2011 SITE MANAGEMENT PERIODIC REVIEW REPORT LOVE CANAL SITE

GLENN SPRINGS HOLDINGS, INC. NIAGARA FALLS, NEW YORK

MARCH 2012
REF. NO. 009954 (24)

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1.0 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. Beginning October 1, 2008, GSH contracted Conestoga-Rovers & Associates (CRA) to perform operation, maintenance, monitoring, and reporting activities for the Site under direct management of GSH.

This report is the seventeenth annual report prepared by or on behalf of OCC and covers operating, maintenance, and monitoring activities for 2011. The completed NYSDEC Institutional and Engineering Controls Certification Form is included as Appendix A.

2.0 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 section of the Canal. The barrier drain was later extended to completely encompass the Canal. The barrier drain, designed to intercept the shallow lateral groundwater flow, consists of a trench 15 to 25 feet deep and 4 feet wide. Installed within the trench is an 8-inch diameter perforated clay tile drain centered in 2 feet of uniformly sized gravel, which is overlain to the surface with sand. Lateral trenches filled with sand were excavated perpendicular to the barrier drain in the direction of the canal. The tile drain is graded toward a series of manholes and wet wells (PC-1A/PC-2A in the North/Central Sector and PC-1/PC-2 in the South Sector) where the leachate is collected. The leachate is pumped from the wet wells to two underground holding tanks (PC-3A in the North/Central Sector and PC-3 in the South Sector) where it is held prior to being treated at the Love Canal Treatment Facility (LCTF) and discharged to the Niagara Falls Water Board (NFWB) sanitary sewer system under the Site's Significant Industrial User Permit (SIU) #44. The locations of the remedial system components are illustrated on the Site Plan presented as Figure 2.1.

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 PC-3 storage tank for treatment at the LCTF. The 102nd Street Landfill Site leachate collection system operates continuously. During 2011, the four-well system at 102nd Street pumped 309,391 gallons of leachate to the LCTF. The leachates from the two sites were then treated and discharged to the permitted NFWB sanitary sewer system.

2.1 OPERATIONS OF THE BARRIER DRAIN AND WELL COLLECTION SYSTEM

2.1.1 BARRIER DRAIN SYSTEM

The Barrier Drain (BD) system functioned as designed in 2011, with no major maintenance required. Visual inspections of the collection system were conducted on April 12 and September 12, 2011; visual inspections of the Barrier Drain Manholes were conducted on April 12 and September 14, 2011. The visual inspections were conducted through the BD system manholes and showed the flumes of the manholes were flowing freely and required no further maintenance. The visual inspections were documented on the Semiannual Inspection Forms which are presented as Appendix B.

2.1.2 WET WELL COLLECTION SYSTEM

The wet well collection system consists of two sectors, the Northern/Central and the Southern Collection System. Leachate from the Northern/Central Sector is pumped from wet wells PC-1A and PC-2A to storage tank PC-3A, while leachate from the Southern Sector is pumped from wet wells PC-1 and PC-2 to storage tank PC-3. The collection systems were operational and functioned properly throughout 2011.

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 the LCTF PC-3 storage tank where it is held for treatment.

3.0 GROUNDWATER TREATMENT AND MONITORING

3.1 GROUNDWATER TREATMENT

3.1.1 TREATMENT SYSTEM

The treatment system 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 to the NFWB sanitary sewer system as authorized by the Facility's SIU Permit #44. In 2010, the NFWB reissued Permit #44 to OCC for an additional 5 years. The permit is valid from January 8, 2010 through January 8, 2015. A copy of the permit is included as Appendix C.

Routine maintenance activities are discussed in Section 4.

3.1.2 EFFLUENT DISCHARGE

The LCTF discharged to the NFWB sanitary sewer system on 171 days in 2011.

Periodically, unusually heavy rainfall or snow melt at the Love Canal and surrounding area can result in surcharged sewers. These surcharges lead to overflows at the combined sanitary and storm sewer overflow points. Consequently, to minimize the potential for LCTF treated effluent discharges from contributing to the surcharge conditions, the NFWB requires the LCTF to cease discharging during these surcharge events. NFWB requested LCTF shut down due to surcharging six times during 2011 (January 27, February 3, February 4, April 4, April 12, and May 18).

In 2011, the LCTF processed a total of 5,859,600 gallons of leachate. This total was comprised of 5,550,209 gallons of leachate from the Love Canal Landfill and 309,391 gallons of leachate from the 102nd Street Landfill.

Table 3.1 shows the monthly total and average treated groundwater quantities from 2000 through 2011.

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. The quarterly effluent sampling for 2011 was performed on January 6, May 17, August 4, and October 4, 2011. The sample results were submitted to the NFWB quarterly as required by the permit. The results for each event were in compliance with the requirements of the Site's SIU permit.

3.1.4 PRECIPITATION

In 2011, precipitation in the Niagara Falls region totaled 36.19 inches (Niagara Falls National Weather Service data). Table 3.1 provides historic regional precipitation data from 2000 through 2011.

3.2 GROUNDWATER MONITORING

3.2.1 GROUNDWATER QUALITY

Sampling and analytical protocols for the Site's groundwater sampling program have been established and are set forth in the "Sampling Manual, Love Canal Site, Long-Term Groundwater Monitoring Program" (LTGMP) dated January 1996.

In a letter dated April 5, 2011 (Appendix D), the NYSDEC requested additional monitoring wells 1181, 7160, 7155, 3251 be added to the LTGMP during 2011. Overburden monitoring well 7155 and bedrock monitoring well 3251 could not be located and are presumed paved over or buried. These two wells are not part of the Site's current LTGMP or part of the hydraulic monitoring. On July 6, 2011, at the Colvin Boulevard sewer repair location, Mr. Brian Sadowski of the NYSDEC was verbally notified by CRA of the inability to locate these two wells and agreed that no further efforts were necessary, and no additional wells should be sampled to replace these two wells.

3.2.2 GROUNDWATER MONITORING

The annual groundwater monitoring event was performed between July 5 and July 19, 2011. As part of the annual groundwater monitoring efforts in 2011, 39 discrete

wells were sampled. On March 25, 2009, the NYSDEC indicated to GSH that they would no longer be providing an annual well sampling list and directed GSH to use the wells sampled in 2007 and 2008 for all future sampling events. This decision has been documented in a memo titled "Love Canal Groundwater Sampling," August 5, 2010, presented in Appendix E. As part of the LTGMP, the NYSDEC has the option of collecting split samples during the annual event and having the samples analyzed independently to verify data. In 2011, NYSDEC did not collect any split samples.

In July 2011, 21 overburden and 18 bedrock groundwater samples were collected in support of the LTGMP. The samples were submitted to TestAmerica Laboratories, Inc., located in Pittsburgh, Pennsylvania, and analyzed for Site-specific volatiles, semi-volatiles, and pesticides/polychlorinated biphenyls (PCBs). A qualified CRA 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 Annual Groundwater Sampling Schedule is presented in Appendix E. Tables 3.2 and 3.3 provide a summary of the wells that were sampled, the laboratory data, and a summation of the number of compounds found at or above the detection limits in each well.

3.2.2.1 OVERBURDEN MONITORING WELLS

Table 3.2 presents the analytical results from the annual monitoring and the analytes that were detected from the overburden wells.

The 2011 groundwater analytical results for the overburden monitoring wells are consistent with previous long-term monitoring analytical results. The analytical results were non-detect or were detected at low levels (except groundwater from well 10135, which is installed in an area of known Site impacts).

Historically, well 10135 has had the most detected compounds and with the highest concentrations. As stated in the LTGMP, well 10135 is located in an area of known contamination and is sampled to present a "worst case" well. In 2011, well 10135 had 23 discrete compounds detected. Well 10135 is located outside the barrier drain but within the boundaries of the remedial Site in the southwestern zone. Table 3.4 presents a summary of detected compounds.

3.2.2.2 BEDROCK MONITORING WELLS

Table 3.3 presents the analytical results from the annual monitoring and the analytes that were detected from the bedrock wells.

The 2011 groundwater analytical results for the bedrock monitoring wells are consistent with previous long-term monitoring analytical results. The analytical results were non-detect or were detected at low levels. Table 3.4 presents a summary of detected compounds.

3.2.2.3 HISTORIC COMPOUND DETECTIONS

Table 3.5 presents a summary of detected compounds of four long-term monitoring wells, including three bedrock wells and one overburden well (bedrock wells 10210A, 10210B, and 10210C, and overburden well 10135) from 1990 to 2011. The data from these four wells are presented since 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 with the occasional low level detection and, therefore, do not present any useful data in regards to a discussion of historical analytical trends at the Site. An evaluation of the 2011 sampling data for these four wells shows that the compounds detected in 2011 were present at concentrations consistent with historical trends.

3.2.3 HYDRAULIC CONTAINMENT

Water levels were measured at six nested piezometer strings (1140, 1150, 1160, 1170, 1180, and 1190) in March, June, September, and December 2011. The water level data are presented in Tables 3.6A to 3.6F. The wells on the tables are ordered from the well furthest from the outside of the barrier drain, to the barrier drain, and to the well inside the area enclosed by the barrier drain. Figures 3.3 to 3.8 show the overburden groundwater flow conditions for June 2011 along the six piezometer strings. A review of the piezometer string groundwater elevation data from the remaining three quarters (March, September, and December) is consistent with the June 2011 data and, therefore, figures depicting the overburden groundwater flow conditions from those quarters have not been created.

In addition to the above-mentioned information, a groundwater contour figure was prepared using the June 2011 water levels from the six nested piezometer strings. The June 2011 groundwater contour figure is presented as Figure 3.9.

The groundwater contour figure and Tables 3.6A to 3.6F illustrate that there is at least 5 feet of inward gradient on the outside of the barrier drain at each of the six nested piezometer strings, demonstrating that the barrier drain and lateral trenches are effectively capturing leachate from the Site and preventing off-Site migration of chemicals. 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 outside of the barrier drain is primarily towards the barrier drain. A review of Figure 3.9 shows that groundwater flow inside of the barrier drain is towards the barrier drain. Monitoring will continue during 2012 as per the approved monitoring program.

3.2.4 WELL MAINTENANCE

No monitoring well maintenance was required during 2011.

3.2.5 SUMMARY OF TREATMENT AND MONITORING RESULTS

Effluent discharge increased from 2010 to 2011, but is consistent with volumes from previous years with similar precipitation levels. Quarterly sampling and analysis found that all chemistry detected within effluent samples for each event was less than the limits established in the Site's SIU permit.

An inward hydraulic gradient at each of the six nested piezometer strings at the barrier drain demonstrates that the barrier drain is effectively capturing leachate from the Site and preventing off-Site migration of chemicals. Any chemistry detected within the monitoring wells was present at low levels (with the exception of groundwater from well 10135, discussed in Section 3.2.2), further illustrating containment.

An overall inward hydraulic gradient towards the barrier drain and a review of groundwater quality for the groundwater monitoring wells demonstrates overall Site containment.

4.0 ACTIVITIES

Summaries of normal activities and repairs performed in 2011 are presented below.

4.1 PROCESS ACTIVITIES

Process activities that occurred during the year included the following:

- Cleaning of all process building tanks and clarifier
- Removal and disposal of hazardous waste
- Replacement of PC2 pump
- Upgrade of select switches and routers throughout the network

4.2 NON-PROCESS ACTIVITIES

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

- Scheduled preventative maintenance
- Installation of two overburden groundwater monitoring wells at Colvin Boulevard
- Disposal of Colvin Sewer project wastes
- Routine repairs to Site lighting and system components, as needed
- Reorganized and cleaned drum barn, Love Canal office building, and Love Canal process building
- Replaced process building roof drains and added heat trace
- Replaced lighting on office building flag with higher efficiency lighting fixtures
- Painted internal area of process building including process piping, ceiling, and floors
- Replaced all Ventsorb vapor phase carbon drums and connection piping
- Replaced exit lights
- Preventative maintenance and filter changes on heating and cooling systems
- Landscaping maintenance including grass cutting and tree and flower bed maintenance

4.3 COMMUNITY OUTREACH

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

4.3.1 BEAUTIFICATION

The following beautification activities were conducted at Love Canal in 2011:

- 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 and within adjacent lots

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.

On May 26, 2011, a tour of the Love Canal Site was given to the New York and New Jersey Education and Research Center.

4.3.3 COMMUNICATIONS

All required reporting was compiled and submitted to various agencies throughout the year. Reports included the 2010 Annual Hazardous Waste Reports to NYSDEC, the 2010 Periodic Review Report (formerly titled the Annual Operations and Monitoring Report) to various agencies, quarterly SIU analytical reports to the NFWB, and monthly SIU reports to the NFWB.

The Love Canal Annual Newsletter for 2010 was issued to surrounding citizens and agencies in April 2011. 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.

The NFWB performed an annual inspection of the LCTF in 2011. Additionally, an annual verification sampling of the effluent discharge was performed by the NFWB. The inspections 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.

4.4 WASTE GENERATION

Throughout 2011, both hazardous and nonhazardous waste was generated from various activities on and related to the Site, and disposed of off Site in accordance with all 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 207,685 pounds of hazardous waste were generated from various activities on and related to the Site. The waste materials were then sent off Site for proper disposal in accordance with all applicable laws and regulations. Wastes generated in 2011 were transported and disposed of through incineration or landfill impoundment by Clean Harbors, LLC and Clean Harbors Canada, Inc. Of the total amount of hazardous waste generated, approximately 111,620 pounds were impacted soils from the Colvin Boulevard sewer repair project (for details, refer to the "Colvin Boulevard Sewer Repair Supplemental Subsurface Investigation Report" [CRA, 2011]).

The remaining 96,065 pounds of hazardous waste disposed of in 2011 consisted of spent carbon, non-aqueous phase liquid (NAPL), debris, soil, waste liquids, solid wastes, and personal protective equipment (PPE).

In addition to the waste generated above, solid waste from the installation of monitoring wells during the Colvin Boulevard sewer repair activities was also generated and disposed of as nonhazardous material at the Niagara Falls Allied Waste facility.

4.5 ROUTINE OPERATIONS, INSPECTIONS, AND MONITORING

A daily inspection of the system operations was performed for each day in 2011 in accordance with the Operation and Maintenance Manual (O&M) for the Love Canal Site dated May 17, 2011. Inspection records are available upon request.

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

The backflow preventer system was inspected and tested by Camtech on March 21, 2011. All backflow prevention devices were found to be operational with no maintenance required. A copy of the Test and Maintenance of Backflow Prevention Device Report for each device is presented in Appendix G.

