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Report

2013 Annual Periodic Review Report
102nd Street Landfill Site
Niagara Falls, New York

Prepared for: Glenn Springs Holdings, Inc.

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February 2014 • 001431 • Report No. 90

Partners in Sustainability

Executive Summary

The following report describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2013 at the 102nd Street Landfill Site (Site) located in Niagara Falls, New York. The Site covers approximately 22.1 acres and consists of two separate properties owned by Occidental Chemical Corporation (OCC) (15.6 acres) and Olin Corporation (Olin) (6.5 acres). Management of the Site is performed on behalf of OCC and Olin by Glenn Springs Holdings, Inc. (GSH), an affiliate of OCC. Beginning on October 1, 2008, GSH contracted Conestoga-Rovers & Associates (CRA) to perform operation, maintenance, monitoring, and reporting activities for the Site under the direct supervision of GSH.

During 2013, the Remedial Action (RA) system components at the Site performed as designed. The leachate collection system removed 241,873 gallons of Aqueous Phase Liquid (APL) from the Site. The slurry wall installed at the Site continued to function as designed. Water level monitoring showed that an inward gradient with respect to groundwater flow across the slurry wall continued to be maintained throughout the year at nine of the ten well pairs as indicated by a lower water elevation inside the slurry than outside the slurry wall. One well pair (PCM-07R/PZ-07) on the north side of the Site indicated an outward gradient during two of the four monitoring events (i.e., one pair during each of two separate quarterly events). However, analytical results indicate that no Site parameters were detected above the survey levels (Site estimated quantification values from Table 3.1 of the Site OM&M Manual, 2011) outside of the slurry wall at PCM-07R. Groundwater potentiometric contours demonstrate that groundwater flows in a north-to-south direction towards the APL collection trench.

In 2013, 797 gallons of Non-Aqueous Phase Liquid (NAPL) were recovered from the Site NAPL Recovery (NR) Wells. The recovered NAPL was accumulated on Site in two 2,500-gallon accumulation tanks, containerized, and shipped to the Clean Harbors Aragonite facility in Grantsville, Utah for incineration.

The 2013 data indicate that there has been no significant change in chemical and hydrogeological conditions at the Site. The APL collection trench continues to collect sufficient leachate from the landfill to maintain an inward gradient across the slurry wall and a depressed water table inside the slurry wall. As mentioned above, the slurry wall is functioning as designed, preventing off-Site migration and influx of groundwater.

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Section 1.0 Introduction

The following report describes the Operation, Maintenance, and Monitoring (OM&M) activities for 2013 at the 102nd Street Landfill Site (Site) located in Niagara Falls, New York (Figure 1.1). Management of the Site is performed on behalf of Occidental Chemical Corporation (OCC) and Olin Corporation (Olin) by Glenn Springs Holdings, Inc. (GSH), an affiliate of OCC. Beginning on October 1, 2008, GSH contracted Conestoga-Rovers & Associates (CRA) to perform operation, maintenance, monitoring, and reporting activities for the Site under the direct supervision of GSH.

The Site covers approximately 22.1 acres and consists of two separate properties owned by OCC (15.6 acres) and Olin (6.5 acres). The Site is bordered by the Niagara River to the south, Buffalo Avenue to the north, Griffon Park to the west, and privately owned land to the east. A perimeter fence restricts Site access. Authorized vehicular traffic access is provided from Buffalo Avenue by locked fence gates.

Remedial construction at the Site was completed in 1999, and groundwater pumping began in March 1999. The groundwater collection system at the Site is shown on Figure 1.2.

Final responses to the comments for the Final Closure Report for the Site were submitted to the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) (collectively, the "Agencies") on September 22, 2000. The Certificate of Completion for the Site was accepted by the Agencies on March 13, 2002, signifying that all remedial work had been completed. Subsequently, the formal initiation of the OM&M for the Site occurred in April 2002. This report is the thirteenth annual report for the Site.

The Remedial Action (RA) system components at the Site that have associated OM&M activities are as follows:

- Landfill cap
- Perimeter slurry wall
- Aqueous Phase Liquid (APL) collection and discharge system
- Non-Aqueous Phase Liquid (NAPL) recovery system
- Post-RA system performance monitoring
- Perimeter fence

This report describes the OM&M activities conducted and presents the data collected at the Site between January 1, 2013 and December 31, 2013. The completed Institutional and Engineering Control Certification (ICEC) Form is included as Appendix A.

Section 2.0 Site Monitoring Programs

The Site monitoring program was established to monitor the effectiveness of the RA system components and includes the following activities/programs:

- Quarterly groundwater level measurements
- Annual groundwater quality monitoring
- Quarterly NAPL presence monitoring
- Accelerated NAPL Recovery Program (ANRP)

2.1 Hydraulic Monitoring Program

Hydraulic monitoring at the Site consists of the measurement of water levels in monitoring wells to determine groundwater elevations. This includes ten monitoring well pairs, each with a monitoring well located inside the slurry wall (PZ-01 through PZ-10) and a corresponding monitoring well located outside the slurry wall (PCM-01 through PCM-10). The measurements are used to evaluate RA system performance toward establishment of a depressed water table within the slurry wall by comparing the water levels in each monitoring well pair. A lower water elevation inside the slurry wall than the water elevation outside the slurry wall at each monitoring well pair demonstrates that the water table has been depressed and that an "inward gradient" with respect to groundwater flow across the slurry wall has been created. The established monitoring well pairs are listed in Table 2.1, and the locations of the monitoring well sand slurry wall are shown on Figure 1.2.

Groundwater level measurements in the monitoring wells were measured quarterly in 2013, in accordance with the OM&M Manual. The 2013 water level measurements have been converted to elevations and are presented in Table 2.2. Table 2.2 also presents measured groundwater elevations for Site NAPL recovery (NR) wells and wet wells. The elevations for each of the monitoring well pairs and the gradients achieved for the quarterly events throughout the year are presented in Table 2.3.

Groundwater elevations are listed on the Annual Report Forms (Appendix B). Data for 2002 through 2013 have been graphed to show groundwater elevation trends (Appendix C). The quarterly groundwater elevations and associated potentiometric groundwater contours are presented on Figures 2.1 through 2.4.

2.2 Groundwater Quality Monitoring Program

The groundwater quality monitoring program consists of ten overburden monitoring wells (PCM-01 through PCM-10) and three bedrock monitoring wells (PCBM-01 through PCBM-03). These wells were sampled quarterly for the first 2 years following initiation of the OM&M in 2002, and then semiannually

for the next 8 years through 2011. In 2012, sampling frequency decreased to annual in accordance with the approved OM&M Manual.

Annual groundwater quality monitoring was performed in October 2013. Table 2.4 presents the results of these groundwater monitoring events. Historic groundwater monitoring results are presented in Appendix D. The next groundwater quality monitoring event will occur in October 2014.

Concentrations present in the groundwater have been graphed for select monitoring wells (PCM-03, PCM-04, and PCM-05) to evaluate concentration trends and determine if any of the levels are increasing. These graphs are presented in Appendix E. The monitoring well locations and parameters presented were selected based on the historical detection of compounds. Those monitoring well locations and parameters not included in Appendix E are typically non-detect with the occasional low level detections and, therefore, do not present any useful data with regard to a discussion of historical analytical trends at the Site.

The monitoring well purge records from the 2013 groundwater quality monitoring event are presented in Appendix F.

2.3 NAPL Presence Monitoring Program

The NAPL presence monitoring program consists of eight NR wells (NR-01 through NR-05, NR-07, NR-08, and NR-10). NAPL presence monitoring began in these wells in April 2002, immediately after the Agencies accepted the Certificate of Completion. In accordance with the OM&M Manual, NAPL presence was checked each month for the first 3 months. The monthly monitoring ended in June 2002. Since June 2002, the NAPL presence monitoring has been completed quarterly. If during the quarterly monitoring more than 3 gallons of NAPL (6 inches deep in the 12-inch diameter well) are present in a NR well, the NAPL will be removed. NAPL removal will occur from April through October, during the warmer months of the year.

In December 2003, GSH submitted the "NAPL Extraction Program Work Plan for Accelerated Recovery" (Work Plan) to determine the production capability and possible accelerated extraction of NAPL at NR-02 (known to have a quick recharge rate). As a result of the pumping tests conducted per the Work Plan, the ANRP was implemented in 2004. This program involved the continuous removal of NAPL from NR-02 through the use of a low-flow, automated pump installed in the NR-02 well with daily measurements, while the remaining NR wells were monitored quarterly and NAPL removed as necessary, per the OM&M Manual.

On June 23, 2010, CRA, on behalf of GSH, submitted a memorandum documenting modifications to the ANRP at the Site. The memo summarized March 10, 2011 discussions with Mr. Brian Sadowski of NYSDEC regarding a reduction in frequency of NAPL removal at NR-02 and the addition of NR-03 to the

ANRP. Quarterly NAPL presence and removal data in 2010 indicated that NAPL presence in the vicinity of NR-02 may be diminishing, either due to a decrease in NAPL in the area of NR-02 (indicating a successful implementation of the recovery program), or possibly a result of creating a "de-NAPLed" (absence of NAPL) area around NR-02 due to the long-term pumping at this location and a decreased recharge rate of the NAPL. Due to the reduction in NAPL removed from NR-02, it was proposed to reduce the frequency of monitoring at NR-02 from continuous to weekly. Historic amounts of NAPL removed from NR-03, along with quarterly NAPL measurements during 2010, indicated that there may be sufficient NAPL present at NR-03 such that additional NAPL removal would be beneficial. Therefore, NR-03 was proposed to be added to the ANRP on a temporary basis. Mr. Sadowski agreed to the modification to the program, effective immediately, with the addition of NR-03 and with the stipulation that NR-02 would be checked, and NAPL removed as necessary, no less than on a weekly frequency. The modification was further discussed and confirmed during the May 27, 2010 NYSDEC annual Site inspection. The addition of NR-03 to the ANRP was originally to be on a continuous basis. Monitoring and continuous removal of NAPL from NR-03 (in addition to weekly removal from NR-02) began in May 2010. A low NAPL recharge rate at NR-03 resulted in the pumping frequency at this NR well being reduced from continuous to twice weekly (NAPL checks and pumping as necessary), and subsequently from twice weekly to its current weekly frequency as approved by the NYSDEC. Subsequently, the high recharge rate in NR-02 resulted in an increase in NAPL check and pumping frequency from weekly to its current twice weekly frequency as approved by NYSDEC.

Results of the 2013 NAPL presence monitoring are included on the Annual Report Forms presented in Appendix B.

Section 3.0 Site Monitoring Results

3.1 Hydraulic Monitoring Results

The 2013 quarterly groundwater elevations and potentiometric groundwater contours are shown on Figures 2.1 through 2.4. Where groundwater was present, inward gradients across the slurry wall towards the landfill (as indicated by a lower water elevation inside the slurry than outside the slurry wall) were demonstrated at all monitoring wells pairs for each event with the exception of the first and fourth quarter events for monitoring well pair 7. The water elevation inside the slurry wall at this monitoring well pair was higher than outside during these two events by 1.13 feet and 1.70 feet, respectively, as shown in Table 2.3. Groundwater analytical results from well PCM-07R (located outside the slurry wall) show that no Site parameters were detected above the Site survey levels (Site estimated quantification values from Table 3.1 of the Site OM&M Manual, 2011) at this location (see Section 3.3).

PZ-06 and PZ-08 were dry during some of the quarterly events. The difference in elevation used to demonstrate an inward gradient at these monitoring well pairs during dry events was calculated using the bottom elevation of each dry monitoring well, with the rationale that if the monitoring well was dry,

the water elevation would have to be at an elevation below the bottom of the monitoring well. The water level elevations in the monitoring wells outside the slurry wall were higher than the elevation of the bottom of the dry monitoring wells inside the slurry wall; therefore, regardless of the dry conditions at PZ-06 and PZ-08, an inward gradient across the slurry wall was maintained at these two monitoring well pairs in 2013.

Monitoring well pairs 6, 7, 8, 9, and 10 are located along the northern side of the Site, and as shown on Figures 2.1 through 2.4, exhibit groundwater elevations ranging from 563.61 feet above mean sea level (AMSL) to 572.22 feet AMSL. The remaining wells at the Site (monitoring well pairs 1, 2, 3, 4, 5), NAPL recovery wells (NR-01, NR-05, NR-07, NR-08, NR-10), and Wet Wells (1 through 4) to the south of monitoring well pairs 6, 7, 8, 9, and 10 exhibit groundwater elevations ranging from 560.18 feet AMSL to 566.52 feet AMSL. Groundwater potentiometric contours presented on Figures 2.1 through 2.4 demonstrate that groundwater flows in a north-to-south direction towards the APL collection trench (located on the south side of the Site along the Niagara River and portions of the east and west sides of the Site) and, therefore, it is reasonable to conclude that any groundwater impacts would migrate to the trench and that the water table is depressed inside the slurry wall.

3.2 Groundwater Quality Monitoring Results

Overburden Monitoring Wells

In 2013, groundwater samples were collected from all ten monitoring wells included in the annual analytical program. However, monitoring well PCM-06 yielded insufficient volume for analysis of semi-volatile organic compounds (SVOCs), metals, and pesticides. Sufficient volume was available for only volatile organic compound (VOC) analysis.

Concentrations in groundwater exceeded Site survey levels (Site estimated quantification values from Table 3.1 of the Site OM&M Manual, 2011) in three of the ten overburden monitoring wells sampled in 2013 (PCM-03, PCM-04, and PCM-05) consistent with previous sampling results. Well PCM-03 had exceedances of VOCs (benzene, chlorobenzene, dichlorobenzenes, and chlorotoluene), SVOCs (chlorophenols and dichlorophenols), and pesticides (beta- and delta-benzene hexachloride (beta- and delta-BHC), also known as hexachlorocyclohexane). Well PCM-04 had exceedances of VOCs (benzene, chlorobenzene, and dichlorobenzenes), a SVOC (chlorophenol), and a pesticide (delta-BHC). Well PCM-05 demonstrated exceedances for VOCs (chlorobenzene) and SVOCs (chlorophenol). The exceedances at these locations are consistent with or lower than historic concentrations at these wells (see Appendix D).

In both the NYSDEC "Site Management (SM) Periodic Review Report (PRR) Response Letter" for the 2010 PRR (August 3, 2011) and the USEPA "2010 Annual Periodic Review Report" (August 17, 2011) response letter, NYSDEC and USEPA expressed a concern regarding the persistent detections of Site-related

contaminants in monitoring wells PCM-03, PCM-04, and PCM-05. Both Agencies requested that GSH investigates the persistent detections at these locations. An evaluation was conducted and findings submitted to the Agencies in a letter dated July 15, 2013.

Bedrock Monitoring Wells

Site Survey levels were not exceeded in any of the three bedrock monitoring wells that were sampled for groundwater quality in 2013.

3.3 NAPL Presence Monitoring Results

Monitoring for the presence of NAPL at the eight NR wells is checked quarterly. Results of the quarterly NAPL monitoring events are presented in the Annual Report Forms included in Appendix B.

NAPL was present in six of the eight NR wells in 2013 (NR-01 through NR-05, and NR-08). The thickness of NAPL in these six wells ranged from 0.05 foot (NR-04) to 1.85 feet (NR-02). NAPL was removed from the wells between April 1 and October 31, 2013 when it was present at quantities of more than 3 gallons or at a thickness greater than 6 inches.

Section 4.0 Operation of 102nd Street Landfill Systems

4.1 APL Collection and Discharge System Operation

The individual APL pumps in the four APL collection wet wells operated throughout 2013 on level control. The pump in Wet Well 2 is set to start up at an elevation of 562.0 feet AMSL (1 foot below the average Niagara River water level) and shut down when the elevation in the well reached 561.8 feet AMSL. Over the years, the set points on the pumps in Wet Wells 1, 3, and 4 have been lowered to encourage pumping in the wells. The pumps in Wet Wells 1, 3, and 4 are set to start up at elevations of 561.68, 561.86, and 561.51, respectively, and shut down when the elevations in the wells reach 561.48, 561.66, and 561.31, respectively.

