047	560,237	550,518	582,109	526,021	978,000	363,378	467,083	375,154	642,149	529,757	629,687	480,496
	Days	23	21	21	17	21	13	13	16	12	18	17	21	16	20	17	20	21	20	24
April	Gross	**675,600**	**352,300**	**689,700**	**432,800**	**800,400**	**805,300**	**184,800**	**447,200**	**602,000**	**414,900**	**498,200**	**676,400**	**334,400**	**533,800**	**786,808**	**575,949**	**531,147**	**1,053,394**	**751,811**
	Net	547,926	262,946	629,683	380,745	767,982	769,514	155,028	420,133	574,359	377,080	466,778	652,656	316,188	516,478	768,257	561,287	517,498	1,041,670	740,294
	Days	20	20	20	16	17	14	6	14	12	16	15	11	18	22	20	17	19	24	28
May	Gross	**473,300**	**311,200**	**589,500**	**425,400**	**326,500**	**183,400**	**121,800**	**323,200**	**172,900**	**306,200**	**379,400**	**942,700**	**363,100**	**148,500**	**444,598**	**113,599**	**175,158**	**983,450**	**169,570**
	Net	335,331	207,580	532,251	379,299	294,612	156,846	93,394	297,471	147,715	267,700	348,837	917,206	341,424	129,687	428,177	99,179	163,324	971,685	159,011
	Days	20	17	20	14	10	5	4	12	11	14	18	17	16	18	21	12	15	25	18
June	Gross	**632,200**	**202,200**	**395,100**	**367,900**	**253,200**	**160,800**	**130,700**	**173,300**	**128,700**	**110,000**	**205,200**	**473,100**	**142,000**	**497,300**	**168,921**	**262,025**	**98,255**	**178,582**	**110,862**
	Net	486,721	132,132	347,485	303,576	208,659	118,979	104,449	148,638	107,411	79,200	174,305	449,046	118,568	478,285	152,639	245,083	83,122	164,597	99,568
	Days	20	16	14	13	9	6	5	4	6	7	13	16	12	18	12	19	11	15	10
July	Gross	**333,900**	**182,200**	**194,500**	**187,700**	**137,700**	**92,600**	**195,500**	**129,100**	**164,760**	**187,900**	**85,600**	**79,700**	**98,400**	**280,000**	**151,772**	**138,495**	**77,140**	**335,930**	**103,168**
	Net	184,955	111,941	145,344	142,849	111,217	78,234	183,084	99,026	141,442	153,170	55,670	53,632	72,435	260,823	123,921	122,874	62,847	322,782	95,988
	Days	20	16	16	11	7	3	5	6	6	7	4	5	9	19	15	16	12	18	8
August	Gross	**437,100**	**267,200**	**151,300**	**158,600**	**301,900**	**98,800**	**322,440**	**120,800**	**197,340**	**369,400**	**184,300**	**193,900**	**73,960**	**193,144**	**98,166**	**108,376**	**65,714**	**242,754**	**91,721**
	Net	286,925	194,821	107,928	114,497	269,934	55,055	293,900	106,040	191,068	347,425	162,562	166,652	49,422	168,418	83,010	91,308	50,772	228,321	80,446
	Days	23	18	17	8	10	5	10	5	6	18	8	13	8	21	9	7	6	17	7
September	Gross	**209,600**	**144,900**	**148,600**	**105,800**	**484,800**	**317,900**	**249,160**	**68,400**	**152,200**	**101,500**	**88,100**	**47,800**	**161,100**	**131,289**	**139,016**	**151,905**	**96,279**	**114,926**	**95,188**
	Net	82,263	81,619	94,401	60,350	435,482	284,315	213,343	49,041	122,101	76,057	56,678	21,679	136,728	110,397	111,392	134,935	79,011	100,242	88,215
	Days	20	16	12	7	12	8	7	4	9	7	2	6	17	23	13	12	11	8	8
October	Gross	**264,300**	**438,500**	**154,600**	**211,000**	**135,700**	**486,300**	**919,200**	**173,000**	**296,100**	**199,200**	**120,200**	**417,500**	**318,400**	**503,036**	**121,075**	**146,842**	**124,508**	**286,862**	**132,231**
	Net	134,248	348,153	108,226	211,000	94,476	445,560	892,734	141,650	274,068	129,035	88,537	389,696	291,391	480,233	94,680	123,794	104,726	270,291	128,444
	Days	20	18	13	9	4	10	18	8	13	8	5	14	19	20	18	11	11	12	11
November	Gross	**250,900**	**250,400**	**360,800**	**356,800**	**211,400**	**524,600**	**691,800**	**90,100**	**449,700**	**210,100**	**263,400**	**350,100**	**526,900**	**538,978**	**107,729**	**146,722**	**101,686**	**686,365**	**635,923**
	Net	132,728	194,481	306,258	310,650	186,999	494,443	658,765	77,506	414,149	152,302	233,159	322,735	504,290	520,087	85,439	127,799	85,421	669,770	631,896
	Days	17	16	14	12	5	14	14	3	14	12	15	12	20	19	12	15	11	22	21
December	Gross	**522,600**	**555,300**	**549,600**	**692,300**	**674,400**	**502,000**	**510,400**	**345,700**	**757,500**	**506,200**	**510,900**	**952,000**	**517,700**	**677,411**	**471,085**	**155,368**	**335,448**	**278,817**	**626,070**
	Net	421,149	475,856	496,556	643,735	622,403	476,165	492,900	317,790	733,582	467,578	483,221	926,201	493,061	660,890	456,099	138,929	318,036	264,686	612,715
	Days	17	18	15	14	14	12	12	8	20	17	17	19	14	17	14	13	14	19	28
Total	Gross	**5,281,200**	**4,277,500**	**4,751,200**	**4,345,500**	**5,003,600**	**5,152,200**	**5,055,800**	**3,663,300**	**4,735,700**	**4,042,500**	**3,734,100**	**5,859,600**	**4,149,060**	**5,087,758**	**3,689,013**	**2,889,343**	**3,170,102**	**5,738,453**	**4,400,918**
	Net	**3,551,603**	**3,254,348**	**4,115,626**	**3,819,210**	**4,529,349**	**4,743,871**	**4,712,073**	**3,363,226**	**4,445,962**	**3,613,238**	**3,344,216**	**5,550,209**	**3,867,868**	**4,846,582**	**3,455,883**	**2,689,450**	**2,985,132**	**5,570,085**	**4,284,554**
	Days	**242**	**215**	**203**	**148**	**128**	**118**	**119**	**107**	**143**	**153**	**141**	**171**	**180**	**234**	**186**	**172**	**168**	**212**	**207**
Monthly	Gross	**440,100**	**356,458**	**395,933**	**362,125**	**416,967**	**429,350**	**421,317**	**305,275**	**394,642**	**336,875**	**311,175**	**488,300**	**345,755**	**423,980**	**307,418**	**240,779**	**264,175**	**478,204**	**366,743**
Average	Net	295,967	271,196	342,969	318,268	377,446	395,323	392,673	280,269	370,497	301,103	278,685	462,517	322,322	403,882	287,990	224,121	248,761	464,174	357,046
	Days	20	18	17	12	11	10	10	9	12	13	12	14	15	20	16	14	14	18	17
Precipitation Inches [4]		**36.33**	**29.56**	**31.05**	**32.03**	**36.33**	**35.99**	**38.66**	**24.02**	**36.45**	**37.85**	**34.54**	**40.26**	**31.87**	**40.66**	**35.12**	**24.99**	**23.33**	**41.36**	**34.93**

Notes:

(1) - Gross: Total volume of leachate treated in gallons; treatment at LCTF includes leachate collected from 102nd Street Landfill Site.
(2) - Net: Love Canal leachate treated in gallons; net is equal to the total (gross) leachate treated less leachate received from 102nd Street.
(3) - Days: Number of days treatment facility discharged to the sanitary sewer.
(4) - Precipitation data obtained from the National Climatic Data Center for Niagara Falls International Airport.

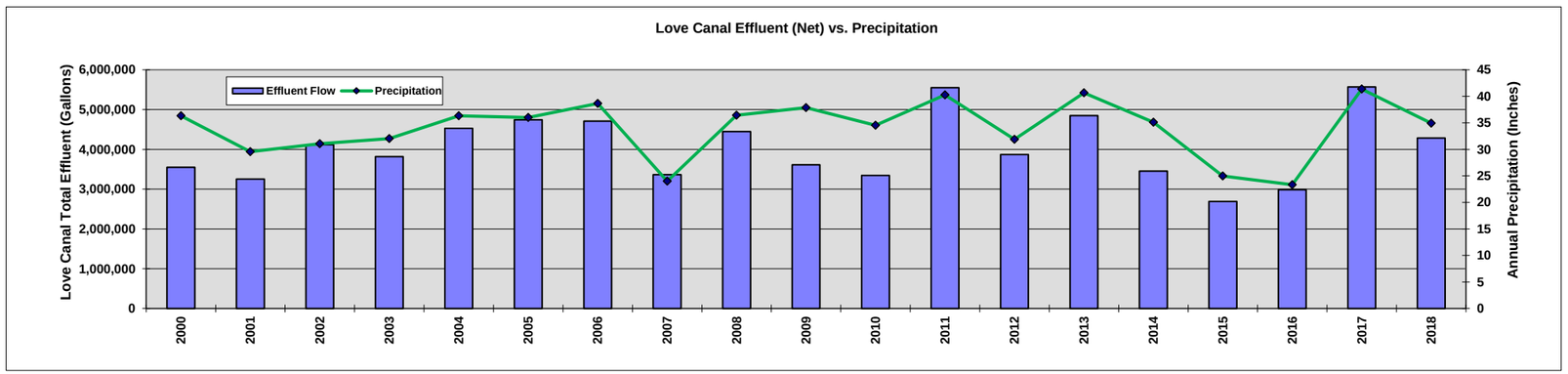


Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		7115	7125	7130	7132	8106	8115	8125	9105
Sample ID:		WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007	WG-9954-070618-SG-008
Sample Date:		7/5/2018	7/5/2018	7/5/2018	7/5/2018	7/11/2018	7/5/2018	7/6/2018	7/6/2018
Parameters	**Units**								
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	3.4 J	3.4 J	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	0.21 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	3.7 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Discrete Compounds Detected:		1	1	1	1	0	0	0	0
Semi-volatile Organic Compounds									
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ
Semi-volatile Organic Compounds-Continued									
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		7115	7125	7130	7132	8106	8115	8125	9105
Sample ID:		WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007	WG-9954-070618-SG-008
Sample Date:		7/5/2018	7/5/2018	7/5/2018	7/5/2018	7/11/2018	7/5/2018	7/6/2018	7/6/2018
Parameters	**Units**								
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	26	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Semi-volatile Organic Compounds-Continued									
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Discrete Compounds Detected:		0	0	0	0	1	0	0	0
Polychlorinated Biphenyls (PCBs)									
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	1.9 UJ	1.9 UJ	1.9 U	1.9 U	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Discrete Compounds Detected:		0	0	0	0	0	0	0	0

Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		7115	7125	7130	7132	8106	8115	8125	9105
Sample ID:		WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007	WG-9954-070618-SG-008
Sample Date:		7/5/2018	7/5/2018	7/5/2018	7/5/2018	7/11/2018	7/5/2018	7/6/2018	7/6/2018
Parameters	**Units**								
Pesticides									
4,4'-DDD	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
4,4'-DDE	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
4,4'-DDT	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Aldrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
alpha-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
alpha-Chlordane	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
beta-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
delta-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Dieldrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Endosulfan I	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Endosulfan II	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Endosulfan sulfate	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Endrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Endrin ketone	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
gamma-BHC (lindane)	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
gamma-Chlordane	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Heptachlor	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Heptachlor epoxide	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Methoxychlor	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.047 UJ	0.047 UJ	0.047 U
Toxaphene	µg/L	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 U
Discrete Compounds Detected:		0	0	0	0	0	0	0	0
Notes:									
J - Estimated concentration									
U - Not detected at the associated reporting limit									
UJ - Not detected; associated reporting limit is estimated									

Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		9113	9113	9118	10135	10178A
Sample ID:		WG-9954-070618-SG-009	WG-9954-070618-SG-010	WG-9954-071018-SG-011	WG-9954-071018-SG-012	WG-9954-070618-SG-006
Sample Date:		7/6/2018	7/6/2018	7/10/2018	7/10/2018	7/6/2018
			Duplicate			
Parameters	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	1000 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	1000 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	1000 U	10 U
Acetone	µg/L	10 U	10 U	10 U	1000 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	6200	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	38 J	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Carbon disulfide	µg/L	10 U	10 U	10 U	1000 U	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	2400	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	230 J	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	39 J	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	21000	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	34 J	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	71 J	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	1000 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	500 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	35 J	5.0 U
Discrete Compounds Detected:		0	0	0	9	0
Semi-volatile Organic Compounds						
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	120 J	9.4 U
2,4-Dimethylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 U	470 U	9.4 UJ
Semi-volatile Organic Compounds-Continued						
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	2400 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
2-Methylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 U	470 U	9.4 UJ
2-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	80 J	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U

Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		9113	9113	9118	10135	10178A
Sample ID:		WG-9954-070618-SG-009	WG-9954-070618-SG-010	WG-9954-071018-SG-011	WG-9954-071018-SG-012	WG-9954-070618-SG-006
Sample Date:		7/6/2018	7/6/2018	7/10/2018	7/10/2018	7/6/2018
			Duplicate			
Parameters	**Units**					
3-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	2400 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	2400 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	6000	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	280 J	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Semi-volatile Organic Compounds-Continued						
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	2400 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U	9.4 U
Discrete Compounds Detected:		0	0	0	4	0
Polychlorinated Biphenyls (PCBs)						
Aroclor-1016 (PCB-1016)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 UJ	1.9 UJ	1.9 UJ	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Discrete Compounds Detected:		0	0	0	0	0

Table 3.2

2018 Analytical Results Summary-Overburden
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		9113	9113	9118	10135	10178A
Sample ID:		WG-9954-070618-SG-009	WG-9954-070618-SG-010	WG-9954-071018-SG-011	WG-9954-071018-SG-012	WG-9954-070618-SG-006
Sample Date:		7/6/2018	7/6/2018	7/10/2018	7/10/2018	7/6/2018
			Duplicate			
Parameters	**Units**					
Pesticides						
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U	23	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	4.3	0.047 U
delta-BHC	µg/L	0.047 U	0.047 U	0.047 U	7.2	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U	3.3	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.94 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	10 U	0.50 U
Discrete Compounds Detected:		0	0	0	4	0
Notes:						
J - Estimated concentration						
U - Not detected at the associated reporting limit						
UJ - Not detected; associated reporting limit is estimated						

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		3257	5221	6209	6209	7205	8210	9205	9210	10205
Sample ID:		WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027	WG-9954-071918-SG-025	WG-9954-072318-SG-034	WG-9954-072318-SG-033	WG-9954-071118-SG-015	WG-9954-071118-SG-016
Sample Date:		7/11/2018	7/23/2018	7/20/2018	7/20/2018	7/19/2018	7/23/2018	7/23/2018	7/11/2018	7/11/2018
					Duplicate					
Parameters	**Units**									
Volatile Organic Compounds										
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.6 J	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
Carbon disulfide	µg/L	2.5 J	4.4 J	5.8 J	4.4 J	10 U	1.4 J	10 U	0.61 J	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	1.1 J	5.0 U	0.25 J	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Discrete Compounds Detected:		1	1	1	2	0	2	0	2	0
Semi-volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Semi-volatile Organic Compounds-Continued										
4-Methylphenol	µg/L	9.4 U	9.4 U	5.6 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		3257	5221	6209	6209	7205	8210	9205	9210	10205
Sample ID:		WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027	WG-9954-071918-SG-025	WG-9954-072318-SG-034	WG-9954-072318-SG-033	WG-9954-071118-SG-015	WG-9954-071118-SG-016
Sample Date:		7/11/2018	7/23/2018	7/20/2018	7/20/2018	7/19/2018	7/23/2018	7/23/2018	7/11/2018	7/11/2018
					Duplicate					
Parameters	**Units**									
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	66	47 U	47 U	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	5.8 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	3.0 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	7.4 J	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Discrete Compounds Detected:		0	0	5	0	0	0	0	0	0
Polychlorinated Biphenyls (PCBs)										
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	1.9 UJ	1.9 U	1.9 U	1.9 UJ	1.9 UJ	9.4 U	9.4 U
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U	0.94 UJ	0.94 UJ	4.7 U	4.7 U
Discrete Compounds Detected:		0	0	0	0	0	0	0	0	0
Pesticides										
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
delta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.043 J	0.047 U	0.047 U	0.18 J	0.24 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Pesticides-Continued										
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.24 U	0.24 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.5 U
Discrete Compounds Detected:		0	0	0	0	1	0	0	1	0
Notes:										
J - Estimated concentration										
U - Not detected at the associated reporting limit										
UJ - Not detected; associated reporting limit is estimated										

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		10205	10210A	10210B	10210C	10215	10225A	10225B	10225C	10270
Sample ID:		WG-9954-071118-SG-017	WG-9954-072318-SG-030	WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031	WG-9954-072318-SG-032	WG-9954-071218-SG-019	WG-9954-071218-SG-022
Sample Date:		7/11/2018	7/23/2018	7/19/2018	7/19/2018	7/11/2018	7/23/2018	7/23/2018	7/12/2018	7/12/2018
		Duplicate								
Parameters	**Units**									
Volatile Organic Compounds										
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	8.4 J	2.6 J	4.3 J	10 U	11	4.5 J	8.9 J	10 U	1.3 J
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	2.0 J	3.4 J	0.77 J	1.7 J	3.1 J	1.2 J	1.2 J	3.5 J	1.5 J
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.1 J	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.9 J	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	0.35 J	5.0 U	5.0 U	5.0 U	0.43 J	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	0.27 J	0.29 J	0.33 J	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	8.0	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Discrete Compounds Detected:		3	2	2	1	4	3	3	4	2
Semi-volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	7.7 J	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Semi-volatile Organic Compounds-Continued										
4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		10205	10210A	10210B	10210C	10215	10225A	10225B	10225C	10270
Sample ID:		WG-9954-071118-SG-017	WG-9954-072318-SG-030	WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031	WG-9954-072318-SG-032	WG-9954-071218-SG-019	WG-9954-071218-SG-022
Sample Date:		7/11/2018	7/23/2018	7/19/2018	7/19/2018	7/11/2018	7/23/2018	7/23/2018	7/12/2018	7/12/2018
		Duplicate								
Parameters	**Units**									
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Discrete Compounds Detected:		0	0	0	0	0	0	0	1	0
Polychlorinated Biphenyls (PCBs)										
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	9.4 U	9.4 U	9.4 U	1.9 UJ	1.9 UJ	1.9 U	1.9 U
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	4.7 U	4.7 U	4.7 U	0.94 UJ	0.94 UJ	0.94 U	0.94 U
Discrete Compounds Detected:		0	0	0	0	0	0	0	0	0
Pesticides										
4,4'-DDD	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.024 J	0.047 U	0.24 U	0.24 U	0.24 U	0.026 J	0.24	0.11	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
beta-BHC	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 U	0.032 J	0.24 U	0.24 U	0.24 U	0.048	0.097	0.026 J	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Pesticides-Continued										
Endosulfan I	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.021 J	0.24 U	0.24 U	0.24 U	0.035 J	0.21	0.052	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.24 U	0.24 U	0.24 U	0.047 U	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	0.50 U	0.50 U
Discrete Compounds Detected:		1	2	0	0	0	3	3	3	0
Notes:										
J - Estimated concentration										
U - Not detected at the associated reporting limit										
UJ - Not detected; associated reporting limit is estimated										

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		10272	10278	MW-01	MW-02
Sample ID:		WG-9954-071218-SG-021	WG-9954-071218-SG-020	WG-9954-072018-SG-028	WG-9954-072018-SG-029
Sample Date:		7/12/2018	7/12/2018	7/20/2018	7/20/2018
Parameters	**Units**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	1.7 J	1.3 J	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U
Carbon disulfide	µg/L	1.6 J	1.6 J	1.2 J	1.1 J
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Discrete Compounds Detected:		2	2	1	1
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Semi-volatile Organic Compounds-Continued					
4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 3.3

2018 Analytical Results Summary-Bedrock
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Sample Location:		10272	10278	MW-01	MW-02
Sample ID:		WG-9954-071218-SG-021	WG-9954-071218-SG-020	WG-9954-072018-SG-028	WG-9954-072018-SG-029
Sample Date:		7/12/2018	7/12/2018	7/20/2018	7/20/2018
Parameters	**Units**				
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Discrete Compounds Detected:		0	0	0	0
Polychlorinated Biphenyls (PCBs)					
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 U	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 U	0.94 UJ	0.94 UJ
Discrete Compounds Detected:		0	0	0	0
Pesticides					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 U	0.024 J	0.047 U	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Pesticides-Continued					
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U
Discrete Compounds Detected:		0	1	0	0
Notes:					
J - Estimated concentration					
U - Not detected at the associated reporting limit					
UJ - Not detected; associated reporting limit is estimated					

Table 3.4

Summary of Detected Compounds - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

		Number of Parameters Detected			
Overburden Wells	**Well Group**	**VOCs**	**SVOCs**	**PCBs**	**Pesticides**
7115	B	1	U	U	U
7125	B	1	U	U	U
7130	A	1	U	U	U
7132	A	1	U	U	U
8106	A	U	1	U	U
8115	B	U	U	U	U
8125	B	U	U	U	U
9105	B	U	U	U	U
9113	B	U	U	U	U
9118	B	U	U	U	U
10135	A	9	4	U	4
10178A	B	U	U	U	U
Subtotal Overburden		**13**	**5**	**0**	**4**
Bedrock Wells		**VOCs**	**SVOCs**	**PCBs**	**Pesticides**
3257	A	1	U	U	U
5221	A	1	U	U	U
6209	A	1 (2)	5 (U)	U	U
7205	A	U	U	U	1
8210	A	2	U	U	U
9205	A	U	U	U	U
9210	A	2	U	U	1
10205	A	U (3)	U	U	U (1)
10210A	A	2	U	U	2
10210B	A	2	U	U	U
10210C	A	1	U	U	U
10215	A	4	U	U	U
10225A	A	3	U	U	3
10225B	A	3	U	U	3
10225C	A	4	1	U	3
10270	A	2	U	U	U
10272	A	2	U	U	U
10278	A	2	U	U	1
MW-01	X	1	U	U	U
MW-02	X	1	U	U	U
Subtotal Bedrock Well Detections		**34 (38)**	**6 (1)**	**0**	**14 (15)**
Total # of Detections		**47 (51)**	**11 (6)**	**0**	**18 (19)**