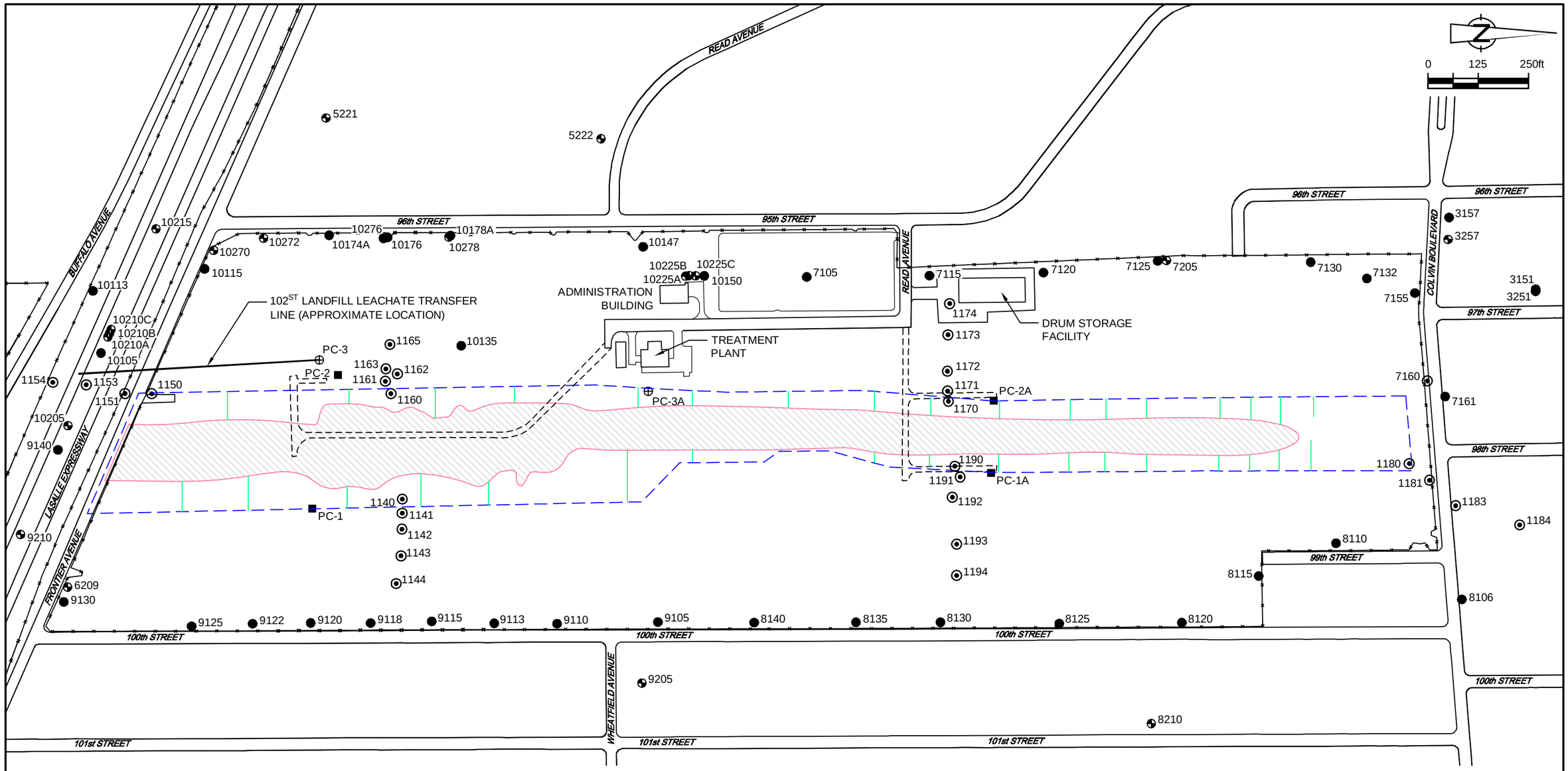
On January 24, 2011, the NFWB and Site personnel completed the annual Site inspection. NFWB personnel found the facility to be operating in accordance with the SIU permit and NFWB regulations. Therefore, no recommendations were made as a result of this inspection. The NFWB completed inspection forms are included as Appendix H.

The NYSDEC Annual Hazardous Waste Inspection was carried out on September 23, 2011. No issues were identified. A copy of the inspection report completed by the NYSDEC is included as Appendix I.

5.0 CONCLUSION

The 2011 data indicates that the chemical and hydrogeological conditions at the Site remain consistent. The barrier drain is successfully capturing leachate from the Site and preventing off-Site migration of chemicals as evidenced by the groundwater gradients depicted on Figures 3.3 to 3.9. The remediation system is functioning as designed based on third party inspections by the NYSDEC and the NFWB and effluent compliance with the Site's SIU discharge permit. There were 5,859,600 gallons of leachate treated and discharged from the Site, of which 5,550,209 gallons of leachate were collected on Site and the remaining 309,391 gallons were collected from the 102nd Street Site and pumped to the LCTF for treatment.

FIGURES



LEGEND

×——×	FENCE LINE	10270	BEDROCK OBSERVATION WELL
– – – –	APPROXIMATE BARRIER DRAIN	■ PC-1	WET WELL FOR LEACHATE COLLECTION
———	APPROXIMATE LATERAL LOCATION	⊕ PC-3	UNDERGROUND LEACHATE STORAGE TANK
⊙ 7105	PIEZOMETER WELL	▨	APPROXIMATE LIMITS OF DISPOSED WASTE
● 9120	OVERBURDEN OBSERVATION WELL		

figure 2.1

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

09954-D23101(024)GN-WA001 JAN 11/2012

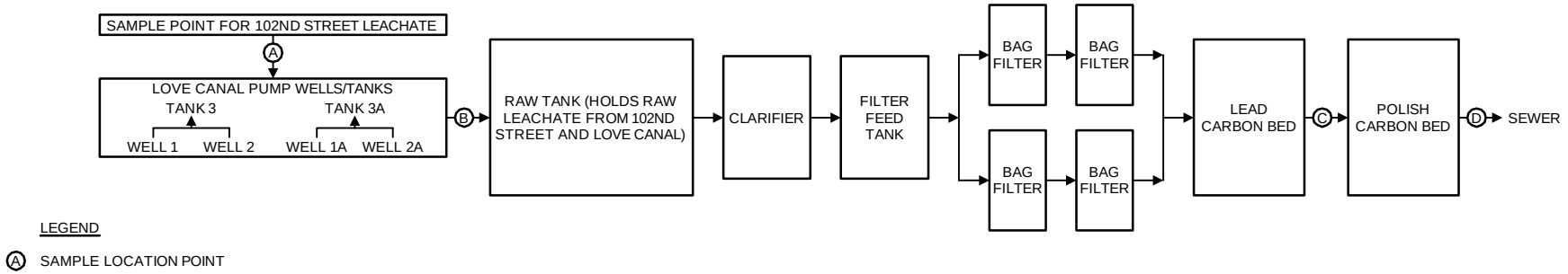
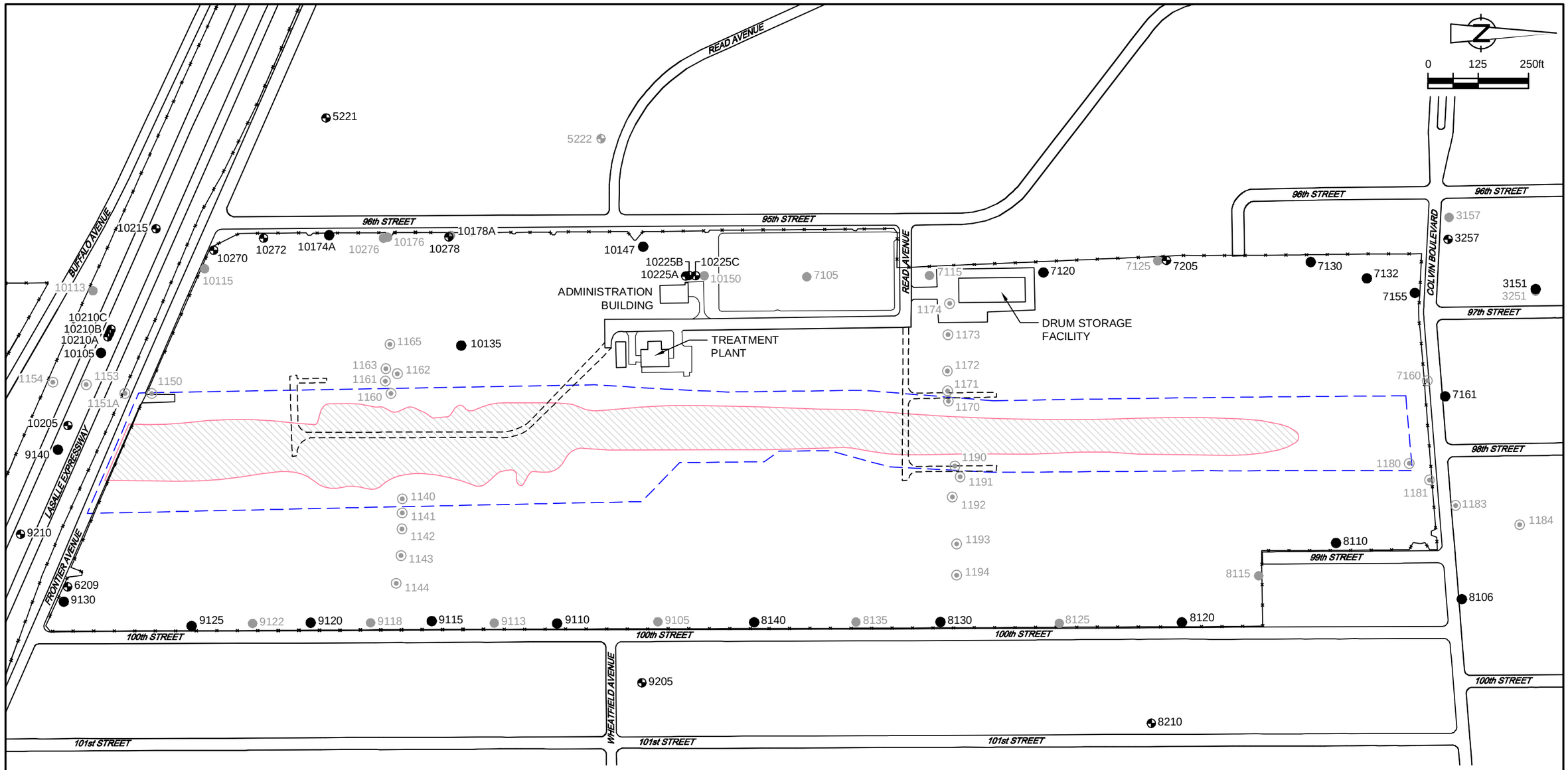


figure 3.1

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



LEGEND

	FENCE LINE	5222	BEDROCK OBSERVATION WELLS
	APPROXIMATE BARRIER DRAIN	9205	OVERBURDEN WELLS SAMPLED IN 2011
7105	PIEZOMETER WELL	10270	BEDROCK WELLS SAMPLED 2011
9120	OVERBURDEN OBSERVATION WELL		APPROXIMATE LIMITS OF DISPOSED WASTE

NOTE:
WELLS 3151 AND 3251 ARE UNABLE TO BE LOCATED
(ASSUMED TO BE PAVED OVER)

figure 3.2

2011 GROUNDWATER MONITORING LOCATIONS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

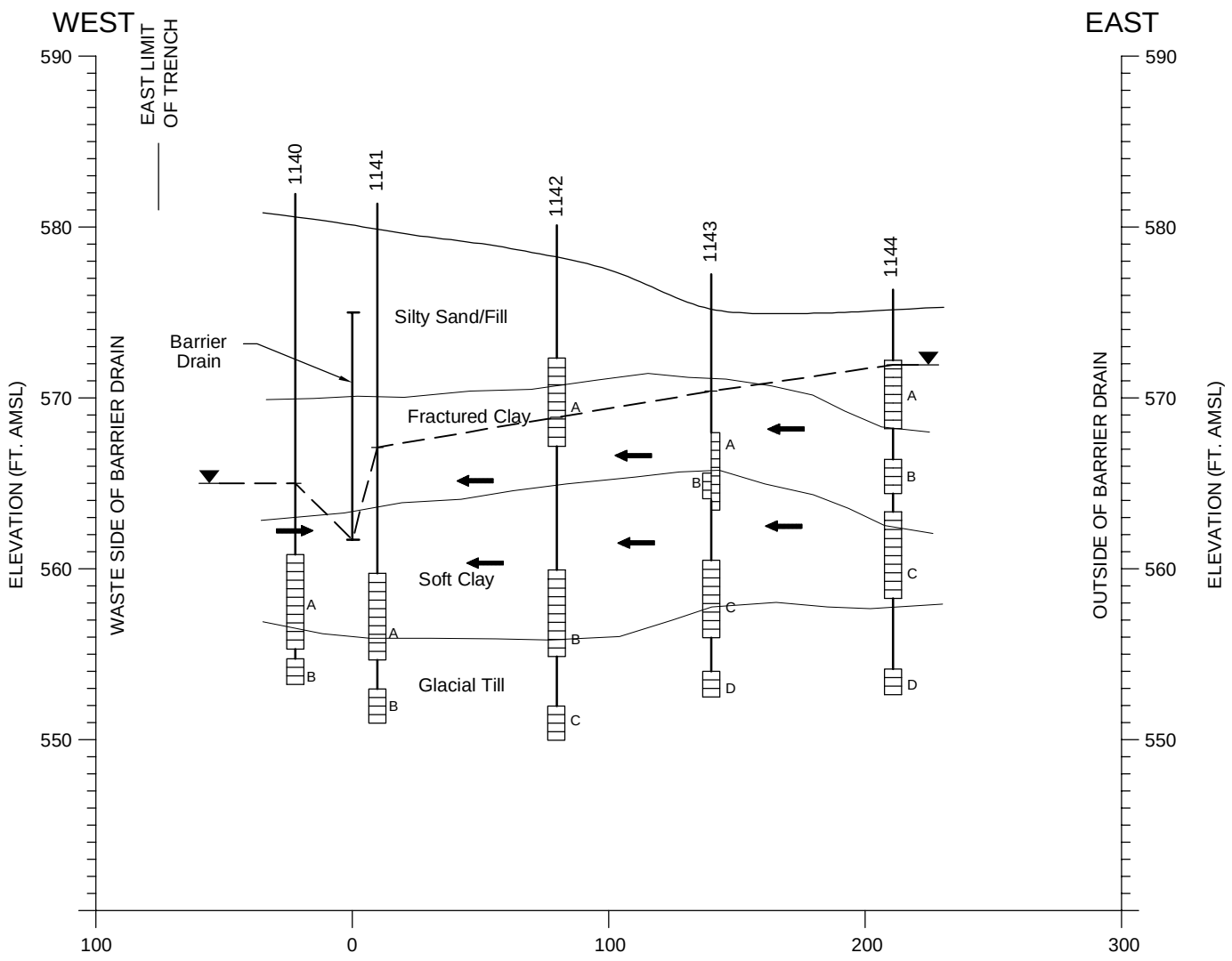


figure 3.3

LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

JUNE 2011 FLOW DIAGRAM
1140 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