A total of 241,873 gallons of APL was removed from the Site and pumped to the Love Canal Treatment Facility (LCTF). There, the APL was treated and discharged to the City of Niagara Falls Sanitary Sewer System, under the Niagara Falls Water Board Significant Industrial User (SIU) Permit #44. A total of approximately 8.9 million gallons of APL has been recovered from the Site since pumping was initiated in March 1999.

In 2013, Wet Well 1 collected 2.5 percent of the total APL for the Site, Wet Well 2 collected 92 percent, Wet Well 3 collected 2.2 percent, and Wet Well 4 collected 3.8 percent.

4.2 NAPL Recovery

The total volume of NAPL removed from the NR wells at the Site in 2013 was 797 gallons (Table 4.1). The majority of the NAPL was pumped from NR-02 (Table 4.2).

Table 4.1 shows the current and historical NAPL recoveries from the on-Site NR wells. Approximately 69,000 gallons of NAPL have been recovered at the Site to date.

4.2.1 NR-02 and NR-03 NAPL Recovery

As discussed in Section 2.3, in 2010 a temporary change to the ANRP at the Site was implemented. Previous to June 2010, the ANRP consisted of continuous NAPL recovery at well NR-02 and quarterly NAPL presence checks and recovery (if necessary) from NR-01, NR-03, NR-04, NR-05, NR-07, NR-08, and NR-10 between April and October of each year. The June 2010 modification and the evaluations of data collected thereafter resulted in the current schedule of NAPL removal at NR-02 twice weekly, NR-03 weekly, and quarterly at the remaining NR wells.

As per the approved modification to the ANRP, pumping at NR-02 was conducted twice weekly during the second and third quarters of 2013 and resulted in a total NAPL recovery of 787 gallons. Table 4.2 presents a summary of NAPL removed from NR-02 during 2013. The removal of NAPL from NR-02 will continue to be evaluated, and options to maximize NAPL removal and optimize the pumping schedule at NR-02 will continue to be evaluated.

Weekly NAPL checks at well NR-03 were conducted from March through the beginning of October during 2013. Due to the high viscosity of the NAPL and typical measurements of NAPL of less than 6 inches, only 5 gallons of NAPL were removed from NR-03 in 2013. In addition, 5 gallons were removed from NR-01.

4.2.2 NAPL Storage and Disposal

NAPL removed from the NR wells during 2013 was pumped into one of two 2,500-gallon double-walled skid-mounted steel tanks with internal secondary containment. The tanks are located at NR-02 and NR-03 due to the current pumping schedule and can be easily moved depending on the productivity of the two wells during pumping events. The two 2,500-gallon NAPL tanks are inspected as part of the 102nd Street daily inspections.

Approximately 935 gallons of accumulated NAPL (from 2012 and 2013) were containerized and transported to the Clean Harbors Aragonite facility in Grantsville, Utah for incineration in 2013.

Section 5.0 Site Maintenance and Inspections

5.1 Site Inspections

Daily inspections were conducted at the Site in 2013, as per the OM&M Manual. Copies of the daily inspection forms are available upon request.

The 2013 annual NYSDEC Site inspection was conducted on May 29, 2013 with representatives from NYSDEC, GSH, and CRA. The Site inspection reviews the RA System Components to ensure Site compliance. The inspection included a general Site walk and covered all portions of the landfill remediation including the APL Collection System, APL Discharge System, Landfill Cap, Bulkhead, and Storm Sewer.

In general, the NYSDEC commented that the Site looked well maintained and in very good order, with no evidence of erosion.

5.2 Monitoring Well Inspections

The monitoring wells, NAPL recovery wells, and wet wells are inspected on an annual basis.

Additionally, the physical condition of the wells is recorded, and any repairs needed are noted as part of the water level measurement and groundwater sampling procedures.

5.3 Activities

Activities performed at the Site in 2013 included the following:

- Mowing the landfill vegetation to inhibit the growth of woody material
- Filling of holes found in the soil cover made by burrowing animals
- Removing all driftwood from 102nd Street storm sewer outlet
- Maintaining (including scheduled preventative maintenance) all pumps and on-Site control equipment to ensure proper function
- Monitoring and pumping NAPL from NR-02 (twice per week) and NR-03 (once per week) between April and October
- Removing NAPL from the accumulation tanks and disposing off Site
- Upgrading select control systems as part of Love Canal control system upgrade. This included upgrading programmable logic controller (PLC) hardware and network architecture communications associated with control of the Love Canal and Site remedial systems. In addition, the existing communication cable between Love Canal and the Site was replaced with fiber optic cable, the leak

detection system wiring from 102nd Street to Love Canal was replaced, and the Love Canal/102nd Street auto dialer was replaced.

5.4 Site Beautification/Wildlife

Wildlife/beautification enhancements to the Site continue to provide wildlife habitat and beneficial reuse. The Site is a Wildlife Habitat Council (WHC) listed site. This designation indicates that the 102nd Street Landfill Site has been identified as an area dedicated to the restoration and enhancement of wildlife habitat. The WHC is comprised of a group of corporations, conservation organizations, and individuals with the goal of bringing together conservation and business. They work with corporations and landowners to create tailored voluntary wildlife habitat enhancement.

Wildlife and beautification enhancements at the Site in the past have included the following:

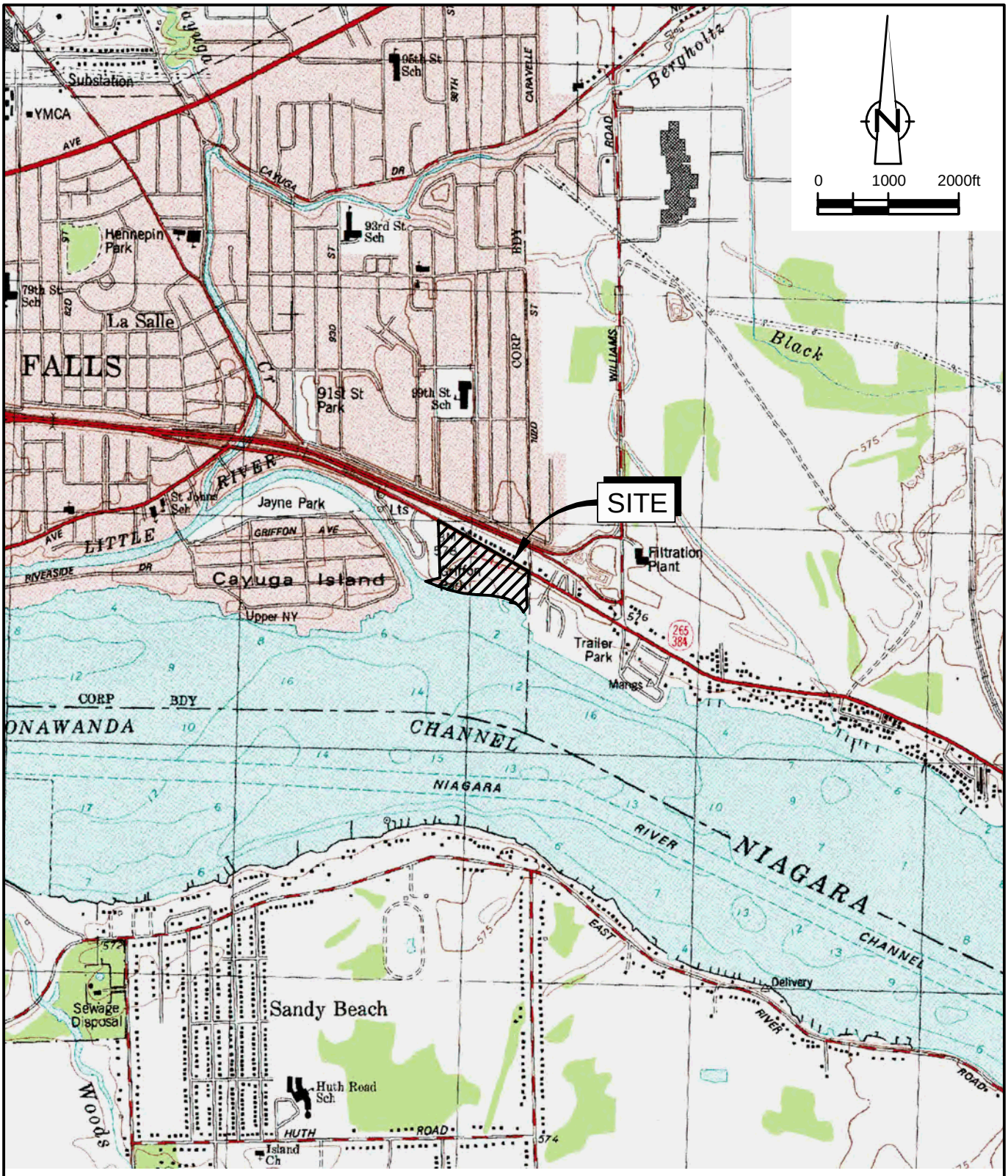
- Planting of a large proportion of lancer pea on the landfill cap at the beginning of O&M activities at the Site to provide food for waterfowl
- Replanting the embayment area with water celery to enhance fish habitat
- Growth of native grasses and flowers on the landfill cap
- Installation of bluebird houses and bat boxes on the perimeter of the landfill cap
- Daily inspection of perimeter fencing and Site cover and removal of litter as necessary, which enhances the aesthetics of the Site when viewed from the Niagara River, from Buffalo Avenue, and from Griffon Park
- Mowing on the landfill cap of only the space necessary to access the Site groundwater and NR wells, as not to disrupt wildlife habitat in the native growth

Section 6.0 Conclusions and Recommendations

During 2013, the RA system components at the Site performed as designed. The leachate collection system removed 241,873 gallons of APL from the Site. Water level monitoring showed that an inward gradient with respect to groundwater flow across the slurry wall continues to be maintained at nine of the ten well pairs as indicated by a lower water elevation inside the slurry than outside the slurry wall. One well pair (PCM-07R/PZ-07) on the north side of the Site indicated an outward gradient during two of the four monitoring events (i.e., one pair in two separate events). However, analytical results indicate no Site parameters were detected above the survey levels outside of the slurry wall at PCM-07R. Groundwater potentiometric contours demonstrate that groundwater flows in a north-to-south direction towards the APL collection trench.

In 2013, 797 gallons of NAPL were recovered from the Site NR wells. The recovered NAPL was stored on Site in one of two 2,500-gallon accumulation tanks during 2013, containerized, and was shipped to an off-Site disposal facility (incinerators) (Clean Harbors, Grantville, Utah) for final destruction.

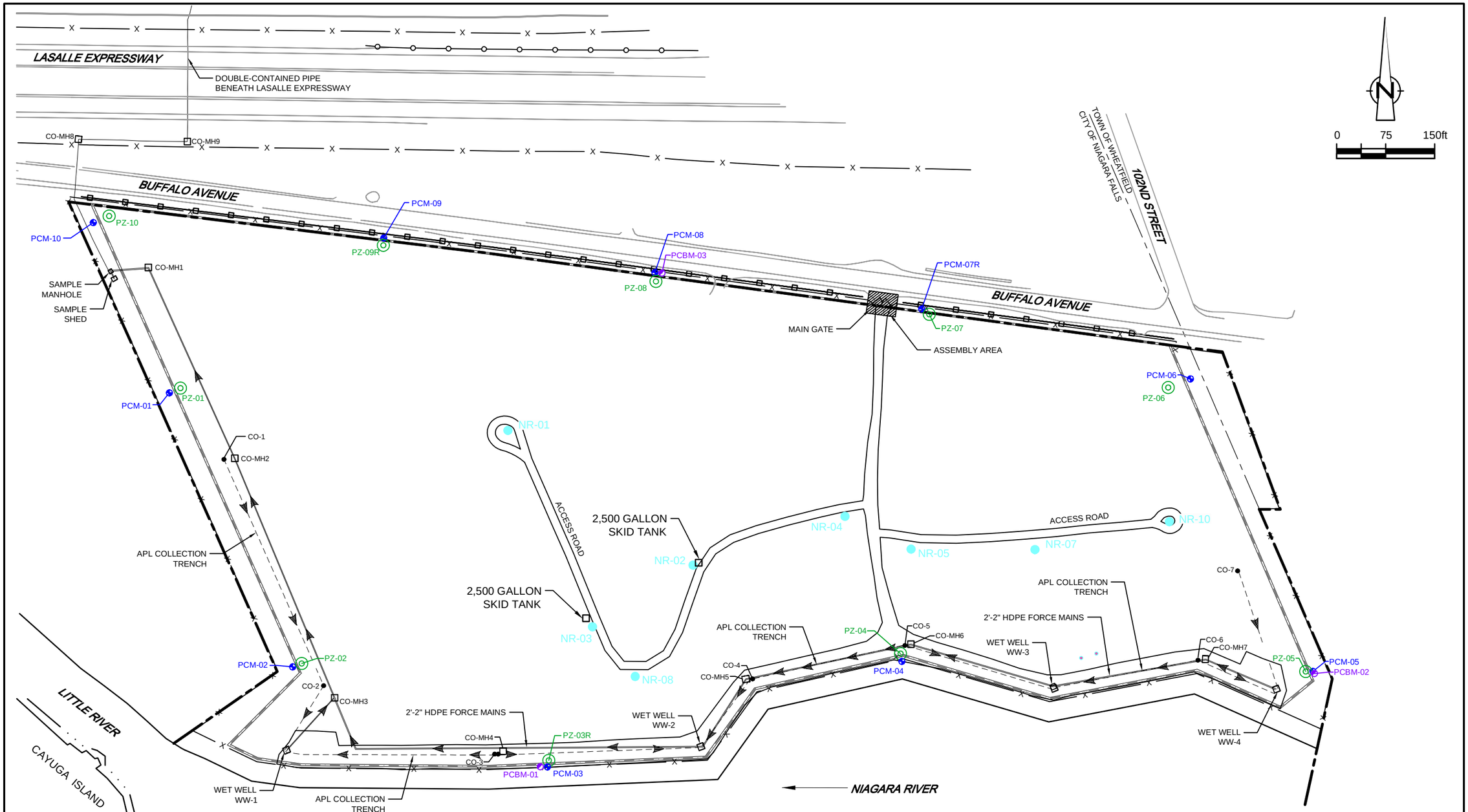
The 2013 data indicate that there has been no significant change in chemical and hydrogeological conditions at the Site. The APL collection trench continues to collect sufficient leachate from the landfill to maintain an inward gradient across the slurry wall and a depressed water table inside the slurry wall. The slurry wall is functioning as designed, preventing off-Site migration and the influx of off-Site groundwater.