Notes:

U	- No parameters detected at or above detection limits
A	- Annual Well
B	- Biannual Well
X	- Additional annual well added to program in 2011
( )	- Results for duplicate sample, if different from parent sample
PCBs	- Polychlorinated Biphenyls
SVOCs	- Semi-volatile Organic Compounds
VOCs	- Volatile Organic Compounds

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A
SampleDate:	**7/24/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**5/25/1995**	**7/1/1996**	**7/10/1997**	**6/26/1998**	**6/23/1999**	**6/21/2000**	**5/18/2001**	**6/13/2002**	**5/27/2003**	**6/3/2004**	**6/28/2005**	**7/6/2006**	**7/26/2007**	**7/17/2008**	**7/15/2009**
Parameters																			
Volatiles (µg/L)																			
1,1,1-Trichloroethane																			
1,1,2,2-Tetrachloroethane				0.2															
1,1,2-Trichloroethane																			
1,1-Dichloroethene																			
1,2-Dichloroethane																			
1,2-Dichloroethene (total)																			
1,2-Dichloropropane				0.04															
2-Butanone (Methyl Ethyl Ketone)									2 J			3 J		4 J					
2-Hexanone				0.4					3 J										
Acetone	14C			13B				120 J			10 J								
Benzene				0.1															
Bromodichloromethane																			
Bromoform				0.03															
Bromomethane (Methyl bromide)																			
Carbon Disulfide				2	20	310					6 J			6 J	1.6 J	1 J	8 J	24	
Chlorobenzene																			
Chloroform																			
Chlorotoluenes																			
cis-1,2-Dichloroethene																			
Dibromochloromethane				0.08															
Dichlorotoluene, total																			
Ethylbenzene				0.6															
m&p-Xylenes																			
Methylene Chloride				0.3															
o-Xylene																			
Styrene				0.1															
Tetrachloroethene				0.07															
Toluene				0.4					2 J						2.3 J				
trans-1,2-Dichloroethene																			
Trichloroethene				0.1															
Trichlorotoluene, total																			
Vinyl Acetate																			
Vinyl Chloride																			
Xylenes (total)				1															
Semi-volatiles (µg/L)																			
1,2,4-Trichlorobenzene																			
1,2-Dichlorobenzene																			
1,3-Dichlorobenzene																			
1,4-Dichlorobenzene																			
2,4,5-Trichlorophenol																			
2,4,6-Trichlorophenol																			
2,4-Dichlorophenol																			
2,4-Dimethylphenol																			
2-Chloronaphthalene																			
2-Chlorophenol																			
2-Methylnaphthalene																			
2-Methylphenol																			
2-Nitrophenol																			
3,5-Dichlorotoluene																			
4-Chloro-3-methylphenol																			
4-Chlorophenyl phenyl ether																			
4-Methylphenol																			
Acetic acid																			
Anthracene																			
Benzo(a)pyrene																			
Benzo(b)fluoranthene																			
Benzo(g,h,i)perylene																			
Benzo(k)fluoranthene																			
Benzoic Acid				12 J								3 J	3 J		2.7 J				5.8 J
Benzyl Alcohol																			

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A
SampleDate:	**7/24/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**5/25/1995**	**7/1/1996**	**7/10/1997**	**6/26/1998**	**6/23/1999**	**6/21/2000**	**5/18/2001**	**6/13/2002**	**5/27/2003**	**6/3/2004**	**6/28/2005**	**7/6/2006**	**7/26/2007**	**7/17/2008**	**7/15/2009**
Parameters																			
Bis(2-Chloroethyl)Ether																			
Semi-volatiles (µg/L)-Continued																			
bis(2-Ethylhexyl)Phthalate		12	21	31	51									1 J	1.7 J	8 J			2.5 J
Butyl benzylphthalate (BBP)				3															
Camphor																			
Carbazole																			
Chlorobenzoic acid																			
Chrysene																			
Dibenz(a,h)anthracene																			
Diethyl phthalate																			
Dimethyl Phthalate	16																		
Dimethyl tetrasulfide				22															
Di-n-butyl phthalate (DBP)		2		0.9															
Di-n-octyl phthalate (DnOP)	3B																		
Fluoranthene																			
Hexachlorobenzene																			
Hexachloroethane																			
Indeno(1,2,3-cd)pyrene																			
Naphthalene																			
N-Nitrosodiphenylamine																			
Pentachlorophenol																			
Phenanthrene																			
Phenol									1 J				5 J	1 J	1.7 J				
Pyrene																			
Pesticides/PCBs (µg/L)																			
4,4'-DDD													0.013 J						
4,4'-DDE																			
Aldrin																			
Alpha-BHC									0.28										
Alpha-Chlordane																			
Aroclor-1260 (PCB-1260)																			
beta&gamma-BHC (sum of isomers)																			
Beta-BHC									0.035 J				0.020 J	0.011 J					0.015 J
Delta-BHC		0.0061											0.062 J	0.043 J					
Dieldrin																			
Endosulfan I									0.046 J										
Endosulfan II																			
Endosulfan Sulfate																			
Endrin																			
Endrin ketone																			
Gamma-BHC (Lindane)									0.10 J				0.039 J						
Gamma-Chlordane																			
Heptachlor																			
Heptachlor epoxide																			
Methoxychlor																			

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B
SampleDate:	**6/24/2010**	**7/19/2011**	**6/22/2012**	**6/13/2013**	**6/27/2014**	**6/26/2015**	**6/24/2016**	**7/10/2017**	**7/23/2018**	**7/24/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**6/15/1994**	**6/1/1995**	**7/5/1996**	**7/1/1997**	**6/18/1998**	**6/24/1999**	**6/15/2000**
Parameters																				
Volatiles (µg/L)																				
1,1,1-Trichloroethane																				
1,1,2,2-Tetrachloroethane																				
1,1,2-Trichloroethane																				
1,1-Dichloroethene														0.06						
1,2-Dichloroethane																				
1,2-Dichloroethene (total)																				
1,2-Dichloropropane																				
2-Butanone (Methyl Ethyl Ketone)														4						
2-Hexanone																				
Acetone	5.2 J						3.5 J	8.4 J	2.6 J			31	6	12 B	23					
Benzene													0.3	0.3						
Bromodichloromethane																				
Bromoform																				
Bromomethane (Methyl bromide)							6.1						0.2							
Carbon Disulfide			2.7 J			2.9 J		2.0 J	3.4 J				2	0.4				8 J	2 J	
Chlorobenzene														0.2						
Chloroform																				
Chlorotoluenes																				
cis-1,2-Dichloroethene																				
Dibromochloromethane																				
Dichlorotoluene, total																				
Ethylbenzene							0.28 J	0.35 J					0.2	0.08						
m&p-Xylenes																				
Methylene Chloride													0.4	0.2						
o-Xylene																				
Styrene																				
Tetrachloroethene													0.06							
Toluene										1.8				0.5					2 J	1 J
trans-1,2-Dichloroethene																				
Trichloroethene	6.3												0.1	0.1						
Trichlorotoluene, total																				
Vinyl Acetate																				
Vinyl Chloride																				
Xylenes (total)													0.5	0.5						
Semi-volatiles (µg/L)																				
1,2,4-Trichlorobenzene																				
1,2-Dichlorobenzene																				
1,3-Dichlorobenzene																				
1,4-Dichlorobenzene																				
2,4,5-Trichlorophenol																				
2,4,6-Trichlorophenol																				
2,4-Dichlorophenol																				
2,4-Dimethylphenol																				
2-Chloronaphthalene																				
2-Chlorophenol																				
2-Methylnaphthalene														0.06						
2-Methylphenol																				
2-Nitrophenol																				
3,5-Dichlorotoluene																				
4-Chloro-3-methylphenol																				
4-Chlorophenyl phenyl ether																				
4-Methylphenol														0.2						
Acetic acid																				
Anthracene																				
Benzo(a)pyrene														0.07						
Benzo(b)fluoranthene														0.08						
Benzo(g,h,i)perylene														0.1						
Benzo(k)fluoranthene														0.04						
Benzoic Acid																				
Benzyl Alcohol																				

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210A	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B
SampleDate:	**6/24/2010**	**7/19/2011**	**6/22/2012**	**6/13/2013**	**6/27/2014**	**6/26/2015**	**6/24/2016**	**7/10/2017**	**7/23/2018**	**7/24/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**6/15/1994**	**6/1/1995**	**7/5/1996**	**7/1/1997**	**6/18/1998**	**6/24/1999**	**6/15/2000**
Parameters																				
Bis(2-Chloroethyl)Ether																				
Semi-volatiles (µg/L)-Continued																				
bis(2-Ethylhexyl)Phthalate										7 B	13		11	9			55	6 J		
Butyl benzylphthalate (BBP)														0.2						
Camphor																				
Carbazole														0.05						
Chlorobenzoic acid																				
Chrysene																				
Dibenz(a,h)anthracene														0.1						
Diethyl phthalate														0.3						
Dimethyl Phthalate																				
Dimethyl tetrasulfide																				
Di-n-butyl phthalate (DBP)										1	1			0.6						
Di-n-octyl phthalate (DnOP)														0.1						
Fluoranthene														0.04						
Hexachlorobenzene																				
Hexachloroethane																				
Indeno(1,2,3-cd)pyrene														0.1						
Naphthalene						0.41 J														
N-Nitrosodiphenylamine														0.2						
Pentachlorophenol										1				0.3						
Phenanthrene														0.07						
Phenol										3	3			2						
Pyrene														0.04						
Pesticides/PCBs (µg/L)																				
4,4'-DDD																				
4,4'-DDE																				
Aldrin																				
Alpha-BHC	0.14 J						0.086													
Alpha-Chlordane						0.030														
Aroclor-1260 (PCB-1260)																				
beta&gamma-BHC (sum of isomers)																				
Beta-BHC	0.12 J																			
Delta-BHC	0.12 J		0.067 J				0.067 J		0.032 J											
Dieldrin																				
Endosulfan I																				
Endosulfan II																				
Endosulfan Sulfate																				
Endrin																				
Endrin ketone																				
Gamma-BHC (Lindane)	0.12 J						0.083		0.021 J											
Gamma-Chlordane																				
Heptachlor																				
Heptachlor epoxide																				
Methoxychlor																				

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B
SampleDate:	**5/17/2001**	**6/10/2002**	**5/23/2003**	**6/2/2004**	**6/24/2005**	**6/28/2006**	**7/26/2007**	**7/17/2008**	**7/15/2009**	**7/15/2009**	**7/9/2009**	**6/15/2010**	**7/14/2011**	**6/18/2012**	**6/15/2013**	**6/26/2014**	**7/2/2015**	**6/28/2016**
Parameters																		
Volatiles (µg/L)																		
1,1,1-Trichloroethane																		
1,1,2,2-Tetrachloroethane																		
1,1,2-Trichloroethane																		
1,1-Dichloroethene																		
1,2-Dichloroethane																		
1,2-Dichloroethene (total)																		
1,2-Dichloropropane																		
2-Butanone (Methyl Ethyl Ketone)			23															
2-Hexanone																		
Acetone	12 J																	
Benzene																		
Bromodichloromethane																		
Bromoform																		
Bromomethane (Methyl bromide)																		
Carbon Disulfide	14	3 J	2 J		1.4 J	1 J	6 J					4.0 J	4.6 J	6.1 J		2.9 J	7.9	
Chlorobenzene				1 J														
Chloroform																		
Chlorotoluenes																		
cis-1,2-Dichloroethene																		
Dibromochloromethane																		
Dichlorotoluene, total																		
Ethylbenzene																		
m&p-Xylenes																		
Methylene Chloride															1.2 J			
o-Xylene																		
Styrene																		
Tetrachloroethene				9 J														
Toluene					1.1 J													
trans-1,2-Dichloroethene																		
Trichloroethene																		
Trichlorotoluene, total																		
Vinyl Acetate																		
Vinyl Chloride																		
Xylenes (total)																		
Semi-volatiles (µg/L)																		
1,2,4-Trichlorobenzene			3 J															
1,2-Dichlorobenzene																		
1,3-Dichlorobenzene																		
1,4-Dichlorobenzene																		
2,4,5-Trichlorophenol																		
2,4,6-Trichlorophenol																		
2,4-Dichlorophenol																		
2,4-Dimethylphenol																		
2-Chloronaphthalene																		
2-Chlorophenol																		
2-Methylnaphthalene																		
2-Methylphenol																		
2-Nitrophenol																		
3,5-Dichlorotoluene																		
4-Chloro-3-methylphenol																		
4-Chlorophenyl phenyl ether																		
4-Methylphenol																		
Acetic acid																		
Anthracene																		
Benzo(a)pyrene																		
Benzo(b)fluoranthene																		
Benzo(g,h,i)perylene																		
Benzo(k)fluoranthene																		
Benzoic Acid						2 J												
Benzyl Alcohol																		

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B	10210B
SampleDate:	**5/17/2001**	**6/10/2002**	**5/23/2003**	**6/2/2004**	**6/24/2005**	**6/28/2006**	**7/26/2007**	**7/17/2008**	**7/15/2009**	**7/15/2009**	**7/9/2009**	**6/15/2010**	**7/14/2011**	**6/18/2012**	**6/15/2013**	**6/26/2014**	**7/2/2015**	**6/28/2016**
Parameters																		
Bis(2-Chloroethyl)Ether																		
Semi-volatiles (µg/L)-Continued																		
bis(2-Ethylhexyl)Phthalate				4 J	4.5 J	3 J												
Butyl benzylphthalate (BBP)																		
Camphor																		
Carbazole																		
Chlorobenzoic acid																		
Chrysene																		
Dibenz(a,h)anthracene																		
Diethyl phthalate														1.8 J				
Dimethyl Phthalate																		
Dimethyl tetrasulfide																		
Di-n-butyl phthalate (DBP)	3 J																	
Di-n-octyl phthalate (DnOP)																		
Fluoranthene																		
Hexachlorobenzene			1 J															
Hexachloroethane																		
Indeno(1,2,3-cd)pyrene																		
Naphthalene																		
N-Nitrosodiphenylamine																		
Pentachlorophenol																		
Phenanthrene																		
Phenol																		
Pyrene																		
Pesticides/PCBs (µg/L)																		
4,4'-DDD																		
4,4'-DDE				0.011 J														
Aldrin						.0089 J												
Alpha-BHC	19	2.4	0.37	.58	0.016 J		0.064	0.050	0.050 / 0.064				0.048 J					0.056 J
Alpha-Chlordane																		
Aroclor-1260 (PCB-1260)																		
beta&gamma-BHC (sum of isomers)																		
Beta-BHC	1.9	0.53	0.082 P	.082														
Delta-BHC	0.56 J	0.15		.047 J			0.032 J	0.028 J	0.028 J / 0.032 J	0.050 J			0.042 J					0.17 J
Dieldrin	0.13 J																	
Endosulfan I	0.11 J																	
Endosulfan II																		
Endosulfan Sulfate																		
Endrin																		
Endrin ketone																		
Gamma-BHC (Lindane)	2.1	0.39	0.046 J	.099			0.038 J	0.033 J	0.038 J / 0.033 J				0.061 J					0.084
Gamma-Chlordane	0.15 J																	
Heptachlor													0.053 J					
Heptachlor epoxide	0.35 J																	
Methoxychlor																		

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210B	10210B	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C
SampleDate:	**7/10/2017**	**7/19/2018**	**7/25/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**6/8/1994**	**6/1/1995**	**7/1/1996**	**7/1/1997**	**6/22/1998**	**6/24/1999**	**6/15/2000**	**5/17/2001**	**6/10/2002**	**5/23/2003**	**6/7/2004**	**6/23/2005**	**6/28/2006**
Parameters																			
Volatiles (µg/L)																			
1,1,1-Trichloroethane																			
1,1,2,2-Tetrachloroethane																			
1,1,2-Trichloroethane																			
1,1-Dichloroethene																			
1,2-Dichloroethane																			
1,2-Dichloroethene (total)																			
1,2-Dichloropropane																			
2-Butanone (Methyl Ethyl Ketone)																			
2-Hexanone																			
Acetone	2.6 J	4.3 J			10 B		19 B					2100	8 J	9 J				1.9 J	
Benzene																			
Bromodichloromethane																			
Bromoform																			
Bromomethane (Methyl bromide)																			
Carbon Disulfide	3.4 J	0.77 J					0.6						3 J						
Chlorobenzene																			2 J
Chloroform																			
Chlorotoluenes																			
cis-1,2-Dichloroethene																			
Dibromochloromethane																			
Dichlorotoluene, total																			
Ethylbenzene																			
m&p-Xylenes																			
Methylene Chloride							0.2												
o-Xylene																			
Styrene																			
Tetrachloroethene																			6 J
Toluene	3													29 / 23					
trans-1,2-Dichloroethene																			
Trichloroethene																			
Trichlorotoluene, total																			
Vinyl Acetate																			
Vinyl Chloride																			
Xylenes (total)																			
Semi-volatiles (µg/L)																			
1,2,4-Trichlorobenzene																			6 J
1,2-Dichlorobenzene																			
1,3-Dichlorobenzene																			
1,4-Dichlorobenzene																			
2,4,5-Trichlorophenol																			
2,4,6-Trichlorophenol																			
2,4-Dichlorophenol																			
2,4-Dimethylphenol																			
2-Chloronaphthalene																			
2-Chlorophenol																			
2-Methylnaphthalene																			
2-Methylphenol							5												
2-Nitrophenol																			
3,5-Dichlorotoluene																			
4-Chloro-3-methylphenol																			
4-Chlorophenyl phenyl ether																			
4-Methylphenol							6	29	110	62	0.6J								
Acetic acid			11																
Anthracene																			
Benzo(a)pyrene																			
Benzo(b)fluoranthene																			
Benzo(g,h,i)perylene																			
Benzo(k)fluoranthene																			
Benzoic Acid																			
Benzyl Alcohol																			

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210B	10210B	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C
SampleDate:	**7/10/2017**	**7/19/2018**	**7/25/1990**	**8/22/1991**	**8/26/1992**	**8/11/1993**	**6/8/1994**	**6/1/1995**	**7/1/1996**	**7/1/1997**	**6/22/1998**	**6/24/1999**	**6/15/2000**	**5/17/2001**	**6/10/2002**	**5/23/2003**	**6/7/2004**	**6/23/2005**	**6/28/2006**
Parameters																			
Bis(2-Chloroethyl)Ether																			
Semi-volatiles (µg/L)-Continued																			
bis(2-Ethylhexyl)Phthalate			7 B	13			8										29 / 5 J		5 J
Butyl benzylphthalate (BBP)			1				0.4												
Camphor																			
Carbazole																			
Chlorobenzoic acid																			
Chrysene																			
Dibenz(a,h)anthracene																			
Diethyl phthalate			1				0.2												
Dimethyl Phthalate																			
Dimethyl tetrasulfide																			
Di-n-butyl phthalate (DBP)			2	3			0.5												
Di-n-octyl phthalate (DnOP)							0.04												
Fluoranthene																			
Hexachlorobenzene																			
Hexachloroethane				1															
Indeno(1,2,3-cd)pyrene																			
Naphthalene																			
N-Nitrosodiphenylamine																			
Pentachlorophenol																			
Phenanthrene							0.03												
Phenol			2	6				22		22									
Pyrene																			
Pesticides/PCBs (µg/L)																			
4,4'-DDD																			
4,4'-DDE																			
Aldrin																			0.061 J
Alpha-BHC																	0.083		0.45 J
Alpha-Chlordane																			
Aroclor-1260 (PCB-1260)																			
beta&gamma-BHC (sum of isomers)																			
Beta-BHC																			0.048 J
Delta-BHC																	0.019 J / 0.017 J		0.052 J
Dieldrin																			
Endosulfan I																			
Endosulfan II																			
Endosulfan Sulfate																			
Endrin																			0.14 J
Endrin ketone																			
Gamma-BHC (Lindane)																			0.11 J
Gamma-Chlordane																			0.018 J
Heptachlor																			
Heptachlor epoxide																			
Methoxychlor																			