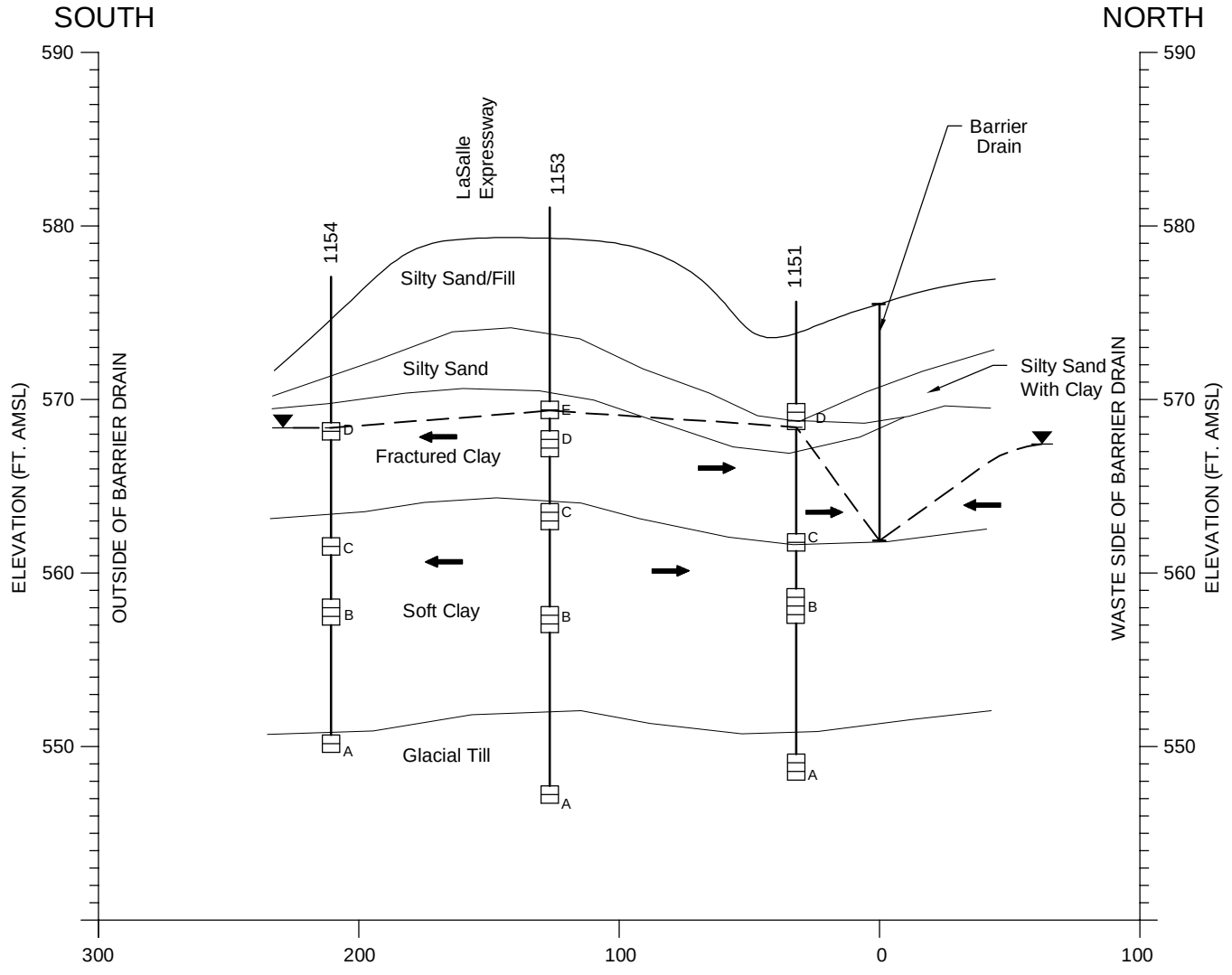


figure 3.4

JUNE 2011 FLOW DIAGRAM
1150 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

LEGEND

- A — PIEZOMETER DESIGNATION
- — — — GROUNDWATER LEVEL
- ➡ FLOW DIRECTION
- SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

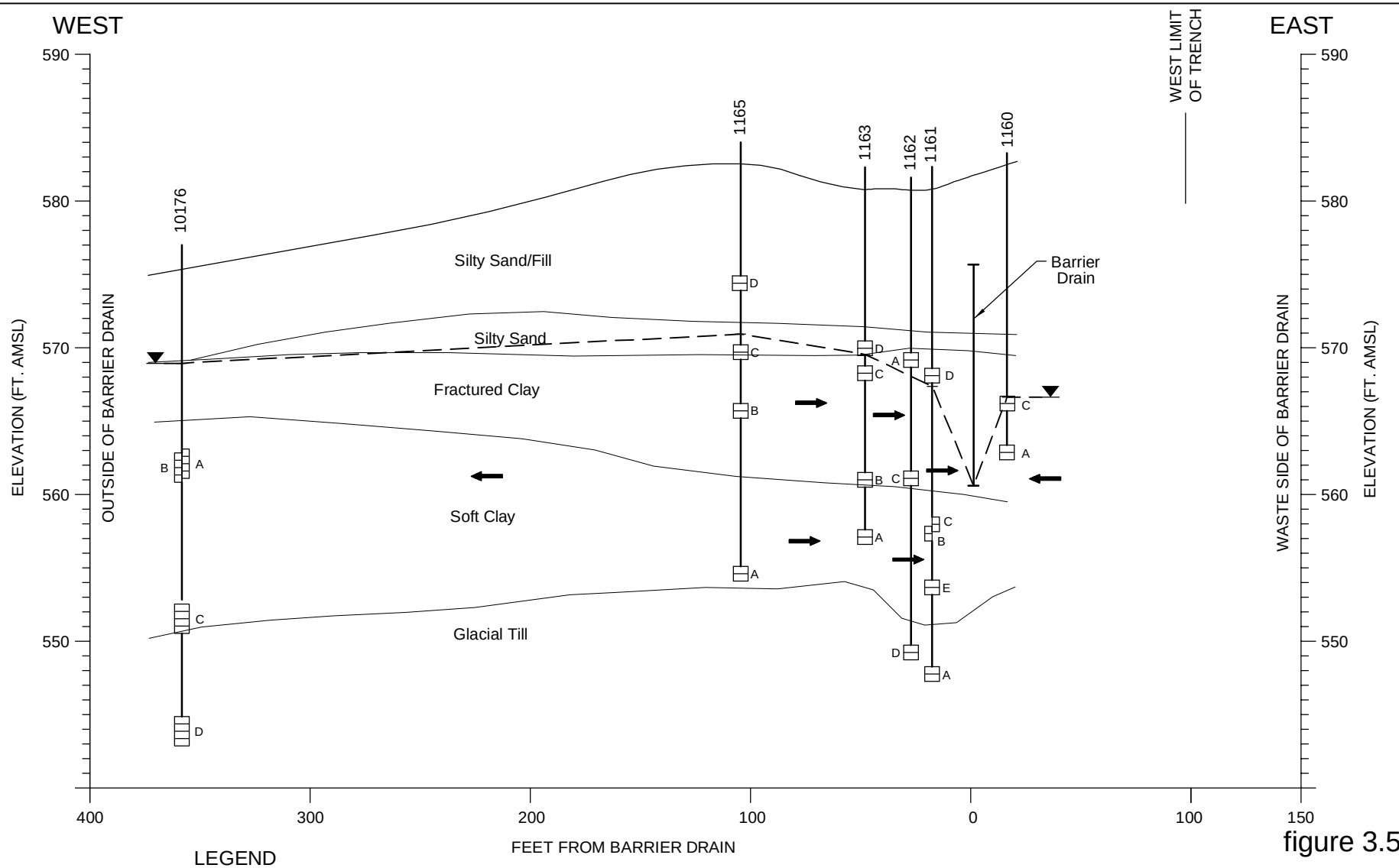


figure 3.5

LEGEND

A — PIEZOMETER DESIGNATION

— — — GROUNDWATER LEVEL

→ FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

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

JUNE 2011 FLOW DIAGRAM
1160 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

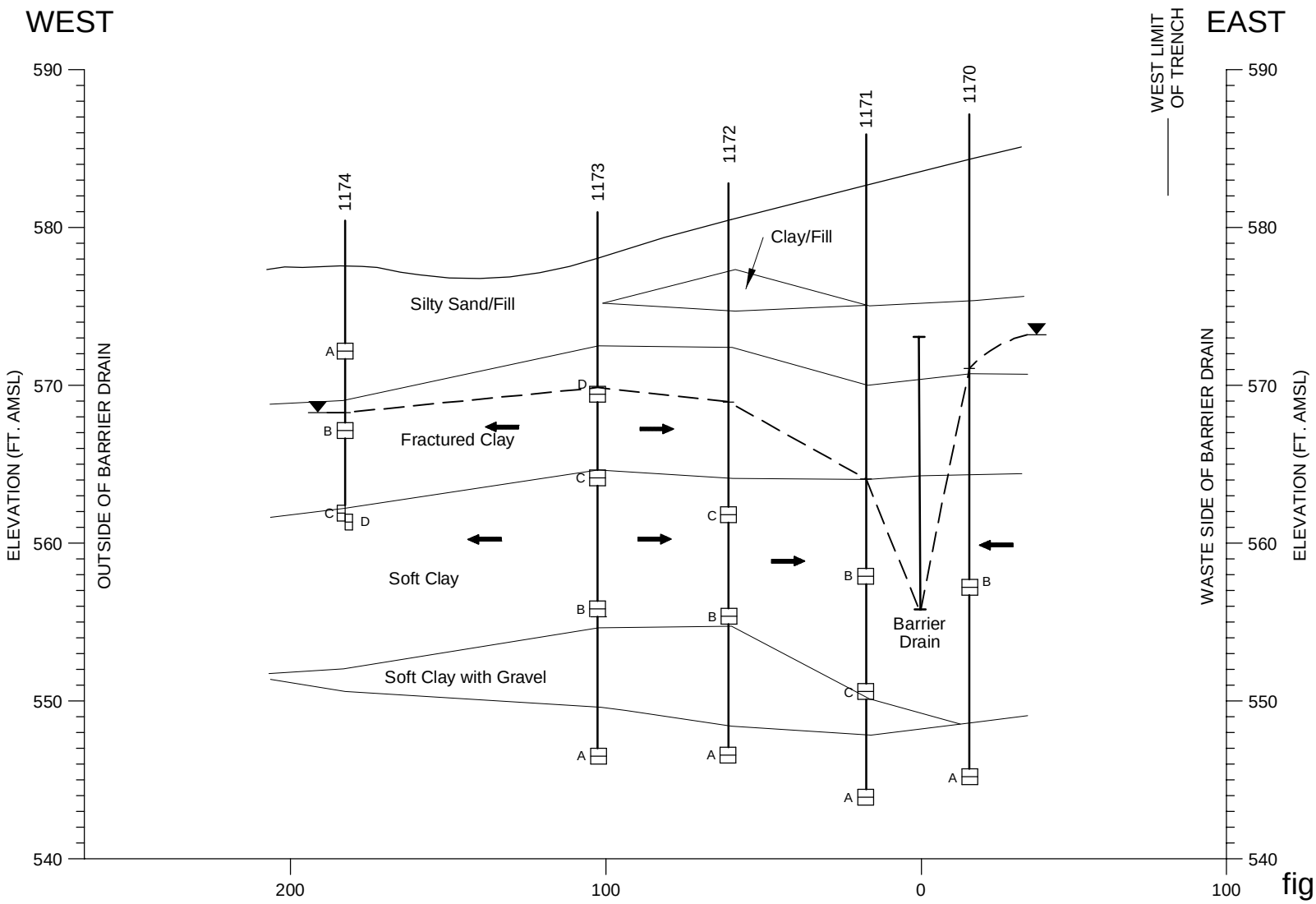


figure 3.6

LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

JUNE 2011 FLOW DIAGRAM
1170 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

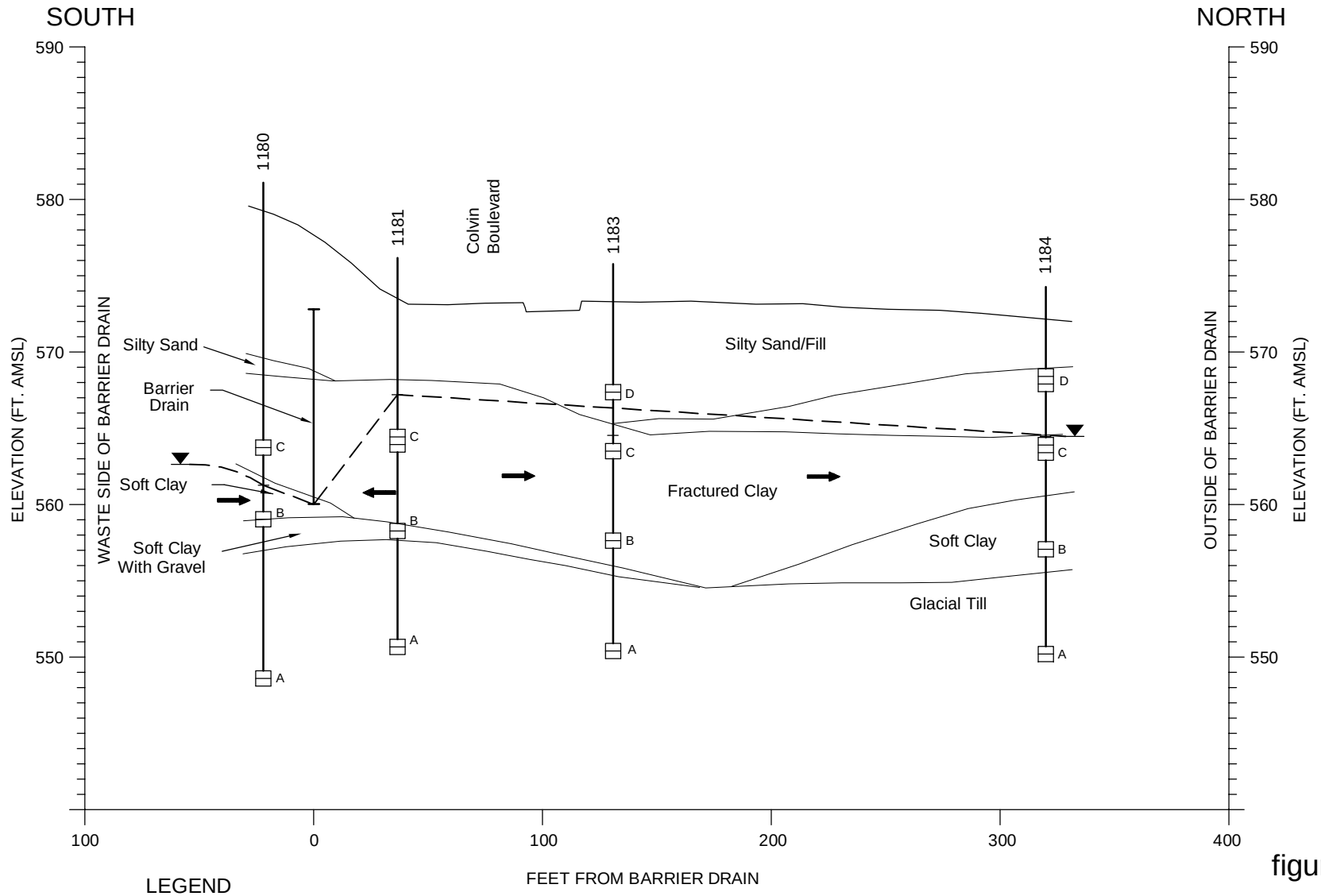


figure 3.7

JUNE 2011 FLOW DIAGRAM
1180 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