SOURCE: USGS QUADRANGLE MAP;
TONAWANDA WEST, NEW YORK, 1980

figure 1.1

SITE LOCATION
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York



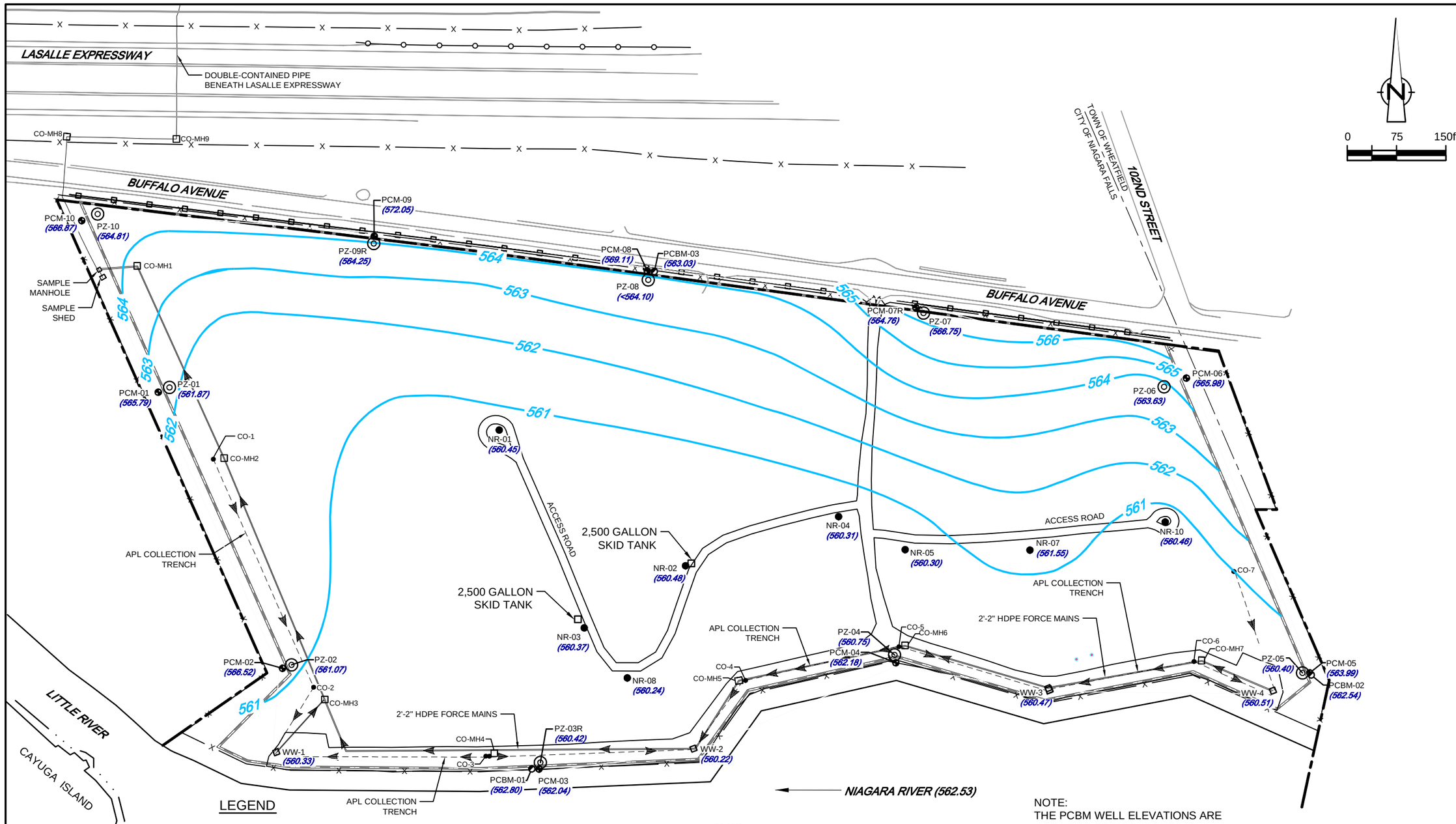
LEGEND

PROPERTY LINE	SLURRY WALL AND CENTERLINE	CO-2	TRENCH CLEAN OUT
CITY LINE	APL COLLECTION TRENCH	CO-MH3	FORCEMAIN CLEAN OUT MANHOLE
FENCE LINE	PZ-02 PIEZOMETER LOCATION		NAPL RECOVERY WELL LOCATION
CRIB WALL	PCM-02 MONITORING WELL LOCATION	PCBM-01	BEDROCK MONITORING WELL LOCATION
FORCEMAIN			

figure 1.2

SITE PLAN
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01431-D23101(090)GN-WA002 DEC 8/2013



LEGEND

- PROPERTY LINE
- CITY LINE
- FENCE LINE
- CRIB WALL
- FORCEMAIN
- SLURRY WALL AND CENTERLINE
- APL COLLECTION TRENCH
- PCBM-01 BEDROCK MONITORING WELL LOCATION
- PZ-02 PIEZOMETER LOCATION
- PCM-02 MONITORING WELL LOCATION
- CO-2 TRENCH CLEAN OUT
- CO-MH3 FORCEMAIN CLEAN OUT MANHOLE
- NAPL RECOVERY WELL LOCATION
- (562.04) GROUNDWATER ELEVATION
- 562 GROUNDWATER CONTOUR
- 562 APPROXIMATE INFERRED GROUNDWATER CONTOUR

NOTE:
THE PCBM WELL ELEVATIONS ARE NOT USED FOR CONTOURING.

figure 2.1

GROUNDWATER ELEVATIONS - MARCH 5, 2013
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01431-D23101(090)GN-WA003 FEB 10/2014

LASALLE EXPRESSWAY

DOUBLE-CONTAINED PIPE
BENEATH LASALLE EXPRESSWAY

CO-MH8

CO-MH9

BUFFALO AVENUE

PCM-10
(566.44)

PZ-10
(564.87)

PCM-09
(569.65)

PZ-09R
(564.13)

PCM-08
(568.70)

PCBM-03
(563.75)

PZ-08
(<564.10)

CO-MH1

SAMPLE
MANHOLE

SAMPLE
SHED

564

563

562

561

565

566

PCM-07R
(565.36)

PZ-07
(566.17)

BUFFALO AVENUE

TOWN OF WHEATFIELD
CITY OF NIAGARA FALLS

102ND STREET

PCM-06
(566.03)

PZ-06
(563.61)

PZ-01
(561.79)

PCM-01
(565.48)

CO-1

CO-MH2

NR-01
(560.43)

ACCESS ROAD

2,500 GALLON
SKID TANK

NR-02
(560.39)

NR-04
(560.28)

NR-05
(560.25)

NR-07
(561.49)

ACCESS ROAD

NR-10
(560.40)

APL COLLECTION
TRENCH

2,500 GALLON
SKID TANK

NR-03
(560.32)

NR-08
(560.19)

CO-7

APL COLLECTION
TRENCH

2'-2" HDPE FORCE MAINS

APL COLLECTION
TRENCH

CO-5

CO-MH6

PZ-04
(560.67)

CO-6

CO-MH7

PZ-05
(560.43)

PCM-05
(563.82)

PCBM-02
(563.42)

PCM-02
(566.18)

PZ-02
(561.07)

CO-4

CO-MH5

WW-3
(560.49)

WW-4
(560.52)

PCM-04
(563.38)

CO-2

CO-MH3

LITTLE RIVER

CAYUGA ISLAND

2'-2" HDPE FORCE MAINS

CO-MH4

PZ-03R
(560.48)

WW-1
(560.34)

CO-3

WW-2
(560.30)

PCBM-01
(563.70)

PCM-03
(563.31)

APL COLLECTION
TRENCH

NIAGARA RIVER (563.83)

0 75 150ft

LEGEND

PROPERTY LINE	APL COLLECTION TRENCH	CO-MH3	FORCEMAIN CLEAN OUT MANHOLE
CITY LINE	PCBM-01 BEDROCK MONITORING WELL LOCATION		NAPL RECOVERY WELL LOCATION
FENCE LINE	PZ-02 PIEZOMETER LOCATION	(563.70)	GROUNDWATER ELEVATION
CRIB WALL	PCM-02 MONITORING WELL LOCATION	562	GROUNDWATER CONTOUR
FORCEMAIN	CO-2 TRENCH CLEAN OUT	562	APPROXIMATE INFERRED GROUNDWATER CONTOUR
SLURRY WALL AND CENTERLINE			

NOTE:
THE PCBM WELL ELEVATIONS ARE
NOT USED FOR CONTOURING.

figure 2.2

GROUNDWATER ELEVATIONS - JUNE 4, 2013
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01431-D23101(090)GN-WA004 FEB 10/2014

LASALLE EXPRESSWAY

DOUBLE-CONTAINED PIPE
BENEATH LASALLE EXPRESSWAY

CO-MH8

CO-MH9

BUFFALO AVENUE

PZ-10
(564.90)

PCM-10
(566.01)

PCM-09
(568.10)

PZ-09R
(565.24)

PCM-08
(568.84)

PCBM-03
(563.58)

PZ-08
(<564.10)

PCM-07R
(565.69)

PZ-07
(568.31)

BUFFALO AVENUE

TOWN OF WHEATFIELD
CITY OF NIAGARA FALLS

102ND STREET

PCM-06
(567.17)

PZ-06
(<563.09)

0 75 150ft

CO-MH1

SAMPLE
MANHOLE

SAMPLE
SHED

PZ-01
(561.77)

PCM-01
(565.20)

CO-1

CO-MH2

APL COLLECTION
TRENCH

NR-01
(560.41)

ACCESS ROAD

2,500 GALLON
SKID TANK

NR-02
(560.46)

NR-04
(560.30)

NR-05
(560.27)

NR-07
(561.52)

ACCESS ROAD

NR-10
(560.45)

CO-7

APL COLLECTION
TRENCH

2'-2" HDPE FORCE MAINS

2,500 GALLON
SKID TANK

NR-03
(560.33)

NR-08
(560.18)

APL COLLECTION
TRENCH

PZ-04
(560.70)

CO-5
CO-MH6

PCM-04
(563.49)

CO-6
CO-MH7

PZ-05
(560.48)

PCM-05
(563.14)

PCBM-02
(563.44)

PCM-02
(565.90)

PZ-02
(561.02)

CO-2

CO-MH3

CO-4
CO-MH5

WW-3
(560.54)

WW-4
(560.58)

LITTLE RIVER

CAYUGA ISLAND

2'-2" HDPE FORCE MAINS

CO-MH4

PZ-03R
(560.44)

WW-1
(560.23)

CO-3

WW-2
(560.32)

PCBM-01
(563.74)

PCM-03
(563.50)

APL COLLECTION
TRENCH

NIAGARA RIVER (563.98)

565 564 563 562 561

LEGEND

- PROPERTY LINE
- CITY LINE
- FENCE LINE
- CRIB WALL
- FORCEMAIN
- SLURRY WALL AND CENTERLINE
- APL COLLECTION TRENCH
- PCBM-01 BEDROCK MONITORING WELL LOCATION
- PZ-02 PIEZOMETER LOCATION
- PCM-02 MONITORING WELL LOCATION
- CO-2 TRENCH CLEAN OUT
- CO-MH3 FORCEMAIN CLEAN OUT MANHOLE
- NAPL RECOVERY WELL LOCATION
- (563.74) GROUNDWATER ELEVATION
- 562 GROUNDWATER CONTOUR
- 562 APPROXIMATE INFERRED GROUNDWATER CONTOUR

NOTE:
THE PCBM WELL ELEVATIONS ARE
NOT USED FOR CONTOURING.

figure 2.3

GROUNDWATER ELEVATIONS - SEPTEMBER 5, 2013
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01431-D23101(090)GN-WA005 FEB 10/2014

LASALLE EXPRESSWAY

DOUBLE-CONTAINED PIPE
BENEATH LASALLE EXPRESSWAY

BUFFALO AVENUE

102ND STREET

TOWN OF WHEATFIELD
CITY OF NIAGARA FALLS

0 75 150ft

CO-MH8 CO-MH9 CO-MH1 CO-MH2 CO-MH3 CO-MH4 CO-MH5 CO-MH6 CO-MH7

PCM-10 (566.55) PZ-10 (564.96)
PCM-09 (572.22) PZ-09R (565.50)
PCM-08 (570.70) PCBM-03 (563.36) PZ-08 (<564.10)
PCM-07R (564.81) PZ-07 (567.37)
PCM-06 (566.38) PZ-06 (<563.09)
PCM-01 (565.70) PZ-01 (562.01)
PCM-02 (566.31) PZ-02 (561.18)
PCM-03 (562.34) PCBM-01 (563.18) PZ-03R (560.62)
PCM-04 (562.41) PZ-04 (560.87)
PCM-05 (563.59) PZ-05 (560.41) PCBM-02 (562.87)

SAMPLE MANHOLE
SAMPLE SHED

NR-01 (560.73)
NR-02 (560.68)
NR-03 (560.58)
NR-04 (560.52)
NR-05 (560.48)
NR-07 (561.71)
NR-08 (560.42)
NR-10 (560.54)

2,500 GALLON SKID TANK
2,500 GALLON SKID TANK

ACCESS ROAD
ACCESS ROAD

APL COLLECTION TRENCH
APL COLLECTION TRENCH
APL COLLECTION TRENCH
APL COLLECTION TRENCH

2'-2" HDPE FORCE MAINS
2'-2" HDPE FORCE MAINS

CO-1 CO-2 CO-4 CO-5 CO-6 CO-7

WW-1 (560.40) WW-2 (560.27) WW-3 (560.52) WW-4 (560.52)

563 564 565 566 567 562 561

LITTLE RIVER
CAYUGA ISLAND

NIAGARA RIVER (562.76)

LEGEND

- PROPERTY LINE
- CITY LINE
- FENCE LINE
- CRIB WALL
- FORCEMAIN
- SLURRY WALL AND CENTERLINE
- APL COLLECTION TRENCH
- PCBM-01 BEDROCK MONITORING WELL LOCATION
- PZ-02 PIEZOMETER LOCATION
- PCM-02 MONITORING WELL LOCATION
- CO-2 TRENCH CLEAN OUT
- CO-MH3 FORCEMAIN CLEAN OUT MANHOLE
- NAPL RECOVERY WELL LOCATION
- (562.34) GROUNDWATER ELEVATION
- 562 GROUNDWATER CONTOUR
- 562 APPROXIMATE INFERRED GROUNDWATER CONTOUR

NOTE:
THE PCBM WELL ELEVATIONS ARE
NOT USED FOR CONTOURING.

figure 2.4

GROUNDWATER ELEVATIONS - DECEMBER 2, 2013
2013 PERIODIC REVIEW REPORT
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC.
Niagara Falls, New York

01431-D23101(090)GN-WA006 FEB 10/2014

TABLE 2.1

HYDRAULIC GRADIENT WELL PAIRS
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

Pair	*Outside*	*Inside*	*Location*
1	PCM-01	PZ-01	West Side
2	PCM-02	PZ-02	Southwest Side
3	PCM-03	PZ-03/PZ-03R	South Side
4	PCM-04	PZ-04	South Side
5	PCM-05	PZ-05	Southeast Side
6	PCM-06	PZ-06	Northeast Side
7	PCM-07R	PZ-07	North Side
8	PCM-08	PZ-08	North Side
9	PCM-09	PZ-09/PZ-09R	North Side
10	PCM-10	PZ-10	Northwest Side

TABLE 2.2

QUARTERLY WATER LEVEL ELEVATIONS
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

Location	*Ref Elev. (ft AMSL)*	*March 5, 2013*	*June 4, 2013*	*September 5, 2013*	*December 2, 2013*
NR-01	595.96	560.45	560.43	560.41	560.73
NR-02	588.39	560.48	560.39	560.46	560.68
NR-03	593.09	560.37	560.32	560.33	560.58
NR-04	581.06	560.31	560.28	560.30	560.52
NR-05	580.33	560.30	560.25	560.27	560.48
NR-07	587.21	561.55	561.49	561.52	561.71
NR-08	590.72	560.24	560.19	560.18	560.42
NR-10	586.77	560.46	560.40	560.45	560.54
PCBM-01	576.19	562.80	563.70	563.74	563.18
PCBM-02	575.21	562.54	563.42	563.44	562.87
PCBM-03	579.34	563.03	563.75	563.58	563.36
PCM-01	577.02	565.79	565.48	565.20	565.70
PCM-02	576.22	566.52	566.18	565.90	566.31
PCM-03	576.14	562.04	563.31	563.50	562.34
PCM-04	574.90	562.18	563.38	563.49	562.41
PCM-05	575.21	563.99	563.82	563.14	563.59
PCM-06	579.26	565.98	566.03	567.17	566.38
PCM-07R	578.80	565.62	566.22	566.55	565.67
PCM-08	578.34	569.11	568.70	568.84	570.70
PCM-09	578.05	572.05	569.65	568.10	572.22
PCM-10	578.44	566.87	566.44	566.01	566.55
PZ-01	580.98	561.87	561.79	561.77	562.01
PZ-02	577.10	561.07	561.07	561.02	561.18
PZ-03	575.82	--	--	--	--
PZ-03R	576.15	560.40	560.46	560.42	560.60
PZ-04	575.99	560.75	560.67	560.70	560.87
PZ-05	575.92	560.40	560.43	560.48	560.41
PZ-06	583.70	563.63	563.61	Dry	Dry
PZ-07	578.48	566.75	566.17	566.31	567.37
PZ-08	579.71	Dry	Dry	Dry	Dry
PZ-09	579.51	--	--	--	--
PZ-09R	580.37	563.73	563.61	564.72	564.98
PZ-10	581.61	564.81	564.87	564.90	564.96
RIVERNPIER	567.02	562.53	563.83	563.98	562.86
WW-1	574.97	560.33	560.34	560.23	560.40
WW-2	574.43	560.22	560.30	560.32	560.27
WW-3	574.78	560.47	560.49	560.54	560.52
WW-4	575.20	560.51	560.52	560.58	560.52