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10135	10135	10135	10135	10135	10135	10135	10135
SampleDate:	**7/26/2007**	**7/16/2008**	**7/13/2009**	**6/15/2010**	**7/14/2011**	**6/22/2012**	**6/15/2013**	**6/26/2014**	**7/2/2015**	**6/28/2016**	**7/10/2017**	**7/19/2018**	**9/13/1990**	**8/29/1991**	**8/26/1992**	**8/19/1993**	**6/22/1994**	**6/1/1995**	**6/27/1996**	**7/7/1997**
Parameters																				
Volatiles (µg/L)																				
1,1,1-Trichloroethane																8	14			
1,1,2,2-Tetrachloroethane																12	51		26	
1,1,2-Trichloroethane																			14	
1,1-Dichloroethene													6			15	3			
1,2-Dichloroethane																				
1,2-Dichloroethene (total)															700	840	650	670 JD	560	
1,2-Dichloropropane																				
2-Butanone (Methyl Ethyl Ketone)																36				
2-Hexanone																				
Acetone											4.3 J		50			270	100 B	100 J	60	
Benzene													6200	6700		5200	6000 E	4900 D	4800	5000 / 5600
Bromodichloromethane																				
Bromoform																				
Bromomethane (Methyl bromide)																				
Carbon Disulfide		2 J				U/1.4 J					0.77 J	1.7 J								
Chlorobenzene													2380	2400	2600	1700 E	2900 E	2000 D	1500	2300 / ND
Chloroform																100	120	86 J	110	
Chlorotoluenes													16600	16000						
cis-1,2-Dichloroethene																				
Dibromochloromethane																				
Dichlorotoluene, total													14000	140						
Ethylbenzene													12	10		13	12			
m&p-Xylenes																				
Methylene Chloride													5			41	8		11	
o-Xylene																				
Styrene																4				
Tetrachloroethene													50			8	32			
Toluene													22800	26000	2700	17000	21500	18000 D	14000	19000 / 17000
trans-1,2-Dichloroethene													20							
Trichloroethene													260	450		24	140	18 J	36	
Trichlorotoluene, total													40							
Vinyl Acetate															6800					
Vinyl Chloride																	61	44 J	50	
Xylenes (total)													50	30		47	10 B	37 J	28	
Semi-volatiles (µg/L)																				
1,2,4-Trichlorobenzene													80	290		74	87 B			
1,2-Dichlorobenzene													50	16		35	34			
1,3-Dichlorobenzene																	4			
1,4-Dichlorobenzene													120	47	110	94	91			
2,4,5-Trichlorophenol													860	130		70	59			
2,4,6-Trichlorophenol														120			8			
2,4-Dichlorophenol													830		1200B	420	610	150		2100 / 2100
2,4-Dimethylphenol																	9			
2-Chloronaphthalene																		150		
2-Chlorophenol																	20			
2-Methylnaphthalene																				
2-Methylphenol																51	46			
2-Nitrophenol																				
3,5-Dichlorotoluene																350				
4-Chloro-3-methylphenol														13			31			
4-Chlorophenyl phenyl ether																	2			
4-Methylphenol														10		60	64			
Acetic acid																				
Anthracene																	1			
Benzo(a)pyrene																				
Benzo(b)fluoranthene																				
Benzo(g,h,i)perylene																				
Benzo(k)fluoranthene																				
Benzoic Acid													140000	580				6400 D	4000	27000 J / 30000 J
Benzyl Alcohol													4200	1100				380		1900 / 1600

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10210C	10135	10135	10135	10135	10135	10135	10135	10135
SampleDate:	**7/26/2007**	**7/16/2008**	**7/13/2009**	**6/15/2010**	**7/14/2011**	**6/22/2012**	**6/15/2013**	**6/26/2014**	**7/2/2015**	**6/28/2016**	**7/10/2017**	**7/19/2018**	**9/13/1990**	**8/29/1991**	**8/26/1992**	**8/19/1993**	**6/22/1994**	**6/1/1995**	**6/27/1996**	**7/7/1997**
Parameters																				
Bis(2-Chloroethyl)Ether																23				
Semi-volatiles (µg/L)-Continued																				
bis(2-Ethylhexyl)Phthalate																50	2			
Butyl benzylphthalate (BBP)																				
Camphor																130				
Carbazole																				
Chlorobenzoic acid													4000							
Chrysene																	0.2			
Dibenz(a,h)anthracene																				
Diethyl phthalate				4.4 J													1			
Dimethyl Phthalate				0.87 J																
Dimethyl tetrasulfide																				
Di-n-butyl phthalate (DBP)																				
Di-n-octyl phthalate (DnOP)																				
Fluoranthene																	0.2			
Hexachlorobenzene																				
Hexachloroethane																				
Indeno(1,2,3-cd)pyrene																				
Naphthalene																				
N-Nitrosodiphenylamine																				
Pentachlorophenol																52	4			
Phenanthrene																				
Phenol														10		98	91	140		
Pyrene																				
Pesticides/PCBs (µg/L)																				
4,4'-DDD																				
4,4'-DDE																	0.071			
Aldrin															0.53	0.24 P				
Alpha-BHC						0.062									84	42 C	24 CEP	28 D	29	39 / 39
Alpha-Chlordane																				
Aroclor-1260 (PCB-1260)																				
beta&gamma-BHC (sum of isomers)																19.5	20.4			
Beta-BHC																		10 D	11	8.1 / 8.6
Delta-BHC		0.048 J				0.14 J									15	9.8	7.5 CE	4.7	5.2	5.1 / ND
Dieldrin																				
Endosulfan I																				
Endosulfan II																				
Endosulfan Sulfate																0.43 P				
Endrin					0.13												0.15 P			
Endrin ketone																				
Gamma-BHC (Lindane)						0.13									33				2.4 J	6.2 J / 5.1 J
Gamma-Chlordane																				
Heptachlor																				
Heptachlor epoxide																				
Methoxychlor																				

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135	10135
SampleDate:	**6/17/1998**	**6/16/1999**	**6/22/2000**	**5/11/2001**	**6/12/2002**	**5/19/2003**	**5/28/2004**	**6/17/2005**	**6/28/2005**	**6/26/2006**	**7/18/2007**	**7/23/2008**	**6/25/2009**	**6/16/2010**	**7/13/2011**	**6/12/2012**	**6/18/2013**
Parameters																	
Volatiles (µg/L)																	
1,1,1-Trichloroethane																	
1,1,2,2-Tetrachloroethane	94 J	29 / 32	27 J / 26 J	120 J / 100 J	56	38					16 J		25 / 24				
1,1,2-Trichloroethane	29 J	15 / 12	16 J / 14 J	29 J / 34 J	27						15 J		9.1 J / 8.7 J				
1,1-Dichloroethene		4 J / 3 J	4 J / 4 J	4 J / 4 J	4 J	3 J					2 J						
1,2-Dichloroethane																	
1,2-Dichloroethene (total)					600 J / 560	490 J											
1,2-Dichloropropane																	
2-Butanone (Methyl Ethyl Ketone)			10 J	11 J / 12 J									5.8 J / 6.1 J				
2-Hexanone																	
Acetone	110 J		28 J / 46 J		72	74				200 J	53 J		42 / 37	39			
Benzene	5300 J	5700 / 5600	6900 J / 6400 D	8500 J / 7600	5900 / 6400	5500		5400	5700	6800	7100	5300	7500 / 7600	3400	2200	5900	2500
Bromodichloromethane																	
Bromoform																	
Bromomethane (Methyl bromide)																	
Carbon Disulfide		2 J									2 J						
Chlorobenzene	1900 J	1900 / 1800	2300 J / 2300 J	3000 J / 2700 J	2200 / 2400	1900		2000	2100	2400	2100	1400	2900 J / 3000 J	1300	1100	2500	730
Chloroform	150 J	110 / 120	130 J / 100 J	160 J / 150 J	160	110				110 J	140 J	99 J	96 / 97	160	67	130 J	
Chlorotoluenes																	
cis-1,2-Dichloroethene										630		79 J	79 / 76	110	38 J		
Dibromochloromethane																	
Dichlorotoluene, total																	
Ethylbenzene	12	9 J / 10 J	12 J / 12 J	24 J / 22 J	15	10					10 J		10 / 10	13			
m&p-Xylenes					39	29											
Methylene Chloride			24 J / 24 J		39	26			100 J	44 J	32 J		25 / 24	38	16 J		
o-Xylene					12	9 J											
Styrene																	
Tetrachloroethene	40 J	13 / 12	16 J / 14 J	50 J / 61 J	38	18					13 J		14 / 14	19	9.5 J		
Toluene	16000 J	16000 / 17000	21000 D / 21000 J	24000 / 22000	20000 j / 19000	15000		16000	18000	21000	23000	13000	24000 / 24000	11000	3100	14000	6100
trans-1,2-Dichloroethene	58 J	67 / 70	67 J / 70 J	59 J / 60 J						52 J	50 J	32 J	30 / 30	48	17 J		
Trichloroethene	170 J	58 / 70	60 J / 72 J	180 J / 140 J	160 / 130 J	91				46 J	89 J	27 J	91 / 89	140	52		
Trichlorotoluene, total																	
Vinyl Acetate																	
Vinyl Chloride	48 J	62 / 61	110 J / 85 J	66 J / 75 J	48	51							27 / 17	31			
Xylenes (total)	55 J	44 / 43	42 J / 44 J								37 J		44 / 53	51			
Semi-volatiles (µg/L)																	
1,2,4-Trichlorobenzene	78 J	45 J / 65 J	45 J / 36 J	65 J / 42 J		97 J		67 J		63	47 J	28	110 / 110	78 J	76 J	74 J	69
1,2-Dichlorobenzene		24 J / 30 J	18 J / 22 J	48 J		59 J		36 J		37	31 J	10 J	68 / 52	57 J	45 J		45
1,3-Dichlorobenzene										3 J	87 J		4.1 J / 5.5 J				5.2 J
1,4-Dichlorobenzene		61 J / 74 J	59 J / 52 J	110 J / 69 J		160 J		100 J	110 J	100	84 J	24	150 J / 100 J	150 J	130 J	110 J	130
2,4,5-Trichlorophenol	38 J		0.9 J							8 J							10
2,4,6-Trichlorophenol			1 J									6 J	28 / 23				12
2,4-Dichlorophenol	2000	690 / 610	1400 J / 470 J	620 J / 1200 J	1800 J / 1500 J	1700		420	300 J	250	490	150	1200 / 1100	780	590	240	360
2,4-Dimethylphenol			2 J														
2-Chloronaphthalene				370 J / 550 J												150 J	210
2-Chlorophenol	28 J	25 J								18		17 J	31 / 26				28
2-Methylnaphthalene																	
2-Methylphenol	55 J	42 J / 35 J	160 J	41 J		50 J		25 J		33	34 J	140	66 J / 50 J	42 J	30 J		29
2-Nitrophenol			1 J														
3,5-Dichlorotoluene																	
4-Chloro-3-methylphenol		25 J / 33 J				41 J				15		26	95 / 97	31 J			23
4-Chlorophenyl phenyl ether																	
4-Methylphenol	130 J	95 J / 120	99 J / 300 J	130 J / 86 J		210 J		49 J	98 J	110	120 J	110	170 J / 140 J	130 J	83 J		89
Acetic acid																	
Anthracene																	
Benzo(a)pyrene																	
Benzo(b)fluoranthene																	
Benzo(g,h,i)perylene																	
Benzo(k)fluoranthene																	
Benzoic Acid	23000 J	4300 / 5000	4700 J / 19000 J	6200 J / 4400 J	31000 / 25000	26000		1400 J	4700 J	14000 J	14000	7600 J	39000 J / 54000 J	9500	11000	8700	16000
Benzyl Alcohol	2700	680 / 540	14000 D / 3200 J	330 J / 630 J	2000 / 1700 J	640		23 J		48	580	38	1200 / 1300	610	450	600 J	380 J

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number: / SampleDate:	10135 6/17/1998	10135 6/16/1999	10135 6/22/2000	10135 5/11/2001	10135 6/12/2002	10135 5/19/2003	10135 5/28/2004	10135 6/17/2005	10135 6/28/2005	10135 6/26/2006	10135 7/18/2007	10135 7/23/2008	10135 6/25/2009	10135 6/16/2010	10135 7/13/2011	10135 6/12/2012	10135 6/18/2013
Parameters																	
Bis(2-Chloroethyl)Ether	24 J	26 J / 25 J						24 J		24	30 J	16 J	29 / 28	34 J	28 J		26
Semi-volatiles (µg/L)-Continued																	
bis(2-Ethylhexyl)Phthalate			41 J / 24 J							53			4.4 J / 4.2 J				
Butyl benzylphthalate (BBP)																	
Camphor																	
Carbazole																	
Chlorobenzoic acid																	
Chrysene																	
Dibenz(a,h)anthracene																	
Diethyl phthalate																	
Dimethyl Phthalate																	
Dimethyl tetrasulfide																	
Di-n-butyl phthalate (DBP)																	
Di-n-octyl phthalate (DnOP)																	
Fluoranthene																	
Hexachlorobenzene																	
Hexachloroethane																	
Indeno(1,2,3-cd)pyrene																	
Naphthalene		1400 J / 2000 J	4000 J / 1800 J	1400 / 1100				1800 J	4500 J								
N-Nitrosodiphenylamine																	
Pentachlorophenol																	
Phenanthrene																	
Phenol		120 / 96 J		51 J		180 J			100 J	140	130 J	96	140 J / 160 J	100	82	89 J	92
Pyrene																	
Pesticides/PCBs (µg/L)																	
4,4'-DDD		0.21 / 0.20 J	0.13 J / 0.071 J					0.19 J	0.11 J		0.081 J	0.13 J		0.048 J		0.036 J	0.089 J
4,4'-DDE																	0.053
Aldrin		0.21 J / 0.74 JN		1.5 JN / 0.95 JN	0.12 J / 0.12 J						0.073	0.052 J	0.55 J / 0.55 J	0.063 J			0.16 J
Alpha-BHC	59	40 / 37 J	50 / 50	43 J / 50 J	43 / 39	49		15	21 C	35	12	17	27 J / 32 J	4.0	21	7.1 J	20
Alpha-Chlordane					0.031 J / 0.017 J						0.011 J						
Aroclor-1260 (PCB-1260)													12 J / 11 J				
beta&gamma-BHC (sum of isomers)																	
Beta-BHC	12	12 / 11 J	15 / 16	16 J / 16 J	14 J / 13 J	15 J		3.4	5.6	7.1	3.7	4.4	11 J / 9.1 J	4.1	7.1	3.1	5.9
Delta-BHC	8.9	11 / 9.6 J	13 / 14	10 J / 12 J	9.0 J / 11 J	12		9.1	9.1	13	4.7	6.3	11 J / 12	0.28	7.3	1.6 J	5.2
Dieldrin																	
Endosulfan I		0.34 J / 0.43 J		1.5 JN / 1.6 JN													
Endosulfan II			0.52 J / 0.69 J					0.15 J					1.6 J / 2.3				0.053 J
Endosulfan Sulfate		0.18 / 0.17 J	0.17 J			1.3 J					0.34	0.37 J	1.5 J				
Endrin											0.034 J		1.9 / 1.3 J				
Endrin ketone																	
Gamma-BHC (Lindane)	6.5 J	5.5 / 4.1 J	6.4 / 8.0	7.3 J / 5.0 J	7.1 J / 6.1 J	7.1			0.32 J	4.8	2.1	2	7.4 J / 6.2 J	0.92	4.1	1.4 J	3.9
Gamma-Chlordane			0.18 J / 0.16 J		0.29 J / 0.35 J					.33 J	0.017 J						0.065
Heptachlor		0.63 / 0.68 JN				0.61 J					0.092	0.19 J				0.71	0.15 J
Heptachlor epoxide		0.043 J / 0.058 J	0.031 J / 0.029 J		0.016 J / 0.025 J	2.2 J		0.053			0.29	0.13 J	1.6 J / 1.7 J	0.10 J		0.089 J	0.22 J
Methoxychlor																0.036 J	

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10135	10135	10135
SampleDate:	**6/13/2014**	**6/25/2015**	**7/5/2016**
Parameters			
Volatiles (µg/L)			
1,1,1-Trichloroethane			
1,1,2,2-Tetrachloroethane			
1,1,2-Trichloroethane			
1,1-Dichloroethene			
1,2-Dichloroethane			
1,2-Dichloroethene (total)			
1,2-Dichloropropane			
2-Butanone (Methyl Ethyl Ketone)			
2-Hexanone			
Acetone			
Benzene	6100	6200	7100
Bromodichloromethane			
Bromoform			
Bromomethane (Methyl bromide)			
Carbon Disulfide			
Chlorobenzene	2300	2600	2700
Chloroform		180 J	400 J
Chlorotoluenes			
cis-1,2-Dichloroethene			
Dibromochloromethane			
Dichlorotoluene, total			
Ethylbenzene			
m&p-Xylenes			
Methylene Chloride		150 J	
o-Xylene			
Styrene			
Tetrachloroethene			
Toluene	20000	20000	23000
trans-1,2-Dichloroethene			
Trichloroethene		110 J	78 J
Trichlorotoluene, total			
Vinyl Acetate			
Vinyl Chloride			
Xylenes (total)			
Semi-volatiles (µg/L)			
1,2,4-Trichlorobenzene	64 J		22 J
1,2-Dichlorobenzene	34 J	47 J	14 J
1,3-Dichlorobenzene			
1,4-Dichlorobenzene	94 J	140 J	36 J
2,4,5-Trichlorophenol			
2,4,6-Trichlorophenol			
2,4-Dichlorophenol	660	790	42 J
2,4-Dimethylphenol			
2-Chloronaphthalene			
2-Chlorophenol			12 J
2-Methylnaphthalene			
2-Methylphenol	23 J	44 J	
2-Nitrophenol			
3,5-Dichlorotoluene			
4-Chloro-3-methylphenol			
4-Chlorophenyl phenyl ether			
4-Methylphenol	53 J	93 J	
Acetic acid			
Anthracene			
Benzo(a)pyrene			
Benzo(b)fluoranthene			
Benzo(g,h,i)perylene			
Benzo(k)fluoranthene			
Benzoic Acid	14000	16000	1100
Benzyl Alcohol	290	250	79 J

Table 3.5

Summary of Detected Compounds in Select Wells
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Well Number:	10135	10135	10135
SampleDate:	**6/13/2014**	**6/25/2015**	**7/5/2016**
Parameters			
Bis(2-Chloroethyl)Ether	19 J	27 J	
Semi-volatiles (µg/L)-Continued			
bis(2-Ethylhexyl)Phthalate			
Butyl benzylphthalate (BBP)			
Camphor			
Carbazole			
Chlorobenzoic acid			
Chrysene			
Dibenz(a,h)anthracene			
Diethyl phthalate			
Dimethyl Phthalate			
Dimethyl tetrasulfide			
Di-n-butyl phthalate (DBP)			
Di-n-octyl phthalate (DnOP)			
Fluoranthene			
Hexachlorobenzene			
Hexachloroethane			
Indeno(1,2,3-cd)pyrene			
Naphthalene			
N-Nitrosodiphenylamine			
Pentachlorophenol			
Phenanthrene			
Phenol	62	87 J	11 J
Pyrene			
Pesticides/PCBs (µg/L)			
4,4'-DDD			
4,4'-DDE			
Aldrin	0.060 J		
Alpha-BHC	21 J	20	25
Alpha-Chlordane			
Aroclor-1260 (PCB-1260)			
beta&gamma-BHC (sum of isomers)			
Beta-BHC	5.3 J	4.7	6.7
Delta-BHC	4.8 J	7.4	11
Dieldrin			
Endosulfan I			
Endosulfan II	0.12 J		
Endosulfan Sulfate		0.035 J	
Endrin		1.4	
Endrin ketone	0.067 J		
Gamma-BHC (Lindane)	4.3 J	3.2	4.9
Gamma-Chlordane	0.064 J	1.1 J	
Heptachlor	0.23 J		
Heptachlor epoxide	0.23 J		
Methoxychlor			

Notes:

D - Sample result is from a dilution
C - Sample result was confirmed
E - Sample result was greater than the highest calibration level
N - Validator qualifier-presumptive certainty, usually used when there is a large difference in dual column results
P - Lab qualifier used when there are large differences in dual column results
J - Estimated concentration
U - Not detected at the associated reporting limit
B - Detected in the blank sample
Blank - Not detected
PCBs - Polychlorinated Biphenyls

Table 3.6A

1140 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Silty Sand/Fill Medium

	Well **	
	1144 A	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)
03/05/18	572.66	561.70
05/29/18	571.86	561.70
09/11/18	569.25	561.70
12/06/18	572.37	561.70

Fractured Clay Medium

	Well **			
	1144 B	1143 A	1142 A	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	572.79	571.85	571.03	561.70
05/29/18	571.95	571.47	570.87	561.70
09/11/18	569.31	569.75	569.78	561.70
12/06/18	572.17	569.97	569.27	561.70

Soft Clay Medium

	Well **						
	1144 C	1143 B	1143 C	1142 B	1141 A	Tile Drain	1140 A
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	572.58	571.81	570.04	568.28	566.46	561.70	564.03
05/29/18	571.74	571.69	570.10	568.42	566.49	561.70	563.93
09/11/18	569.32	569.84	569.02	567.98	566.26	561.70	564.23
12/06/18	571.22	569.61	568.61	567.66	566.12	561.70	564.39

Glacial Till Medium

	Well **					
	1144 D	1143 D	1142 C	1141 B	Tile Drain	1140 B
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	570.58	568.75	566.61	566.86	561.70	564.59
05/29/18	570.78	568.94	566.92	566.96	561.70	564.48
09/11/18	569.21	568.33	566.57	566.79	561.70	564.54
12/06/18	568.70	567.84	566.39	566.51	561.70	564.85

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
- Indicates wells used in Figure 3.3 Piezometer Flow Diagram to generate Fractured Clay groundwater level
- Indicates wells used in Figure 3.3 Piezometer Flow Diagram to generate Soft Clay groundwater level
- Indicates wells used in Figure 3.3 Piezometer Flow Diagram to generate Glacial Till groundwater level
ft. AMSL - Feet above mean sea level.

Table 3.6B

1150 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Silty Sand/Fill Medium

	Well **	
	1151 D	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)
03/05/18	571.60	561.85
05/29/18	570.05	561.85
09/11/18	568.30	561.85
12/06/18	572.20	561.85

Fractured Clay Medium

	Well **				
	1154 D	1153 E	1153 D	1151 C	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	568.96	569.38	573.96	569.26	561.85
05/29/18	568.72	569.24	571.20	569.34	561.85
09/11/18	567.96	568.96	569.70	567.64	561.85
12/06/18	568.85	569.60	572.97	568.29	561.85

Soft Clay Medium

	Well **					
	1154 B	1154 C	1153 B	1153 C	1151 B	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	568.26	568.89	569.65	576.27	567.90	561.85
05/29/18	567.91	568.62	569.13	570.34	568.02	561.85
09/11/18	567.73	568.03	569.02	569.46	567.54	561.85
12/06/18	568.24	568.28	569.75	574.37	568.14	561.85

Glacial Till Medium

	Well **			
	1154 A	1153 A	1151 A	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	572.52	573.14	567.62	561.85
05/29/18	572.35	569.86	567.18	561.85
09/11/18	572.23	569.01	566.90	561.85
12/06/18	572.05	571.55	567.54	561.85

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
- Indicates wells used in Figure 3.4 Piezometer Flow Diagram to generate Fractured Clay groundwater level
- Indicates wells used in Figure 3.4 Piezometer Flow Diagram to generate Soft Clay groundwater level
- Indicates wells used in Figure 3.4 Piezometer Flow Diagram to generate Glacial Till groundwater level
ft. AMSL - Feet above mean sea level.