LEGEND

A — PIEZOMETER DESIGNATION

— — — GROUNDWATER LEVEL

➡ FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

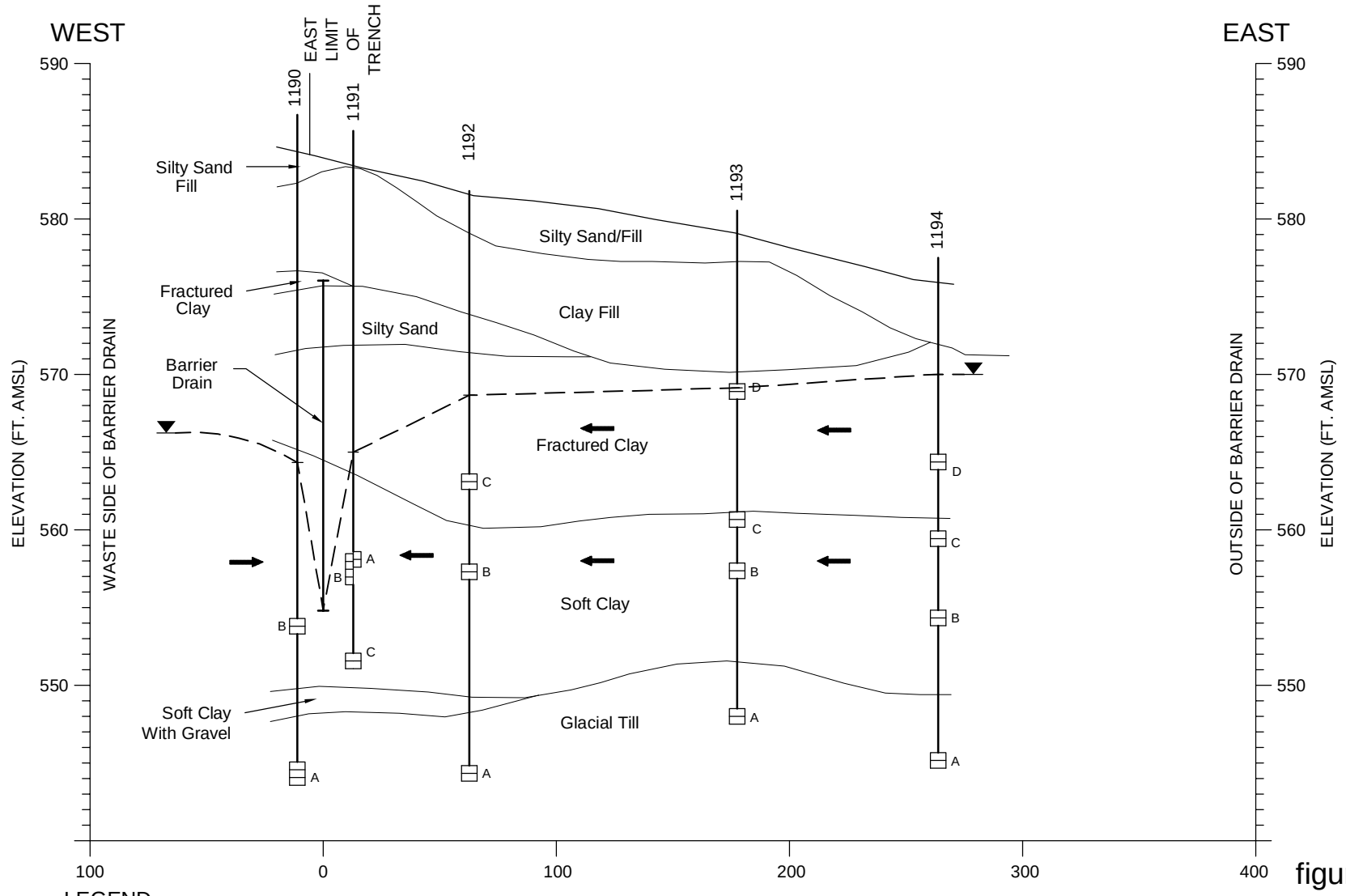


figure 3.8

LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

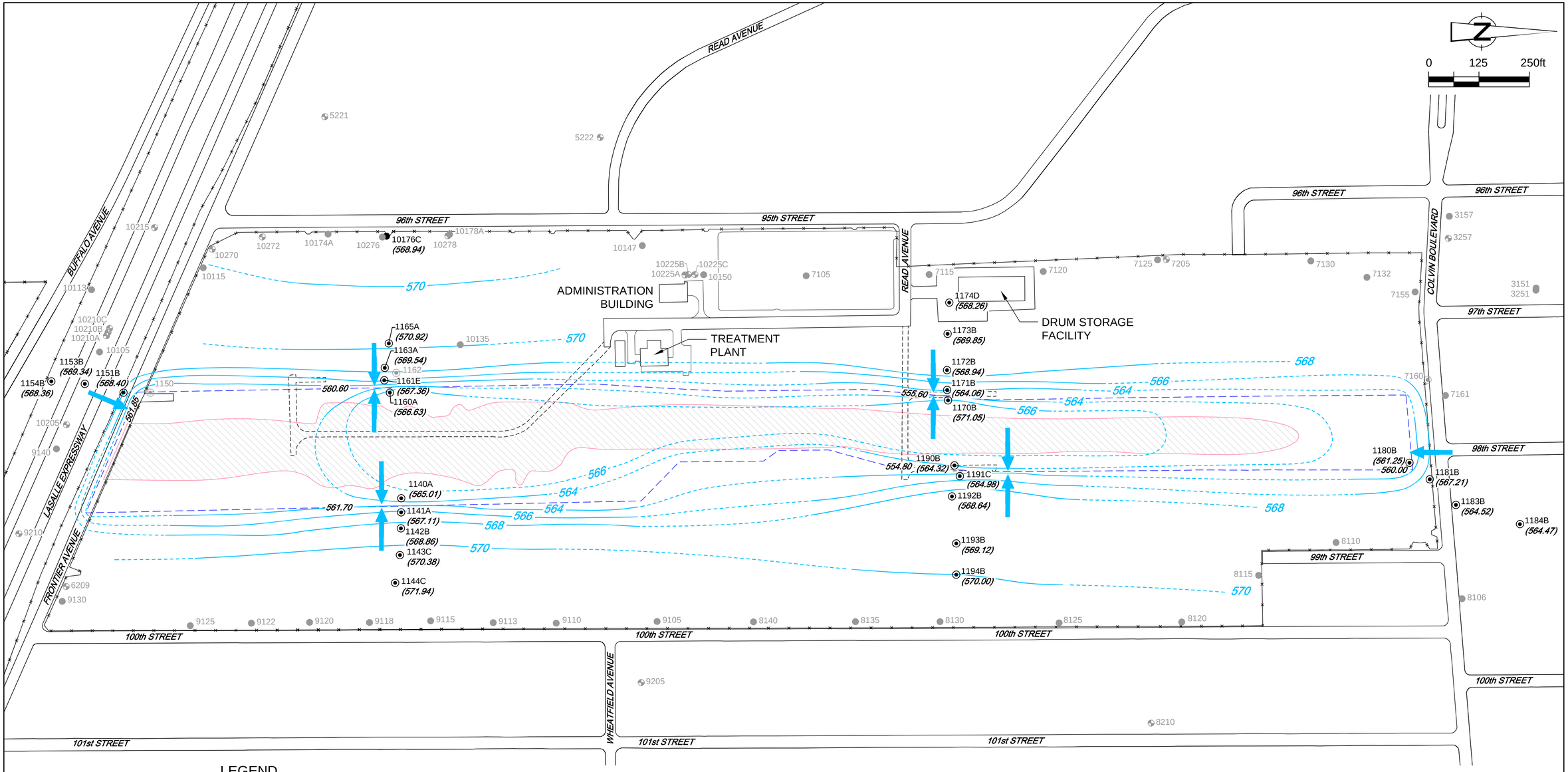
SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR LOWERMOST MONITORED INTERVAL WITHIN SOFT CLAY MEDIUM

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

JUNE 2011 FLOW DIAGRAM
1190 SERIES PIEZOMETERS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

09954-D23101(024)GN-WA009 FEB 3/2012



LEGEND

- FENCE LINE
- APPROXIMATE BARRIER DRAIN
- 7105 PIEZOMETER WELL
- 9120 OVERBURDEN OBSERVATION WELL
- 7105 PIEZOMETER WELL (NOT SAMPLED)
- 9120 OVERBURDEN OBSERVATION WELL (NOT SAMPLED)
- 5222 BEDROCK OBSERVATION WELL (NOT SAMPLED)
- APPROXIMATE LIMITS OF DISPOSED WASTE
- (569.67) GROUNDWATER ELEVATION (JUNE 2011)
- 565 GROUNDWATER CONTOUR (JUNE 2011)
- INFERRED GROUNDWATER CONTOUR (JUNE 2011)
- GROUNDWATER FLOW DIRECTION

figure 3.9

JUNE 2011 GROUNDWATER CONTOURS
LOVE CANAL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

TABLES

TABLE 3.1

MONTHLY VOLUMES OF GROUNDWATER TREATED
LOVE CANAL LEACHATE TREATMENT FACILITY
GLENN SPRINGS HOLDINGS, INC.

		2000	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*
January	Gross (1)	**495,800**	**396,900**	**488,900**	**419,400**	**309,200**	**841,400**	**855,900**	**993,400**	**674,000**	**523,500**	**534,400**	**346,900**
	Net (2)	280,364	282,480	422,682	374,123	260,171	796,518	817,305	970,918	649,777	495,713	471,805	322,994
	Days (3)	21	20	21	14	10	17	16	20	18	16	17	18
February	Gross	**480,400**	**560,000**	**663,700**	**266,300**	**330,000**	**440,200**	**437,300**	**216,600**	**570,000**	**506,700**	**314,300**	**375,800**
	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
	Days	21	19	20	13	9	11	9	7	16	13	10	19
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**
	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
	Days	23	21	21	17	21	13	13	16	12	18	17	21
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**
	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
	Days	20	20	20	16	17	14	6	14	12	16	15	11
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**
	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
	Days	20	17	20	14	10	5	4	12	11	14	18	17
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**
	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
	Days	20	16	14	13	9	6	5	4	6	7	13	16
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**
	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
	Days	20	16	16	11	7	3	5	6	6	7	4	5
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**
	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
	Days	23	18	17	8	10	5	10	5	6	18	8	13
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**
	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
	Days	20	16	12	7	12	8	7	4	9	7	2	6
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**
	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
	Days	20	18	13	9	4	10	18	8	13	8	5	14
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**
	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
	Days	17	16	14	12	5	14	14	3	14	12	15	12
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**
	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
	Days	17	18	15	14	14	12	12	8	20	17	17	19
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**
	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**
	Days	**242**	**215**	**203**	**148**	**128**	**118**	**119**	**107**	**143**	**153**	**141**	**171**
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**
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
	Days	20	18	17	12	11	10	10	9	12	13	12	14
Precipitation Inches		**42.2**	**35.18**	**39.74**	**37.15**	**41.73**	**39.07**	**44.41**	**35.12**	**47.23**	**42.37**	**36.71**	**36.19**

Notes:

(1) Gross: Total volume of leachate treated in gallons; as of March 1999, treatment at LCTF included 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.

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*7120*	*7130*	*7132*	*7155*	*7161*	*8106*	*8110*
Sample ID:		*LC-7120-0711*	*LC-7130-0711*	*LC-7132-0711*	*LC-7155-0711*	*LC-7161-0711*	*LC-8106-0711*	*LC-8110-0711*
Sample Date:		*7/7/2011*	*7/13/2011*	*7/7/2011*	*7/7/2011*	*7/13/2011*	*7/6/2011*	*7/13/2011*
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
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
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
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
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
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
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
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
2-Hexanone	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 U	20 UJ
Benzene	µg/L	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
Bromoform	µg/L	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 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
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
Chlorobenzene	µg/L	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
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
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
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
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
Dibromochloromethane	µg/L	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
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
Styrene	µg/L	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
Toluene	µg/L	5.0 U	1.2 J	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
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
Trichloroethene	µg/L	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	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 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
Xylenes (total)	µg/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Discrete Compounds		0	1	0	0	0	0	0
Semi-volatile Organic Compounds								
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2,4-Dichlorophenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4-Dimethylphenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2,4-Dinitrophenol	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2-Chloronaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2-Methylnaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*7120*	*7130*	*7132*	*7155*	*7161*	*8106*	*8110*
Sample ID:		*LC-7120-0711*	*LC-7130-0711*	*LC-7132-0711*	*LC-7155-0711*	*LC-7161-0711*	*LC-8106-0711*	*LC-8110-0711*
Sample Date:		*7/7/2011*	*7/13/2011*	*7/7/2011*	*7/7/2011*	*7/13/2011*	*7/6/2011*	*7/13/2011*
Parameters	***Units***							
Semi-volatile Organic Compounds - Continued								
2-Methylphenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
2-Nitroaniline	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
2-Nitrophenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
3-Nitroaniline	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
4-Chloroaniline	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
4-Methylphenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
4-Nitroaniline	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
4-Nitrophenol	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
Acenaphthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzoic acid	µg/L	47 U	48 U	49 U	48 U	48 U	47 U	48 U
Benzyl alcohol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
bis(2-Chloroethyl)ether	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Chrysene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenzofuran	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Diethyl phthalate	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Dimethyl phthalate	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Hexachloroethane	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Indeno(1,2,3-cd)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Isophorone	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Pentachlorophenol	µg/L	9.4 U	9.5 U	9.7 U	9.5 U	9.5 U	9.4 U	9.5 U
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0	0	0	0	0

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:			*7120*	*7130*	*7132*	*7155*	*7161*	*8106*	*8110*
Sample ID:			*LC-7120-0711*	*LC-7130-0711*	*LC-7132-0711*	*LC-7155-0711*	*LC-7161-0711*	*LC-8106-0711*	*LC-8110-0711*
Sample Date:			*7/7/2011*	*7/13/2011*	*7/7/2011*	*7/7/2011*	*7/13/2011*	*7/6/2011*	*7/13/2011*
Parameters		***Units***							
PCBs									
Aroclor-1016 (PCB-1016)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1221 (PCB-1221)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1232 (PCB-1232)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1242 (PCB-1242)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1248 (PCB-1248)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1254 (PCB-1254)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1260 (PCB-1260)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
	Discrete Compounds		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	0.048 U	0.047 U	0.048 U
4,4'-DDE		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
4,4'-DDT		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Aldrin		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
alpha-BHC		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
alpha-Chlordane		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
beta-BHC		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
delta-BHC		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Dieldrin		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Endosulfan I		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Endosulfan II		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Endosulfan sulfate		µg/L	0.047 U	0.047 U	0.047 UJ	0.047 U	0.048 U	0.047 U	0.048 U
Endrin		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Endrin ketone		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
gamma-BHC (lindane)		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
gamma-Chlordane		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Heptachlor		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Heptachlor epoxide		µg/L	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U	0.048 U
Methoxychlor		µg/L	0.094 U	0.094 U	0.094 U	0.094 U	0.095 U	0.094 U	0.095 U
Toxaphene		µg/L	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
	Discrete Compounds		0	0	0	0	0	0	0

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*8120*	*8130*	*8140*	*9110*	*9115*	*9115*	*9120*
Sample ID:		*LC-8120-0711*	*LC-8130-0711*	*LC-8140-0711*	*LC-9110-0711*	*LC-9115-0711*	*LC-8205-0711*	*LC-9120-0711*
Sample Date:		*7/19/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011 (Duplicate)*	*7/6/2011*
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
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
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
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
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
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
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
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 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
Bromodichloromethane	µg/L	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
Bromomethane (Methyl bromide)	µg/L	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 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
Chlorobenzene	µg/L	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
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
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
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
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
Dibromochloromethane	µg/L	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
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
Styrene	µg/L	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
Toluene	µg/L	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
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
Trichloroethene	µg/L	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	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
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
Xylenes (total)	µg/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Discrete Compounds		0	0	0	0	0	0	0
Semi-volatile Organic Compounds								
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2,4-Dichlorophenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4-Dimethylphenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2-Chloronaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2-Methylnaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*8120*	*8130*	*8140*	*9110*	*9115*	*9115*	*9120*
Sample ID:		*LC-8120-0711*	*LC-8130-0711*	*LC-8140-0711*	*LC-9110-0711*	*LC-9115-0711*	*LC-8205-0711*	*LC-9120-0711*
Sample Date:		*7/19/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011 (Duplicate)*	*7/6/2011*
Parameters	***Units***							
Semi-volatile Organic Compounds - Continued								
2-Methylphenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
2-Nitroaniline	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
3-Nitroaniline	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
4-Methylphenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
4-Nitroaniline	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
4-Nitrophenol	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
Acenaphthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzoic acid	µg/L	47 U	48 U	47 U	47 U	48 U	48 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Chrysene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenzofuran	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.4 UJ	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Hexachloroethane	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Isophorone	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Pentachlorophenol	µg/L	9.4 U	9.6 U	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0	0	0	0	0