Notes:
Dry - No water in well during time of measurement
-- - Well decommissioned
ft AMSL - Feet above mean sea level

TABLE 2.3

WELL PAIR GRADIENTS
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

		Elevation (ft AMSL)						
Pairs	***Well IDs***	***TOC***	***Bottom***	***March 5, 2013***	***June 4, 2013***	***September 5, 2013***	***December 2, 2013***	***Quarters Maintaining Inward Gradient***
Pair 1	PCM-01	577.02	549.05	565.79	565.48	565.20	565.70	
	PZ-01	580.98	549.64	561.87	561.79	561.77	562.01	
				-3.92	-3.69	-3.43	-3.69	4
Pair 2	PCM-02	576.22	547.90	566.52	566.18	565.90	566.31	
	PZ-02	577.10	548.43	561.07	561.07	561.02	561.18	
				-	-	-	-	
				-5.45	-5.11	-4.88	-5.13	4
Pair 3	PCM-03	576.14	545.15	562.04	563.31	563.50	562.34	
	PZ-03R	576.15	542.75	560.40	560.46	560.42	560.60	
				-1.64	-2.85	-3.08	-1.74	4
Pair 4	PCM-04	574.90	545.74	562.18	563.38	563.49	562.41	
	PZ-04	575.99	545.63	560.75	560.67	560.70	560.87	
				-1.43	-2.71	-2.79	-1.54	4
Pair 5	PCM-05	575.21	550.00	563.99	563.82	563.14	563.59	
	PZ-05	575.92	550.50	560.40	560.43	560.48	560.41	
				-3.59	-3.39	-2.66	-3.18	4
Pair 6	PCM-06	579.26	565.51	565.98	566.03	567.17	566.38	
	PZ-06	583.70	563.09	563.63	563.61	Dry	Dry	
				-2.35	-2.42	< -4.08	< -3.29	4*
Pair 7	PCM-07R	578.80	557.63	565.62	566.22	566.55	565.67	
	PZ-07	578.48	563.72	566.75	566.17	566.31	567.37	
				1.13	-0.05	-0.24	1.70	2
Pair 8	PCM-08	578.34	564.43	569.11	568.70	568.84	570.70	
	PZ-08	579.71	564.10	Dry	Dry	Dry	Dry	
				< -5.01	< -4.60	< -4.74	< -6.60	4*

TABLE 2.3

WELL PAIR GRADIENTS
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

		Elevation (ft AMSL)						
Pairs	***Well IDs***	***TOC***	***Bottom***	***March 5, 2013***	***June 4, 2013***	***September 5, 2013***	***December 2, 2013***	***Quarters Maintaining Inward Gradient***
Pair 9	PCM-09	578.05	566.93	572.05	569.65	568.10	572.22	
	PZ-09R	580.37	563.27	563.73	563.61	564.72	564.98	
				-8.32	-6.04	-3.38	-7.24	4
Pair 10	PCM-10	578.44	556.39	566.87	566.44	566.01	566.55	
	PZ-10	581.61	561.56	564.81	564.87	564.90	564.96	
				-2.06	-1.57	-1.11	-1.59	4

Notes:
ft AMSL - Feet above mean sea level
TOC - Top of casing
-3.53 - Negative number indicates an inward gradient
Dry - No water in well during time of measurement. Assumed to be less than bottom of well for gradient calculation.
* - When the bottom elevation of the well is taken into account, all four quarters demonstrate inward gradients
Bottom - Bottom of well screen elevation

TABLE 2.4

ANALYTICAL RESULTS SUMMARY
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

				Overburden Wells					
			Sample Location:	PCM-01	PCM-02	PCM-03	PCM-04	PCM-05	PCM-06
			Sample ID:	PCM-01-1013	PCM-02-1013	PCM-03-1013	PCM-04-1013	PCM-05-1013	PCM-06-1013
			Sample Date:	10/9/2013	10/9/2013	10/3/2013	10/3/2013	10/3/2013	10/10/2013
Parameters	NYSDEC Class GA GW Criteria	Survey Level	Units						
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	5	10	µg/L	1.0 U	1.0 U	4.0 U	4.0 U	4.0 U	1.0 U
1,2,4-Trichlorobenzene	5	10	µg/L	1.0 U	1.0 U	4.0 U	4.0 U	4.0 U	1.0 U
1,2-Dichlorobenzene	3	10	µg/L	1.0 U	1.0 U	82	20	4.0 U	1.0 U
1,4-Dichlorobenzene	3	10	µg/L	1.0 U	1.0 U	450	340	4.0 U	1.0 U
2-Chlorotoluene	5	5	µg/L	1.0 U	1.0 U	16	4.0 U	4.0 U	1.0 U
Benzene	1	5	µg/L	1.0 U	1.0 U	58	33	4.0 U	1.0 U
Chlorobenzene	5	5	µg/L	1.0 U	1.0 U	4600	10000 J	150	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	5	10	µg/L	9.5 U	9.7 U	38 U	9.6 U	9.6 U	-
2,4,5-Trichlorophenol	1	50	µg/L	9.5 U	9.7 U	38 U	9.6 U	9.6 U	-
2,4-Dichlorophenol	1	10	µg/L	9.5 U	9.7 U	27 J	0.71 J	9.6 U	-
2,5-Dichlorophenol	1	10	µg/L	9.5 U	9.7 U	38 U	9.6 U	9.6 U	-
2-Chlorophenol	1	10	µg/L	9.5 U	9.7 U	18 J	11	9.6 U	-
4-Chlorophenol	1	10	µg/L	9.5 U	9.7 U	31 J	18	1.1 J	-
Phenol	1	10	µg/L	9.5 U	9.7 U	38 U	9.6 U	9.6 U	-
Metals (Totals)									
Arsenic	25	50	µg/L	10 U	10 U	10 U	10 U	10 U	-
Mercury	0.7	0.10	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	-
Pesticides									
alpha-BHC	0.01	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	-
beta-BHC	0.04	10	µg/L	0.048 U	0.047 U	0.093	0.048 U	0.048 U	-
delta-BHC	0.04	10	µg/L	0.048 U	0.047 U	0.86	0.81	0.048 U	-
gamma-BHC (lindane)	0.05	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	-
Field Parameters									
Specific Conductivity	NA	NA	mS/cm	10.18	1.004	5.09	3.97	3.75	4.27
Dissolved Oxygen	NA	NA	mg/L	0.27	0.19	0.27	0.31	0.3	1.36
Oxidation Reduction Potential	NA	NA	mV	-137	-158	-208	-183	-240	-78
pH	NA	NA	s.u.	8.2	6.95	6.69	6.91	7.38	8.1
Temperature	NA	NA	°C	16.03	14.33	15.25	14.78	13.14	18.66

Notes:
µg/L - Micrograms per liter
J - Estimated concentration
U - Not present at or above the associated value
[ ] - Exceedance of NYSDEC Class GA GW Criteria and/or Survey Level
- - Not analyzed
NA - Not applicable
mS/cm - Millisiemens per centimeter
mg/L - Milligrams per liter
mV - Millivolt
s.u. - Standard unit
°C - Degree Celsius

TABLE 2.4

ANALYTICAL RESULTS SUMMARY
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

				Overburden Wells (continued)				*Bedrock Wells*			
			Sample Location:	*PCM-07R*	*PCM-08*	*PCM-09*	*PCM-10*	*PCBM-01*	*PCBM-02*	*PCBM-03*	*PCBM-03*
			Sample ID:	*PCM-07R-1013*	*PCM-08-1013*	*PCM-09-1013*	*PCM-10-1013*	*PCBM-01-1013*	*PCBM-02-1013*	*PCBM-03-1013*	*PCM-12-1013*
			Sample Date:	*10/9/2013*	*10/9/2013*	*10/9/2013*	*10/9/2013*	*10/3/2013*	*10/3/2013*	*10/9/2013*	*10/9/2013 (Duplicate)*
Parameters	***NYSDEC Class GA GW Criteria***	***Survey Level***	***Units***								
Volatile Organic Compounds											
1,2,3-Trichlorobenzene	5	10	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	10	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	10	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	10	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	5	5	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	1	5	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	5	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds											
1,2,4,5-Tetrachlorobenzene	5	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	1	50	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4-Dichlorophenol	1	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2,5-Dichlorophenol	1	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2-Chlorophenol	1	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
4-Chlorophenol	1	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Phenol	1	10	µg/L	9.6 U	9.6 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Metals (Totals)											
Arsenic	25	50	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Mercury	0.7	0.10	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides											
alpha-BHC	0.01	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U
beta-BHC	0.04	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U
delta-BHC	0.04	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U
gamma-BHC (lindane)	0.05	10	µg/L	0.048 U	0.047 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U
Field Parameters											
Specific Conductivity	NA	NA	mS/cm	1.59	1.193	0.522	1.74	4.78	4.34	5.67	-
Dissolved Oxygen	NA	NA	mg/L	0.73	0.42	4.19	0.22	0.18	0.27	0.21	-
Oxidation Reduction Potential	NA	NA	mV	20	-147	46	-79	-337	-324	-339	-
pH	NA	NA	s.u.	8.94	7.16	7.46	8.25	6.96	6.94	6.94	-
Temperature	NA	NA	°C	16.34	16.96	17.89	13.39	12.72	11.84	12.81	-

Notes:
µg/L - Micrograms per liter
J - Estimated concentration
U - Not present at or above the associated value
bold - Exceedance of NYSDEC Class GA GW Criteria and/or Survey Level
- - Not analyzed
NA - Not applicable
mS/cm - Millisiemens per centimeter
mg/L - Milligrams per liter
mV - Millivolt
s.u. - Standard unit
°C - Degree Celsius

TABLE 4.1

CURRENT AND HISTORICAL NAPL RECOVERIES
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

	Amount of NAPL Removed in Gallons														
Year / **Well**	***1999***	***2001***	***2002***	***2003***	***2004***	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***Totals***
NR-01	-	55	0	60	0	0	30	85	44	46	7	11	7	5	349
NR-02	-	200	1,490	1,355	12,151	18,153	8,738	9,421	6,189	7,164	478	953	1,185	787	68,263
NR-03	-	40	0	0	0	0	10	42	22	12	0	7	6	5	144
NR-04	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NR-05	-	40	0	20	0	0	10	36	21	15	0	3	0	0	145
NR-07	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NR-08	-	0	0	5	0	0	8	43	22	16	0	4	0	0	98
NR-10	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	--	**335**	**1,490**	**1,440**	**12,151**	**18,153**	**8,796**	**9,627**	**6,298**	**7,253**	**485**	**977**	**1,198**	**797**	**68,999**

Notes:
NAPL - Non-Aqueous Phase Liquid
* 2010 - NR-2 inspections/pumping frequency reduced from daily to twice weekly, NR-3 increased to weekly

TABLE 4.2

NAPL RECOVERY FROM NR-02
GLENN SPRINGS HOLDINGS, INC.
102nd STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

Date	*NAPL Removed (gallons)*
4/1/2013	19.75
4/5/2013	19
4/9/2013	27.8
4/11/2013	12.5
4/15/2013	17.6
4/18/2013	16.3
4/22/2013	13
4/26/2013	16.3
5/1/2013	14
5/3/2013	17.8
5/6/2013	16.3
5/10/2013	16.3
5/14/2013	20.4
5/17/2013	12.2
5/20/2013	8
5/28/2013	17.1
5/31/2013	13.5
6/4/2013	17.5
6/7/2013	24.1
6/11/2013	15
6/14/2013	20
6/18/2013	10.2
6/21/2013	20
6/27/2013	24.3
7/1/2013	17.7
7/8/2013	9.3
7/12/2013	18.6
7/16/2013	15.5
7/19/2013	23
7/22/2013	15.2
7/29/2013	17
8/2/2013	8.4
8/5/2013	17.1
8/9/2013	17
8/12/2013	21
8/16/2013	13.4
8/20/2013	18.6
8/23/2013	19.3
8/27/2013	14.4
8/30/2013	19.2
9/5/2013	15
9/10/2013	20.4
9/12/2013	15.3
9/16/2013	15.3
9/20/2013	15.5
9/27/2013	15.75
9/30/2013	15.75
TOTAL	**787**

Notes:
NAPL - Non-Aqueous Phase Liquid

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

12/16/2013

Joseph Branch
Project Manager
OCC/Glenn Springs Holdings Inc.
7601 Old Channel Trail
P.O. Box 146
Montague, MI 49437

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal
Site Name: Hooker-102nd Street Landfill
Site No.: 932022
Site Address: 102nd Street, South of River Road
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 **February 28, 2014**. 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 Professional Engineer (PE). 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 Ave
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

cc: w/ enclosures
Olin Corporation

ec: w/ enclosures
Brian Sadowski, Project Manager
Greg Sutton, Hazardous Waste Remediation Engineer, Region 9

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 Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. 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.

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

3. 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:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the 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. **932022**

Site Name **Hooker-102nd Street Landfill**

Site Address: 102nd Street, South of River Road Zip Code: 14304
City/Town: Niagara Falls
County: Niagara
Site Acreage: 22.1

Reporting Period: January 01, 2013 to December 31, 2013

	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? Closed Landfill	☒	☐
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. 932022 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
161.18-1-34.2	Occidental Chemical Corporation	Landuse Restriction Ground Water Use Restriction Building Use Restriction Monitoring Plan O&M Plan

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

161.19-3-1	Occidental Chemical Corporation	Monitoring Plan O&M Plan Building Use Restriction Landuse Restriction Ground Water Use Restriction

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

161.19-3-2	Occidental Chemical Corporation	Landuse Restriction Ground Water Use Restriction Building Use Restriction Monitoring Plan O&M Plan

1. Record of Decision (ROD) September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

174.07-1-1	Occidental Chemical Corporation	Ground Water Use Restriction Building Use Restriction O&M Plan Monitoring Plan Landuse Restriction

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

174.07-1-2	Occidental Chemical Corporation	Ground Water Use Restriction Building Use Restriction Landuse Restriction Monitoring Plan O&M Plan

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

174.07-1-3	Olin Corporation	Monitoring Plan O&M Plan Ground Water Use Restriction Building Use Restriction Landuse Restriction

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

174.07-1-4	Olin Corporation	Landuse Restriction Monitoring Plan O&M Plan Ground Water Use Restriction Building Use Restriction

1. Record of Decision; September 26, 1990.

2. Deed Restriction; January 25, 2000. Prohibits the use of site groundwater or disturbance of the landfill cover.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
161.18-1-34.2	Groundwater Treatment System Groundwater Containment Subsurface Barriers Leachate Collection Cover System Fencing/Access Control

The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.

161.19-3-1	Cover System Fencing/Access Control Leachate Collection Groundwater Treatment System Groundwater Containment Subsurface Barriers

The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.

161.19-3-2	Groundwater Treatment System Groundwater Containment Subsurface Barriers Leachate Collection Cover System Fencing/Access Control

The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.

174.07-1-1	Cover System Fencing/Access Control Leachate Collection Groundwater Treatment System Groundwater Containment Subsurface Barriers

The engineering controls consist of a containment system for the landfill, including: a perimeter sub-surface slurry wall, groundwater collection system, NAPL recovery wells, landfill cap and perimeter fencing. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April-October) from NAPL recovery wells into two, 2,500 gallon, double walled skid mounted tanks with internal secondary containment. Accumulated NAPL is shipped off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.

174.07-1-2	Leachate Collection Groundwater Treatment System Groundwater Containment Subsurface Barriers Cover System Fencing/Access Control

The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery

Parcel	Engineering Control
wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.	
174.07-1-3	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Subsurface Barriers Fencing/Access Control
The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.	
174.07-1-4	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Subsurface Barriers Fencing/Access Control
The engineering controls consist of a containment system for the landfill, including: perimeter fencing; NAPL recovery wells; a groundwater collection system; a perimeter sub-surface slurry wall; and a landfill cap. Groundwater collected from the containment system is pumped north for treatment at the Love Canal Leachate Treatment Facility. NAPL is pumped seasonally (April - Nov.) from NAPL recovery wells into two double walled skid mounted tanks with internal secondary containment and sent off site for proper disposal. OCC/Olin, or their consultant has performed the required OM&M activities since 1999.	