Table 3.6C

1160 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Silty Sand/Fill Medium

	Well **	
Date	1165 D (ft. AMSL)	Tile Drain (ft. AMSL)
03/05/18	573.58	560.60
05/29/18	572.65	560.60
09/11/18	571.39	560.60
12/06/18	572.80	560.60

Silty Sand Medium

	Well **		
Date	1165 C (ft. AMSL)	1163 D (ft. AMSL)	Tile Drain (ft. AMSL)
03/05/18	572.22	DRY	560.60
05/29/18	572.45	DRY	560.60
09/11/18	572.14	DRY	560.60
12/06/18	571.97	DRY	560.60

Fractured Clay Medium

	Well **								
Date	1165 B (ft. AMSL)	1163 B (ft. AMSL)	1163 C (ft. AMSL)	1162 A (ft. AMSL)	1162 C (ft. AMSL)	1161 D (ft. AMSL)	Tile Drain (ft. AMSL)	1160 A (ft. AMSL)	1160 C (ft. AMSL)
03/05/18	572.03	569.62	569.85	569.76	569.88	569.75	560.60	565.38	DRY
05/29/18	571.46	570.05	570.47	570.03	570.13	570.30	560.60	564.91	566.22
09/11/18	570.72	569.61	569.95	569.46	569.70	570.05	560.60	564.83	566.65
12/06/18	571.62	569.37	569.52	569.31	569.58	569.35	560.60	565.34	566.48

Soft Clay Medium

	Well **								
Date	10176 A (ft. AMSL)	10176 B (ft. AMSL)	10176 C (ft. AMSL)	1165 A (ft. AMSL)	1163 A (ft. AMSL)	1161 B (ft. AMSL)	1161 C (ft. AMSL)	1161 E (ft. AMSL)	Tile Drain (ft. AMSL)
03/05/18	570.73	571.38	569.17	572.46	568.73	567.08	569.16	565.76	560.60
05/29/18	569.33	569.39	568.60	572.76	568.65	566.83	569.42	565.41	560.60
09/11/18	568.44	568.52	568.37	572.07	568.59	566.87	569.22	565.37	560.60
12/06/18	572.46	572.49	569.37	571.80	568.82	567.04	568.95	565.67	560.60

Glacial Till Medium

	Well **			
Date	10176 D (ft. AMSL)	1162 D (ft. AMSL)	1161 A (ft. AMSL)	Tile Drain (ft. AMSL)
03/05/18	567.75	567.86	565.64	560.60
05/29/18	567.59	567.70	565.33	560.60
09/11/18	567.43	567.43	565.13	560.60
12/06/18	567.87	567.86	565.42	560.60

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

- Indicates wells used in Figure 3.5 Piezometer Flow Diagram to generate Fractured Clay groundwater level

- Indicates wells used in Figure 3.5 Piezometer Flow Diagram to generate Soft Clay groundwater level

- Indicates wells used in Figure 3.5 Piezometer Flow Diagram to generate Glacial Till groundwater level

ft. AMSL - Feet above mean sea level.

Table 3.6D

1170 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

	Well **		
	1174 D	1173 D	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	568.85	572.83	555.60
05/29/18	568.39	571.93	555.60
09/11/18	568.25	570.66	555.60
12/06/18	568.89	571.89	555.60

Soft Clay Medium

	Well **				
	1174 B	1174 C	1173 B	1173 C	1172 B
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	570.27	569.80	570.21	571.84	569.17
05/29/18	570.47	569.66	569.83	572.10	569.00
09/11/18	570.77	570.08	569.66	571.07	568.74
12/06/18	570.28	570.20	569.93	570.89	568.48

	1172 C	1171 B	1171 C	Tile Drain	1170 B
	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	569.42	563.03	561.66	555.60	573.20
05/29/18	569.63	562.70	561.54	555.60	569.45
09/11/18	569.23	562.65	561.47	555.60	561.89
12/06/18	568.83	562.77	561.74	555.60	572.17

Glacial Till Medium

	Well **					
	1174 A	1173 A	1172 A	1171 A	Tile Drain	1170 A
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	570.57	568.74	566.37	563.86	555.60	562.59
05/29/18	570.44	568.59	566.41	563.93	555.60	562.41
09/11/18	570.60	568.15	566.34	563.64	555.60	562.27
12/06/18	570.50	568.58	566.32	563.67	555.60	562.56

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

- Indicates wells used in Figure 3.6 Piezometer Flow Diagram to generate Fractured Clay groundwater level

- Indicates wells used in Figure 3.6 Piezometer Flow Diagram to generate Soft Clay groundwater level

- Indicates wells used in Figure 3.6 Piezometer Flow Diagram to generate Glacial Till groundwater level

ft. AMSL - Feet above mean sea level.

Table 3.6E

1180 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Silty Sand Medium

	Well **	
	1183 D	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)
03/05/18	566.77	560.00
05/29/18	566.80	560.00
09/11/18	566.94	560.00
12/06/18	566.78	560.00

Fractured Clay Medium

	Well **				
	1184 C	1184 D	1183 C	1183 B	1181 C
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	568.57	568.72	567.70	565.35	569.54
05/29/18	567.50	567.97	567.30	565.05	567.86
09/11/18	562.97	DRY	565.92	564.67	566.94
12/06/18	566.78	568.21	567.21	564.66	569.97

	Tile Drain	1180 C
	(ft. AMSL)	(ft. AMSL)
03/05/18	560.00	DRY
05/29/18	560.00	DRY
09/11/18	560.00	DRY
12/06/18	560.00	DRY

Soft Clay Medium

	Well **			
	1184 B	1181 B	Tile Drain	1180 B
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	564.88	567.43	560.00	561.19
05/29/18	564.77	566.51	560.00	560.98
09/11/18	563.47	565.96	560.00	561.03
12/06/18	564.36	567.51	560.00	561.16

Glacial Till Medium

	Well **				
	1184 A	1183 A	1181 A	Tile Drain	1180 A
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	564.59	564.41	569.00	560.00	563.26
05/29/18	564.53	564.43	567.51	560.00	563.40
09/11/18	564.11	563.83	566.50	560.00	563.05
12/06/18	564.48	564.40	569.54	560.00	563.14

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
- Indicates wells used in Figure 3.7 Piezometer Flow Diagram to generate Fractured Clay groundwater level
- Indicates wells used in Figure 3.7 Piezometer Flow Diagram to generate Soft Clay groundwater level
- Indicates wells used in Figure 3.7 Piezometer Flow Diagram to generate Glacial Till groundwater level
ft. AMSL - Feet above mean sea level.

Table 3.6F

1190 Series Piezometers Water Levels - 2018
Love Canal Long-Term Monitoring Program
Glenn Springs Holdings, Inc.

Fractured Clay Medium

	Well **			
	1194 D	1193 D	1192 C	Tile Drain
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	574.58	572.03	569.90	554.80
05/29/18	573.54	572.15	570.26	554.80
09/11/18	569.55	570.95	570.03	554.80
12/06/18	572.45	570.82	569.67	554.80

Soft Clay Medium

	Well **					
	1194 B	1194 C	1193 B	1193 C	1192 B	1191 B
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	570.39	573.62	568.96	571.03	568.55	565.85
05/29/18	570.08	572.70	569.30	571.74	568.85	566.55
09/11/18	567.93	569.33	568.85	570.88	568.60	566.27
12/06/18	569.52	575.44	569.41	570.49	568.48	565.43

	1191 C	Tile Drain	1190 B
	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	564.26	554.80	574.98
05/29/18	564.34	554.80	564.01
09/11/18	564.07	554.80	562.27
12/06/18	564.11	554.80	579.38

Glacial Till Medium

	Well **					
	1194 A	1193 A	1192 A	1191 A	Tile Drain	1190 A
Date	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)	(ft. AMSL)
03/05/18	564.85	566.10	564.74	565.48	554.80	566.57
05/29/18	564.74	566.01	564.76	565.78	554.80	566.16
09/11/18	564.03	565.40	564.09	565.70	554.80	564.10
12/06/18	564.65	565.86	564.63	565.56	554.80	566.19

Notes:

** - Wells listed from left to right in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
- Indicates wells used in Figure 3.8 Piezometer Flow Diagram to generate Fractured Clay groundwater level
- Indicates wells used in Figure 3.8 Piezometer Flow Diagram to generate Soft Clay groundwater level
- Indicates wells used in Figure 3.8 Piezometer Flow Diagram to generate Glacial Till groundwater level
ft. AMSL - Feet above mean sea level.

Appendices

Appendix A
Institutional and Engineering Controls Certification Form

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-7020
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

11/19/2018

Joseph Branch Project Coordinator
OCC/Glenn Springs Holdings, Inc.
7601 Old Channel Trail
Montaque, MI 49437

RE: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal
Site Name: Love Canal
Site No.: 932020
Site Address: 805 97th Street

Dear Mr. Branch:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of and compliance with, site specific SM requirements. Section 6.3(b) of DER-10 Technical Guidance for Site Investigation and Remediation (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **January 30, 2019**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Qualified Environmental Professional (QEP). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

All site-related documents and data, including the PRR, are to be submitted in electronic format to the Department of Environmental Conservation. The Department will not approve the PRR unless all documents and data generated in support of that report have been submitted in accordance with the electronic submissions protocol. In addition, the certification forms are required to be submitted in both paper and electronic formats.

Information on the format of the data submissions can be found at:
http://www.dec.ny.gov/regulations/2586.html

The signed certification forms should be sent to Brian Sadowski, Project Manager, at the following address:

New York State Department of Environmental Conservation
270 Michigan Avenue Buffalo, NY 14203-2915

Phone number: 716-851-7220 E-mail: brian.sadowski@dec.ny.gov

The contact information above is also provided so that you may notify the project manager about upcoming inspections, or for any other questions or concerns that may arise in regard to the site.

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

ec: w/enclosures
Brian Sadowski, Project Manager
Chad Staniszewski, Hazardous Waste Remediation Engineer, Region 9
John Pentilchuk, GHD Group

Enclosure 1 Certification

Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional / Engineering Controls (Boxes 3, 4, and 5)

Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- Where the only control is an Institutional Control on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner.
- Where the site has Institutional and Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932020

Site Name Love Canal

Site Address: 805 97th Street Zip Code: 14304
City/Town: Niagara Falls
County: Niagara
Site Acreage: 70.0

Reporting Period: January 1, 2018 to December 31, 2018

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below?	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

1-28-2019
Date

SITE NO. 932020

Description of Engineering and Institutional Controls

Boxes 3 and 4

Parcel	Engineering Control	Institutional Control
232 Parcels	Cover System Fencing/Access Control Groundwater Containment Leachate Collection Pump & Treat	Building Use Restriction Ground Water Use Restriction Landuse Restriction Monitoring Plan O&M Plan
161.19-1-1		
161.57-1-1		
161.65-1-1		
161.73-1-1		
161.57-1-2		
161.65-1-2		
161.73-1-2		
161.57-1-3		
161.65-1-3		
161.73-1-3		
161.57-1-4		
161.65-1-4		
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161.18-1-18

Periodic Review Report (PRR) Certification Statements **Box 5**

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

1-28-2019
Date

IC CERTIFICATIONS
SITE NO. 932020

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2 and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Joseph Branch (print name) at 7601 Old Channel Trail 49437 (print business address)

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner or Remedial Party Rendering Certification

1-28-2019
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Richard J. Snyder (print name) at GHD Services Inc. 2055 Niagara Falls Blvd, Niagara Falls, NY 14304 (print business address)

am certifying as a Qualified Environmental Professional for the Remedial Party (Owner or Remedial Party)

STATE OF NEW YORK
RICHARD J. SNYDER
LICENSED
No. 66242
PROFESSIONAL ENGINEER

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

January 29, 2014
Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated the ability of each component of the remedy subject to O&M requirements to perform as

designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;

1. whether all requirements of each plan were met during the reporting period
2. any requirements not met
3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals

1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

Appendix B
Semiannual Inspection Forms

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Love Canal Semiannual Barrier System / Pump Chamber Inspections

Date: 6/19/2018
Inspector: Darrell Crockett

Weather: Sunny 75 F

Check the Following as Appropriate:

Visual Inspection of chamber piping
Verification of level probe performance
Inspection of pump chamber integrity
Inspection of pump chamber security

Wells	Satisfactory	Needs Maintenance
PC-1	Y	
PC-2	Y	
PC-3	Y	
PC-1A	Y	
PC-2A	Y	
PC-3A	Y	

Comments:

Signature:

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Love Canal Semiannual Barrier System / Pump Chamber Inspections

Date: 9/21/2018 ***Weather:*** Sunny 70 F
Inspector: Darrell Crockett

Check the Following as Appropriate:

Visual Inspection of chamber piping
Verification of level probe performance
Inspection of pump chamber integrity
Inspection of pump chamber security

Wells	Satisfactory	Needs Maintenance
PC-1	Y	
PC-2	Y	
PC-3	Y	
PC-1A	Y	
PC-2A	Y	
PC-3A	Y	

Comments:

Signature: Darrell Crockett

Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

Love Canal Semi-Annual Barrier Drain Manhole Inspection

Date 6/20/2018

Sector	MH No.	Location	Water Y/N	Level Feet	Debris Y/N	Structure OK	Cleaning Y/N	Comments
North Colvin	MH-10A	NW	N	0"	N	Y	N	
	MH-8A	NW	Y	2"	N	Y	N	
	MH-6C	NW	Y	2"	Y	Y	N	Some built up sludge
	MH-6B	NW	Y	3"	N	Y	N	
	MH-6A	NW	N	0"	N	Y	N	
	PC-2A	NW	Y	2.3'	N	Y	N	
	MH-4A	NW	Y	2"	N	Y	N	
	MH-2A	NW	Y	2"	N	Y	N	
	MH-2	SW	N	0"	Y	Y	N	
	MH-4	SW	Y	4"	Y	Y	N	
	MH-6	SW	Y	8"	N	Y	N	
	MH-8/PC2	SW	Y	4.5'	N	Y	N	
	MH-10	SW	Y	3"	Y	Y	N	
	MH-12	SW	Y	2"	N	Y	N	
South Frontier	MH-14	SW	Y	2"	N	Y	N	
North Colvin	NH-17A	NE	N	0"	N	Y	N	
	MH-15A	NE	N	0"	N	Y	N	
	MH-13A	NE	Y	2"	Y	Y	N	
	PC1A	NE	Y	3.0'	Y	Y	N	
	MH-11A	NE	Y	3"	N	Y	N	
	MH-9A	NE	Y	3"	N	Y	N	
	MH-7A	NE	Y	3"	Y	Y	N	
	MH-5A	NE	Y	3"	N	Y	N	
	MH-3A	NE	Y	3"	N	Y	N	
	MH-1A	NE	Y	3"	N	Y	N	
	MH-1	SE	Y	3"	N	Y	N	
	MH-3	SE	Y	4"	Y	Y	N	
	MH-5	SE	Y	1"	N	Y	N	
	MH-7/PC1	SE	Y	2.5'	N	Y	N	
	MH-9	SE	Y	2.5"	N	Y	N	
	MH-11	SE	Y	4"	Y	Y	N	
South Frontier	MH-13	SE	Y	2"	N	Y	N	

Signature: Darrell Crockett

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Love Canal Semi-Annual Barrier Drain Manhole Inspection

Date 9/19/2018

Sector	MH No.	Location	Water Y/N	Level Feet	Debris Y/N	Structure OK	Cleaning Y/N	Comments
North Colvin	MH-10A	NW	N	0"	N	Y	N	
	MH-8A	NW	Y	2"	N	Y	N	
	MH-6C	NW	Y	2"	Y	Y	N	Some built up sludge
	MH-6B	NW	Y	2"	N	Y	N	
	MH-6A	NW	Y	1"	N	Y	N	
	PC-2A	NW	Y	3.0'	N	Y	N	
	MH-4A	NW	Y	2"	N	Y	N	
	MH-2A	NW	Y	2"	N	Y	N	
	MH-2	SW	Y	1"	Y	Y	N	
	MH-4	SW	Y	3"	Y	Y	N	
	MH-6	SW	Y	4'"	N	Y	N	
	MH-8/PC2	SW	Y	2.5'	N	Y	N	
	MH-10	SW	Y	3"	Y	Y	N	
	MH-12	SW	Y	3"	N	Y	N	
South Frontier	MH-14	SW	Y	1"	N	Y	N	
North Colvin	NH-17A	NE	N	0"	N	Y	N	
	MH-15A	NE	N	0"	N	Y	N	
	MH-13A	NE	Y	1"	Y	Y	N	
	PC1A	NE	Y	2.5'	Y	Y	N	
	MH-11A	NE	Y	2"	N	Y	N	
	MH-9A	NE	Y	2"	N	Y	N	
	MH-7A	NE	Y	2"	Y	Y	N	
	MH-5A	NE	Y	2"	N	Y	N	
	MH-3A	NE	Y	2"	N	Y	N	
	MH-1A	NE	Y	2"	N	Y	N	
	MH-1	SE	Y	2"	N	Y	N	
	MH-3	SE	Y	3"	Y	Y	N	
	MH-5	SE	Y	1"	N	Y	N	
	MH-7/PC1	SE	Y	3.0'	N	Y	N	
	MH-9	SE	Y	2.0"	N	Y	N	
	MH-11	SE	Y	3"	Y	Y	N	
South Frontier	MH-13	SE	Y	2"	N	Y	N	

Signature: Darrell Crockett

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

SEMIANNUAL LANDFILL CAP, SITE COVER, AND FENCE INSPECTION

Site: Love Canal
Date: 6/18/2018 **Weather:** 70 F
Inspector: Darrell Crockett

Inspection Item	Applicable to Site	Inspect For	
1. **Landfill Cap**	Y	- signs of erosion (cap, ditches, swales)	N
		- exposure of the HDPE Liner	N
		- areas of insufficient grass coverage	N
		- signs of dead/dying grass	N
		- presence of washouts	N
		- settlement causing ponding of water	N
		- signs of slope instability	Y
		- signs of burrowing by animals	N
		- presence of rooting trees (cap, ditches, swales)	N
		- signs of poor drainage in ditches/swales	N
2. **Site Cover** (Asphalt, Grass, Vegetation)	N	- signs of erosion (cover, ditches, swales)	Y / N
		- areas of insufficient asphalt, grass, vegetation coverage	Y / N
		- signs of dead/dying grass/vegetation	Y / N
		- presence of washouts	Y / N
		- settlement causing ponding of water	Y / N
		- signs of slope instability	Y / N
		- signs of burrowing by animals	Y / N
		- presence of rooting trees (cover, ditches, swales)	Y / N
		- signs of poor drainage in ditches/swales	Y / N
3. **Perimeter Fence**	Y	- breaches in fence	N
		- gates secure	Y
		- locks in place	Y
		- missing or illegible signage	N

Comments/Remarks **(Note: If repair/maintenance is recommended, describe its location/extent below)**

Signs of slope instability southwest of PC1

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

SEMIANNUAL LANDFILL CAP, SITE COVER, AND FENCE INSPECTION

Site: Love Canal
Date: 9/20/2018 **Weather:** 75 F
Inspector: Darrell Crockett

Inspection Item	Applicable to Site	Inspect For	
1. **Landfill Cap**	Y	- signs of erosion (cap, ditches, swales)	N
		- exposure of the HDPE Liner	N
		- areas of insufficient grass coverage	N
		- signs of dead/dying grass	N
		- presence of washouts	N
		- settlement causing ponding of water	N
		- signs of slope instability	Y
		- signs of burrowing by animals	N
		- presence of rooting trees (cap, ditches, swales)	N
		- signs of poor drainage in ditches/swales	N
2. **Site Cover** (Asphalt, Grass, Vegetation)	N	- signs of erosion (cover, ditches, swales)	Y / N
		- areas of insufficient asphalt, grass, vegetation coverage	Y / N
		- signs of dead/dying grass/vegetation	Y / N
		- presence of washouts	Y / N
		- settlement causing ponding of water	Y / N
		- signs of slope instability	Y / N
		- signs of burrowing by animals	Y / N
		- presence of rooting trees (cover, ditches, swales)	Y / N
		- signs of poor drainage in ditches/swales	Y / N
3. **Perimeter Fence**	Y	- breaches in fence	N
		- gates secure	Y
		- locks in place	Y
		- missing or illegible signage	N

Comments/Remarks **(Note: If repair/maintenance is recommended, describe its location/extent below)**

Signs of slope instability southwest of PC1

Appendix C
Niagara Falls Water Board
Wastewater Discharge Permit #44

NIAGARA FALLS WATER BOARD
WASTEWATER FACILITIES
SIGNIFICANT INDUSTRIAL USER
WASTEWATER DISCHARGE PERMIT

PERMIT NO. 44 Glenn Springs Holdings, Inc. -
Love Canal Leachate Treatment Facility

In accordance with all terms and conditions of the Niagara Falls Water Board Regulations Part 1960 and also with all applicable provisions of Federal and State Law or regulation:

Permission is Hereby Granted To: Glenn Springs Holdings, Inc. -
Love Canal Leachate Treatment Facility

Located at: 805 - 97th Street, Niagara Falls, NY 14304

Classified by SIC No(s): 4952

For the contribution of wastewater, into the Niagara Falls Water Board Publicly-Owned Treatment Works (POTW).