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:			*8120*	*8130*	*8140*	*9110*	*9115*	*9115*	*9120*
Sample ID:			*LC-8120-0711*	*LC-8130-0711*	*LC-8140-0711*	*LC-9110-0711*	*LC-9115-0711*	*LC-8205-0711*	*LC-9120-0711*
Sample Date:			*7/19/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011*	*7/6/2011 (Duplicate)*	*7/6/2011*
Parameters		*Units*							
PCBs									
Aroclor-1016 (PCB-1016)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1221 (PCB-1221)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1232 (PCB-1232)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1242 (PCB-1242)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1248 (PCB-1248)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1254 (PCB-1254)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1260 (PCB-1260)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
	Discrete Compounds		0	0	0	0	0	0	0
Pesticides									
4,4'-DDD		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
4,4'-DDE		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
4,4'-DDT		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Aldrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
alpha-BHC		µg/L	0.047 U	0.048 U	0.54	0.047 U	0.047 U	0.048 U	0.047 U
alpha-Chlordane		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
beta-BHC		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
delta-BHC		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Dieldrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan I		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan II		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan sulfate		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endrin ketone		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
gamma-BHC (lindane)		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
gamma-Chlordane		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Heptachlor		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Heptachlor epoxide		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Methoxychlor		µg/L	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.095 U	0.094 U
Toxaphene		µg/L	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
	Discrete Compounds		0	0	1	0	0	0	0

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*9125*	*9130*	*9140*	*10105*	*10135*	*10147*	*10174A*	*1181A*
Sample ID:		*LC-9125-0711*	*LC-9130-0711*	*LC-9140-0711*	*LC-10105-0711*	*LC-10135-0711*	*LC-10147-0711*	*LC-10174A-0711*	*LC-1181A-0711*
Sample Date:		*7/7/2011*	*7/7/2011*	*7/7/2011*	*7/6/2011*	*7/13/2011*	*7/7/2011*	*7/13/2011*	*7/15/2011*
Parameters	***Units***								
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 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	50 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	50 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	50 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	50 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	50 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	50 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 UJ	5.0 U	5.0 U	5.0 U
2-Hexanone	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 UJ	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L	20 UJ	20 UJ	20 UJ	20 U	200 UJ	20 UJ	20 UJ	20 U
Benzene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	2200	5.0 U	5.0 U	5.0 U
Bromodichloromethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 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	50 U	5.0 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	50 U	5.0 UJ	5.0 UJ	5.0 UJ
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 UJ	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 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	1100	5.0 U	5.0 U	5.0 U
Chloroethane	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 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	67	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	50 U	5.0 U	5.0 UJ	5.0 U
cis-1,2-Dichloroethene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	38 J	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	50 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	50 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	50 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	16 J	5.0 U	5.0 U	5.0 U
Styrene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 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	9.5 J	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	3100	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	17 J	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	50 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	52	5.0 U	5.0 U	5.0 U
Vinyl acetate	µg/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	50 U	5.0 UJ	5.0 UJ	5.0 UJ
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	15 U	15 U	15 U	15 U	150 U	15 U	15 U	15 U
Discrete Compounds		0	0	0	0	9	0	0	0
Semi-volatile Organic Compounds									
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	76 J	9.5 U	9.5 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	45 J	9.5 U	9.5 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	130 J	9.5 U	9.5 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 UJ
2,4,5-Trichlorophenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2,4-Dichlorophenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	590	1.9 U	1.9 U	1.9 U
2,4-Dimethylphenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2,4-Dinitrophenol	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 UJ
2,4-Dinitrotoluene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2-Chloronaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
2-Methylnaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*9125*	*9130*	*9140*	*10105*	*10135*	*10147*	*10174A*	*1181A*
Sample ID:		*LC-9125-0711*	*LC-9130-0711*	*LC-9140-0711*	*LC-10105-0711*	*LC-10135-0711*	*LC-10147-0711*	*LC-10174A-0711*	*LC-1181A-0711*
Sample Date:		*7/7/2011*	*7/7/2011*	*7/7/2011*	*7/6/2011*	*7/13/2011*	*7/7/2011*	*7/13/2011*	*7/15/2011*
Parameters	***Units***								
Semi-volatile Organic Compounds - Continued									
2-Methylphenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	30 J	9.5 U	9.5 U	9.4 U
2-Nitroaniline	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 U
2-Nitrophenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
3-Nitroaniline	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 UJ
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.5 U	9.5 U	4.8 J	190 U	9.5 U	9.5 U	9.4 U
4-Chloroaniline	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
4-Methylphenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	83 J	9.5 U	9.5 U	9.4 U
4-Nitroaniline	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 U
4-Nitrophenol	µg/L	47 U	48 U	48 U	49 U	950 U	48 U	48 U	47 U
Acenaphthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 UJ
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Benzoic acid	µg/L	47 U	48 U	48 U	49 U	11000	48 U	48 U	47 U
Benzyl alcohol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	450	9.5 U	9.5 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	28 J	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U	19 U	380 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Chrysene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 UJ
Dibenzofuran	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Diethyl phthalate	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Dimethyl phthalate	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 UJ
Hexachloroethane	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 UJ
Isophorone	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U	19 U	380 U	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 U
Pentachlorophenol	µg/L	9.4 U	9.5 U	9.5 U	9.7 U	190 U	9.5 U	9.5 U	9.4 UJ
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	82	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	38 U	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0	1	10	0	0	0

TABLE 3.2

2011 ANALYTICAL RESULTS SUMMARY-OVERBURDEN
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:			*9125*	*9130*	*9140*	*10105*	*10135*	*10147*	*10174A*	*1181A*
Sample ID:			*LC-9125-0711*	*LC-9130-0711*	*LC-9140-0711*	*LC-10105-0711*	*LC-10135-0711*	*LC-10147-0711*	*LC-10174A-0711*	*LC-1181A-0711*
Sample Date:			*7/7/2011*	*7/7/2011*	*7/7/2011*	*7/6/2011*	*7/13/2011*	*7/7/2011*	*7/13/2011*	*7/15/2011*
Parameters		***Units***								
PCBs										
Aroclor-1016 (PCB-1016)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1221 (PCB-1221)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1232 (PCB-1232)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1242 (PCB-1242)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.13 J	0.38 U
Aroclor-1248 (PCB-1248)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1254 (PCB-1254)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
Aroclor-1260 (PCB-1260)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
	Discrete Compounds		0	0	0	0	0	0	1	0
Pesticides										
4,4'-DDD		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
4,4'-DDE		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
4,4'-DDT		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Aldrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
alpha-BHC		µg/L	0.047 U	0.048 U	0.047 U	1.1	21	0.047 U	0.048 U	0.047 U
alpha-Chlordane		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
beta-BHC		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	7.1	0.047 U	0.048 U	0.047 U
delta-BHC		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	7.3	0.047 U	0.048 U	0.019 J
Dieldrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Endosulfan I		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Endosulfan II		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Endosulfan sulfate		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Endrin		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Endrin ketone		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
gamma-BHC (lindane)		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	4.1	0.047 U	0.048 U	0.077
gamma-Chlordane		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Heptachlor		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Heptachlor epoxide		µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.48 U	0.047 U	0.048 U	0.047 U
Methoxychlor		µg/L	0.094 U	0.095 U	0.094 U	0.094 U	0.95 U	0.094 U	0.095 U	0.094 U
Toxaphene		µg/L	3.8 U	3.8 U	3.8 U	3.8 U	38 U	3.8 U	3.8 U	3.8 U
	Discrete Compounds		0	0	0	1	4	0	0	2

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 3.3

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*3257*	*5221*	*5221*	*6209*	*7205*	*8210*	*8210*	*9205*	*9210*	*10205*
Sample ID:		*LC-3257-0711*	*LC-5221-0711*	*LC-8225-0711*	*LC-6209-0711*	*LC-7205-0711*	*LC-8210-0711*	*LC-8215-0711*	*LC-9205-0711*	*LC-9210-0711*	*LC-10205-0711*
Sample Date:		*7/6/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/14/2011*	*7/14/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/13/2011*	*7/13/2011*	*7/14/2011*
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	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	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	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	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	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	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	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	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	5.0 U
Acetone	µg/L	20 U	20 UJ	20 UJ	20 U	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 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	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	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	5.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Carbon disulfide	µg/L	7.2	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 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	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	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	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	5.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	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	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	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	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	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	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	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	5.0 U
Toluene	µg/L	5.0 U	3.4 J	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-1,2-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	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	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	5.0 U
Vinyl acetate	µg/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
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	5.0 U
Xylenes (total)	µg/L	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Discrete Compounds		1	1	0	0	0	0	0	0	0	0
Semi-volatile Organic Compounds											
1,2,4-Trichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
1,2-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
1,3-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
1,4-Dichlorobenzene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2,4,6-Trichlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2,4-Dichlorophenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2,4-Dimethylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2,4-Dinitrophenol	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
2,4-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2,6-Dinitrotoluene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2-Chloronaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
2-Methylnaphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*3257*	*5221*	*5221*	*6209*	*7205*	*8210*	*8210*	*9205*	*9210*	*10205*
Sample ID:		*LC-3257-0711*	*LC-5221-0711*	*LC-8225-0711*	*LC-6209-0711*	*LC-7205-0711*	*LC-8210-0711*	*LC-8215-0711*	*LC-9205-0711*	*LC-9210-0711*	*LC-10205-0711*
Sample Date:		*7/6/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/14/2011*	*7/14/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/13/2011*	*7/13/2011*	*7/14/2011*
Parameters	***Units***										
Semi-volatile Organic Compounds - Continued											
2-Nitroaniline	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
2-Nitrophenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
3,3'-Dichlorobenzidine	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
3-Nitroaniline	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
4,6-Dinitro-2-methylphenol	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
4-Bromophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
4-Chloro-3-methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
4-Chloroaniline	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
4-Chlorophenyl phenyl ether	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
4-Methylphenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
4-Nitroaniline	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
4-Nitrophenol	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
Acenaphthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzoic acid	µg/L	47 U	47 U	47 U	48 U	47 U	48 U	47 U	48 U	47 U	49 U
Benzyl alcohol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
bis(2-Chloroethoxy)methane	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
bis(2-Chloroethyl)ether	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Chrysene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dibenzofuran	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Diethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Dimethyl phthalate	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Di-n-butylphthalate (DBP)	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Di-n-octyl phthalate (DnOP)	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Hexachloroethane	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Indeno(1,2,3-cd)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Isophorone	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodiphenylamine	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Pentachlorophenol	µg/L	9.4 U	9.4 U	9.4 U	9.6 U	9.4 U	9.5 U	9.4 U	9.5 U	9.4 U	9.7 U
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0	0	0	0	0	0	0	0

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
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GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*3257*	*5221*	*5221*	*6209*	*7205*	*8210*	*8210*	*9205*	*9210*	*10205*
Sample ID:		*LC-3257-0711*	*LC-5221-0711*	*LC-8225-0711*	*LC-6209-0711*	*LC-7205-0711*	*LC-8210-0711*	*LC-8215-0711*	*LC-9205-0711*	*LC-9210-0711*	*LC-10205-0711*
Sample Date:		*7/6/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/14/2011*	*7/14/2011*	*7/13/2011*	*7/13/2011 (Duplicate)*	*7/13/2011*	*7/13/2011*	*7/14/2011*
Parameters	***Units***										
PCBs											
Aroclor-1016 (PCB-1016)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Aroclor-1221 (PCB-1221)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Aroclor-1232 (PCB-1232)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Aroclor-1242 (PCB-1242)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
PCBs - Continued											
Aroclor-1248 (PCB-1248)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Aroclor-1254 (PCB-1254)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Aroclor-1260 (PCB-1260)	µg/L	0.38 U	0.38 U	0.39 UJ	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U
Discrete Compounds		0	0	0	0	0	0	0	0	0	0
Pesticides											
4,4'-DDD	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
4,4'-DDE	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
4,4'-DDT	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Aldrin	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
alpha-BHC	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.037 J	0.047 U
alpha-Chlordane	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
beta-BHC	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
delta-BHC	µg/L	0.093 UJ	0.047 U	0.049 U	0.047 UJ	0.047 U	0.047 U	0.017 J	0.053	0.082	0.047 U
Dieldrin	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan I	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan II	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endosulfan sulfate	µg/L	0.047 U	0.047 U	0.049 U	0.047 UJ	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endrin	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Endrin ketone	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
gamma-BHC (lindane)	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.046 J	0.066	0.047 U
gamma-Chlordane	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Heptachlor	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Heptachlor epoxide	µg/L	0.047 U	0.047 U	0.049 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.048 U	0.047 U
Methoxychlor	µg/L	0.094 U	0.094 U	0.097 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.095 U	0.094 U
Toxaphene	µg/L	3.8 U	3.8 U	3.9 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U
Discrete Compounds		0	0	0	0	0	0	1	2	3	0

Notes:
J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*10210A*	*10210B*	*10210C*	*10215*	*10225A*	*10225B*	*10225C*	*10270*
Sample ID:		*LC-10210A-0711*	*LC-10210B-0711*	*LC-10210C-0711*	*LC-10215-0711*	*LC-10225A-0711*	*LC-10225B-0711*	*LC-10225C-0711*	*LC-10270-0711*
Sample Date:		*7/19/2011*	*7/14/2011*	*7/14/2011*	*7/14/2011*	*7/19/2011*	*7/19/2011*	*7/14/2011*	*7/14/2011*
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	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-Hexanone	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
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	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
Acetone	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 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 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U	5.0 U
Carbon disulfide	µg/L	5.0 U	4.6 J	5.0 U	5.0 U	5.0 U	1.9 J	5.0 U	5.0 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	0.99 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
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	3.4 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
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	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-1,2-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	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	6.4	5.0 U
Vinyl acetate	µg/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
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	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Discrete Compounds		0	1	0	0	0	1	3	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	4.5 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
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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 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
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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 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

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*10210A*	*10210B*	*10210C*	*10215*	*10225A*	*10225B*	*10225C*	*10270*
Sample ID:		*LC-10210A-0711*	*LC-10210B-0711*	*LC-10210C-0711*	*LC-10215-0711*	*LC-10225A-0711*	*LC-10225B-0711*	*LC-10225C-0711*	*LC-10270-0711*
Sample Date:		*7/19/2011*	*7/14/2011*	*7/14/2011*	*7/14/2011*	*7/19/2011*	*7/19/2011*	*7/14/2011*	*7/14/2011*
Parameters	***Units***								
Semi-volatile Organic Compounds - Continued									
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
3,3'-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
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-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-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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.51 J
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.40 J
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.0
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.51 J
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.55 J
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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	0.63 J
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	4.8
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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.4 UJ	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 UJ	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	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8
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
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 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	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0	0	0	0	1	8

TABLE 3.3

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:			*10210A*	*10210B*	*10210C*	*10215*	*10225A*	*10225B*	*10225C*	*10270*
Sample ID:			*LC-10210A-0711*	*LC-10210B-0711*	*LC-10210C-0711*	*LC-10215-0711*	*LC-10225A-0711*	*LC-10225B-0711*	*LC-10225C-0711*	*LC-10270-0711*
Sample Date:			*7/19/2011*	*7/14/2011*	*7/14/2011*	*7/14/2011*	*7/19/2011*	*7/19/2011*	*7/14/2011*	*7/14/2011*
Parameters		***Units***								
PCBs										
Aroclor-1016 (PCB-1016)		µg/L	R	0.38 U	0.38 U	0.38 U	R	R	0.38 U	0.38 U
Aroclor-1221 (PCB-1221)		µg/L	R	0.38 U	0.38 U	0.38 U	R	R	0.38 U	0.38 U
Aroclor-1232 (PCB-1232)		µg/L	R	0.38 U	0.38 U	0.38 U	R	0.38 UJ	0.38 U	0.38 U
Aroclor-1242 (PCB-1242)		µg/L	R	0.38 U	0.38 U	0.38 U	R	0.38 UJ	0.38 U	0.38 U
PCBs - Continued										
Aroclor-1248 (PCB-1248)		µg/L	R	0.38 U	0.38 U	0.38 U	R	0.38 UJ	0.38 U	0.38 U
Aroclor-1254 (PCB-1254)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U	0.38 U
Aroclor-1260 (PCB-1260)		µg/L	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UJ	0.38 U	0.38 U
	Discrete Compounds		0	0	0	0	0	0	0	0
Pesticides										
4,4'-DDD		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
4,4'-DDE		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
4,4'-DDT		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
Aldrin		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
alpha-BHC		µg/L	R	0.048 J	0.047 U	0.047 U	R	0.047 U	0.047 U	0.079
alpha-Chlordane		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
beta-BHC		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
delta-BHC		µg/L	R	0.042 J	0.047 U	0.047 U	R	0.056	0.047 U	0.047 U
Dieldrin		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan I		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
Endosulfan II		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
Endosulfan sulfate		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
Endrin		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
Endrin ketone		µg/L	0.048 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U
gamma-BHC (lindane)		µg/L	R	0.061 J	0.047 U	0.047 U	R	0.047 U	0.047 U	0.097
gamma-Chlordane		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
Heptachlor		µg/L	R	0.053 J	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
Heptachlor epoxide		µg/L	R	0.047 U	0.047 U	0.047 U	R	0.047 U	0.047 U	0.047 U
Methoxychlor		µg/L	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Toxaphene		µg/L	R	3.8 U	3.8 U	3.8 U	R	3.8 U	3.8 U	3.8 U
	Discrete Compounds		0	4	0	0	0	1	0	2