Box 5

Periodic Review Report (PRR) Certification Statements

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 compete.

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. 932022

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

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

am certifying as Owner (Owner or Remedial Party)

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

J Branch
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

2-13-14
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer 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 ROBERT G. ADAMS (print name) at CRA INFRASTRUCTURE & ENGINEERING, INC. 285 DELAWARE AVE, BUFFALO NY, 14202 (print business address)

am certifying as a Professional Engineer for the REMEDIAL PARTY (Owner or Remedial Party)

STATE OF NEW YORK ★ LICENSED PROFESSIONAL ENGINEER ★ ROBERT G. ADAMS 064918

Robert G. Adams
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

2/6/14
Date

Stamp (Required for PE)

PE # 064918

Appendix B

Annual Report Forms

ANNUAL OPERATION AND MAINTENANCE REPORT
102ND STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

YEAR: **2013**

MONITORING - Water Level Measurements

Month	*Day*	*Inspector*	*PCM-01*	*PZ-01*	*PCM-02*	*PZ-02*	*PCM-03*	*PZ-03R*
1st Qtr.	3/5/2013	D. Tyran	565.79	561.87	566.52	561.07	562.04	560.40
2nd Qtr.	6/4/2013	D. Tyran	565.48	561.79	566.18	561.07	563.31	560.46
3rd Qtr.	9/5/2013	D. Tyran	565.20	561.77	565.90	561.02	563.50	560.42
4th Qtr.	12/2/2013	D. Tyran	565.70	562.01	566.31	561.18	562.34	560.60

Month	*Day*	*Inspector*	*PCM-04*	*PZ-04*	*PCM-05*	*PZ-05*	*PCM-06*	*PZ-06*
1st Qtr.	3/5/2013	D. Tyran, S. Gardner	562.18	560.75	563.99	560.40	565.98	563.63
2nd Qtr.	6/4/2013	D. Tyran, S. Gardner	563.38	560.67	563.82	560.43	566.03	563.61
3rd Qtr.	9/5/2013	D. Tyran, S. Gardner	563.49	560.70	563.14	560.48	567.17	Dry
4th Qtr.	12/2/2013	D. Tyran, S. Gardner	562.41	560.87	563.59	560.41	566.38	Dry

Month	*Day*	*Inspector*	*PCM-07R*	*PZ-07*	*PCM-08*	*PZ-08*	*PCM-09*	*PZ-09R*
1st Qtr.	3/5/2013	D. Tyran, S. Gardner	565.62	566.75	569.11	Dry	572.05	563.73
2nd Qtr.	6/4/2013	D. Tyran, S. Gardner	566.22	566.17	568.70	Dry	569.65	563.61
3rd Qtr.	9/5/2013	D. Tyran, S. Gardner	566.55	566.31	568.84	Dry	568.10	564.72
4th Qtr.	12/2/2013	D. Tyran, S. Gardner	565.67	567.37	570.70	Dry	572.22	564.98

Month	*Day*	*Inspector*	*PCM-10*	*PZ-10*
1st Qtr.	3/5/2013	D. Tyran, S. Gardner	566.87	564.81
2nd Qtr.	6/4/2013	D. Tyran, S. Gardner	566.44	564.87
3rd Qtr.	9/5/2013	D. Tyran, S. Gardner	566.01	564.90
4th Qtr.	12/2/2013	D. Tyran, S. Gardner	566.55	564.96

FORM 1

ANNUAL OPERATION AND MAINTENANCE REPORT

102ND STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

YEAR: **2013**

GROUNDWATER - Quality Monitoring

Quarter	*Date Sample Taken*	*Inspector*	*Comments*
1st			
2nd			
3rd			
4th	10/3, 10/9, 10/10	D. Tyran, S. Gardner	Annual Event; PCM-06 insufficient volume, VOCs only.

Results of analyses are attached.

NAPL PRESENCE - Monitoring

			NR-01		*NR-02*		*NR-03*	
	Date	*Inspector*	*Depth of NAPL (ft)*	*Gallons Removed*	*Depth of NAPL (ft)*	*Gallons Removed*	*Depth of NAPL (ft)*	*Gallons Removed*
1st Quarter	3/5/2013	D. Tyran, S. Gardner	0.67	0.00	1.51	0.00	0.73	0.00
2nd Quarter	6/4/2013	D. Tyran, S. Gardner	0.94	4.50	1.73	17.50	0.52	0.25
3rd Quarter	9/5/2013	D. Tyran, S. Gardner	0.38	0.00	1.85	15.00	0.45	0.00
4th Quarter	12/2/2013	D. Tyran, S. Gardner	0.80	0.00	1.65	0.00	0.54	0.00

			NR-04		*NR-05*		*NR-07*	
	Date	*Inspector*	*Depth of NAPL (ft)*	*Gallons Removed*	*Depth of NAPL (ft)*	*Gallons Removed*	*Depth of NAPL (ft)*	*Gallons Removed*
1st Quarter	3/5/2013	D. Tyran, S. Gardner	0.05	0.00	0.19	0.00	NO NAPL	
2nd Quarter	6/4/2013	D. Tyran, S. Gardner	NO NAPL		0.36	0.00	NO NAPL	
3rd Quarter	9/5/2013	D. Tyran, S. Gardner	0.09	0.00	0.42	0.00	NO NAPL	
4th Quarter	12/2/2013	D. Tyran, S. Gardner	0.06	0.00	0.37	0.00	NO NAPL	

			NR-08		*NR-10*	
	Date	*Inspector*	*Depth of NAPL (ft)*	*Gallons Removed*	*Depth of NAPL (ft)*	*Gallons Removed*
1st Quarter	3/5/2013	D. Tyran, S. Gardner	0.78	0.00	NO NAPL	
2nd Quarter	6/4/2013	D. Tyran, S. Gardner	0.24	0.00	NO NAPL	
3rd Quarter	9/5/2013	D. Tyran, S. Gardner	0.47	0.00	NO NAPL	
4th Quarter	12/2/2013	D. Tyran, S. Gardner	0.43	0.00	NO NAPL	

FORM 1

ANNUAL OPERATION AND MAINTENANCE REPORT

102ND STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

YEAR: **2013**

OPERATION

APL COLLECTION AND DISCHARGE SYSTEM

APL Flow for Previous Year (gallons)	*APL Flow for Current Year (gallons)*
281,192	241,873

NAPL REMOVAL SYSTEM

	NAPL Removed for Previous Year (gallons)	*NAPL Removed for Current Year (gallons)*
NR-01	7	5
NR-02	1185	787
NR-03	6	5
NR-04	0	0
NR-05	0	0
NR-07	0	0
NR-08	0	0
NR-10	0	0
Total	1198	797

Where was NAPL treated/disposed?

Facility	Clean Harbors Aragonite, Grantsville, Utah	Date	7/1/2013
Facility	Clean Harbors Aragonite, Grantsville, Utah	Date	11/12/2013
Facility		Date	
Facility		Date	
Facility		Date	
Facility		Date	

FORM 1

ANNUAL OPERATION AND MAINTENANCE REPORT

102ND STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

YEAR: **2013**

INSPECTION AND MAINTENANCE

Scheduled inspections performed:

	Date	***Inspectors***
DEC Inspection	**5/29/2013**	Brian Sadowski (NYSDEC); Joe Branch (GSH); John Pentilchuk (CRA); Darrell Crockett (CRA), Jane Polovich (CRA), Jim Thornton (CRA)
Well Inspection	**10/10/2013**	Dave Tyran (CRA), Shawn Gardner (CRA)

Was maintenance required?

Yes	***No***
X	

What maintenance was required?	Date Performed
NAPL trailer emptied.	4/25/2014
Rodent holes filled.	5/15/2013
Intake cleaned.	5/20/2013
Replacement of electronics related to Love Canal programmable logic controller (PLC) upgrade.	7/22/2013

Describe any maintenance activity that required an activity specific work plan and health and safety plan.

Form Completed By:

Joseph Branch, Project Manager

NAME SIGNATURE DATE

FORM 1

ANNUAL OPERATION AND MAINTENANCE REPORT

102ND STREET LANDFILL SITE
NIAGARA FALLS, NEW YORK

YEAR: 2013

Send completed copies of this form to the following for review:

Mr. Joseph Branch
Glenn Springs Holdings, Inc.
7601 Old Channel Trail
Montague, MI 49437

and

Mr. Curt Richards
Olin Corporation
3855 North Ocoee Street, Suite 200
Cleveland, TN 37312

After review is complete, send 5 copies to the following:

Chief-New York Remedial Branch
Emergency and Remedial Response Davison
U.S. Environmental Protection Agency - Region II
290 Broadway, 20th Floor
New York, NY 10007-1866
Attn: 102nd Street Landfill Superfund Site Manager

and

Mr. Brian Sadowski
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999

and

Mr. Gregory P. Sutton
Regional Remediation Engineer
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999

FORM 1

Appendix C

Graphs of Groundwater Level Elevations 2002-2013

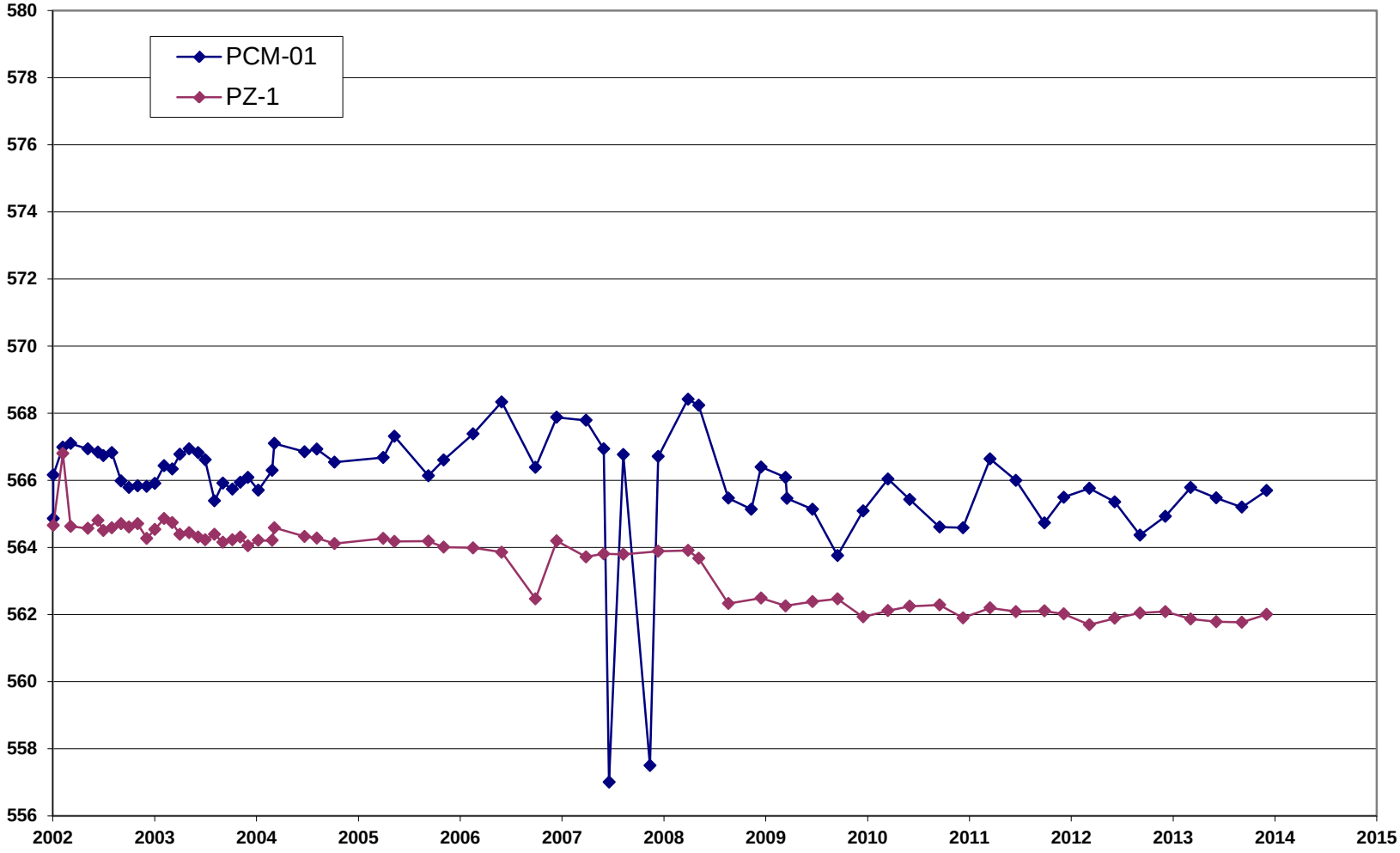


figure C.1
GROUNDWATER LEVELS WELL PAIR 1
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

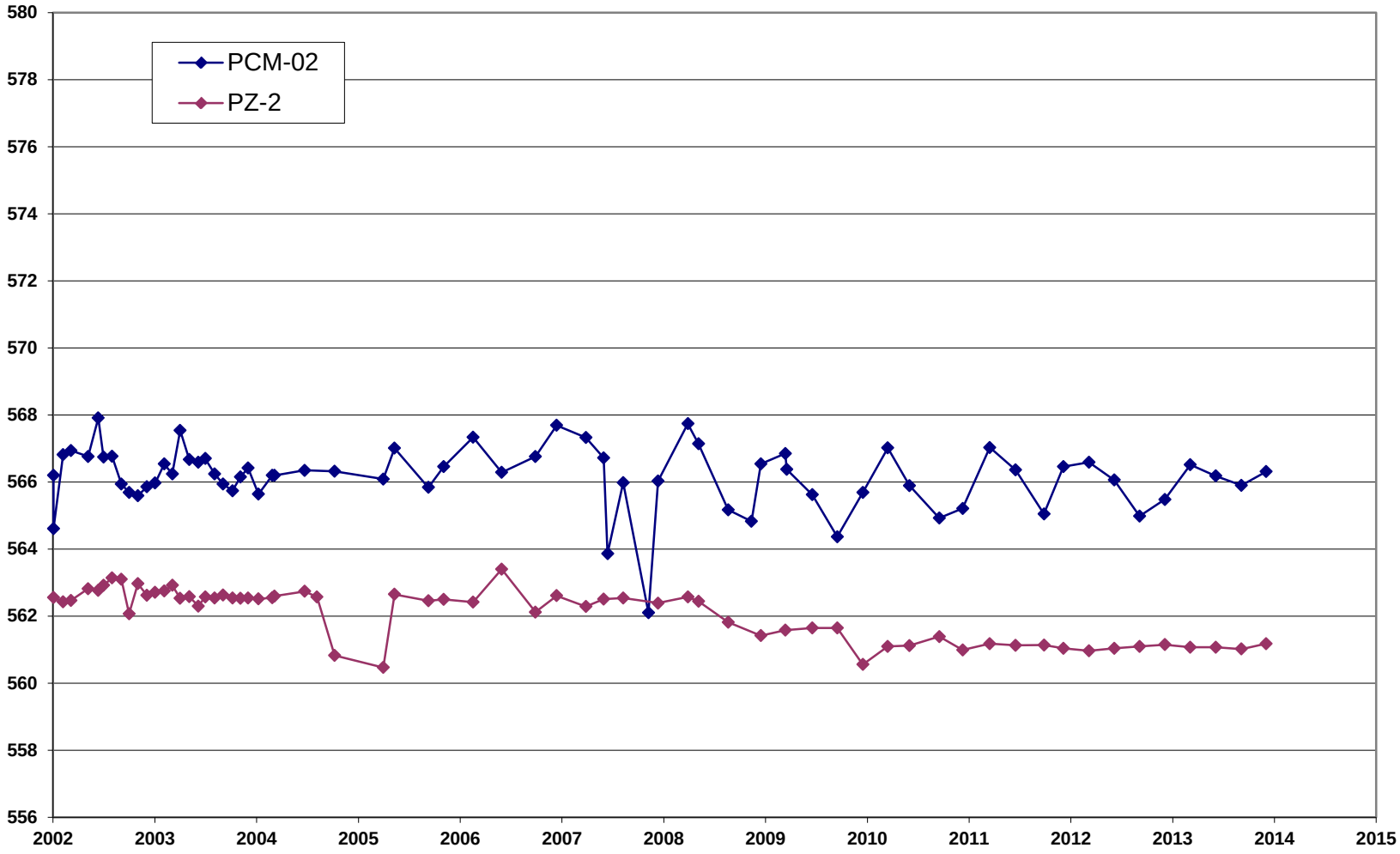


figure C.2
GROUNDWATER LEVELS WELL PAIR 2
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