Effective this 9th day of, January 2015
To Expire this 9th day of, January 2020

for

Paul J. Drof
Executive Director of Niagara Falls Water Board

Signed this 31TH day of December, 2014

DISCHARGE IDENTIFICATION

OUTFALL	DESCRIPTION	LOCATION	RECEIVING
#1	97th Street Discharge	97th Street	Carbon Treated Leachate from Love Canal Leachate Treatment Facility and the 102nd Street landfill

WASTEWATER DISCHARGE PERMIT REQUIREMENTS FOR:		ACTION REQUIRED	REQUIRED DATE OF SUBMISSION
A.	**Discharges to the Niagara Falls Water Board (NFWB) Sewer**		
1.	Identification of all discharges to the NFWB Sewer System on a current plant sewer map certified by a New York State licensed professional engineer.	None	Submitted 12/24/14
2.	Identification of each contributing waste stream to each discharge to the NFWB Sewer System clearly marked on, or referenced to, a current plant sewer map certified by a New York State licensed professional engineer.	None	Submitted 12/24/14
3.	Elimination of all uncontaminated discharges to the NFWB Sewer System. All uncontaminated flows should be clearly identified on a current sewer map certified by a New York State licensed professional engineer.	N/A	
4.	Establishment of a control manhole that is continuously and immediately accessible for each discharge to the NFWB Sewer System.	None	Previously Established
B.	**Wastewater Discharge Management Practices**		
1.	Identification of a responsible person(s) (day to day and in emergencies).	None	Performed by NFWB

C. Slug Control Plan**

Pursuant to Section 40 CFR 403.12 (v) of the Federal Pretreatment Standards the Niagara Falls Water Board will evaluate the permittee, a minimum of once every two years for the need for a "Slug Control Plan." If a plan is required by the Niagara Falls Water Board, then the plan will contain, at a minimum, the following elements:

a) Description of discharge practices, including non-routine batch discharges;
b) Description of stored chemicals;
c) Procedures for immediately notifying the POTW of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5 (b), with procedures for follow-up written notification within five days;
d) If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.

**This section applies to all pollutants limited by the Niagara Falls Water Board SPDES Permit and all prohibited wastewater discharges (See Section 1960.5 of the Niagara Falls Water Board Wastewater Regulations).

D. General Wastewater Discharge Permit Conditions

1. Flow monitoring should be performed concurrently with any Wastewater Discharge Permit sampling and should be reported at the same time as analytical results. If it is not feasible to perform flow monitoring, an estimate of flow (method of estimated flow preapproved by the Niagara Falls Water Board) should be submitted with the analytical results.

2. All sampling for billing and pretreatment compliance purposes will be coordinated through the Niagara Falls Water Board Industrial Monitoring Coordinator.

3. All analysis must be performed by a State certified laboratory using analytical methods consistent with 40 CFR 136 and quality control provisions as required by the Niagara Falls Water Board Laboratory Technical Director. The permittee will report the results as directed in Section G of this permit. Results should be reported using the Method Detection Limit (MDL). Reporting results less than MDL will be indicated in the report by a less than sign (<) followed by the numeric MDL concentration reported by the laboratory. In these cases the pollutant load will be calculated and reported as zero (0). The MDL will be defined as the level at which the analytical procedure referenced is capable of determining with a 99% probability that the substance is present. The value is determined in reagent water. The precision at this level is +/- 100%.

4. An estimate of relative production levels for wastewater contributing processes at the time of any pretreatment compliance sampling will be submitted upon request of the Director of Niagara Falls Water Board - Wastewater Facilities.

5. All samples will be handled in accordance with EPA approved methods. Chain of Custody records will be submitted with all sampling results.

6. All conditions, standards and numeric limitations of Niagara Falls Water Board Wastewater Regulations are hereby incorporated into this permit by reference. These conditions, standards and numeric limitations must be complied with. Failure to comply with any part of said Regulations constitutes a violation and is subject to enforcement actions(s) described in Section 1960.9 of said Regulations, and in the Niagara Falls Water Board Pretreatment Administrative Procedure Number Five (5) - "Enforcement Response Guide." In the event of a violation, including slug discharges or spills, the Niagara Falls Water Board must be notified immediately by phone and confirmed by letter within five (5) working days.

   Any person adjudicated of violating any provision in the Niagara Falls Water Board Wastewater Regulations shall be assessed a fine in the amount of up to $10,000. This amount is available for each violation, and each day of a violation is a separate incident for which penalties may be sought.

6. The person violating any of the provisions of the Niagara Falls Water Board Wastewater Regulations will be liable for any expense, loss, or damage occasioned by reason of such violation. The expense, loss or damage will be taken to be the extent determined by the Director.

   In addition, any person who knowingly makes any false statements, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to the Niagara Falls Water Board Wastewater Regulations, or Wastewater Discharge Permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under the Niagara Falls Water Board Wastewater Regulations will, upon conviction be punished by a fine up to $5,000. Furthermore, the Niagara Falls Water Board may recover reasonable attorney's fees, court costs, court reporting fees, and other expenses of litigation by appropriate suit at law against the person found to have violated applicable laws, orders, rules and permits required by the Niagara Falls Water Board Wastewater Regulations.

7. In accordance with Federal Regulation CFR 40, Part 403.12(g), any exceedance of a numeric limitation noted by the SIU must be re-sampled, analyzed and resubmitted to the Niagara Falls Water Board - Wastewater Facilities within 30 days.

   Specifically, if any limit that is *listed* in Section F of this permit is exceeded, then the permittee will undertake a short term monitoring program for that pollutant. Samples will be collected identical to those required for routine monitoring purposes and will be collected on each of at least *two (2)* operating days and analyzed. Results will be reported in both concentration and mass, and will be submitted within *30* days of becoming aware of the exceedence.

8. Sampling frequency for any permitted compounds may be increased beyond the requirements set forth in Section F and G of this permit. If the permittee monitors (sample and analysis) more frequent than required under this permit, **all** results of this monitoring must be reported.

9. As noted in Section 1960.5g of the Niagara Falls Water Board Wastewater Regulations, "Personnel as designated by the Director will be permitted at any time for reasonable cause to enter upon all properties served by the Niagara Falls Water Board for the purpose of, and to carry out, inspection of the premises, observation, measurement, sampling and testing, in accordance with provisions of the Regulations."

10. As noted in Section 1960.5c of the Niagara Falls Water Board Wastewater Regulations, significant changes in discharge characteristics or volume must be reported immediately to the Niagara Falls Water Board - Wastewater Facilities.

11. As noted in Section 1960.6b of the Niagara Falls Water Board Wastewater Regulations, samples required to be collected via a 24-hour composite sampler must be retained refrigerated for an additional 24 hour plus un-refrigerated an additional 48 hours (total 72 hours).

12. As noted in Section 1960.5d of the Niagara Falls Water Board Wastewater Regulations, all "SIU's will keep on file for a minimum of three years, all records, flow charts, laboratory calculations or any other pertinent data on their discharge to the Niagara Falls Water Board - Wastewater Facilities."

13. As noted in Section 1960.6g of the Niagara Falls Water Board Wastewater Regulations, "Permits are issued to a specific user for a specific monitoring station. A permit will not be reassigned or transferred without the approval of the Director which approval will not be unreasonably withheld. Any succeeding owner or user to which a permit has been transferred and approved will also comply with all the terms and conditions of the existing permit."

14. The Annual Average Limitation is equivalent to the specific SIU allocation, and will be defined as the permissible long term average discharge of a particular pollutant. These limitations are listed in Section F of this permit. The computation of the Annual Average will be as follows; for each compound listed in Section G of this permit, the Annual Average will be the average of the present monitoring quarter and three previous quarters data.

15. The Daily Maximum Limitation will be defined as the maximum allowable discharge on anyone day. The Daily Maximum Limitation will allow for periodic short term discharge fluctuations. These specific limitations are listed in Section F of this permit.

16. Enforcement of the Annual Average Limitation will be based on the reported average of the last four quarters data vs. the Annual Average Limited listed in Section F of this permit. Enforcement of the Daily Maximum Limitation will be based on individual analysis results vs. the Daily Maximum Limit listed in Section F of this permit. These results may be obtained from self monitoring (Section G), City of Niagara Falls Verification, incident investigation or billing samples.

17. The Niagara Falls Water Board Administrative Procedure Number 6 "Procedure for Determination and Use of Local Limits" lists all pollutants noted in the Niagara Falls Water Board – Wastewater Facilities SPDES Permit. The limits defined in the procedure are values which are based on the quantity of substances discharged which can be easily related to the Treatment Plant's removal capacity.
    The pollutants listed in this procedure that are <u>not</u> specifically listed in Section F and G of this permit may be present in the permittee's wastewater discharge, but at levels which do not require specific permit limitations. Consequently, if any of the limits listed in this procedure, for pollutants <u>not</u> identified in Section F and G of this permit, are exceeded then the permittee will undertake a short-term, high intensity monitoring program for that pollutant. Samples identical to those required for routine monitoring purposes will be collected on each of at least three operating days and analyzed. Results will be expressed in terms of both concentration and mass, and will be submitted no later than the end of the third month following the month when the limit was first exceeded.

    If levels higher than the limit are confirmed, the permit may be reopened by the Niagara Falls Water Board for consideration of revised permit limits.

E. Specific Wastewater Discharge Permit Conditions

1. Billing Agreement:

a) Flow quantities will be derived from the Wastewater Treatment Facility flow meter. The results of the daily flow readings will be compiled and submitted in a Monthly Flow Report by the 15th day of the following month.

b) Charges for TSS, SOC and Substances of Concern shall be developed based on Quarterly Self Monitoring data.

2. Love Canal Leachate Treatment Facility (LCLTF)

The Niagara Falls Water Board agrees to accept wastewater processed from the Glenn Springs Holdings (GSH) LCLTF. These waters in addition to Love Canal wastewater shall include wastewater from the 102nd Street remedial site. This approval is subject to the following conditions:

a) The LCLTF shall be properly operated and maintained at all times.

b) To ensure proper operation GSH shall ensure sufficient feed, inter-stage (breakthrough), and effluent analysis to ensure timely carbon changes. Treatment levels of 10 ug/ℓ shall be achieved and verified with quarterly composite sample analysis for the following compounds: trichloroethylene, tetrachloroethylene, monochlorotoluene, monochlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, hexachlorocyclohexanes and hexachlorobenzene.

E. Specific Wastewater Discharge Permit Conditions

2. Love Canal Leachate Treatment Facility (LCLTF) Continued

c) The issuance of this approval if based on GSH's previous assertions that there is no reason to anticipate the presence of tetrachlorodibenzo-p-dioxins in the discharge from the treatment facility. The Niagara Falls Water Board hereby reserves the right to collect samples from the treatment facility effluent and analyze such wastewaters for their chemical constituents, including tetrachlorodibenzo-p-dioxins. If such analysis indicates the presence of tetrachlorodibenzo-p-dioxins, this approval may be withdrawn. If at anytime, the Niagara Falls Water Board determines on any basis that the discharge of these wastewater to the POTW is interfering with the operation of that facility, the Niagara Falls Water Board will direct GSH to discontinue the discharge.

d) These pretreated wastewaters shall be discharged to the POTW via Outfall MS # 1.

e) Periodically wet weather flow in the area around LCLTF results in surcharged sewers. The resultant surcharge requires overflow at combined sewer and storm sewer overflow points. Other points in the sewer shed require manual bypass pumping. Consequently, to minimize this overflow, the Niagara Falls Water Board will require the permittee to cease discharge from the LCLTF during these surcharge events.

A notification procedure has been established by the Niagara Falls Water Board to formalize the communication between the Niagara Falls Water Board and the permittee to halt and resume the LCLTF discharge. This procedure by reference is hereby incorporated as a condition of this permit.

F. Discharge Limitations & Monitoring Requirements

During the Period beginning the effective date of this Permit and lasting until the expiration date, discharge from the permitted facility outfall(s) will be limited and monitored by the permittee as specified below.

OUTFALL NUMBER/ EFFLUENT PARAMETER	DISCHARGE LIMITATIONS		UNITS	MINIMUM MONITORING REQUIREMENTS	
	ANNUAL AVERAGE	DAILY MAXIMUM		MEASUREMENT FREQUENCY	SAMPLE TYPE
#1 Flow	0.3	0.3	MGD	Continuous	4
#1 Total Suspended Suspended	25	50	lbs/d	1/Qtr.	1
#1 Soluble Organic Carbon	50	75	lbs/d	1/Qtr.	1
#1 Volatile - Priority Pollutants (See Attached list Section G)	MONITOR	ONLY	lbs/d	1/Qtr.	1
#1 Acid Extractable - Priority Pollutants (See attached list Section G)	MONITOR	ONLY	lbs/d	1/Qtr.	1
#1 Base/Neutral - Priority Pollutants (See attached list Section G)	MONITOR	ONLY	lbs/d	1/Qtr.	1
# 1 Pesticides - Hexachlorocyclohexanes	MONITOR	ONLY	lbs/d	1/Qtr.	1
#1 Total Phenols	MONITOR	ONLY	lbs/d	1/Qtr.	1

F. DISCHARGE LIMITATIONS & MONITORING REQUIREMENTS CONTINUED

SAMPLE TYPE FOOTNOTES

(1) Each sample will consist of four (4) grabs collected spaced throughout the **batch** discharge, such that they are representative of the effluent being discharged pursuant to 40CFR 403.12.b5iii. The four (4) grabs will be **composited in the laboratory** and analyzed as one sample.

(2) Each sample will consist of four (4) grabs collected spaced over the 24-hour period, such that they are representative of the effluent being discharged pursuant to 40CFR 403.12.b5iii. The four (4) grabs will be **composited in the laboratory** and analyzed as one sample.

(3) Each sample will consist of a 24-hour, **flow proportioned** composite sample collected from the monitoring point.

(4) Flow will be monitored continuously with the use of a water meter or another acceptable flow metering device.

(5) Each sample will consist of a 24-hour, **time proportioned** composite sample collected from the monitoring point.

(6) Reserved

(7) Same as (3), however, five (5) samples will be collected per quarter from the monitoring point and analyzed by and at the Niagara Falls Water Board's expense.

(8) Four (4) grab samples will be collected spaced over the 24-hour period, such that they are representative of the effluent being discharged pursuant to 40CFR 403.12.b5iii. Each grab will be **analyzed and reported separately**.

(9) A grab sample is defined as an aliquot collected over a period of not more than 15 minutes.

G. Discharge Monitoring Reporting Requirements

During the period beginning the effective date of this permit and lasting until its expiration date, discharge monitoring results will be summarized and reported by the permittee; Monthly - 14 days after monitoring period, Quarterly - by the last day of the monitoring period = February 28, May 31, August 31, November 30. Semiannual reports will be submitted on the last day of the monitoring period = February 28, August 31. The annual average for each parameter listed in Section F, will be computed and reported quarterly. The individual sample analysis for present quarter will also be reported quarterly unless directed otherwise in this permit.

OUTFALL NO	PARAMETER	REPORTING FREQUENCY
#1	Flow	Monthly
#1	Total Suspended Solids	Quarterly
#1	Volatile - Priority Pollutants	Quarterly
#1	Acid Extractables - Priority Pollutants	Quarterly
#1	Base/Neutral - Priority Pollutants	Quarterly
#1	Total Phenols	Quarterly

Discharge Monitoring Compounds

Volatile	Base/Neutrals Extractables
Benzene	Dimethyl Phthalate
Carbon Tetrachloride	Butyl Benz Phthalate
Chlorodibromethane	Di-N-Butyl Phthalate
Monochlorobenzene	Di-N-Octyl Phthalate
Dichlorobromethane	Diethyl Phthalate
Chloroform	Nitrosodiphenylamine
Dichloroethylenes	Dichlorobenzenes
Bromoform	Dichlorotoluene
Dichloropropylenes	Acenaphthlene
Ethylbenzene	Fluoranthene
Tetrachloroethanes	Chrysene
Tetrachloroethylene	Napthalene
Toluene	Benzo (a) Anthracene
Trichloroethanes	Pyrene
Trichloroethylene	Trichlorobenzene
Methylene Chloride	Trichlorotoluene
Vinyl Chloride	Hexachlorobutadiene
Monochlorotoluenes	Tetrachlorobenzene
Monochlorobenzotrifluoride	Hexachlorocyclopentadiene
	Hexachlorobenzene
	Dichlorobenzotrifluoride

Discharge Monitoring Compounds

Acids	Pesticides
Monochlorophenol	Alpha, beta, delta, gama – hexachlorocyclohexane
Dichlorophenol	
Monochlorocresol	
Trichlorophenol	
Pentachlorophenol	

Conventionals	
Total Phenols	
Total Suspended Solids	
Soluble Organic Carbon	

H. Comments/Revisions

Appendix D
Annual Groundwater Sampling Schedule

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO:	Clint Babcock, Ralph Schupp	REF. NO.:	009954
FROM:	Jane Pietraszek-Polovich/adh/8	DATE:	August 5, 2010
C.C.:	Darrell Crockett, Dennis Hoyt, John Pentilchuk, Dave Tyran, Filing		
RE:	**Love Canal Annual Groundwater Sampling Schedule**		

At the request of Glenn Springs Holdings, Inc. (GSH), Conestoga-Rovers & Associates (CRA) has prepared the following memo to document the Annual Groundwater Sampling schedule for the Love Canal Facility in Niagara Falls, New York (Site).

Correspondence from Mr. Brian Sadowski of the New York State Department of Environmental Conservation (NYSDEC) sent to CRA and GSH on March 25, 2009 (email attached) states that it is no longer necessary for the NYSDEC to specifically list the wells to be sampled each year at the Site, since the annual and alternating (Group I and Group II) wells have remained the same throughout the years. From 1994 through 2008, the NYSDEC provided GSH with a list of wells to be sampled each year. The March 25, 2009 email from Mr. Sadowski stated that the NYSDEC will no longer provide such a list. Therefore, Mr. Sadowski suggested that the wells sampled during the 2007 annual groundwater monitoring event be used for the 2009 annual groundwater monitoring event, to remain consistent with the Long-Term Monitoring Program. The 2007 (and therefore 2009) monitoring wells represent the Group I wells (Table 1). The 2008 (and therefore 2010) monitoring wells represent the Group II wells. In addition, there are select overburden and bedrock wells that are to be sampled annually (Table 1).

Mr. Sadowski went on to further state that GSH must "ensure that the monitoring network and well selection provide adequate overburden and bedrock coverage that returns the data necessary for the evaluation of the remediation, and that the NYSDEC feels that the selection of the 2007 wells will meet those objectives." Mr. Sadowski indicated that GSH can enhance upon the objective by choosing other wells if they wish. Once the well selection is made for the annual event, GSH is to provide the NYSDEC with the monitoring well numbers. Any changes in the well selection must be accompanied with reasons for the addition/deletion. Based on a review of the data for the wells suggested by NYSDEC, GSH agreed to sample the wells in Table 1 for future sampling events. This was communicated to the NYSDEC through a phone call to Mr. Sadowski on June 7, 2010, and documented in the attached email dated June 8, 2010. The NYSDEC is to be notified when the annual monitoring will take place for oversight purposes and to split samples if desired. A 2-week notice of the annual groundwater monitoring event is preferred by the NYSDEC.

TABLE 1

SAMPLE SCHEDULE
LOVE CANAL FACILITY
LONG-TERM MONITORING PROGRAM
NIAGARA FALLS, NEW YORK

Annual Wells	*Biannual Wells*	
Bedrock Wells	*Overburden Wells Group I (2009)*	*Overburden Wells Group II (2010)*
3257	3151	7115
5221	7120	7125
6209	7155	8115
7205	7161	8125
8210	8110	9105
9205	8120	9113
9210	8130	9118
10205	8140	10178A
10210A	9110	
10210B	9115	
10210C	9120	
10215	9125	
10225A	9130	
10225B	9140	
10225C	10105	
10270	10147	
10272	10174A	
10278		
Overburden Wells		
7130		
7132		
8106		
10135		

From: Crockett, Darrell
Sent: Wednesday, March 25, 2009 12:06 PM
To: Pentilchuk, John
Subject: 9954 FW: Love Canal Annual 2009 Sampling
John,

Please let me know how you'd like for me to proceed. I have the 2007 sampling event data.

Thanks
Darrell

From: Brian Sadowski [mailto:bpsadows@gw.dec.state.ny.us]
Sent: Wed 3/25/2009 11:56 AM
To: Crockett, Darrell
Cc: Hoyt, Dennis; Clint_Babcock ext
Subject: Re: Love Canal Annual 2009 Sampling

Darrell,

Your contact and this response will be considered as our pre-sampling conference as stated on p.6. in Section 2.0 Monitoring Requirements of the February 19, 2001 Sampling Manual. Over the last fourteen years the Department has specifically listed the wells to sample and believe that is no longer necessary as the annual and alternating wells have stayed the same. GSHI and/or MSRM has clearly demonstrated their ability to operate , maintain and monitor the site. With the addition of CRA; there is an added layer of technological security and professional environmental judgement. With that said, the Department will not provide a specific list of wells to monitor. However, the suggested wells are the wells that were sampled in 2007 to remain consistent with the LTM program schedule listed on Table 2.2 of the Sampling Manual. The monitoring schedule is flexible. OXY and CRA is to ensure that the monitoring network and well selection provides adequate overburden and bedrock coverage that returns the data necessary for the evaluation of the remediation. The Department feels that the selection of the 2007 wells will meet those objectives. OXY and CRA can enhance upon the objectives by choosing other wells if they wish. When a decision is made by CRA on the well selection, please provide the Department with the well numbers. A simple return "as same as 2007 or 2007 with the addition, deletion or substitution of well #" will suffice. If changes are made, please provide reasoning. Finally, the Department will not be splitting this year. But, will need to be given notice when monitoring will take place for oversight purposes. Thank you.

>>> "Crockett, Darrell" <dcrockett@craworld.com> 3/18/2009 8:05 AM >>>
Hello Brian,

At your convenience would you please provide me with a 2009 Annual sampling well list including the split samples.