Notes:
J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 3.3

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*10272*	*10272*	*10278*
Sample ID:		*LC-10272-0711*	*LC-8235-0711*	*LC-10278-0711*
Sample Date:		*7/14/2011*	*7/14/2011 (Duplicate)*	*7/14/2011*
Parameters	*Units*			
Volatile Organic Compounds				
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	5.0 U	5.0 U	5.0 U
2-Hexanone	µg/L	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5.0 U	5.0 U	5.0 U
Acetone	µg/L	20 U	20 UJ	20 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 UJ	5.0 U
Carbon disulfide	µg/L	5.0 U	5.0 U	5.0 U
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 UJ	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
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
Tetrachloroethene	µg/L	5.0 U	5.0 U	5.0 U
Toluene	µg/L	5.0 U	5.0 U	5.0 U
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
Vinyl acetate	µg/L	5.0 UJ	5.0 UJ	5.0 UJ
Vinyl chloride	µg/L	5.0 U	5.0 U	5.0 U
Xylenes (total)	µg/L	15 U	15 U	15 U
Discrete Compounds		0	0	0
Semi-volatile Organic Compounds				
1,2,4-Trichlorobenzene	µg/L	9.5 U	9.4 U	9.4 U
1,2-Dichlorobenzene	µg/L	9.5 U	9.4 U	9.4 U
1,3-Dichlorobenzene	µg/L	9.5 U	9.4 U	9.4 U
1,4-Dichlorobenzene	µg/L	9.5 U	9.4 U	9.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	1.9 U	1.9 U	1.9 U
2,4,5-Trichlorophenol	µg/L	9.5 U	9.4 U	9.4 U
2,4,6-Trichlorophenol	µg/L	9.5 U	9.4 U	9.4 U
2,4-Dichlorophenol	µg/L	1.9 U	1.9 U	1.9 U
2,4-Dimethylphenol	µg/L	9.5 U	9.4 U	9.4 U
2,4-Dinitrophenol	µg/L	48 U	47 U	47 U
2,4-Dinitrotoluene	µg/L	9.5 U	9.4 U	9.4 U
2,6-Dinitrotoluene	µg/L	9.5 U	9.4 U	9.4 U
2-Chloronaphthalene	µg/L	1.9 U	1.9 U	1.9 U
2-Chlorophenol	µg/L	9.5 U	9.4 U	9.4 U
2-Methylnaphthalene	µg/L	1.9 U	1.9 U	1.9 U
2-Methylphenol	µg/L	9.5 U	9.4 U	9.4 U

TABLE 3.3

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:		*10272*	*10272*	*10278*
Sample ID:		*LC-10272-0711*	*LC-8235-0711*	*LC-10278-0711*
Sample Date:		*7/14/2011*	*7/14/2011 (Duplicate)*	*7/14/2011*
Parameters	***Units***			
Semi-volatile Organic Compounds - Continued				
2-Nitroaniline	µg/L	48 U	47 U	47 U
2-Nitrophenol	µg/L	9.5 U	9.4 U	9.4 U
3,3'-Dichlorobenzidine	µg/L	9.5 U	9.4 U	9.4 U
3-Nitroaniline	µg/L	48 U	47 U	47 U
4,6-Dinitro-2-methylphenol	µg/L	48 U	47 U	47 U
4-Bromophenyl phenyl ether	µg/L	9.5 U	9.4 U	9.4 U
4-Chloro-3-methylphenol	µg/L	9.5 U	9.4 U	9.4 U
4-Chloroaniline	µg/L	9.5 U	9.4 U	9.4 U
4-Chlorophenyl phenyl ether	µg/L	9.5 U	9.4 U	9.4 U
4-Methylphenol	µg/L	9.5 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	48 U	47 U	47 U
4-Nitrophenol	µg/L	48 U	47 U	47 U
Acenaphthene	µg/L	1.9 U	1.9 U	1.9 U
Acenaphthylene	µg/L	1.9 U	1.9 U	1.9 U
Anthracene	µg/L	1.9 U	1.9 U	1.9 U
Benzo(a)anthracene	µg/L	1.9 U	1.9 U	1.9 U
Benzo(a)pyrene	µg/L	1.9 U	1.9 U	1.9 U
Benzo(b)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U
Benzo(g,h,i)perylene	µg/L	1.9 U	1.9 U	1.9 U
Benzo(k)fluoranthene	µg/L	1.9 U	1.9 U	1.9 U
Benzoic acid	µg/L	48 U	47 U	47 U
Benzyl alcohol	µg/L	9.5 U	9.4 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	9.5 U	9.4 U	9.4 U
bis(2-Chloroethyl)ether	µg/L	1.9 U	1.9 U	1.9 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	9.5 U	9.4 U	9.4 U
Chrysene	µg/L	1.9 U	1.9 U	1.9 U
Dibenz(a,h)anthracene	µg/L	1.9 U	1.9 U	1.9 U
Dibenzofuran	µg/L	9.5 U	9.4 U	9.4 U
Diethyl phthalate	µg/L	9.5 U	9.4 U	9.4 U
Dimethyl phthalate	µg/L	9.5 U	9.4 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	9.5 U	9.4 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	9.5 U	9.4 U	9.4 U
Fluoranthene	µg/L	1.9 U	1.9 U	1.9 U
Fluorene	µg/L	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	µg/L	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	µg/L	1.9 U	1.9 U	1.9 U
Hexachlorocyclopentadiene	µg/L	9.5 U	9.4 U	9.4 U
Hexachloroethane	µg/L	9.5 U	9.4 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	1.9 U	1.9 U	1.9 U
Isophorone	µg/L	9.5 U	9.4 U	9.4 U
Naphthalene	µg/L	1.9 U	1.9 U	1.9 U
Nitrobenzene	µg/L	19 U	19 U	19 U
N-Nitrosodi-n-propylamine	µg/L	1.9 U	1.9 U	1.9 U
N-Nitrosodiphenylamine	µg/L	9.5 U	9.4 U	9.4 U
Pentachlorophenol	µg/L	9.5 U	9.4 U	9.4 U
Phenanthrene	µg/L	1.9 U	1.9 U	1.9 U
Phenol	µg/L	1.9 U	1.9 U	1.9 U
Pyrene	µg/L	1.9 U	1.9 U	1.9 U
Discrete Compounds		0	0	0

TABLE 3.3

2011 ANALYTICAL RESULTS SUMMARY-BEDROCK
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Sample Location:			*10272*	*10272*	*10278*
Sample ID:			*LC-10272-0711*	*LC-8235-0711*	*LC-10278-0711*
Sample Date:			*7/14/2011*	*7/14/2011 (Duplicate)*	*7/14/2011*
Parameters		***Units***			
PCBs					
Aroclor-1016 (PCB-1016)		µg/L	0.38 U	0.38 U	0.38 U
Aroclor-1221 (PCB-1221)		µg/L	0.38 U	0.38 U	0.38 U
Aroclor-1232 (PCB-1232)		µg/L	0.38 U	0.38 U	0.38 U
Aroclor-1242 (PCB-1242)		µg/L	0.38 U	0.38 U	0.38 U
PCBs - Continued					
Aroclor-1248 (PCB-1248)		µg/L	0.38 U	0.38 U	0.38 U
Aroclor-1254 (PCB-1254)		µg/L	0.38 U	0.38 U	0.38 U
Aroclor-1260 (PCB-1260)		µg/L	0.38 U	0.38 U	0.38 U
	Discrete Compounds		0	0	0
Pesticides					
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	0.044 J
alpha-Chlordane		µg/L	0.047 U	0.047 U	0.047 U
beta-BHC		µg/L	0.047 U	0.047 U	0.047 U
delta-BHC		µg/L	0.047 U	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	0.073
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	0.094 U	0.094 U	0.094 U
Toxaphene		µg/L	3.8 U	3.8 U	3.8 U
	Discrete Compounds		0	0	2

Notes:
J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 3.4

SUMMARY OF DETECTED COMPOUNDS - 2011
LOVE CANAL LONG-TERM GROUNDWATER MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

Overburden Wells	*Well Group*	*VOCs*	*SVOCs*	*Pesticides/PCBs*
7120	***B-I***	U	U	U
7130	***A***	1	U	U
7132	***A***	U	U	U
7155	***B-I***	U	U	U
7161	***B-I***	U	U	U
8106	***X***	U	U	U
8110	***B-I***	U	U	U
8120	***B-I***	U	U	U
8130	***B-I***	U	U	U
8140	***B-I***	U	U	1
9110	***B-I***	U	U	U
9115	***B-I***	U	U	U
9120	***B-I***	U	U	U
9125	***B-I***	U	U	U
9130	***B-II***	U	U	U
9140	***B-I***	U	U	U
10105	***B-II***	U	1	1
10135	***A***	9	10	4
10147	***B-I***	U	U	U
10174A	***B-I***	U	U	1
1181A	***X***	U	U	2
Subtotal Overburden Wells		10	11	9

Bedrock Wells		*VOCs*	*SVOCs*	*Pesticides/PCBs*
3257	***A***	1	U	U
5221	***X***	1	U	U
6209	***X***	U	U	U
7205	***A***	U	U	U
8210	***A***	U	U	1
9205	***A***	U	U	2
9210	***A***	U	U	3
10205	***A***	U	U	U
10210A	***A***	U	U	U
10210B	***A***	1	U	4
10210C	***A***	U	U	U
10215	***X***	U	U	U
10225A	***A***	U	U	U
10225B	***A***	1	U	1
10225C	***A***	3	1	U
10270	***X***	U	8	2
10272	***A***	U	U	U
10278	***A***	U	U	2
Subtotal Bedrock Wells		7	9	15
Total # of Detections		**17**	**20**	**24**

Notes:

U	No parameters detected at or above detection limits.
A	Annual Well.
B-I	Biannual Well Group I.
B-II	Biannual Well Group II.
X	Additional Well.
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*
SampleDate:	*07/24/90*	*08/22/91*	*08/26/92*	*08/11/93*	*05/25/95*	*07/01/96*	*07/10/97*	*06/26/98*	*06/23/99*	*06/21/00*	*05/18/01*
Volatiles (µg/L)											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,2-Dichloroethene (total)											
2-Butanone									2J		
2-Hexanone									3J		
Acetone	14C			13B				120J			10J
Benzene											
Carbon Disulfide					20	310					6J
Chlorobenzene											
Chloroform											
Ethylbenzene											
Methylene Chloride											
Tetrachloroethene											
Toluene									2J		
Trichloroethene											
Vinyl Acetate											
Vinyl Chloride											
Xylene (total)											
Semi-volatiles (µg/L)											
1,2,4-Trichlorobenzene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol											
2,4,6-Trichlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
2-Chloronaphthalene											
2-Chlorophenol											
2-Methylphenol											
2-Nitrophenol											
4-Chloro-3-methylphenol											
4-Methylphenol											
Benzoic Acid							12J				
Benzyl Alcohol											
Bis(2-Chloroethyl)Ether											
bis(2-Ethylhexyl)Phthalate		12	21	31	51						
Diethyl phthalate											
Dimethyl Phthalate	16										
Di-n-Octyl Phthalate	3B										
Hexachlorobenzene											
Naphthalene											
Pentachlorophenol											
Phenol									1J		

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*
SampleDate:	*07/24/90*	*08/22/91*	*08/26/92*	*08/11/93*	*05/25/95*	*07/01/96*	*07/10/97*	*06/26/98*	*06/23/99*	*06/21/00*	*05/18/01*
Pesticides/PCBs (µg/L)											
4,4'-DDD											
Aldrin											
Alpha-BHC									0.28		
Alpha-Chlordane											
Beta-BHC									0.035J		
Delta-BHC											
Dieldrin											
Endosulfan I									0.046J		
Endosulfan II											
Endosulfan Sulfate											
Endrin											
Gamma-BHC (Lindane)									0.10J		
Gamma-Chlordane											
Heptachlor											
Heptachlor epoxide											

Notes:
J - Estimated.

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*
SampleDate:	*06/13/02*	*05/27/03*	*06/03/04*	*06/28/05*	*07/06/06*	*07/26/07*	*07/17/08*	*07/15/09*	*06/24/10*	*07/19/11*
Volatiles (µg/L)										
1,1,2,2-Tetrachloroethane										
1,1,2-Trichloroethane										
1,1-Dichloroethane										
1,2-Dichloroethene (total)										
2-Butanone			4J							
2-Hexanone										
Acetone									5.2 J	
Benzene										
Carbon Disulfide			6J	1.6 J	1 J	8J	24			
Chlorobenzene										
Chloroform										
Ethylbenzene										
Methylene Chloride										
Tetrachloroethene										
Toluene				2.3 J						
Trichloroethene									6.3	
Vinyl Acetate										
Vinyl Chloride										
Xylene (total)										
Semi-volatiles (µg/L)										
1,2,4-Trichlorobenzene										
1,2-Dichlorobenzene										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
2-Butanone (Methyl Ethyl Ketone)	3J									
2,4,5-Trichlorophenol										
2,4,6-Trichlorophenol										
2,4-Dichlorophenol										
2,4-Dimethylphenol										
2-Chloronaphthalene										
2-Chlorophenol										
2-Methylphenol										
2-Nitrophenol										
4-Chloro-3-methylphenol										
4-Methylphenol										
Benzoic Acid			3J	2.7 J				5.8 J		
Benzyl Alcohol										
Bis(2-Chloroethyl)Ether										
bis(2-Ethylhexyl)Phthalate			1J	1.7 J	8 J			2.5 J		
Diethyl phthalate										
Dimethyl Phthalate										
Di-n-Octyl Phthalate										
Hexachlorobenzene										
Naphthalene										
Pentachlorophenol										
Phenol			1J	1.7 J						

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*
SampleDate:	*06/13/02*	*05/27/03*	*06/03/04*	*06/28/05*	*07/06/06*	*07/26/07*	*07/17/08*	*07/15/09*	*06/24/10*	*07/19/11*
Pesticides/PCBs (µg/L)										
4,4'-DDD										
Aldrin										
Alpha-BHC									0.14 J	
Alpha-Chlordane										
Beta-BHC			0.011J				0.015 J		0.12 J	
Delta-BHC			0.043J						0.12 J	
Dieldrin										
Endosulfan I										
Endosulfan II										
Endosulfan Sulfate										
Endrin										
Gamma-BHC (Lindane)									0.12 J	
Gamma-Chlordane										
Heptachlor										
Heptachlor epoxide										

Notes:
J - Estimated.