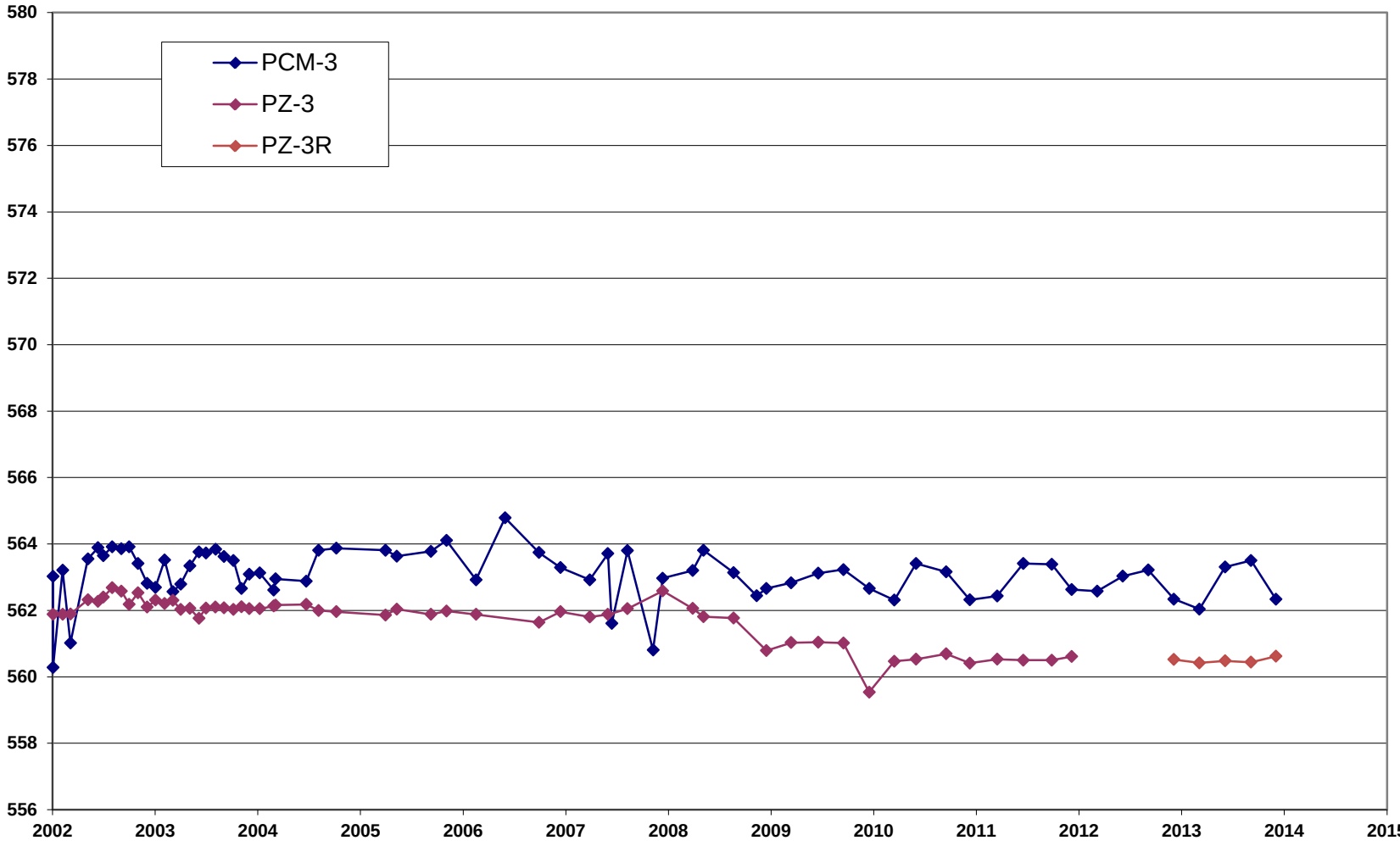


figure C.3
GROUNDWATER LEVELS WELL PAIR 3
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

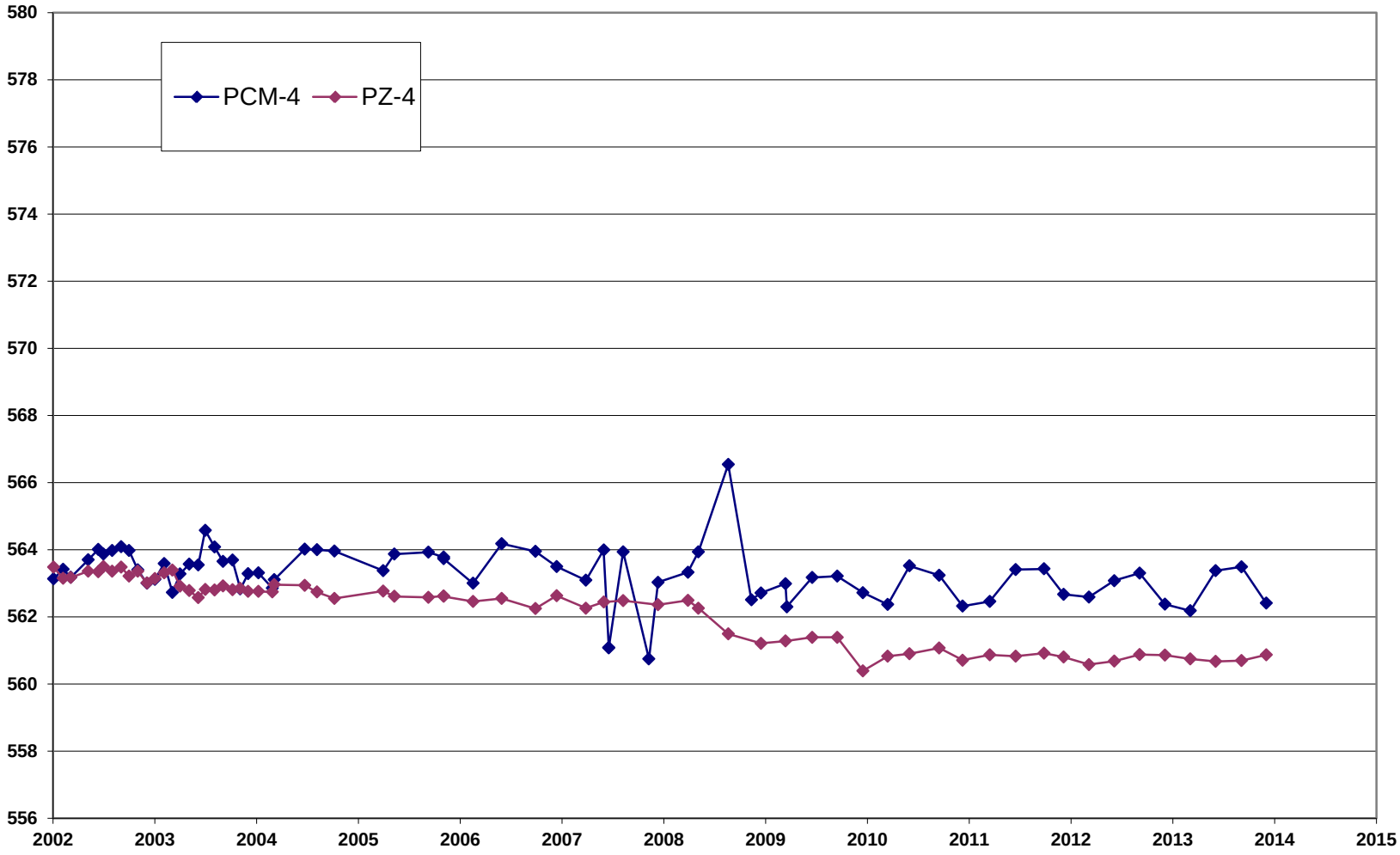


figure C.4
GROUNDWATER LEVELS WELL PAIR 4
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

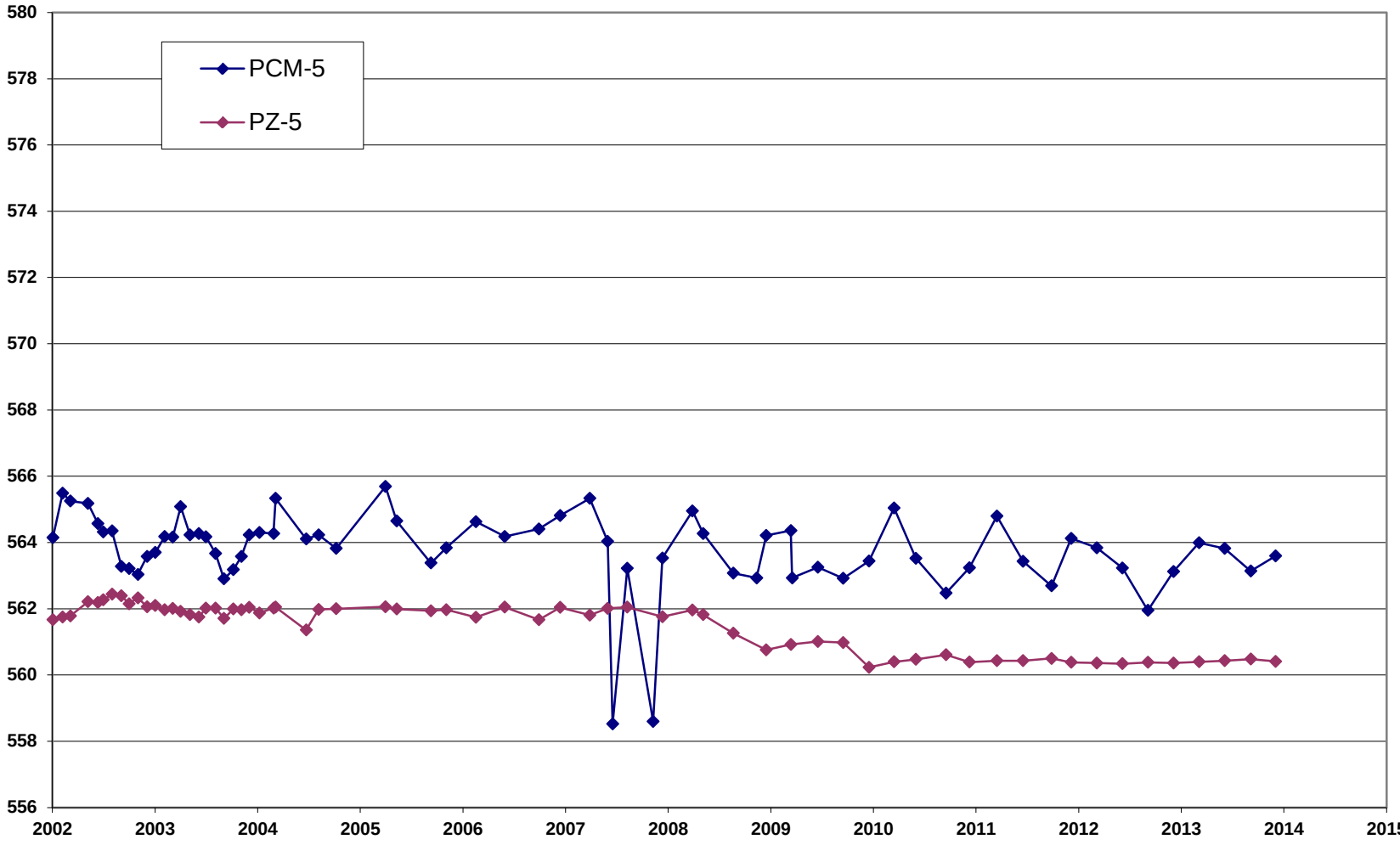


figure C.5
GROUNDWATER LEVELS WELL PAIR 5
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

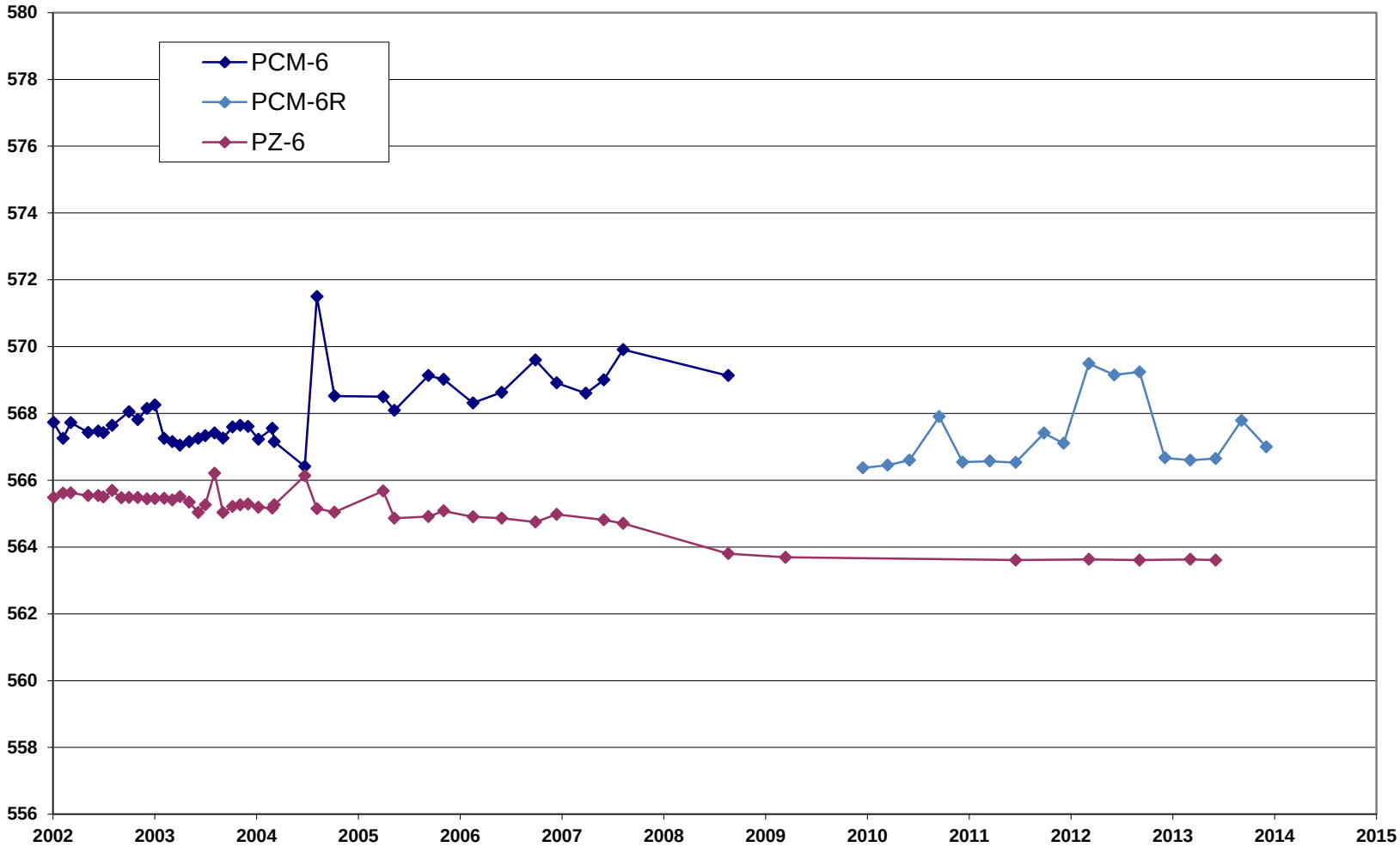


figure C.6
GROUNDWATER LEVELS WELL PAIR 6
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