Thank You
Darrell Crockett
716/998-5804

From: Polovich, Jane
Sent: Tuesday, June 08, 2010 9:49 AM
To: Filing
Subject: 9954: Love Canal Annual Sampling - Conversation with Brian Sadowski NYSDEC

I spoke with Brian Sadowski on Monday June 7, 2010 to confirm the annual groundwater sampling locations at Love Canal. As per Brians email of March 25 2009 to Darrell Crockett, the 2007 wells selected by the DEC were to be the ones sampled in 2009 (these represent the Group I wells). I confirmed with Mr. Sadowski that the 2008 wells selected by the DEC would be teh wells sampled in 2010 (representing the Group II wells). These Group I and Group II wells will from this point forward be the wells sampled for the alternating annual groundwater sampling events at Love Canal. Mr Sadowski went further to say that GSH may add or delete wells from the sampling but must provide a reason to the DEC prior to sampling for the additions / deletions. CRA documented this change in the sampling program in a internal memo.

Jane Polovich
Conestoga-Rovers & Associates (CRA)
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Phone: 716.297.6150
Fax: 716.297.2265
Email: jpolovich@CRAworld.com
www.CRAworld.com

Appendix E
Laboratory Reports

Appendix F
Data Validation Memorandum

Memorandum

September 17, 2018
Revised November 5, 2018

To:	Joe Branch [joseph_branch@oxy.com]	Ref. No.:	009954
From:	Kathy Willy/adh/56	Tel:	716-205-1942
cc:	John Pentilchuk, Dennis Hoyt, Maggie Popek		

Subject: **Analytical Results and Full Validation**
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

1. Introduction

This document details a validation of analytical results for water samples collected in support of the Annual Long-Term Monitoring Program at the Love Canal Site during July 2018. Samples were submitted to ALS Laboratories located in Rochester, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spike (MS) samples, and field quality assurance/quality control (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The Quality Assurance/Quality Control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "Quality Assurance Project Plan", Appendix B of "Sampling Manual Long-Term Groundwater Monitoring Program", June 2013

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", United States Environmental Protection Agency (USEPA) 540-R-08-01, June 2008

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times with the exception of three pesticide samples and one polychlorinated biphenyls (PCB) sample that were re-extracted 4 days and 3 days outside of the method required holding time due to a QC failure. The associated sample results were qualified as estimated based on the potential low bias. A summary of qualified results is presented in Table 4.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check)

3.1 Organic Analyses

Prior to volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, methods require the analysis of specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the methods before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout VOC and SVOC analysis periods. All tuning criteria were met, indicating that proper optimization of the instrumentation was achieved.

4. Initial Calibration - Organic Analyses

4.1 GC/MS

To quantify VOCs and SVOCs of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the following criteria:

i) All relative response factors (RRFs) must be greater than or equal to 0.05 (0.01 for poor responders).

ii) The percent relative standard deviation (RSD) values must not exceed 20.0 percent (40 percent for poor responders) or a minimum correlation coefficient (R) of 0.995 and minimum coefficient of determination (R^2) of 0.99 if linear and quadratic equation calibration curves, respectively, are used.

The initial calibration data for VOCs and SVOCs were reviewed. All compounds met the above criteria for sensitivity and linearity.

4.2 GC

To quantify pesticides, the performance evaluation mixture (PEM) is analyzed at the beginning and end of the initial calibration sequence and throughout the analytical sequence. The results of these analyses are used to evaluate dichlorodiphenyltrichloroethane (DDT)/endrin breakdown, using the method degradation criteria of <15 percent. PEM standards were analyzed at the required frequency throughout sample analysis, and all method performance criteria were met.

In order to quantify organic compounds of interest by GC, calibration of the gas chromatograph over a specific concentration range must be performed. Initially, a calibration curve consisting of a minimum of five concentration levels is analyzed for all single component compounds of interest and for PCB (Aroclors 1016 and 1260). A single calibration standard is analyzed for all other multi-response compounds. Linearity of the calibration curve is acceptable if all RSD values are less than or equal to 20.0 percent or if the correlation coefficient (R) is 0.995 or greater for linear regression curves.

Retention time windows are also calculated from the initial calibration analyses. These windows are then used to identify all compounds of interest in subsequent analyses.

All initial calibration standards were analyzed at the required frequencies. All retention time, peak resolution, and linearity criteria were satisfied as specified in the methods.

5. Continuing Calibration - Organic Analyses

5.1 GC/MS

To ensure that instrument calibration for VOC and SVOC analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

The following criteria were employed to evaluate continuing calibration data:

i) All RRF values must be greater than or equal to 0.05 (0.01 for poor responders).

ii) Percent difference (%D) values must not exceed 25 percent (40 percent for poor responders).

Calibration standards were analyzed at the required frequency, and the results met the above criteria for instrument sensitivity and stability.

5.2 GC

To ensure that the calibration of the instrument for organic analyses by GC is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis. To evaluate the continued linearity of the calibration, %D values are calculated for each compound. As specified in the methods, all %D values should not exceed 15 percent. To ensure that compound retention times do not vary over the analysis period, all retention times for continuing calibration compounds must fall within the established retention time windows.

All continuing calibration standards were analyzed at the required frequency. All %D values and compound retention times met the above criteria, indicating acceptable instrument calibration throughout the analysis period.

6. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

7. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC, SVOC, pesticides, and PCB determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. Some surrogate recoveries could not be assessed due to necessary secondary dilutions performed on the samples. All other surrogate recoveries were within acceptable limits, with the exception of three low pesticide surrogate recoveries and one PCB surrogate recovery. All samples were re-extracted outside of the method required holding time with similar results being recorded, thus establishing a matrix effect. All sample results were previously qualified as estimated due to the holding time exceedance.

8. Internal Standards (IS) Analyses

IS data were evaluated for all VOC and SVOC sample analyses.

To ensure that changes in the GC/MS sensitivity and response do not affect sample analysis results, IS compounds are added to each sample prior to analysis. All results are then calculated as a ratio of the IS responses.

The sample IS results were evaluated against the following criteria:

i) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

ii) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated calibration standard.

All organic IS recoveries and retention times met the above criteria.

9. Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision with the following exceptions:

- Some low recoveries were reported. Associated sample results were qualified as estimated to reflect the implied low bias.
- Some high RPD values were also observed with these recoveries. All associated sample results were non-detect and would not have been impacted by the implied variability.

A summary of qualified results is presented in Table 5.

10. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the distillation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

11. Field QA/QC Samples

The field QA/QC consisted of six trip blank samples, three rinse blank samples, and three field duplicate sample sets.

11.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, six trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest with the exception of some low concentrations of acetone. All associated sample results with concentrations similar to that found in the trip blanks were qualified as non-detect. A summary of qualified results is presented in Table 6.

11.2 Rinse Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, three rinse blanks were submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

11.3 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

12. Tentatively Identified Compounds (TICs)

Chromatographic peaks recorded during VOC and SVOC sample GC/MS analyses that are not target compounds, surrogates, or IS, are potential TICs.

A summary of the TICs reported by the laboratory is presented in Table 7. Per the "Guidelines", TICs that were present in the method blanks or identified as solvent preservatives/aldol reaction products were rejected and are not included in the table.

13. Dual Column Analysis

Pesticide analyses were performed using dual column analysis. All pesticide results showed good correlation between the two columns (<40 percent).

14. Analyte Reporting

The laboratory reported detected results down to the laboratory's Method Detection Limit (MDL) for each analyte. Positive analyte detections less than the Practical Quantitation Limit (PQL) but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

15. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to the identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

16. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Table 1

Sample Collection and Analysis Summary
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters				Comments
					VOCs	SVOCs	Pesticides	PCB	
WG-9954-071118-SG-014	3257	Groundwater	07/11/2018	11:05	x	x	x	x	
WG-9954-072318-SG-035	5221	Groundwater	07/23/2018	13:05	x	x	x	x	
WG-9954-072018-SG-026	6209	Groundwater	07/20/2018	11:00	x	x	x	x	
WG-9954-072018-SG-027	6209	Groundwater	07/20/2018	11:00	x	x	x	x	Field duplicate of sample WG-9954-072018-SG-026
WG-9954-070518-SG-001	7115	Groundwater	07/05/2018	09:50	x	x	x	x	
WG-9954-070518-SG-002	7125	Groundwater	07/05/2018	10:50	x	x	x	x	
WG-9954-070518-SG-003	7130	Groundwater	07/05/2018	11:35	x	x	x	x	
WG-9954-070518-SG-004	7132	Groundwater	07/05/2018	13:25	x	x	x	x	
WG-9954-071918-SG-025	7205	Groundwater	07/19/2018	13:40	x	x	x	x	
WG-9954-071118-SG-013	8106	Groundwater	07/11/2018	10:20	x	x	x	x	
WG-9954-070518-SG-005	8115	Groundwater	07/05/2018	14:30	x	x	x	x	
WG-9954-072318-SG-034	8210	Groundwater	07/23/2018	12:05	x	x	x	x	
WG-9954-071018-SG-011	9118	Groundwater	07/10/2018	12:05	x	x	x	x	Matrix Spike/Matrix Spike Duplicate
WG-9954-072318-SG-033	9205	Groundwater	07/23/2018	11:20	x	x	x	x	
WG-9954-071118-SG-015	9210	Groundwater	07/11/2018	12:25	x	x	x	x	
WG-9954-071018-SG-012	10135	Groundwater	07/10/2018	13:05	x	x	x	x	
WG-9954-071118-SG-016	10205	Groundwater	07/11/2018	13:05	x	x	x	x	
WG-9954-071118-SG-017	10205	Groundwater	07/11/2018	13:05	x	x	x	x	Field duplicate of sample WG-9954-071118-SG-016
WG-9954-072318-SG-030	10210A	Groundwater	07/23/2018	08:50	x	x	x	x	
WG-9954-071918-SG-023	10210B	Groundwater	07/19/2018	10:25	x	x	x	x	
WG-9954-071918-SG-024	10210C	Groundwater	07/19/2018	11:25	x	x	x	x	Matrix Spike/Matrix Spike Duplicate
WG-9954-071118-SG-018	10215	Groundwater	07/11/2018	14:00	x	x	x	x	
WG-9954-072318-SG-031	10225A	Groundwater	07/23/2018	09:25	x	x	x	x	
WG-9954-072318-SG-032	10225B	Groundwater	07/23/2018	09:40	x	x	x	x	
WG-9954-071218-SG-019	10225C	Groundwater	07/12/2018	10:25	x	x	x	x	
WG-9954-071218-SG-022	10270	Groundwater	07/12/2018	13:20	x	x	x	x	
WG-9954-071218-SG-021	10272	Groundwater	07/12/2018	12:05	x	x	x	x	
WG-9954-071218-SG-020	10278	Groundwater	07/12/2018	11:25	x	x	x	x	
WG-9954-072018-SG-028	MW-01	Groundwater	07/20/2018	12:25	x	x	x	x	
WG-9954-072018-SG-029	MW-02	Groundwater	07/20/2018	13:15	x	x	x	x	
WG-9954-070618-SG-007	8125	Groundwater	07/06/2018	10:25	x	x	x	x	
WG-9954-070618-SG-008	9105	Groundwater	07/06/2018	11:15	x	x	x	x	

Table 1

Sample Collection and Analysis Summary
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters				Comments
					VOCs	SVOCs	Pesticides	PCB	
WG-9954-070618-SG-009	9113	Groundwater	07/06/2018	13:45	x	x	x	x	
WG-9954-070618-SG-010	9113	Groundwater	07/06/2018	13:45	x	x	x	x	Field duplicate of sample WG-9954-070618-SG-009
WG-9954-070618-SG-006	10178A	Groundwater	07/06/2018	09:10	x	x	x	x	
TB-9954-070618-SG-002	-	Water	07/06/2018	-	x				Trip Blank
RB-9954-071118-SG-001	-	Water	07/11/2018	15:00	x	x	x	x	Rinse Blank
RB-9954-071218-SG-005	-	Water	07/12/2018	-	x				Rinse Blank
RB-9954-072018-SG-002	-	Water	07/20/2018	14:10	x	x	x	x	Rinse Blank
TB-9954-070518-SG-001	-	Water	07/05/2018	-	x				Trip Blank
TB-9954-071018-SG-003	-	Water	07/10/2018	-	x				Trip Blank
TB-9954-071918-SG-006	-	Water	07/19/2018	-	x				Trip Blank
TB-9954-072018-SG-007	-	Water	07/20/2018	-	x				Trip Blank
TB-9954-072318-SG-008	-	Water	07/23/2018	-	x				Trip Blank

Notes:

VOCs - Volatile Organic Compounds
SVOCs - Semi-volatile Organic Compounds
PCB - Polychlorinated Biphenyls
- - Not applicable

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**3257**	**5221**	**6209**	**6209**
Sample Name:		**WG-9954-071118-SG-014**	**WG-9954-072318-SG-035**	**WG-9954-072018-SG-026**	**WG-9954-072018-SG-027**
Sample Date:		**07/11/2018**	**07/23/2018**	**07/20/2018**	**07/20/2018**
					Duplicate
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	2.5 J	4.4 J	5.8 J	4.4 J
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	38.3 JN	-	113.2 JN	68.2 JN
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	1.1 J
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	-	13.4 J	9.3 J
Unknown AA	µg/L	-	-	-	11.4 J

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		3257	5221	6209	6209
Sample Name:		WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027
Sample Date:		07/11/2018	07/23/2018	07/20/2018	07/20/2018 Duplicate
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	7.4 JN	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	10 JN	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	14 JN	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	5.6 J	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	5.1 JN	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	11 JN	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		3257	5221	6209	6209
Sample Name:		WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027
Sample Date:		07/11/2018	07/23/2018	07/20/2018	07/20/2018 Duplicate
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	5.9 JN	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	49 JN	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	66	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	5.8 J	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	5.1 JN	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	3.0 J	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		3257	5221	6209	6209
Sample Name:		WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027
Sample Date:		07/11/2018	07/23/2018	07/20/2018	07/20/2018 Duplicate
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	7.4 J	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	-	6.9 J	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	4.8 J	-
Unknown AC	µg/L	-	-	5.6 J	-
Unknown AD	µg/L	-	-	18 J	-
Unknown AE	µg/L	-	-	9.8 J	-
Unknown AF	µg/L	-	-	9.6 J	-
Unknown AG	µg/L	-	-	5.2 J	-
Unknown AH	µg/L	-	-	7.9 J	-
Unknown AI	µg/L	-	-	14 J	-
Unknown AJ	µg/L	-	-	18 J	-
Unknown AK	µg/L	-	-	4.8 J	-
Unknown AL	µg/L	-	-	4.8 J	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	3257	5221	6209	6209
	Sample Name:	WG-9954-071118-SG-014	WG-9954-072318-SG-035	WG-9954-072018-SG-026	WG-9954-072018-SG-027
	Sample Date:	07/11/2018	07/23/2018	07/20/2018	07/20/2018 Duplicate
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	1.9 UJ	1.9 U
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 U
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7115	7125	7130	7132
	Sample Name:	WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004
	Sample Date:	07/05/2018	07/05/2018	07/05/2018	07/05/2018
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	3.4 J	3.4 J
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	-	-	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	0.21 J	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	3.7 J	5.0 U	5.0 U
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**7115**	**7125**	**7130**	**7132**
Sample Name:		**WG-9954-070518-SG-001**	**WG-9954-070518-SG-002**	**WG-9954-070518-SG-003**	**WG-9954-070518-SG-004**
Sample Date:		**07/05/2018**	**07/05/2018**	**07/05/2018**	**07/05/2018**
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 UJ	9.4 UJ	9.4 UJ	9.4 UJ
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7115	7125	7130	7132
	Sample Name:	WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004
	Sample Date:	07/05/2018	07/05/2018	07/05/2018	07/05/2018
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7115	7125	7130	7132
	Sample Name:	WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004
	Sample Date:	07/05/2018	07/05/2018	07/05/2018	07/05/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7115	7125	7130	7132
	Sample Name:	WG-9954-070518-SG-001	WG-9954-070518-SG-002	WG-9954-070518-SG-003	WG-9954-070518-SG-004
	Sample Date:	07/05/2018	07/05/2018	07/05/2018	07/05/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	0.94 UJ	0.94 UJ
beta-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Dieldrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 UJ	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 UJ	0.50 U	0.50 U	0.50 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7205	8106	8115	8125
	Sample Name:	WG-9954-071918-SG-025	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007
	Sample Date:	07/19/2018	07/11/2018	07/05/2018	07/06/2018
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	3.0 J	10 U	10 U	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	27.0 JN	-	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	1.8 J	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	9.0 J	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**7205**	**8106**	**8115**	**8125**
Sample Name:		**WG-9954-071918-SG-025**	**WG-9954-071118-SG-013**	**WG-9954-070518-SG-005**	**WG-9954-070618-SG-007**
Sample Date:		**07/19/2018**	**07/11/2018**	**07/05/2018**	**07/06/2018**
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	0.24 J	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 UJ	9.4 UJ
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 UJ	9.4 UJ
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**7205**	**8106**	**8115**	**8125**
Sample Name:		**WG-9954-071918-SG-025**	**WG-9954-071118-SG-013**	**WG-9954-070518-SG-005**	**WG-9954-070618-SG-007**
Sample Date:		**07/19/2018**	**07/11/2018**	**07/05/2018**	**07/06/2018**
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	26	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7205	8106	8115	8125
	Sample Name:	WG-9954-071918-SG-025	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007
	Sample Date:	07/19/2018	07/11/2018	07/05/2018	07/06/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	9.3 J	-	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	8.7 J	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Aldrin	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	7205	8106	8115	8125
	Sample Name:	WG-9954-071918-SG-025	WG-9954-071118-SG-013	WG-9954-070518-SG-005	WG-9954-070618-SG-007
	Sample Date:	07/19/2018	07/11/2018	07/05/2018	07/06/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 U	1.9 U	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 U	0.94 U	0.94 UJ
beta-BHC	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
delta-BHC	µg/L	0.043 J	0.047 U	0.047 UJ	0.047 UJ
Dieldrin	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Endrin	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Heptachlor	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 UJ	0.047 UJ
Toxaphene	µg/L	0.50 U	0.50 U	0.50 UJ	0.50 UJ