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*
SampleDate:	*07/24/90*	*08/22/91*	*08/26/92*	*08/11/93*	*06/15/94*	*06/01/95*	*07/05/96*	*07/01/97*	*06/18/98*	*06/24/99*	*06/15/00*
Volatiles (µg/L)											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,2-Dichloroethene (total)											
2-Butanone											
2-Hexanone											
Acetone			31		12B	23					
Benzene											
Carbon Disulfide									8J	2J	
Chlorobenzene											
Chloroform											
Ethylbenzene											
Methylene Chloride											
Tetrachloroethene											
Toluene										2J	1J
Trichloroethene											
Vinyl Acetate											
Vinyl Chloride											
Xylene (total)											
Semi-volatiles (µg/L)											
1,2,4-Trichlorobenzene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol											
2,4,6-Trichlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
2-Chloronaphthalene											
2-Chlorophenol											
2-Methylphenol											
2-Nitrophenol											
4-Chloro-3-methylphenol											
4-Methylphenol											
Benzoic Acid											
Benzyl Alcohol											
Bis(2-Chloroethyl)Ether											
bis(2-Ethylhexyl)Phthalate	7B	13		11				55	6J		
Diethyl phthalate											
Dimethyl Phthalate											
Di-n-Octyl Phthalate											
Hexachlorobenzene											
Naphthalene											
Pentachlorophenol											
Phenol		3									

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*
SampleDate:	*07/24/90*	*08/22/91*	*08/26/92*	*08/11/93*	*06/15/94*	*06/01/95*	*07/05/96*	*07/01/97*	*06/18/98*	*06/24/99*	*06/15/00*
Pesticides/PCBs (µg/L)											
4,4'-DDD											
Aldrin											
Alpha-BHC											
Alpha-Chlordane											
Beta-BHC											
Delta-BHC											
Dieldrin											
Endosulfan I											
Endosulfan II											
Endosulfan Sulfate											
Endrin											
Gamma-BHC (Lindane)											
Gamma-Chlordane											
Heptachlor											
Heptachlor epoxide											

Notes:
J - Estimated.

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*
SampleDate:	*05/17/01*	*06/10/02*	*05/23/03*	*06/07/04*	*06/24/05*	*06/28/06*	*07/26/07*	*07/17/08*	*07/15/09*	*6/15/10*	*7/14/11*
Volatiles (µg/L)											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,2-Dichloroethene (total)											
2-Butanone			23								
2-Hexanone											
Acetone	12J										
Benzene											
Carbon Disulfide	14	3J	2 J		1.4 J	1 J	6J			4.0 J	4.6 J
Chlorobenzene				1J							
Chloroform											
Ethylbenzene											
Methylene Chloride											
Tetrachloroethene				9J							
Toluene					1.1 J						
Trichloroethene											
Vinyl Acetate											
Vinyl Chloride											
Xylene (total)											
Semi-volatiles (µg/L)											
1,2,4-Trichlorobenzene			3 J								
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol											
2,4,6-Trichlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
2-Chloronaphthalene											
2-Chlorophenol											
2-Methylphenol											
2-Nitrophenol											
4-Chloro-3-methylphenol											
4-Methylphenol											
Benzoic Acid						2 J					
Benzyl Alcohol											
Bis(2-Chloroethyl)Ether											
bis(2-Ethylhexyl)Phthalate				4J	4.5 J	3 J					
Diethyl phthalate											
Dimethyl Phthalate											
Di-n-Octyl Phthalate	3J										
Hexachlorobenzene			1 J								
Naphthalene											
Pentachlorophenol											
Phenol											

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*
SampleDate:	*05/17/01*	*06/10/02*	*05/23/03*	*06/07/04*	*06/24/05*	*06/28/06*	*07/26/07*	*07/17/08*	*07/15/09*	*6/15/10*	*7/14/11*
Pesticides/PCBs (µg/L)											
4,4'-DDD				0.011J							
Aldrin						0.0089J					
Alpha-BHC			19		0.37	0.58	0.016J		0.064/0.050		0.048 J
Alpha-Chlordane											
Beta-BHC			1.9	0.53	0.082 p	0.082					
Delta-BHC			0.56 J	0.15		0.047 J			0.032 J/0.028 J	0.050 J	0.042 J
Dieldrin			0.13 J								
Endosulfan I			0.11 J								
Endosulfan II											
Endosulfan Sulfate											
Endrin											
Gamma-BHC (Lindane)			2.1	0.39	0.046 J	0.099			0.038 J/0.033 J		0.061 J
Gamma-Chlordane			0.15 J								
Heptachlor			0.35 J								0.053 J
Heptachlor epoxide											

Notes:
J - Estimated.

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*
SampleDate:	*07/25/90*	*08/22/91*	*08/26/92*	*08/11/93*	*06/08/94*	*06/01/95*	*07/01/96*	*07/01/97*	*06/22/98*	*06/24/99*	*06/15/00*
Volatiles (µg/L)											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,2-Dichloroethene (total)											
2-Butanone											
2-Hexanone											
Acetone			10B	23B	19B					2100	8J
Benzene											
Carbon Disulfide											3J
Chlorobenzene											
Chloroform											
Ethylbenzene											
Methylene Chloride											
Tetrachloroethene											
Toluene											
Trichloroethene											
Vinyl Acetate											
Vinyl Chloride											
Xylene (total)											
Semi-volatiles (µg/L)											
1,2,4-Trichlorobenzene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol											
2,4,6-Trichlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
2-Chloronaphthalene											
2-Chlorophenol											
2-Methylphenol											
2-Nitrophenol											
4-Chloro-3-methylphenol											
4-Methylphenol						29	110	62	0.6J		
Benzoic Acid											
Benzyl Alcohol											
Bis(2-Chloroethyl)Ether											
bis(2-Ethylhexyl)Phthalate	7B	13		38							
Diethyl phthalate											
Dimethyl Phthalate											
Di-n-Octyl Phthalate											
Hexachlorobenzene											
Naphthalene											
Pentachlorophenol											
Phenol		6				22		22			

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*
SampleDate:	*07/25/90*	*08/22/91*	*08/26/92*	*08/11/93*	*06/08/94*	*06/01/95*	*07/01/96*	*07/01/97*	*06/22/98*	*06/24/99*	*06/15/00*
Pesticides/PCBs (µg/L)											
4,4'-DDD											
Aldrin											
Alpha-BHC											
Alpha-Chlordane											
Beta-BHC											
Delta-BHC											
Dieldrin											
Endosulfan I											
Endosulfan II											
Endosulfan Sulfate											
Endrin											
Gamma-BHC (Lindane)											
Gamma-Chlordane											
Heptachlor											
Heptachlor epoxide											

Notes:
J - Estimated.

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*
SampleDate:	*05/17/01*	*06/10/02*	*05/23/03*	*06/07/04*	*06/23/05*	*06/28/06*	*07/26/07*	*07/16/08*	*07/15/09*	*06/15/10*	*07/14/11*
Volatiles (µg/L)											
1,1,2,2-Tetrachloroethane											
1,1,2-Trichloroethane											
1,1-Dichloroethane											
1,2-Dichloroethene (total)											
2-Butanone											
2-Hexanone											
Acetone	9J				1.9 J						
Benzene											
Carbon Disulfide								2 J			
Chlorobenzene						2 J					
Chloroform											
Ethylbenzene											
Methylene Chloride											
Tetrachloroethene						6 J					
Toluene				29							
Trichloroethene											
Vinyl Acetate											
Vinyl Chloride											
Xylene (total)											
Semi-volatiles (µg/L)											
1,2,4-Trichlorobenzene						6 J					
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol											
2,4,6-Trichlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
2-Chloronaphthalene											
2-Chlorophenol											
2-Methylphenol											
2-Nitrophenol											
4-Chloro-3-methylphenol											
4-Methylphenol											
Benzoic Acid											
Benzyl Alcohol											
Bis(2-Chloroethyl)Ether											
bis(2-Ethylhexyl)Phthalate				5J		5 J					
Diethyl phthalate										4.4 J	
Dimethyl Phthalate										0.87 J	
Di-n-Octyl Phthalate											
Hexachlorobenzene											
Naphthalene											
Pentachlorophenol											
Phenol											

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*
SampleDate:	*05/17/01*	*06/10/02*	*05/23/03*	*06/07/04*	*06/23/05*	*06/28/06*	*07/26/07*	*07/16/08*	*07/15/09*	*06/15/10*	*07/14/11*
Pesticides/PCBs (µg/L)											
4,4'-DDD											
Aldrin						0.061 J					
Alpha-BHC					0.083	0.45 J					
Alpha-Chlordane											
Beta-BHC				0.017J		0.048 J					
Delta-BHC						0.052 J			0.048 J		
Dieldrin											
Endosulfan I											
Endosulfan II											
Endosulfan Sulfate											
Endrin						0.14 J					
Gamma-BHC (Lindane)						0.11 J					
Gamma-Chlordane						0.018 J					
Heptachlor											
Heptachlor epoxide											

Notes:
J - Estimated.

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*
SampleDate:	*08/26/92*	*08/19/93*	*06/22/94*	*06/01/95*	*06/27/96*	*07/07/97*	*06/17/98*	*06/16/99*	*06/22/00*	*05/11/01*
Volatiles (µg/L)										
1,1,2,2-Tetrachloroethane		12			26		94J	32/29	27J/26J	100J/120J
1,1,2-Trichloroethane					14		29J	15/12	14J/16J	29J/34J
1,1-Dichloroethane		15						4J/3J	4J/4J	4J/4J
1,2-Dichloroethene (total)	700	840			560		58J	67/70	67J/70J	60J/59J
2-Butanone		5200							10UJ/10J	12J/11J
2-Hexanone										
Acetone		270	100B		60		110J		28J/46J	
Benzene			6000E	4900D	4800	5600/5000	5300J	5600/5700	6400/6900J	7600/8500J
Carbon Disulfide								ND/2J		
Chlorobenzene	2600	1700		2000D	1500	2300/ND	1900J	1800/1900	2300J/2300J	2700J/3000J
Chloroform		100			110		150J	120/110	100J/130J	150J/160J
Ethylbenzene		13					12	10J/9J	12J/12J	22J/24J
Methylene Chloride		41			11				24J/24J	
Tetrachloroethene							40J	13/12	16J/14J	50J/61J
Toluene	2700	1700E	21500BE	18000D	14000	19000/17000	16000J	16000/17000	21000J/21000J	22000/24000
Trichloroethene		24			36		170J	70/58	60J/72J	140J/180J
Vinyl Acetate	6800		12B							
Vinyl Chloride					50		48J	62/61	110J/85J	75J/66J
Xylene (total)		47	10B		28		55J	43/44	42J/44J	
Semi-volatiles (µg/L)										
1,2,4-Trichlorobenzene		74	87B				78J	65J/45J	45J/36J	42J/65J
1,2-Dichlorobenzene		35						30J/24J	22J/18J	ND/48J
1,3-Dichlorobenzene										
1,4-Dichlorobenzene	110	94	91					74J/61J	59J/52J	69J/110J
2-Butanone (Methyl Ethyl Ketone)										
2,4,5-Trichlorophenol		70					38J		0.9J/ND	
2,4,6-Trichlorophenol									1J/ND	
2,4-Dichlorophenol	1200B	420	610	150		2100/2100	2000	610/690	1400J/470J	620J/1200J
2,4-Dimethylphenol									ND/2J	
2-Chloronaphthalene				150						370J/550J
2-Chlorophenol							28J	25J/ND		
2-Methylphenol		51					55J	35J/42J	160J/ND	ND/41J
2-Nitrophenol									ND/1J	
4-Chloro-3-methylphenol								33J/25J		
4-Methylphenol		80					130J	120/95J	99J/300J	86J/130J
Benzoic Acid				6400D	4000	30000J/27000J	23000J	5000/4300	19000J/4700J	4400J/6200J
Benzyl Alcohol				380		1900/1600	2700	540/680	14000/3200J	330J/630J
Bis(2-Chloroethyl)Ether		23					24J	26J/25J		
bis(2-Ethylhexyl)Phthalate		50							41J/24/J	
Diethyl phthalate										
Dimethyl Phthalate										
Di-n-Octyl Phthalate										
Hexachlorobenzene										
Naphthalene								2000J/1400J	4000J/1800J	1100/1400
Pentachlorophenol		52								
Phenol		96	91	140				120/96J		ND/51J

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*
SampleDate:	*08/26/92*	*08/19/93*	*06/22/94*	*06/01/95*	*06/27/96*	*07/07/97*	*06/17/98*	*06/16/99*	*06/22/00*	*05/11/01*
Pesticides/PCBs (µg/L)										
4,4'-DDD								0.020J/0.21	0.071J/0.13J	
Aldrin	0.53	0.24P						0.21J/0.74JN		0.95JN/1.5JN
Alpha-BHC	84	42C	24CEP	28D	29	39/39	59	37J/40	50/50	43J/50J
Alpha-Chlordane										
Beta-BHC				10D	11	8.1/8.6	12	11J/12	15/16	16J/16J
Delta-BHC	15	9.8P	7.5CE	4.7	5.2	ND/5.1	8.9	9.6J/11	14/13	10J/12J
Dieldrin										
Endosulfan I								0.43J/0.34		1.5JN/1.6JN
Endosulfan II									0.52J/0.69J	
Endosulfan Sulfate		0.43P						0.17J/0.18	0.17J/0.10UJ	
Endrin			0.15P							
Gamma-BHC (Lindane)	33	19.5	20.4CE			13.2/14.8	6.5J	4.1J/5.5	8.0/6.4	5J/7.3
Gamma-Chlordane									0.16J/0.18J	
Heptachlor								0.68JN/0.63		
Heptachlor epoxide								0.058J/0.043J	0.029J/0.031J	

Notes:
J - Estimated.