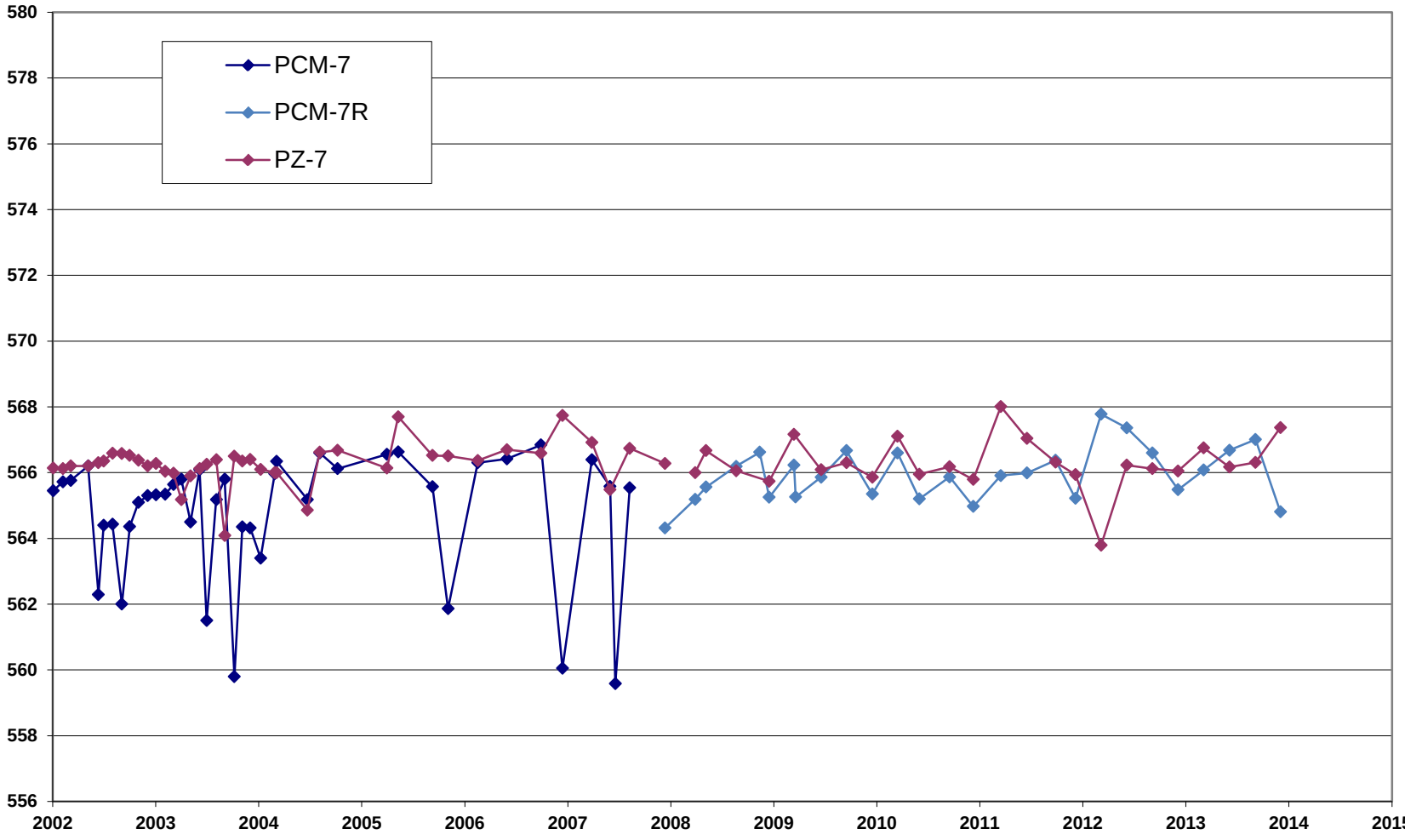


figure C.7
GROUNDWATER LEVELS WELL PAIR 7
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

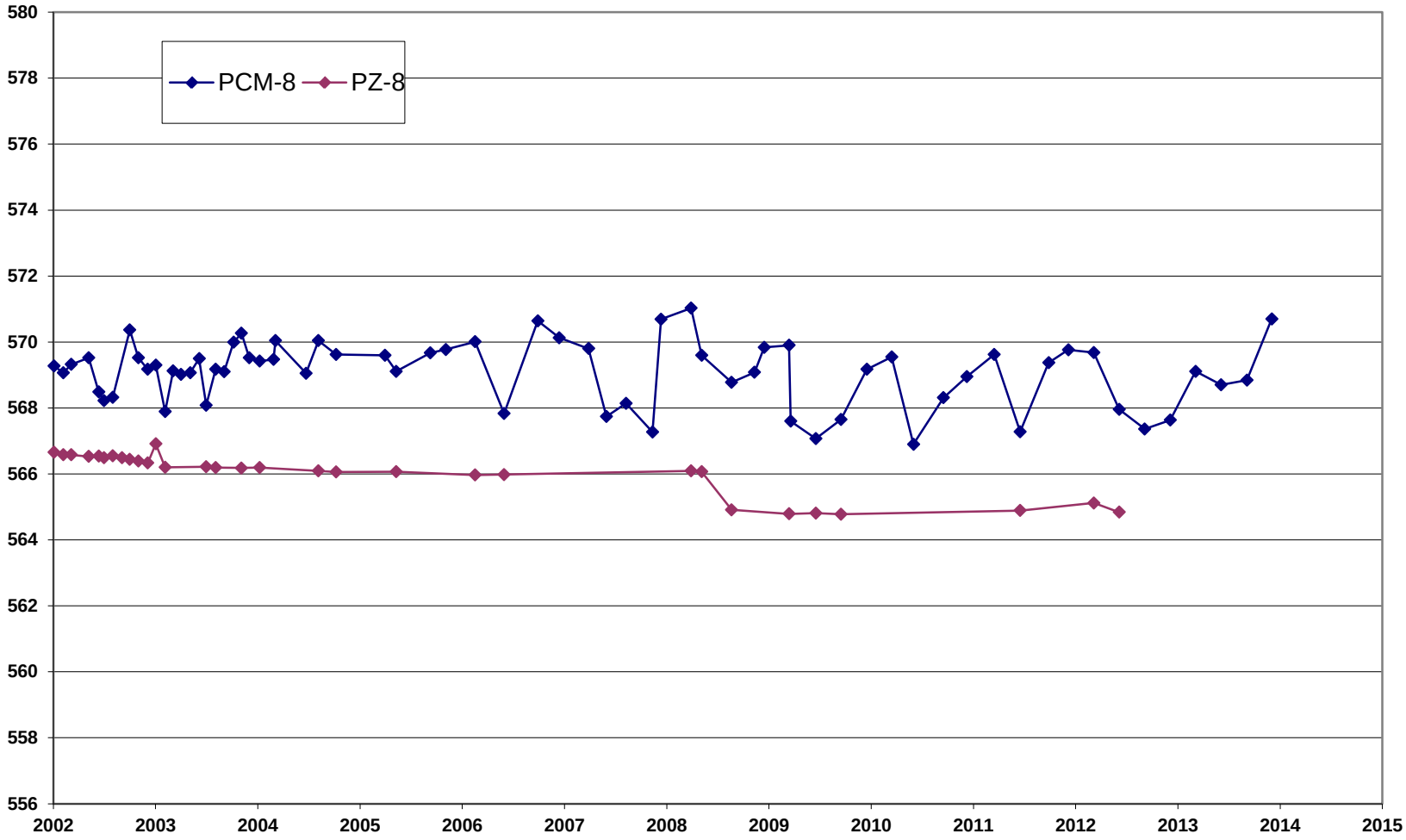


figure C.8
GROUNDWATER LEVELS WELL PAIR 8
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

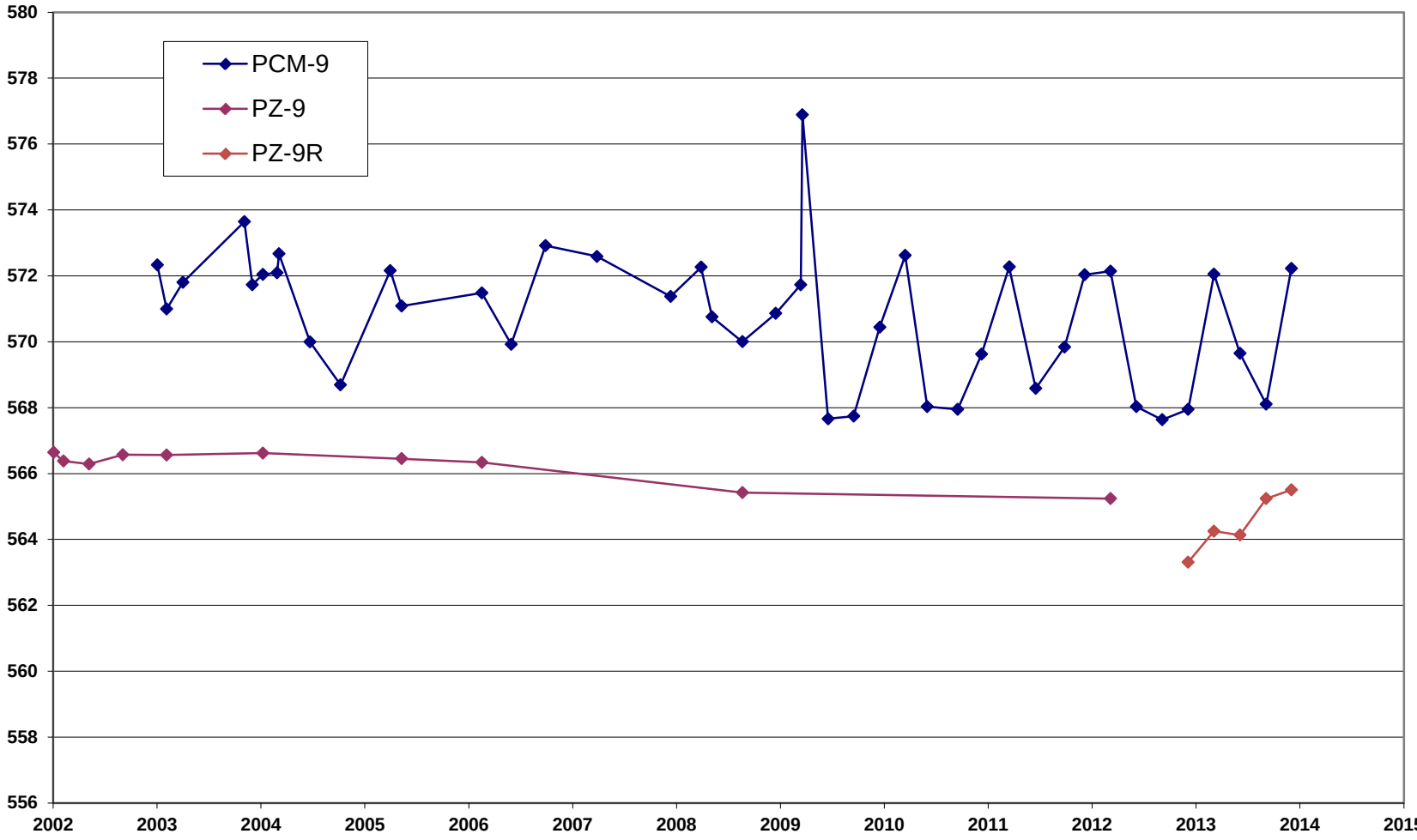


figure C.9
GROUNDWATER LEVELS WELL PAIR 9
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

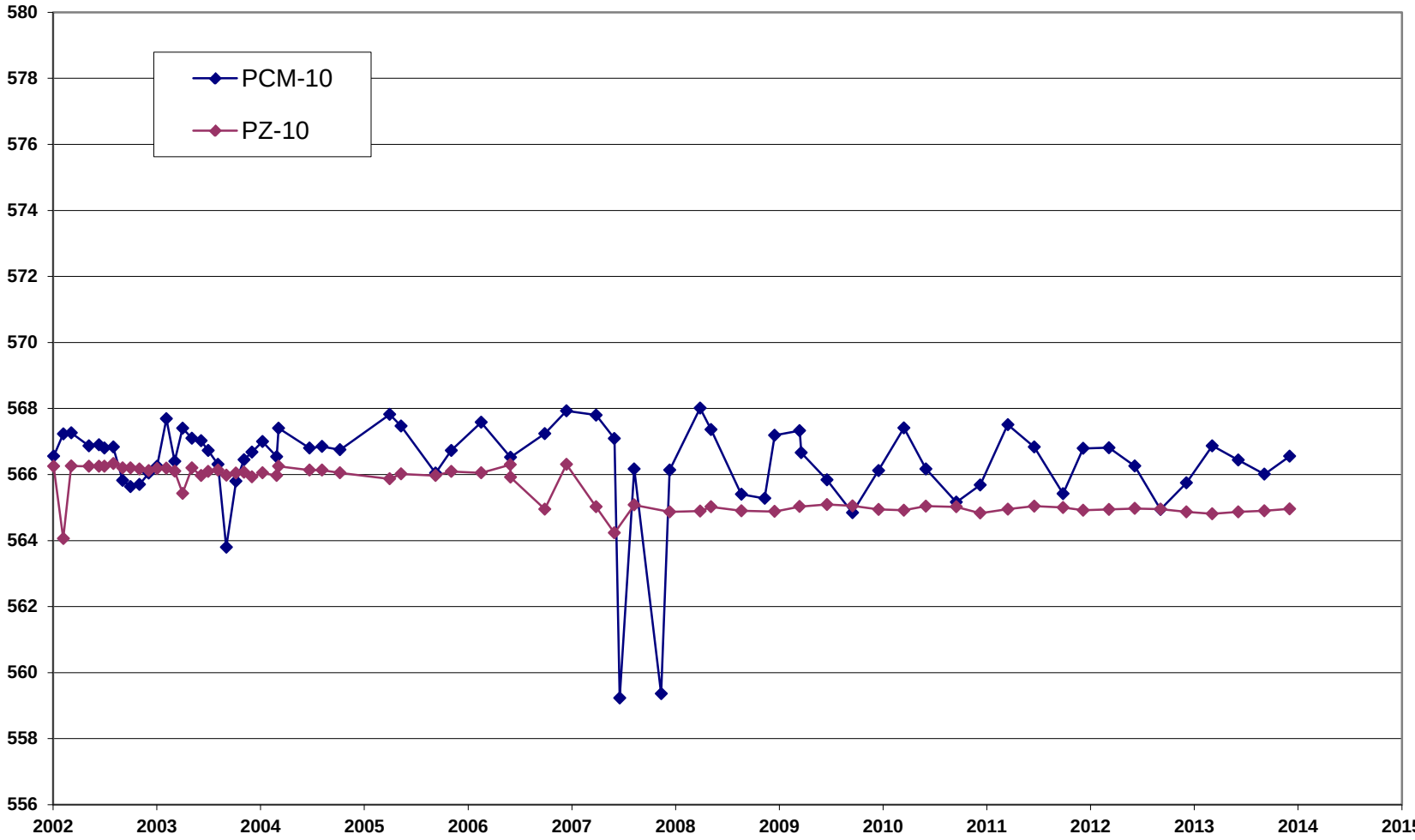


figure C.10
GROUNDWATER LEVELS WELL PAIR 10
102ND STREET LANDFILL SITE
GLENN SPRINGS HOLDINGS, INC
Niagara Falls, New York