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		8210	9105	9113	9113
Sample Name:		WG-9954-072318-SG-034	WG-9954-070618-SG-008	WG-9954-070618-SG-009	WG-9954-070618-SG-010
Sample Date:		07/23/2018	07/06/2018	07/06/2018	07/06/2018 Duplicate
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	3.9 J	10 U	10 U	10 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	-	-	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		8210	9105	9113	9113
Sample Name:		WG-9954-072318-SG-034	WG-9954-070618-SG-008	WG-9954-070618-SG-009	WG-9954-070618-SG-010
Sample Date:		07/23/2018	07/06/2018	07/06/2018	07/06/2018 Duplicate
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 UJ	9.4 UJ	9.4 UJ
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		8210	9105	9113	9113
Sample Name:		WG-9954-072318-SG-034	WG-9954-070618-SG-008	WG-9954-070618-SG-009	WG-9954-070618-SG-010
Sample Date:		07/23/2018	07/06/2018	07/06/2018	07/06/2018 Duplicate
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		8210	9105	9113	9113
Sample Name:		WG-9954-072318-SG-034	WG-9954-070618-SG-008	WG-9954-070618-SG-009	WG-9954-070618-SG-010
Sample Date:		07/23/2018	07/06/2018	07/06/2018	07/06/2018 Duplicate
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	8210	9105	9113	9113
	Sample Name:	WG-9954-072318-SG-034	WG-9954-070618-SG-008	WG-9954-070618-SG-009	WG-9954-070618-SG-010
	Sample Date:	07/23/2018	07/06/2018	07/06/2018	07/06/2018 Duplicate
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 UJ	1.9 UJ	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 UJ	0.94 UJ	0.94 UJ	0.94 UJ
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**9118**	**9205**	**9210**	**10135**
Sample Name:		**WG-9954-071018-SG-011**	**WG-9954-072318-SG-033**	**WG-9954-071118-SG-015**	**WG-9954-071018-SG-012**
Sample Date:		**07/10/2018**	**07/23/2018**	**07/11/2018**	**07/10/2018**
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	500 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	1000 U
2-Hexanone	µg/L	10 U	10 U	10 U	1000 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	1000 U
Acetone	µg/L	10 U	10 U	10 U	1000 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	6200
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	38 J
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	500 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	500 U
Carbon disulfide	µg/L	10 U	3.9 J	1.5 J	1000 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	500 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	2400
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	230 J
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	500 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	39 J
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	500 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	500 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	500 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	500 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	500 U
Sulfur dioxide (SO2) A	µg/L	-	-	34.6 JN	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	500 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	21000
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	34 J
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	500 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	71 J
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		9118	9205	9210	10135
Sample Name:		WG-9954-071018-SG-011	WG-9954-072318-SG-033	WG-9954-071118-SG-015	WG-9954-071018-SG-012
Sample Date:		07/10/2018	07/23/2018	07/11/2018	07/10/2018
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	1000 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	500 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	35 J
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	470 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	120 J
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	2400 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	470 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	470 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	80 J
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	470 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	2400 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	470 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	470 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	470 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**9118**	**9205**	**9210**	**10135**
Sample Name:		**WG-9954-071018-SG-011**	**WG-9954-072318-SG-033**	**WG-9954-071118-SG-015**	**WG-9954-071018-SG-012**
Sample Date:		**07/10/2018**	**07/23/2018**	**07/11/2018**	**07/10/2018**
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	2400 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	2400 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Benzoic acid	µg/L	47 U	47 U	47 U	6000
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	280 J
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	470 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	470 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	470 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	470 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	470 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	470 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	470 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	470 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	470 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	470 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	470 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		9118	9205	9210	10135
Sample Name:		WG-9954-071018-SG-011	WG-9954-072318-SG-033	WG-9954-071118-SG-015	WG-9954-071018-SG-012
Sample Date:		07/10/2018	07/23/2018	07/11/2018	07/10/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	38 JN	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	470 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	470 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	470 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	20 JN	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	2400 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	470 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	470 U
Sulfur A	µg/L	-	-	4.7 JN	-
Unknown A	µg/L	-	-	6.5 J	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Aldrin	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.24 U	23
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.24 U	0.94 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	9118	9205	9210	10135
	Sample Name:	WG-9954-071018-SG-011	WG-9954-072318-SG-033	WG-9954-071118-SG-015	WG-9954-071018-SG-012
	Sample Date:	07/10/2018	07/23/2018	07/11/2018	07/10/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 UJ	1.9 UJ	9.4 U	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 UJ	0.94 UJ	4.7 U	0.94 UJ
beta-BHC	µg/L	0.047 U	0.047 U	0.24 U	4.3
delta-BHC	µg/L	0.047 U	0.047 U	0.18 J	7.2
Dieldrin	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Endrin	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.24 U	3.3
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Heptachlor	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.24 U	0.94 U
Toxaphene	µg/L	0.50 U	0.50 U	2.5 U	10 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10178A	10205	10205	10210A
Sample Name:		WG-9954-070618-SG-006	WG-9954-071118-SG-016	WG-9954-071118-SG-017	WG-9954-072318-SG-030
Sample Date:		07/06/2018	07/11/2018	07/11/2018 Duplicate	07/23/2018
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	10 U	2.3 J	2.0 J	340
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	0.22 J
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	68.8 JN	44.4 JN	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10178A	10205	10205	10210A
Sample Name:		WG-9954-070618-SG-006	WG-9954-071118-SG-016	WG-9954-071118-SG-017	WG-9954-072318-SG-030
Sample Date:		07/06/2018	07/11/2018	07/11/2018 Duplicate	07/23/2018
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	0.27 J
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 UJ	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 UJ	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10178A	10205	10205	10210A
Sample Name:		WG-9954-070618-SG-006	WG-9954-071118-SG-016	WG-9954-071118-SG-017	WG-9954-072318-SG-030
Sample Date:		07/06/2018	07/11/2018	07/11/2018 Duplicate	07/23/2018
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	4.3 JN	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	6.7 JN	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	47 JN
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10178A	10205	10205	10210A
Sample Name:		WG-9954-070618-SG-006	WG-9954-071118-SG-016	WG-9954-071118-SG-017	WG-9954-072318-SG-030
Sample Date:		07/06/2018	07/11/2018	07/11/2018 Duplicate	07/23/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	12 JN	18 JN	11 JN
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	4.4 JN	-	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	8.8 JN	-	-
Unknown A	µg/L	-	-	-	7.7 J
Unknown AA	µg/L	-	-	-	150 J
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.24 U	0.024 J	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.24 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10178A	10205	10205	10210A
	Sample Name:	WG-9954-070618-SG-006	WG-9954-071118-SG-016	WG-9954-071118-SG-017	WG-9954-072318-SG-030
	Sample Date:	07/06/2018	07/11/2018	07/11/2018 Duplicate	07/23/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 UJ	9.4 U	1.9 U	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 UJ	4.7 U	0.94 U	0.94 UJ
beta-BHC	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
delta-BHC	µg/L	0.047 U	0.24 U	0.047 U	0.032 J
Dieldrin	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.24 U	0.047 U	0.021 J
gamma-Chlordane	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.24 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	2.5 U	0.50 U	0.50 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10210B	10210C	10215	10225A
	Sample Name:	WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031
	Sample Date:	07/19/2018	07/19/2018	07/11/2018	07/23/2018
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	16
Carbon disulfide	µg/L	20	6.3 J	13	49
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	0.39 J
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	-	137.6 JN	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	0.27 J
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	-	5.1 J	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10210B	10210C	10215	10225A
	Sample Name:	WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031
	Sample Date:	07/19/2018	07/19/2018	07/11/2018	07/23/2018
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	0.34 J
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10210B**	**10210C**	**10215**	**10225A**
Sample Name:		**WG-9954-071918-SG-023**	**WG-9954-071918-SG-024**	**WG-9954-071118-SG-018**	**WG-9954-072318-SG-031**
Sample Date:		**07/19/2018**	**07/19/2018**	**07/11/2018**	**07/23/2018**
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	49 JN
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10210B	10210C	10215	10225A
Sample Name:		WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031
Sample Date:		07/19/2018	07/19/2018	07/11/2018	07/23/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	4.7 JN	-
Octadecanoic acid A	µg/L	-	-	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	-	7.3 J	29 J
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
4,4'-DDE	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
4,4'-DDT	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Aldrin	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
alpha-BHC	µg/L	0.24 U	0.24 U	0.24 U	0.026 J
alpha-Chlordane	µg/L	0.24 U	0.24 U	0.24 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10210B	10210C	10215	10225A
	Sample Name:	WG-9954-071918-SG-023	WG-9954-071918-SG-024	WG-9954-071118-SG-018	WG-9954-072318-SG-031
	Sample Date:	07/19/2018	07/19/2018	07/11/2018	07/23/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	9.4 U	9.4 U	9.4 U	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	4.7 U	4.7 U	4.7 U	0.94 UJ
beta-BHC	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
delta-BHC	µg/L	0.24 U	0.24 U	0.24 U	0.048
Dieldrin	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Endosulfan I	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Endosulfan II	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Endosulfan sulfate	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Endrin	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Endrin ketone	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
gamma-BHC (lindane)	µg/L	0.24 U	0.24 U	0.24 U	0.035 J
gamma-Chlordane	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Heptachlor	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Heptachlor epoxide	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Methoxychlor	µg/L	0.24 U	0.24 U	0.24 U	0.047 U
Toxaphene	µg/L	2.5 U	2.5 U	2.5 U	0.50 U

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10225B**	**10225C**	**10270**	**10272**
Sample Name:		**WG-9954-072318-SG-032**	**WG-9954-071218-SG-019**	**WG-9954-071218-SG-022**	**WG-9954-071218-SG-021**
Sample Date:		**07/23/2018**	**07/12/2018**	**07/12/2018**	**07/12/2018**
Parameters	**Unit**				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	27	7.9 J	4.8 J	4.0 J
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	0.90 J	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	3.8 J	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	-	-	-
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	0.28 J	5.0 U	0.21 J	5.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	6.2	5.0 U	5.0 U
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10225B**	**10225C**	**10270**	**10272**
Sample Name:		**WG-9954-072318-SG-032**	**WG-9954-071218-SG-019**	**WG-9954-071218-SG-022**	**WG-9954-071218-SG-021**
Sample Date:		**07/23/2018**	**07/12/2018**	**07/12/2018**	**07/12/2018**
Parameters	**Unit**				
VOCs-Continued					
Vinyl acetate	µg/L	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)					
1,2,4-Trichlorobenzene	µg/L	9.4 U	7.7 J	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		10225B	10225C	10270	10272
Sample Name:		WG-9954-072318-SG-032	WG-9954-071218-SG-019	WG-9954-071218-SG-022	WG-9954-071218-SG-021
Sample Date:		07/23/2018	07/12/2018	07/12/2018	07/12/2018
Parameters	**Unit**				
SVOCs-Continued					
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	8.4 JN	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	5.8 JN	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10225B	10225C	10270	10272
	Sample Name:	WG-9954-072318-SG-032	WG-9954-071218-SG-019	WG-9954-071218-SG-022	WG-9954-071218-SG-021
	Sample Date:	07/23/2018	07/12/2018	07/12/2018	07/12/2018
Parameters	**Unit**				
SVOCs-Continued					
Hexadecanoic acid A	µg/L	-	15 JN	-	4.6 JN
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-	-
Octadecanoic acid A	µg/L	-	6.2 JN	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-	-
Unknown A	µg/L	-	-	-	-
Unknown AA	µg/L	-	-	-	-
Unknown AB	µg/L	-	-	-	-
Unknown AC	µg/L	-	-	-	-
Unknown AD	µg/L	-	-	-	-
Unknown AE	µg/L	-	-	-	-
Unknown AF	µg/L	-	-	-	-
Unknown AG	µg/L	-	-	-	-
Unknown AH	µg/L	-	-	-	-
Unknown AI	µg/L	-	-	-	-
Unknown AJ	µg/L	-	-	-	-
Unknown AK	µg/L	-	-	-	-
Unknown AL	µg/L	-	-	-	-
Unknown B	µg/L	-	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)					
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.24	0.11	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	10225B	10225C	10270	10272
	Sample Name:	WG-9954-072318-SG-032	WG-9954-071218-SG-019	WG-9954-071218-SG-022	WG-9954-071218-SG-021
	Sample Date:	07/23/2018	07/12/2018	07/12/2018	07/12/2018
Parameters	**Unit**				
Pesticides/PCB-Continued					
Aroclor-1016 (PCB-1016)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
Aroclor-1221 (PCB-1221)	µg/L	1.9 UJ	1.9 U	1.9 U	1.9 U
Aroclor-1232 (PCB-1232)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
Aroclor-1242 (PCB-1242)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
Aroclor-1248 (PCB-1248)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
Aroclor-1254 (PCB-1254)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
Aroclor-1260 (PCB-1260)	µg/L	0.94 UJ	0.94 U	0.94 U	0.94 U
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.097	0.026 J	0.047 U	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.21	0.052	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U	0.50 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10278**	**MW-01**	**MW-02**
Sample Name:		**WG-9954-071218-SG-020**	**WG-9954-072018-SG-028**	**WG-9954-072018-SG-029**
Sample Date:		**07/12/2018**	**07/20/2018**	**07/20/2018**
Parameters	**Unit**			
Volatile Organic Compounds (VOCs)				
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	µg/L	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U
Bromoform	µg/L	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	3.9 J	2.8 J	2.4 J
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U
Dibromochloromethane	µg/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5.0 U	5.0 U	5.0 U
Methoxytrimethyl-silane A	µg/L	-	-	-
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U
Sulfur dioxide (SO2) A	µg/L	-	135.4 JN	93.6 JN
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	0.22 J
trans-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	5.0 U	5.0 U
Trichloroethene	µg/L	5.0 U	5.0 U	5.0 U
Unknown A	µg/L	-	14.3 J	8.2 J
Unknown AA	µg/L	-	-	20.2 J

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10278**	**MW-01**	**MW-02**
Sample Name:		**WG-9954-071218-SG-020**	**WG-9954-072018-SG-028**	**WG-9954-072018-SG-029**
Sample Date:		**07/12/2018**	**07/20/2018**	**07/20/2018**
Parameters	**Unit**			
VOCs-Continued				
Vinyl acetate	µg/L	10 U	10 U	10 U
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	5.0 U	5.0 U	5.0 U
Semi-volatile Organic Compounds (SVOCs)				
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U
1-(3-Hydroxy-4-methoxyph-ethanone A	µg/L	-	-	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.4 U	9.4 U	9.4 U
2,4'-Dihydroxy-3'-methoxyacetophen A	µg/L	-	-	-
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.4 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U
2-(Methylthio)-pyridine A	µg/L	-	-	-
2-Chloronaphthalene	µg/L	9.4 U	9.4 U	9.4 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	9.4 U	9.4 U	9.4 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U
2-Nitroaniline	µg/L	47 U	47 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U
3&4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U
3-Hydroxy-4-methoxybenzoic acid A	µg/L	-	-	-
3-Nitroaniline	µg/L	47 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U
4-Hydroxy-3-methoxy-benzaldehyde (Vanillin) A	µg/L	-	-	-

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Location ID:	**10278**	**MW-01**	**MW-02**
	Sample Name:	**WG-9954-071218-SG-020**	**WG-9954-072018-SG-028**	**WG-9954-072018-SG-029**
	Sample Date:	**07/12/2018**	**07/20/2018**	**07/20/2018**
Parameters	**Unit**			
SVOCs-Continued				
4-Hydroxy-3-methoxybenzyl alcohol A	µg/L	-	-	-
4-Nitroaniline	µg/L	47 U	47 U	47 U
4-Nitrophenol	µg/L	47 U	47 U	47 U
6-Octadecenoic acid, (Z) A	µg/L	-	-	-
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-dione A	µg/L	-	-	-
Acenaphthene	µg/L	9.4 U	9.4 U	9.4 U
Acenaphthylene	µg/L	9.4 U	9.4 U	9.4 U
Anthracene	µg/L	9.4 U	9.4 U	9.4 U
Azoxystrobin A	µg/L	-	-	-
Benzo(a)anthracene	µg/L	9.4 U	9.4 U	9.4 U
Benzo(a)pyrene	µg/L	9.4 U	9.4 U	9.4 U
Benzo(b)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U
Benzo(g,h,i)perylene	µg/L	9.4 U	9.4 U	9.4 U
Benzo(k)fluoranthene	µg/L	9.4 U	9.4 U	9.4 U
Benzoic acid	µg/L	47 U	47 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	9.4 U	9.4 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.4 U	9.4 U	9.4 U
Butanoic acid, 3-methyl A	µg/L	-	-	-
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U
Chrysene	µg/L	9.4 U	9.4 U	9.4 U
cis-Vaccenic acid A	µg/L	-	-	-
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U
Dibenz(a,h)anthracene	µg/L	9.4 U	9.4 U	9.4 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U
Dimethyl disulfide A	µg/L	-	-	-
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U
Fluoranthene	µg/L	9.4 U	9.4 U	9.4 U
Fluorene	µg/L	9.4 U	9.4 U	9.4 U
Hexachlorobenzene	µg/L	9.4 U	9.4 U	9.4 U
Hexachlorobutadiene	µg/L	9.4 U	9.4 U	9.4 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10278**	**MW-01**	**MW-02**
Sample Name:		**WG-9954-071218-SG-020**	**WG-9954-072018-SG-028**	**WG-9954-072018-SG-029**
Sample Date:		**07/12/2018**	**07/20/2018**	**07/20/2018**
Parameters	**Unit**			
SVOCs-Continued				
Hexadecanoic acid A	µg/L	20 JN	-	-
Indeno(1,2,3-cd)pyrene	µg/L	9.4 U	9.4 U	9.4 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U
N-Nitrosodi-n-propylamine	µg/L	9.4 U	9.4 U	9.4 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U
Naphthalene	µg/L	9.4 U	9.4 U	9.4 U
Nitrobenzene	µg/L	9.4 U	9.4 U	9.4 U
Nonanoic acid A	µg/L	-	-	-
Octadecanoic acid A	µg/L	13 JN	-	-
Pentachlorophenol	µg/L	47 U	47 U	47 U
Phenanthrene	µg/L	9.4 U	9.4 U	9.4 U
Phenol	µg/L	9.4 U	9.4 U	9.4 U
Pyrene	µg/L	9.4 U	9.4 U	9.4 U
Sulfur A	µg/L	-	-	-
Unknown A	µg/L	-	-	-
Unknown AA	µg/L	-	-	-
Unknown AB	µg/L	-	-	-
Unknown AC	µg/L	-	-	-
Unknown AD	µg/L	-	-	-
Unknown AE	µg/L	-	-	-
Unknown AF	µg/L	-	-	-
Unknown AG	µg/L	-	-	-
Unknown AH	µg/L	-	-	-
Unknown AI	µg/L	-	-	-
Unknown AJ	µg/L	-	-	-
Unknown AK	µg/L	-	-	-
Unknown AL	µg/L	-	-	-
Unknown B	µg/L	-	-	-
Pesticides/Polychlorinated Biphenyls (PCB)				
4,4'-DDD	µg/L	0.047 U	0.047 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.047 U

Table 2

Analytical Results Summary
Love Canal Annual Long Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Location ID:		**10278**	**MW-01**	**MW-02**
Sample Name:		**WG-9954-071218-SG-020**	**WG-9954-072018-SG-028**	**WG-9954-072018-SG-029**
Sample Date:		**07/12/2018**	**07/20/2018**	**07/20/2018**
Parameters	**Unit**			
Pesticides/PCB-Continued				
Aroclor-1016 (PCB-1016)	µg/L	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1221 (PCB-1221)	µg/L	1.9 U	1.9 UJ	1.9 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.94 U	0.94 UJ	0.94 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.94 U	0.94 UJ	0.94 UJ
beta-BHC	µg/L	0.047 U	0.047 U	0.047 U
delta-BHC	µg/L	0.024 J	0.047 U	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.047 U
Methoxychlor	µg/L	0.047 U	0.047 U	0.047 U
Toxaphene	µg/L	0.50 U	0.50 U	0.50 U

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
- - Not applicable

Table 3

Analytical Methods
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

			Holding Time	
Parameter	**Method**	**Matrix**	**Collection to Extraction (Days)**	**Collection or Extraction to Analysis (Days)**
Volatile Organic Compounds (VOCs)	SW-846 8260B	Water	-	14
Semi-volatile Organic Compounds (SVOCs)	SW-846 8270C	Water	7	40
Polychlorinated Biphenyls (PCB)	SW-846 8082	Water	7	40
Organochlorine Pesticides	SW-846 8081A	Water	7	40

Notes:

- - Not applicable

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
Pesticides	WG-9954-070518-SG-001	11	7	4,4'-DDD	0.047 UJ	µg/L
				4,4'-DDE	0.047 UJ	µg/L
				4,4'-DDT	0.047 UJ	µg/L
				Aldrin	0.047 UJ	µg/L
				alpha-BHC	0.047 UJ	µg/L
				alpha-Chlordane	0.047 UJ	µg/L
				beta-BHC	0.047 UJ	µg/L
				delta-BHC	0.047 UJ	µg/L
				Dieldrin	0.047 UJ	µg/L
				Endosulfan I	0.047 UJ	µg/L
				Endosulfan II	0.047 UJ	µg/L
				Endosulfan sulfate	0.047 UJ	µg/L
				Endrin	0.047 UJ	µg/L
				Endrin ketone	0.047 UJ	µg/L
				gamma-BHC (lindane)	0.047 UJ	µg/L
				gamma-Chlordane	0.047 UJ	µg/L
				Heptachlor	0.047 UJ	µg/L
				Heptachlor epoxide	0.047 UJ	µg/L
				Methoxychlor	0.047 UJ	µg/L
				Toxaphene	0.50 UJ	µg/L
Pesticides	WG-9954-070518-SG-005	11	7	4,4'-DDD	0.047 UJ	µg/L
				4,4'-DDE	0.047 UJ	µg/L
				4,4'-DDT	0.047 UJ	µg/L
				Aldrin	0.047 UJ	µg/L
				alpha-BHC	0.047 UJ	µg/L
				alpha-Chlordane	0.047 UJ	µg/L
				beta-BHC	0.047 UJ	µg/L
				delta-BHC	0.047 UJ	µg/L
				Dieldrin	0.047 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
Pesticides	WG-9954-070518-SG-005	11	7	Endosulfan I	0.047 UJ	µg/L
				Endosulfan II	0.047 UJ	µg/L
				Endosulfan sulfate	0.047 UJ	µg/L
				Endrin	0.047 UJ	µg/L
				Endrin ketone	0.047 UJ	µg/L
				gamma-BHC (lindane)	0.047 UJ	µg/L
				gamma-Chlordane	0.047 UJ	µg/L
				Heptachlor	0.047 UJ	µg/L
				Heptachlor epoxide	0.047 UJ	µg/L
				Methoxychlor	0.047 UJ	µg/L
				Toxaphene	0.50 UJ	µg/L
Pesticides	WG-9954-070618-SG-007	10	7	4,4'-DDD	0.047 UJ	µg/L
				4,4'-DDE	0.047 UJ	µg/L
				4,4'-DDT	0.047 UJ	µg/L
				Aldrin	0.047 UJ	µg/L
				alpha-BHC	0.047 UJ	µg/L
				alpha-Chlordane	0.047 UJ	µg/L
				beta-BHC	0.047 UJ	µg/L
				delta-BHC	0.047 UJ	µg/L
				Dieldrin	0.047 UJ	µg/L
				Endosulfan I	0.047 UJ	µg/L
				Endosulfan II	0.047 UJ	µg/L
				Endosulfan sulfate	0.047 UJ	µg/L
				Endrin	0.047 UJ	µg/L
				Endrin ketone	0.047 UJ	µg/L
				gamma-BHC (lindane)	0.047 UJ	µg/L
				gamma-Chlordane	0.047 UJ	µg/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
Pesticides	WG-9954-070618-SG-007	10	7	Heptachlor	0.047 UJ	µg/L
				Heptachlor epoxide	0.047 UJ	µg/L
				Methoxychlor	0.047 UJ	µg/L
				Toxaphene	0.50 UJ	µg/L
PCB	WG-9954-070618-SG-007	10	7	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
				Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
				Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
				Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
				Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
				Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
				Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L

Notes:

UJ - Not detected; associated reporting limit is estimated
PCB - Polychlorinated Biphenyls

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Associated Sample ID	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Analyte	Qualified Result	Units
PCB	WG-9954-070518-SG-002	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070518-SG-003	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070518-SG-004	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070618-SG-006	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070618-SG-008	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Associated Sample ID	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Analyte	Qualified Result	Units
PCB	WG-9954-070618-SG-008	07/11/2018	45	36	22	49 - 123	30	Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070618-SG-009	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-070618-SG-010	07/11/2018	45	36	22	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/11/2018	44	36	20	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-071018-SG-012	07/13/2018	47	54	14	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/13/2018	52	59	14	57 - 135	30	Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
								Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
PCB	WG-9954-071018-SG-011	07/13/2018	47	54	14	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/13/2018	52	59	14	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
PCB	WG-9954-071018-SG-011	07/13/2018	47	54	14	49 - 123	30	Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
		07/13/2018	52	59	14	57 - 135	30	Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Associated Sample ID	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Analyte	Qualified Result	Units
PCB	WG-9954-072018-SG-026	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
								Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
PCB	WG-9954-072018-SG-028	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072018-SG-029	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-030	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-031	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Associated Sample ID	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Analyte	Qualified Result	Units
PCB	WG-9954-072318-SG-031	07/26/2018	47	66	34	49 - 123	30	Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-032	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-035	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-034	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L
PCB	WG-9954-072318-SG-033	07/26/2018	47	66	34	49 - 123	30	Aroclor-1016 (PCB-1016)	0.94 UJ	µg/L
		07/26/2018	51	79	43	57 - 135	30	Aroclor-1221 (PCB-1221)	1.9 UJ	µg/L
								Aroclor-1232 (PCB-1232)	0.94 UJ	µg/L
								Aroclor-1242 (PCB-1242)	0.94 UJ	µg/L
								Aroclor-1248 (PCB-1248)	0.94 UJ	µg/L
								Aroclor-1254 (PCB-1254)	0.94 UJ	µg/L
								Aroclor-1260 (PCB-1260)	0.94 UJ	µg/L