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*
SampleDate:	*06/12/02*	*05/19/03*	*05/28/04*	*06/17/05*	*06/26/06*	*07/18/07*	*07/23/08*	*07/15/09*	*06/16/10*	*07/13/11*
Volatiles (µg/L)										
1,1,2,2-Tetrachloroethane	500U/56	38				16J		24/25		
1,1,2-Trichloroethane	500U/27					15J		8.7 J/9.1 J		
1,1-Dichloroethane	500U/4J	3 J				2J				
1,2-Dichloroethene (total)		490 J			682 J	50J	111 J	106/109	158	55 J
2-Butanone								5.8 J/6.1 J		
2-Hexanone										
Acetone	500U/72	74			200 J	53J		42/37	39	
Benzene	5900/6400	5500			6800	7100	5300	7600/7500	3400	2200
Carbon Disulfide						2J				
Chlorobenzene	2200/2400	1900		2000	2400	2100	1400	2900 J/3000 J	1300	1100
Chloroform	500U/160	110			110 J	140J	99 J	96/97	160	67
Ethylbenzene	500U/15	10				10J		10/10	13	
Methylene Chloride	500U/39	26			44 J	32J		25/24	38	16 J
Tetrachloroethene	500U/38	18				13J		14/14	19	9.5 J
Toluene	20000J/19000	15000		16000	21000	23000	13000	24000/24000	11000	3100
Trichloroethene	130J/160	91			46 J	89J	27 J	89/91	140	52
Vinyl Acetate										
Vinyl Chloride	500U/48	51						27/17	31	
Xylene (total)	500U/51	29				37J		44/53	51	
Semi-volatiles (µg/L)										
1,2,4-Trichlorobenzene		97 J		4.5 J	63	47J	28	110/110	78 J	76 J
1,2-Dichlorobenzene		59 J		36 J	37	31J	10 J	52/68	57 J	45 J
1,3-Dichlorobenzene					3 J	87J		4.1 J/5.5 J		
1,4-Dichlorobenzene		160 J		100 J	100	84J	24	100 J/150 J	150 J	130 J
2-Butanone (Methyl Ethyl Ketone)								5.8 J/6.1 J		
2,4,5-Trichlorophenol					8 J					
2,4,6-Trichlorophenol							6 J	23/28		
2,4-Dichlorophenol	1500J/1800J	1700		420	250	490	150	1100/1200	780	590
2,4-Dimethylphenol										
2-Chloronaphthalene										
2-Chlorophenol					18		17 J	26/31		
2-Methylphenol		50 J		25 J	33	34J	140	50 J/66 J	42 J	30 J
2-Nitrophenol										
4-Chloro-3-methylphenol		41 J					26	97/95	31 J	
4-Methylphenol		210 J		49 J		120J	110	140 J/170 J	130 J	83 J
Benzoic Acid	25000/31000	26000		1400 J	14000 J	14000	7600 J	54000 J/39000 J	9500	11000
Benzyl Alcohol	1700J/2000	640		23 J	48	580	38	1200/1300	610	450
Bis(2-Chloroethyl)Ether				24 J	24	30J	16 J	28/29	34 J	28 J
bis(2-Ethylhexyl)Phthalate					53			4.4 J/4.2 J		
Diethyl phthalate										
Dimethyl Phthalate										
Di-n-Octyl Phthalate										
Hexachlorobenzene										
Naphthalene				1800 J						
Pentachlorophenol										
Phenol		180 J			140	130J	96	140 J/160 J	100	82

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*
SampleDate:	*06/12/02*	*05/19/03*	*05/28/04*	*06/17/05*	*06/26/06*	*07/18/07*	*07/23/08*	*07/15/09*	*06/16/10*	*07/13/11*
Pesticides/PCBs (µg/L)										
4,4'-DDD				0.19 J		0.081J	0.13 J		0.048 J	
Aldrin	0.12J/0.12J					0.073J	0.052 J	0.55 J/0.55 J	0.063 J	
Alpha-BHC	39/43	49		15		12	17	27 J/32 J	4.0	21
Alpha-Chlordane	0.031J/0.017J					0.011J				
Beta-BHC	13J/14J	15 J		3.4	7.1	3.2	4.4	9.1 J/11 J	4.1	7.1
Delta-BHC	9.0J/11J	12		9.1	13	4.7	6.3	11 J/12	0.28	7.3
Dieldrin										
Endosulfan I										
Endosulfan II				0.15 J				1.6 J/2.3		
Endosulfan Sulfate		1.3 J				0.34J	0.37 J	1.5 J		
Endrin						0.034J		1.3 J/1.9		
Gamma-BHC (Lindane)	6.1J/7.1J	7.1			4.8	2.1	2	6.2 J/7.4 J	0.92	4.1
Gamma-Chlordane	0.34J/0.29J				.33 J	0.017J				
Heptachlor		0.61 J		0.053		0.092J	0.19 J			
Heptachlor epoxide	0.016J/0.025J	2.2 J				0.29	0.13 J	1.6 J/1.7 J	0.10 J	

Notes:
J - Estimated.

TABLE 3.6A

1140 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1) / *Date*	*1144* *(ft. AMSL)*	*1143* *(ft. AMSL)*	*1142* *(ft. AMSL)*	*1141* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1140* *(ft. AMSL)*
March-11	573.24	571.87	571.12	566.65	561.70	565.50
June-11	572.06	571.64	571.20	567.11	561.70	565.01
September-11	569.87	569.78	569.72	566.28	561.70	564.20
December-11	572.66	570.79	570.18	566.52	561.70	565.09

B WELLS

Well (1) / *Date*	*1144* *(ft. AMSL)*	*1143* *(ft. AMSL)*	*1142* *(ft. AMSL)*	*1141* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1140* *(ft. AMSL)*
March-11	573.00	571.44	567.93	567.23	561.70	565.01
June-11	572.03	571.81	568.86	567.66	561.70	565.44
September-11	569.78	569.92	568.01	566.79	561.70	564.56
December-11	572.91	570.30	567.94	566.88	561.70	564.98

C WELLS

Well (1) / *Date*	*1144* *(ft. AMSL)*	*1143* *(ft. AMSL)*	*1142* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	572.63	569.58	566.05	561.70
June-11	571.94	570.38	566.89	561.70
September-11	569.74	569.18	566.56	561.70
December-11	571.72	569.16	566.40	561.70

D WELLS

Well (1) / *Date*	*1144* *(ft. AMSL)*	*1143* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	569.51	567.86	561.70
June-11	570.78	569.08	561.70
September-11	569.50	568.48	561.70
December-11	569.47	568.26	561.70

Notes:
(1) = Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

TABLE 3.6B

1150 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1) / *Date*	*1154* *(ft. AMSL)*	*1153* *(ft. AMSL)*	*1151* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	570.44	570.26	567.06	561.85
June-11	571.34	569.29	567.23	561.85
September-11	569.86	568.68	567.20	561.85
December-11	571.52	569.17	567.37	561.85

B WELLS

Well (1) / *Date*	*1154* *(ft. AMSL)*	*1153* *(ft. AMSL)*	*1151* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	569.67	576.64	567.74	561.85
June-11	568.36	569.34	568.40	561.85
September-11	568.12	569.25	567.57	561.85
December-11	568.48	576.64	568.08	561.85

C WELLS

Well (1) / *Date*	*1154* *(ft. AMSL)*	*1153* *(ft. AMSL)*	*1151* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	571.58	576.93	569.26	561.85
June-11	569.03	570.95	569.65	561.85
September-11	568.21	569.98	567.73	561.85
December-11	568.37	577.36	568.26	561.85

D WELLS

Well (1) / *Date*	*1154* *(ft. AMSL)*	*1153* *(ft. AMSL)*	*1151* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	569.46	573.75	571.92	561.85
June-11	568.66	571.16	569.15	561.85
September-11	568.41	570.30	568.07	561.85
December-11	569.34	576.66	573.18	561.85

E WELLS

Well (1) / *Date*	*1153* *(ft. AMSL)*
March-11	575.59
June-11	569.25
September-11	569.05
December-11	570.45

Note:
(1) = Wells listed in order from most distant outside of tile drains, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

TABLE 3.6C

1160 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*	*1160*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March-11	572.15	-6.18	568.20	570.05	565.53	560.60	565.38
June-11	569.55	570.92	569.54	570.77	567.08	560.60	566.63
September-11	568.48	570.84	568.82	569.52	565.15	560.60	564.82
December-11	572.40	570.84	568.98	569.47	565.95	560.60	565.78

B WELLS

Well (1)	*10176*	*1165*	*1163*	*1161*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March-11	572.14	571.21	569.48	567.33	560.60
June-11	569.71	571.97	570.91	568.59	560.60
September-11	568.67	570.99	569.70	566.93	560.60
December-11	572.03	571.41	569.49	567.59	560.60

C WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*	*1160*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March-11	568.73	571.51	569.77	569.86	569.12	560.60	DRY
June-11	568.94	573.09	571.17	571.18	570.61	560.60	566.85
September-11	568.75	571.92	570.07	569.73	569.22	560.60	566.86
December-11	569.51	571.77	569.67	569.74	569.18	560.60	566.71

D WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March-11	567.26	572.50	DRY	567.34	569.52	560.60
June-11	567.65	573.20	DRY	568.74	571.17	560.60
September-11	567.77	571.63	DRY	567.53	569.92	560.60
December-11	568.09	572.17	DRY	568.02	569.68	560.60

E WELLS

Well (1)	*1161*
Date	*(ft. AMSL)*
March-11	566.11
June-11	567.36
September-11	565.31
December-11	566.36

Notes:
(1) = Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

TABLE 3.6D

1170 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1) / *Date*	*1174* *(ft. AMSL)*	*1173* *(ft. AMSL)*	*1172* *(ft. AMSL)*	*1171* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1170* *(ft. AMSL)*
March-11	570.95	569.00	566.47	563.91	555.60	563.02
June-11	570.44	568.74	566.59	565.19	555.60	563.47
September-11	570.43	568.51	566.50	564.24	555.60	562.43
December-11	571.72	569.04	566.58	564.14	555.60	562.98

B WELLS

Well (1) / *Date*	*1174* *(ft. AMSL)*	*1173* *(ft. AMSL)*	*1172* *(ft. AMSL)*	*1171* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1170* *(ft. AMSL)*
March-11	570.34	569.53	568.34	563.06	555.60	574.65
June-11	570.73	569.85	568.94	564.06	555.60	571.05
September-11	570.80	569.82	568.37	563.30	555.60	562.36
December-11	570.53	570.16	568.70	563.33	555.60	576.07

C WELLS

Well (1) / *Date*	*1174* *(ft. AMSL)*	*1173* *(ft. AMSL)*	*1172* *(ft. AMSL)*	*1171* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	570.14	571.49	569.01	562.47	555.60
June-11	570.01	572.27	569.99	562.94	555.60
September-11	570.36	571.19	569.47	561.85	555.60
December-11	570.43	571.22	569.30	562.46	555.60

D WELLS

Well (1) / *Date*	*1174* *(ft. AMSL)*	*1173* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	568.31	572.96	555.60
June-11	568.26	572.15	555.60
September-11	568.23	570.77	555.60
December-11	568.72	572.25	555.60

Notes:
(1) = Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

TABLE 3.6E

1180 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1) / *Date*	*1184* *(ft. AMSL)*	*1183* *(ft. AMSL)*	*1181* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1180* *(ft. AMSL)*
March-11	564.33	564.45	566.90	560.00	563.05
June-11	564.21	564.52	567.21	560.00	563.64
September-11	563.60	564.07	567.54	560.00	562.75
December-11	564.32	564.35	571.60	560.00	562.99

B WELLS

Well (1) / *Date*	*1184* *(ft. AMSL)*	*1183* *(ft. AMSL)*	*1181* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1180* *(ft. AMSL)*
March-11	564.95	565.46	567.90	560.00	562.58
June-11	564.47	564.52	567.21	560.00	561.25
September-11	563.37	564.07	567.54	560.00	561.08
December-11	564.54	564.35	571.60	560.00	561.31

C WELLS

Well (1) / *Date*	*1184* *(ft. AMSL)*	*1183* *(ft. AMSL)*	*1181* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1180* *(ft. AMSL)*
March-11	569.89	568.29	570.47	560.00	DRY
June-11	567.72	567.73	568.41	560.00	562.75
September-11	565.27	566.74	567.73	560.00	DRY
December-11	569.48	567.13	570.95	560.00	DRY

D WELLS

Well (1) / *Date*	*1184* *(ft. AMSL)*	*1183* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	569.25	566.79	560.00
June-11	567.88	566.76	560.00
September-11	DRY	566.78	560.00
December-11	569.82	566.83	560.00

Notes:
(1) = Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

TABLE 3.6F

1190 SERIES PIEZOMETERS WATER LEVELS-2011
LOVE CANAL LONG-TERM MONITORING PROGRAM
GLENN SPRINGS HOLDINGS, INC.

A WELLS

Well (1) / *Date*	*1194* *(ft. AMSL)*	*1193* *(ft. AMSL)*	*1192* *(ft. AMSL)*	*1191* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1190* *(ft. AMSL)*
March-11	564.43	565.56	564.48	565.02	554.80	567.11
June-11	564.35	565.74	564.36	565.33	554.80	565.83
September-11	563.71	565.21	563.72	565.20	554.80	563.58
December-11	564.58	565.56	564.51	565.24	554.80	565.23

B WELLS

Well (1) / *Date*	*1194* *(ft. AMSL)*	*1193* *(ft. AMSL)*	*1192* *(ft. AMSL)*	*1191* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*	*1190* *(ft. AMSL)*
March-11	569.68	568.05	567.93	565.21	554.80	564.28
June-11	570.00	569.12	568.64	566.17	554.80	564.32
September-11	568.19	568.82	568.56	566.00	554.80	562.47
December-11	569.54	568.73	568.49	565.88	554.80	563.79

C WELLS

Well (1) / *Date*	*1194* *(ft. AMSL)*	*1193* *(ft. AMSL)*	*1192* *(ft. AMSL)*	*1191* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	574.38	570.31	569.23	564.19	554.80
June-11	571.97	572.58	570.06	564.98	554.80
September-11	569.52	570.76	570.05	564.03	554.80
December-11	574.73	570.53	569.80	564.41	554.80

D WELLS

Well (1) / *Date*	*1194* *(ft. AMSL)*	*1193* *(ft. AMSL)*	*Tile Drain* *(ft. AMSL)*
March-11	573.90	571.63	554.80
June-11	573.66	572.17	554.80
September-11	570.27	570.98	554.80
December-11	573.43	571.18	554.80

Notes:
(1) = Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.
ft. AMSL - Feet above mean sea level.

APPENDIX A

INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

New York State Department of Environmental Conservation
Division of Environmental Remediation, 11th Floor
625 Broadway, Albany, New York 12233
Phone: (518) 402-9553 **Fax:** (518) 402-9577
Website: www.dec.ny.gov

Joe Martens
Commissioner

February 01, 2012

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
Niagara Falls, NY 14304

Dear Joseph 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 **March 30, 2012**. 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: bpsadows@gw.dec.state.ny.us

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
Greg Sutton, Hazardous Waste Remediation Engineer, Region 9
Steven Bates, DOH
Jane Polovich, Conestoga Rovers and Associates, Inc.

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: 80.0

Reporting Period: ~~February 28, 2011 to February 28, 2012~~
January 1, 2011 to December 31, 2011

	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

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		
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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

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 Joe Branch (print name) at 7601 Old Channel Trail, Montague MI 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 — Date: 3/20/2012

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 James Thornton (print name) at 285 Delaware Ave Buffalo, NY (print business address),

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

STATE OF NEW YORK
JAMES C. THORNTON
No. 60482
LICENSED PROFESSIONAL ENGINEER

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

Stamp (Required for PE)

3/16/12
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 C

NIAGARA FALLS WATER BOARD WASTEWATER DISCHARGE PERMIT

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 8th day of, January 2010
To Expire this 8th day of, January 2015

William Bolents
Director of Administrative Services

Signed this 20TH day of December, 2009

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 12/16/09
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 12/16/09
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.

   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	Quarterly
#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

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APPENDIX D

ADDITIONAL WELLS REQUESTED BY
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2915
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.ny.gov

Joe Martens
Commissioner

April 5, 2011

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

Dear Mr. Branch:

Site Management (SM) Periodic Review Report (PRR) Response Letter
Love Canal, Niagara Falls
Niagara County, Site No.: 932020

The Department has reviewed the Periodic Review Report (PRR) and IC/EC Certification for the period: 02/28/2010 to 02/28/2011and finds it acceptable with the below noted comments. These comments are a result of the January-February 2011 Colvin Boulevard and 96th St. Sewer repair incident and questions that were raised concerning off-site contaminant migration from the site.

1. The June 2010 Flow Diagram, figure 3.7, for the 1180 Series Piezometers, indicates that the groundwater direction is to the north towards the Colvin Boulevard sewer. The Department requests that GSH conduct a onetime groundwater quality "snapshot" in this area by sampling additional monitoring wells and piezometers located along the north boundary of the Canal's remedial system. Specifically, piezometer 1181 and wells 7160 and 7155 should be included in the 2011 long term monitoring program (LTMP).

2. In conjunction with the above and as discussed during the Colvin Boulevard sewer repair project, it is requested that an attempt be made to locate well 3251 and if found, include well 3251 in the 2011 LTMP.

The frequency of Periodic Reviews for this site is 1 year. Your next PRR is due on February 28, 2012. You will receive a reminder letter and updated certification form 45-days prior to the due date.

If you have any questions, or need additional forms, please contact me at 716-851-7220 or e-mail: bpsadows@gw.dec.state.ny.us

Sincerely,

Brian Sadowski
Project Manager

BS:dcg
sadowski\branch-apr1.ltr

ec: Mr. Matthew Forcucci DOH Project Manager
Mr. Gregory Sutton, Regional Haz Waste Remediation Engineer

APPENDIX E

LOVE CANAL 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)
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