Table 5

Qualified Sample Results Due to Outlying LCS/LCSD Results
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Associated Sample ID	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Analyte	Qualified Result	Units
SVOCs	WG-9954-070518-SG-001	07/10/2018	58	80	32	59 - 113	30	2,4-Dimethylphenol	9.4 UJ	µg/L
	WG-9954-070518-SG-002								9.4 UJ	µg/L
	WG-9954-070518-SG-003								9.4 UJ	µg/L
	WG-9954-070518-SG-004								9.4 UJ	µg/L
	WG-9954-070518-SG-005								9.4 UJ	µg/L
	WG-9954-070618-SG-006								9.4 UJ	µg/L
	WG-9954-070618-SG-007								9.4 UJ	µg/L
	WG-9954-070618-SG-008								9.4 UJ	µg/L
	WG-9954-070618-SG-009								9.4 UJ	µg/L
	WG-9954-070618-SG-010								9.4 UJ	µg/L
SVOCs	WG-9954-070518-SG-001	07/10/2018	45	63	33	47 - 100	33	2-Methylphenol	9.4 UJ	µg/L
	WG-9954-070518-SG-002								9.4 UJ	µg/L
	WG-9954-070518-SG-003								9.4 UJ	µg/L
	WG-9954-070518-SG-004								9.4 UJ	µg/L
	WG-9954-070518-SG-005								9.4 UJ	µg/L
	WG-9954-070618-SG-006								9.4 UJ	µg/L
	WG-9954-070618-SG-007								9.4 UJ	µg/L
	WG-9954-070618-SG-008								9.4 UJ	µg/L
	WG-9954-070618-SG-009								9.4 UJ	µg/L
	WG-9954-070618-SG-010								9.4 UJ	µg/L

Notes:

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference
UJ - Not detected; associated reporting limit is estimated
PCB - Polychlorinated Biphenyls
SVOCs - Semi-volatile Organic Compounds

Table 6

Qualified Sample Data Due to Analyte Concentrations in the Trip Blanks
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

Parameter	Blank Date (mm/dd/yyyy)	Analyte	Blank Result	Associated Sample ID	Original Result	Qualified Result	Units
VOCs	07/19/2018	Acetone	7.3 J	WG-9954-071918-SG-024	2.7 U	10 U	µg/L
VOCs	07/20/2018	Acetone	5.2 J	WG-9954-072018-SG-028	4.8 U	10 U	µg/L
VOCs	07/23/2018	Acetone	4.2 J	WG-9954-072318-SG-032	5.2 U	10 U	µg/L
VOCs	07/11/2018	Acetone	5.1 J	WG-9954-071118-SG-014	2.3 U	10 U	µg/L
				WG-9954-071118-SG-017	2.4 U	10 U	µg/L

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration
VOCs - Volatile Organic Compounds

Table 7

Tentatively Identified Compounds Summary
Love Canal Annual Long-Term Monitoring Program
Glenn Springs Holdings, Inc.
Niagara Falls, New York
July 2018

	Volatiles		Semi-volatiles	
Sample ID	**Compound**	**Estimated Concentration (µg/L)**	**Compound**	**Estimated Concentration (µg/L)**
WG-9954-072018-SG-026	Sulfur dioxide (SO2)	113.2 J	1-(3-Hydroxy-4-methoxyph-ethanone	7.4 J
	Unknown	13.4 J	2,4'-Dihydroxy-3'-methoxyacetophen	10 J
	-	-	2-(Methylthio)-pyridine	14 J
	-	-	3-Hydroxy-4-methoxybenzoic acid	5.1 J
	-	-	4-Hydroxy-3-methoxy-benzaldehyde (Vanillin)	11 J
	-	-	4-Hydroxy-3-methoxybenzyl alcohol	5.9 J
	-	-	Azoxystrobin	49 J
	-	-	Butanoic acid, 3-methyl	5.1 J
	-	-	Unknown	109.4 J
WG-9954-072018-SG-027	Sulfur dioxide (SO2)	68.2 J	-	-
	Unknown	20.7 J	-	-
WG-9954-072018-SG-028	Sulfur dioxide (SO2)	135.4 J	-	-
	Unknown	14.3 J	-	-
WG-9954-072018-SG-029	Sulfur dioxide (SO2)	93.6 J	-	-
	Unknown	28.4 J	-	-

Notes:

J - Estimated concentration
\- - Not applicable

Appendix G
Niagara Falls Water Board Annual Inspection Letter

NIAGARA FALLS WATER BOARD

SEMIANNUAL PLANT INSPECTION

INDUSTRIAL PRETREATMENT PROGRAM

Name and Address of SIU
Occidental Chemical Corporation
Love Canal Treatment Facility
805 – 97th Street
Niagara Falls, NY 14304

Permit Number: 44
SIC Codes: 4951
Date of Last Inspection: 1/23/2017
CATEGORICAL IU? NO
Day/Date and Time of Inspection:
Tues. January 17th , 2018 @ 10:00AM

SIU Representative:
Darrell Crockett

Inspectors Name:
Stephen Stewart
Matt LaGamba

Contact Phone No.: 998-5804

PART I FLOW RECORDING AND SAMPLING INSTRUMENTATION

a) Flow measurement instrument meets permit requirements? **YES**

b) Primary flow measurement device properly installed? **YES**

c) Type of flow measurement device -

Weir [ ]	Flume(s) [ ]	Water meter [ ]	Mag meter [**X**]

d) Does device measure flow adequately? **YES**

e) Is primary measuring device properly operated and maintained? [1960.6] **YES**

f) Are secondary instruments (recorders, integrators) properly operated and maintained? [1960.6] **YES**

g) Calibration frequency adequate? (date of last calibration): ***Quarterly – December 20th , 2017*** **YES**

PART II SAMPLE COLLECTION

a) Does permit require SIU to submit Periodic Self Monitoring Reports? [40 CFR403.12h] **YES**

b) If "yes", does the sample collection frequency and pollutant type conform with permit requirements? **YES**

c) Are the sample collection locations as described in the permit adequate for representative sample collection? [1960.6 (a)] **YES**

d) Does the method of sample collection conform with permit requirements, **Sewer Use Ordinance** and **Federal Standards**? **YES**

i) Sample **refrigerated throughout collection and storage?** **YES**

ii) Are samples properly preserved? **YES**

iii) Are samples collected using **flow proportion composite** or **grab sampling where appropriate**? [40 CFR12(b)(5)(iii)]. **YES**

iv) Sample holding times appropriate? [40 CFR136.3] **YES**

PART III LABORATORY FACILITIES

a) Is a commercial laboratory used? **YES**

i) Name of laboratory: **ALS Environmental**

ii)

ii) Address: **1565 Jefferson Rd. Rochester, NY 14623**

iii) Is laboratory State certified? **YES**

b) Does SIU perform its own analysis? **NO**

i) Is the SIU's laboratory State certified? **N/A**

ii) Are your laboratory wastes properly disposed of? **N/A**

c) Are EPA approved testing methods used? **YES**

PART IV RECORDS AND REPORTS

a)	Are monitoring records and reports retained in SIU files for **at least three years**? [1960.5 (d)(3)]	**YES**
b)	Are **all** records of sludge volume and disposal practices maintained in files? [1960.5 (d)(2)]	**YES**
c)	Have all hazardous waste discharges been reported to POTW? [40 CFR403.12(p)].	**N/A**
d)	If hazardous waste is discharged, is a waste minimization plan developed and implemented?	**N/A**
e)	Does the SIU have a valid wastewater discharge permit retained on file? [40 CFR403.8(f)(I)(iii)(A)-(E)]	**YES**
f)	Have **all** required reports been submitted on time?	**YES**
g)	Do Self Monitoring reports contain necessary information (samplers name, date & time, sample type, flow, preservation, chain of custody, results) ? [40 CFR403.8(f)(3)(vi)].	**YES**

PART V PLANT OPERATION AND MAINTENANCE

a)	Have there been any accidental discharge(s) that entered the sewer system?	**NO**
	Have they been reported to the POTW as well as other appropriate agencies? [1960.6 (d)]	**N/A**
b)	Is a spill notification procedure conspicuously posted in process areas of the plant? **Issued updated contact list**	**YES**
c)	Is there any evidence of spills?	**NO**
d)	Are all hazardous sludges and solids properly disposed of?	**YES**

e) Has this facility been evaluated ***OR*** re-evaluated for its' potential to experience a slug discharge? 1/20/2018 **YES**

1) Is a **Slug Control Plan** required for this facility [40 CFR403.8(f)(2)(vi)] ? **NO**

A. Has the facility **Developed** and **Implemented** a **Slug Control Plan**? **N/A**

a. The date of the plan's last update: **N/A**
b. Is the latest update on file at the NFWB? **N/A**
c. Does it contain the correct Water Board phone numbers and extensions. **N/A**

2) Has the facility experienced a slug discharge since The last inspection? **NO**

f) Have there been any significant **manufacturing** or **process** changes? [1960.5 (c)] **NO**

List**:** ***None***

Who was contacted **prior** to implementation of these changes?
N/A Date: ***N/A***

g) Describe your hazardous waste storage area(s).
Double contained in the decontamination/storage facility.

Do they meet DEC & EPA containment requirements? **YES**

Are all containers correctly labeled and time limits adhered to? **YES**

Describe your method of disposal:

Incineration as needed through Clean Harbors Inc. at their Deer Park Texas, Utah, or Arizona Facility, approximately once per quarter.

h) Regarding the blueprints that you submitted with your last permit application, **have there been any significant changes made to your process or sewer lines?** **NO**

Have revised blueprints been sent to the WWTP? **N/A**

PART VI PRETREATMENT

a) Briefly describe all required pretreatment.
Clarifier → Bag filter → Carbon treatment → WWTP

b) Are all pretreatment facilities properly maintained? **YES**

c) How many pH probes does your pH monitoring system contain? ***0***

List the frequency for calibration.
N/A

d) To your knowledge, has **anyone** discharged any un-permitted waste or waste not properly pretreated into the sewer system? [40 CFR 403.179] **NO**

e) Were WWTP personal notified? **N/A**

-- Prior to discharge to sewer? **N/A**

-- During or after discharge? **N/A**

Who? ***N/A*** Date: ***N/A*** Time: ***N/A***

SIU personal who contacted WWTP: ***N/A***

Was written notification given to the WWTP **within five (5) working days** of the start of the event? [40 CFR 403.17a] **N/A**

Sent to: ***N/A*** From: ***N/A*** Date: ***N/A***

f) List any pretreatment changes that were made in the past 12 months.
None

Who was contacted **prior** to implementation of these pretreatment changes?
N/A

PART VII COMPLIANCE AND ENFORCEMENT

a)	Has the SIU had any violations since the last inspection? List: ***None***	**NO**
b)	If numeric violations were noted by SIU, was a repeat sample collection and analysis performed within 30 days and the results submitted to the POTW [40 CFR403.12(g)] ?	**N/A**
c)	Is SIU currently on an administrative order and/or compliance schedule?	**NO**
d)	If yes, have milestone dates on schedule been met?	**N/A**
e)	Was escalating enforcement action required to achieve compliance? Describe: ***None Required***	**NO**

PART VIII RECOMMENDATIONS, REQUIREMENTS AND COMMENTS:

Hazardous waste from Love Canal consists of Debris from wells, Clarifier solids, Filters, and PPE.

January 15, 2019

Mr. Darrell Crockett – Facility Manager
Occidental Chemical Corporation
Love Canal
805 – 97th Street
Niagara Falls, New York 14304

Dear Mr. Crockett:

Enclosed please find the results of the Plant Inspection that was conducted at your facility on Tuesday, January 17th , 2018 @ 10:00AM

If you have any questions, I can be reached at 283-9770 ext 262.

Sincerely,

NIAGARA FALLS WATER BOARD
WASTEWATER FACILITIES

Stephen C. Stewart

Stephen C. Stewart
Senior Industrial Waste Inspector

Cc: J. Paradise → S. Stewart → **File: - I-44**
Emailed to SIU

Appendix H
Test and Backflow Prevention Device Reports

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Public Water Supply Protection
Empire State Plaza - Corning Tower Room 1110
Albany, NY 12237

Report on Test and Maintenance of Backflow Prevention Device

Please use a separate form for each device.

For the year 2018

☐ Initial test - *Complete entire form*

☒ Annual test - *Complete Part A only*

PART A

Public Water Supply	Account No.	County	Block	Lot
CITY OF NIAGARA FALLS		NIAGARA		

Facility Name GLENN SPRINGS REMEDIATION

Address 805 95TH ST. (Street) NIAGARA FALLS (City) (Zip)

Location of Device: MAINTENANCE BDG.

Device Information	Manufacturer	Type	Model	Size (in inches)	Serial Number
	WATTS	☒ RPZ ☐ DCV	LF009M2QT	1"	029613

Line Pressure 80 psi

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Date
Test before repair	Leaked ☐ Closed tight ☒ Pressure drop across first check valve 7.2 psid	Leaked ☐ Closed tight ☒	Opened at 2.2 psid	03 15 18 (M D Y)
Describe repairs and materials used				Repaired by Name Lic # Date repaired: (M D Y)
Final test	Closed tight ☐ Pressure drop across first check valve ____ psid	Closed tight ☐	Opened at ____ psid	Date (M D Y)

Water Meter Number 34592315

Meter Reading 073228

Type of Service: (check one) (Domestic) • Fire • Other ____

Remarks (Describe deficiencies: bypasses, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device ☒ meets,* ☐ does NOT meet, the requirements of an acceptable containment device at the time of testing

I hereby certify the foregoing data to be correct.

JOHN A. GOCZKA (Print Name) — 5808 (Certified Tester No.) — (Signature) — 08/30/2020 (Expiration Date)

Property owner's (or owner's agent) certification that test was performed:

X Daniel Comfort (Print Name) — Tech (Title) — (Signature) — 716 998-5804 (Telephone)

PART B Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date (m d y)	NYS DOH Log #
License Number	Phone ( )		
Representing		Describe minor installation changes	
Address			
City	State / Zip		
Signature			

NOTE: Send one completed copy to the designated health department representative and one copy to the water supplier within 30 days of the testing device.
Notify owner and water supplier immediately if device fails test and repairs cannot immediately be made.

DOH- 1013(9/91)

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Public Water Supply Protection
Empire State Plaza - Corning Tower Room 1110
Albany, NY 12237

Report on Test and Maintenance of Backflow Prevention Device

Please use a separate form for each device.

For the year 2018
☐ Initial test - *Complete entire form*
☒ Annual test - *Complete Part A only*

PART A

Public Water Supply	Account No.	County	Block	Lot
CITY OF NIAGARA FALLS		NIAGARA		

Facility Name GLENN SPRINGS REMEDIATION
Address 805 95TH ST. (Street) NIAGARA FALLS (City) (Zip)
Location of Device: LOCKER ROOM

Device Information	Manufacturer	Type	Model	Size (in inches)	Serial Number
	WATTS	☒ RPZ ☐ DCV	909	1½"	364807

Line Pressure 80 psi

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Date
Test before repair	Leaked ☐ Closed tight ☒ Pressure drop across first check valve 7+ psid	Leaked ☐ Closed tight ☒	Opened at 2½ psid	03 15 18 (M D Y)
Describe repairs and materials used				Repaired by Name Lic # Date repaired: (M D Y)
Final test	Closed tight ☐ Pressure drop across first check valve ____ psid	Closed tight ☐	Opened at ____ psid	Date (M D Y)

Water Meter Number 31671117
Meter Reading 011042
Type of Service: (check one) • Domestic • Fire • Other

Remarks (Describe deficiencies: bypasses, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device ☒ meets,• ☐ does NOT meet, the requirements of an acceptable containment device at the time of testing
I hereby certify the foregoing data to be correct.

Print Name	Certified Tester No.	Signature	Expiration Date
JOHN A. GOOBA	5808		04,30,2020

Property owner's (or owner's agent) certification that test was performed:

Print Name	Title	Signature	Telephone
Darrell Gooch	Tech		716.998.5804

PART B Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date (m d y)	NYS DOH Log #
License Number	Phone ( )		
Representing		Describe minor installation changes	
Address			
City	State / Zip		
Signature			

NOTE: Send one completed copy to the designated health department representative and one copy to the water supplier within 30 days of the testing device.
Notify owner and water supplier immediately if device fails test and repairs cannot immediately be made.

DOH- 1013(9/91)

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Public Water Supply Protection
Empire State Plaza - Corning Tower Room 1110
Albany, NY 12237

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For the year 2018

☐ Initial test - *Complete entire form*
☒ Annual test - *Complete Part A only*

PART A

Public Water Supply	Account No.	County	Block	Lot
CITY OF NIAGARA FALLS		NIAGARA		

Facility Name GLENN SPRINGS REMEDIATION
Address 805 95TH ST (Street) NIAGARA FALLS (City) (Zip)

Location of Device: TREATMENT BLDG (WASH DOWN)

Device Information	Manufacturer	Type	Model	Size (in inches)	Serial Number
	WATTS	☒ RPZ ☐ DCV	009M3QT	3/4"	61327

Line Pressure 74 psi

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Date
Test before repair	Leaked ☐ Closed tight ☒ Pressure drop across first check valve 7.8 psid	Leaked ☐ Closed tight ☒	Opened at 21 psid	03 15 18 (M D Y)
Describe repairs and materials used				Repaired by Name Lic # Date repaired: (M D Y)
Final test	Closed tight ☐ Pressure drop across first check valve ____ psid	Closed tight ☐	Opened at ____ psid	Date (M D Y)

Water Meter Number: N/A
Meter Reading: N/A
Type of Service: (check one) • Domestic • Fire • Other PROCESS

Remarks (Describe deficiencies: bypasses, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device ☒ meets,* ☐ does NOT meet, the requirements of an acceptable containment device at the time of testing
I hereby certify the foregoing data to be correct.

Print Name	Certified Tester No.	Signature	Expiration Date
JOHN A. GOCBA	5808		04/30/2020

Property owner's (or owner's agent) certification that test was performed:

Print Name	Title	Signature	Telephone
Darrell Gantt	Tech		716.998.5804

PART B Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date (m d y)	NYS DOH Log #
License Number	Phone ( )		

Representing
Address
City | State | Zip
Signature

Describe minor installation changes

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☒ Annual test - *Complete Part A only*

PART A

Public Water Supply	Account No.	County	Block	Lot
CITY OF NIAGARA FALLS		NIAGARA		

Facility Name GLENN SPRINGS REMEDIATION
Address 805 95TH ST (Street) NIAGARA FALLS (City) (Zip)
Location of Device: TREATMENT BDG (c BLDG)

Device Information	Manufacturer	Type	Model	Size (in inches)	Serial Number
	WATTS	☒ RPZ ☐ DCV	009M2QT	2"	179645

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Line Pressure _____psi
Test before repair	Leaked ☐ Closed tight ☒ Pressure drop across first check valve 6.7 psid	Leaked ☐ Closed tight ☒	Opened at 2.2 psid	Date 03 15 18 (M D Y)
Describe repairs and materials used				Repaired by Name _____ Lic # _____ Date repaired: ___ ___ ___ (M D Y)
Final test	Closed tight ☐ Pressure drop across first check valve _____psid	Closed tight ☐	Opened at _____psid	Date ___ ___ ___ (M D Y)

Water Meter Number: N/A
Meter Reading: N/A
Type of Service: (check one) • Domestic • Fire • Other PROCESS

Remarks (Describe deficiencies: bypasses, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device ☒ meets,* ☐ does NOT meet, the requirements of an acceptable containment device at the time of testing
I hereby certify the foregoing data to be correct.
JOHN A. GOLBA (Print Name) 5808 (Certified Tester No.) (Signature) 04/30/2020 (Expiration Date)

Property owner's (or owner's agent) certification that test was performed:
Darrell Catt (Print Name) Tech (Title) (Signature) 716 998 5804 (Telephone)

PART B Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date (m d y)	NYS DOH Log #
License Number	Phone ( )		
Representing		Describe minor installation changes	
Address			
City	State	Zip	
Signature			

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PART A

Public Water Supply	Account No.	County	Block	Lot
CITY OF NIAGARA FALLS		NIAGARA		

Facility Name GLENN SPRINGS REMEDIATION
Address 805 95TH ST. (Street) NIAGARA FALLS (City) (Zip)
Location of Device: TREATMENT BLDG (MECH. ROOM)

Device Information	Manufacturer	Type	Model	Size (in inches)	Serial Number
	WATTS	☒ RPZ ☐ DCV	909	3"	192775

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Line Pressure 50 psi
Test before repair	Leaked ☐ Closed tight ☒ Pressure drop across first check valve 7.4 psid	Leaked ☐ Closed tight ☒	Opened at 2.2 psid	Date 03 15 18 (M D Y)
Describe repairs and materials used				Repaired by Name Lic # Date repaired: (M D Y)
Final test	Closed tight ☐ Pressure drop across first check valve ____ psid	Closed tight ☐	Opened at ____ psid	Date (M D Y)

Water Meter Number 31923329
Meter Reading 522363 017967 0
Type of Service: (check one) • Domestic • Fire • Other____

Remarks (Describe deficiencies: bypasses, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device ☒ meets, ☐ does NOT meet, the requirements of an acceptable containment device at the time of testing
I hereby certify the foregoing data to be correct.
JOHN A. GOLISH (Print Name) 5808 (Certified Tester No.) (Signature) 04/30/2020 (Expiration Date)

Property owner's (or owner's agent) certification that test was performed:
Darrell Goslett (Print Name) Tech (Title) (Signature) 716.998.5804 (Telephone)

PART B Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date (m d y)	NYS DOH Log #
License Number	Phone ( )		
Representing		Describe minor installation changes	
Address			
City	State / Zip		
Signature			

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