Appendix D

Historic Groundwater Monitoring Results

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*
Sample ID:		*PCBM-01-502*	*PCBM-01-802*	*PCM-12-802*	*PCBM-01-1202*	*PCBM-01-303*	*PCBM-01-603*	*PCBM-01-903*	*PCBM-01-1203*	*PCBM-01-304*
Sample Date:		*5/31/2002*	*8/29/2002*	*8/29/2002 (Duplicate)*	*12/10/2002*	*3/31/2003*	*6/23/2003*	*9/29/2003*	*12/23/2003*	*3/11/2004*
Parameters	***Units***									
Volatile Organic Compounds										
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Benzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Semi-volatile Organic Compounds										
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	5.05 U	4.72 U	4.67 U	4.72 U	4.72 U	4.67 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.43 U	9.43 U	9.35 U
Metals										
Arsenic	µg/L	50.0 U	8.35 J	10.0 U	10.0 U	27.7	10.0 U	10.0 U	10.0 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-	-	-	-
Pesticides										
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0377 U	0.0374 U
beta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0472 U	0.0467 U
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0566 U	0.0561 U
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0377 U	0.0374 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*
Sample ID:		*PCBM-01-1204*	*PCBM-01-605*	*PCM-12-605*	*PCBM-01-1005*	*PCBM-01-606*	*PCM-12-606*	*PCBM-01-1206*	*PCBM-01-607*
Sample Date:		*12/13/2004*	*6/21/2005*	*6/21/2005 (Duplicate)*	*10/18/2005*	*6/26/2006*	*6/26/2006 (Duplicate)*	*12/14/2006*	*6/14/2007*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
1,2-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
1,4-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
2-Chlorotoluene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.22 J	.5 U
Benzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
Chlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	.5 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	4.67 U	10 U	10 U	10.0 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	9.35 U	10 U	10 U	10.0 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	9.35 U	10 U	10 U	10.0 U	10 U	10 U	10 U	10 U
2,5-Dichlorophenol	µg/L	9.35 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	9.35 U	10 U	10 U	10.0 U	10 U	10 U	10 U	10 U
4-Chlorophenol	µg/L	9.35 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	9.35 U	10 U	10 U	10.0 U	10 U	10 U	10 U	10 UJ
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U	10 U
Mercury	µg/L	-	-	-	-	-	-	-	.2 U
Pesticides									
alpha-BHC	µg/L	0.0377 U	0.013 U	0.013 U	0.063 UJ	.013 U	.013 U	.039 J	0.042 J
beta-BHC	µg/L	0.0472 U	0.025 U	0.025 U	0.13 J	.025 U	.025 U	.05 U	0.013 J
delta-BHC	µg/L	0.0566 U	0.013 U	0.013 U	0.013 U	.013 U	.013 U	.014 J	0.02 J
gamma-BHC (lindane)	µg/L	0.0377 U	0.013 U	0.013 U	0.013 U	.013 U	.013 U	.022 J	0.029 J

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*
Sample ID:		*PCBM-01-1107*	*PCBM-01-0508*	*PCBM-01-1108*	*PCBM-01-309*	*PCM-13-309*	*PCBM-011009*	*PCBM-01-310*	*PCM-12*	*PCBM-01-1010*
Sample Date:		*11/8/2007*	*5/21/2008*	*11/11/2008*	*3/18/2009*	*3/18/2009 (Duplicate)*	*10/21/2009*	*4/6/2010*	*4/6/2010 (Duplicate)*	*10/9/2010*
Parameters	***Units***									
Volatile Organic Compounds										
1,2,3-Trichlorobenzene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	2.5 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.98 J	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds										
1,2,4,5-Tetrachlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
2,5-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
2-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
4-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
Phenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U	9.6 U
Metals										
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U	10.0 U	10.0 U	10.0 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.26 U	0.20 U	0.20 U
Pesticides										
alpha-BHC	µg/L	0.054	0.25 U	0.01 J	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U
beta-BHC	µg/L	0.013 J	0.56	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U
delta-BHC	µg/L	0.017 J	0.81	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.033 J	0.25 U	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*	*PCBM-01*
Sample ID:		*PCM-12-1010*	*PCBM-01-0411*	*PCBM-01-1011*	*PCBM-01-1012*	*PCBM-01-1013*
Sample Date:		*10/9/2010 (Duplicate)*	*4/13/2011*	*10/19/2011*	*10/2/2012*	*10/3/2013*
Parameters	***Units***					
Volatile Organic Compounds						
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds						
1,2,4,5-Tetrachlorobenzene	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
2,4-Dichlorophenol	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
2,5-Dichlorophenol	µg/L	9.4 U	9.4 U	9.5 UJ	9.5 U	9.6 U
2-Chlorophenol	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
4-Chlorophenol	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
Phenol	µg/L	9.4 U	9.4 U	9.5 U	9.5 U	9.6 U
Metals						
Arsenic	µg/L	10.0 U	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides						
alpha-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
beta-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
delta-BHC	µg/L	0.048 U	0.048 U	0.055	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*
Sample ID:		*PCBM-02-602*	*PCBM-02-802*	*PCBM-02-1202*	*PCBM-02-303*	*PCBM-02-603*	*PCBM-02-903*	*PCBM-02-1203*	*PCBM-02-304*
Sample Date:		*6/4/2002*	*8/29/2002*	*12/12/2002*	*3/31/2003*	*6/26/2003*	*9/30/2003*	*12/29/2003*	*3/15/2004*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	1.78 U	1.00 U	1.00 U	1.00 U	0.513 J	0.285 J
Benzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.855 J	1.00 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	4.72 U	4.67 U	4.72 U	4.76 U	4.76 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.52 U	9.52 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	30.7	4.39 J	10.0 U	10.0 U	9.84 J
Mercury	µg/L	-	-	-	-	-	-	-	-
Pesticides									
alpha-BHC	µg/L	0.0510 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0374 U	0.0377 U
beta-BHC	µg/L	0.0510 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U	0.0472 U
delta-BHC	µg/L	0.0510 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0561 U	0.0566 U
gamma-BHC (lindane)	µg/L	0.0510 U	0.0500 U	0.0500 U	0.0467 U	0.0467 U	0.0467 U	0.0374 U	0.0377 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*
Sample ID:		*PCBM-02-1204*	*PCBM-02-605*	*PCBM-02-1005*	*PCBM-02-706*	*PCBM-02-1206*	*PCM-12-1206*	*PCBM-02-607*	*PCBM-02-1107*
Sample Date:		*12/14/2004*	*6/22/2005*	*10/19/2005*	*7/5/2006*	*12/13/2006*	*12/13/2006 (Duplicate)*	*6/18/2007*	*11/9/2007*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.50 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.18 J
1,2-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.50 U
1,4-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.50 U
2-Chlorotoluene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	1.2 U
Benzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.50 U
Chlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	6.3 U	0.50 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	4.81 U	10 U	10.0 U	10 U	10 U	10 U	10 U	5.0 U
2,4,5-Trichlorophenol	µg/L	9.62 U	10 U	10.0 U	10 U	10 U	10 U	10 U	5.0 U
2,4-Dichlorophenol	µg/L	9.62 U	10 U	10.0 U	10 U	10 U	10 U	10 U	5.0 U
2,5-Dichlorophenol	µg/L	9.62 U	10 U	10 U	10 U	10 U	10 U	10 U	5.0 U
2-Chlorophenol	µg/L	9.62 U	10 U	10.0 U	10 U	10 U	10 U	10 U	5.0 U
4-Chlorophenol	µg/L	9.62 U	10 U	10 U	10 U	10 U	10 U	10 U	5.0 U
Phenol	µg/L	9.62 U	10 U	10.0 U	10 U	10 U	10 U	10 U	5.0 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U	10 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-	.2 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.0400 U	0.013 U	0.013 U	.013 U	.05 U	.05 U	.05 U	0.050 U
beta-BHC	µg/L	0.0500 U	0.025 U	0.025 U	.025 U	.05 U	.05 U	.05 U	0.050 U
delta-BHC	µg/L	0.0600 U	0.013 U	0.013 U	.013 U	.05 U	.05 U	.05 U	0.050 UJ
gamma-BHC (lindane)	µg/L	0.0400 U	0.013 U	0.013 U	.013 U	.05 U	.05 U	.05 U	0.050 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*	*PCBM-02*
Sample ID:		*PCM-12-1107*	*PCBM-02-0508*	*PCBM-02-1108*	*PCBM-02-309*	*PCBM-021009*	*PCM-121009*	*PCBM-02-310*	*PCBM-02-1010*
Sample Date:		*11/9/2007*	*5/22/2008*	*11/11/2008*	*3/18/2009*	*10/21/2009*	*10/21/2009*	*4/6/2010*	*10/9/2010*
		(Duplicate)					*(Duplicate)*		
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
2,5-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
2-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
4-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
Phenol	µg/L	5.0 U	5.0 UJ	5.0 U	10 U	10 U	10 U	9.4 U	9.5 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10 U	3.3 J	2.0 J	10.0 U	10.0 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U
beta-BHC	µg/L	0.050 U	0.050 U	0.031 J	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U
delta-BHC	µg/L	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.048 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		***PCBM-02***	***PCBM-02***	***PCBM-02***	***PCBM-02***
Sample ID:		***PCBM-02-0411***	***PCBM-02-1011***	***PCBM-02-1012***	***PCBM-02-1013***
Sample Date:		***4/13/2011***	***10/18/2011***	***10/2/2012***	***10/3/2013***
Parameters	***Units***				
Volatile Organic Compounds					
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds					
1,2,4,5-Tetrachlorobenzene	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
2,4,5-Trichlorophenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
2,4-Dichlorophenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
2,5-Dichlorophenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
2-Chlorophenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
4-Chlorophenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
Phenol	µg/L	9.5 U	9.6 U	9.7 U	9.6 U
Metals					
Arsenic	µg/L	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides					
alpha-BHC	µg/L	0.047 U	0.047 U	0.048 U	0.048 U
beta-BHC	µg/L	0.047 U	0.047 U	0.048 U	0.048 U
delta-BHC	µg/L	0.047 UJ	0.047 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.047 UJ	0.047 U	0.048 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*
Sample ID:		*PCBM-03-502*	*PCBM-03-802*	*PCBM-03-1202*	*PCBM-03-303*	*PCBM-03-603*	*PCBM-03-1003*	*PCBM-03-1203*	*PCM-12-1203*
Sample Date:		*6/3/2002*	*8/30/2002*	*12/13/2002*	*4/1/2003*	*6/24/2003*	*10/1/2003*	*12/30/2003*	*12/30/2003 (Duplicate)*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.24 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	1.08 U	1.00 U	1.00 U	3.54 U	1.00 U	0.398 J
Benzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	4.67 U	4.67 U	4.67 U	4.67 U	4.67 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
Phenol	µg/L	10.0 U	9.86 J	10.0 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U
Metals									
Arsenic	µg/L	50.0 U	9.20 J	10.0 U	31.1	10.0 U	10.0 U	10.0 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-	-	-
Pesticides									
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0476 U	0.0467 U	0.0467 U	0.0374 U	0.0374 U
beta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0476 U	0.0467 U	0.0467 U	0.0467 U	0.0467 U
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0476 U	0.0467 U	0.0467 U	0.0561 U	0.0561 U
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0590	0.0467 U	0.0467 U	0.0374 U	0.0374 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*
Sample ID:		*PCBM-03-304*	*PCM-12-304*	*PCBM-03-1204*	*PCBM-03-605*	*PCBM-03-1005*	*PCBM-03-706*	*PCBM-03-1206*	*PCBM-03-607*
Sample Date:		*4/14/2004*	*4/14/2004 (Duplicate)*	*12/15/2004*	*6/27/2005*	*10/31/2005*	*7/6/2006*	*12/12/2006*	*6/19/2007*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
2-Chlorotoluene	µg/L	1.00 U	1.00 U	1.00 U	0.26 J	0.50 U	.37 J	.5 U	.5 U
Benzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
Chlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	4.67 U	5.05 U	5.05 U	10 U	10.0 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10.0 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10.0 U	10 U	10 U	10 U
2,5-Dichlorophenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10.0 U	10 U	10 U	10 U
4-Chlorophenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	9.35 U	10.1 U	10.1 U	10 U	10.0 U	10 U	10 U	10 UJ
Metals									
Arsenic	µg/L	9.39 J	10.0 U	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U
Mercury	µg/L	-	-	-	-	-	-	-	.2 U
Pesticides									
alpha-BHC	µg/L	0.0374 UJ	0.0374 UJ	0.0400 U	0.019	R	.013 U	.05 U	.05 U
beta-BHC	µg/L	0.0467 UJ	0.0467 UJ	0.0500 U	0.025 U	R	.016 J	.05 U	.05 U
delta-BHC	µg/L	0.0561 UJ	0.0561 UJ	0.0600 U	0.013 U	R	.013 U	.05 U	.05 U
gamma-BHC (lindane)	µg/L	0.0374 UJ	0.0374 UJ	0.0400 U	0.012 J	R	.013 U	.05 U	.05 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*
Sample ID:		*PCBM-03-1107*	*PCBM-03-0508*	*PCBM-03-1108*	*PCBM-03-309*	*PCBM-031009*	*PCBM-03-310*	*PCBM-03-1010*	*PCBM-03-0411*
Sample Date:		*11/12/2007*	*5/23/2008*	*11/10/2008*	*3/18/2009*	*10/21/2009*	*4/6/2010*	*10/9/2010*	*4/14/2011*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	0.50 U	2.5 U	0.10 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.50 U	2.5 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
2,5-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
2-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
4-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
Phenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.4 U	9.4 U	9.5 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10 U	3.4 J	10.0 U	10.0 U	10.0 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.047 U	0.048 U	0.048 U
beta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.16	0.048 U	0.048 U
delta-BHC	µg/L	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.047 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.047 U	0.048 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*	*PCBM-03*
Sample ID:		*PCM-12-0411*	*PCBM-03-1011*	*PCM-12-1011*	*PCBM-03-1012*	*PCM-12-1012*	*PCBM-03-1013*	*PCM-12-1013*
Sample Date:		*4/14/2011*	*10/19/2011*	*10/19/2011*	*10/1/2012*	*10/1/2012*	*10/9/2013*	*10/9/2013*
		(Duplicate)		*(Duplicate)*		*(Duplicate)*		*(Duplicate)*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
2,5-Dichlorophenol	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	9.5 U	17 J	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
4-Chlorophenol	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
Phenol	µg/L	9.5 U	48 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U
Metals								
Arsenic	µg/L	10.0 U	3.9 J	10 U	10 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides								
alpha-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U
beta-BHC	µg/L	0.048 U	0.054	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U
delta-BHC	µg/L	0.048 U	0.52	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U
gamma-BHC (lindane)	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U	0.047 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*
Sample ID:		*PCM-01-502*	*PCM-01-802*	*PCM-01-1202*	*PCM-01-303*	*PCM-01-603*	*PCM-01-1003*	*PCM-01-1203*
Sample Date:		*6/3/2002*	*8/29/2002*	*12/18/2002*	*4/1/2003*	*6/27/2003*	*10/1/2003*	*12/31/2003*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.751 J
Benzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	4.67 U	4.67 U	4.67 U	4.72 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	9.35 U	9.35 U	9.35 U	9.43 U
Metals								
Arsenic	µg/L	50.0 U	100 U	20.0 U	20.0 U	7.45 J	10.0 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0146 J	0.0500 U	0.0500 U	0.0623	0.0467 U	0.0467 U	0.0374 U
beta-BHC	µg/L	0.141	0.0500 U	0.0500 U	0.0472 U	0.0467 U	0.0467 U	0.0467 U
delta-BHC	µg/L	0.864	0.0500 U	0.0500 U	0.0613	0.0467 U	0.0467 U	0.0561 U
gamma-BHC (lindane)	µg/L	0.0103 J	0.0500 U	0.0500 U	0.0472 U	0.0467 U	0.0467 U	0.0374 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*
Sample ID:		*PCM-01-304*	*PCM-01-1204*	*PCM-01-605*	*PCM-01-1005*	*PCM-01-706*	*PCM-01-1206*	*PCM-01-607*
Sample Date:		*4/13/2004*	*12/16/2004*	*6/23/2005*	*10/27/2005*	*7/7/2006*	*12/12/2006*	*6/19/2007*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	0.50 U	0.50 U	.12 J	.5 U	.5 U
2-Chlorotoluene	µg/L	0.332 J	1.00 U	0.50 U	0.19 J	.5 U	.5 U	.5 U
Benzene	µg/L	1.00 U	1.00 U	0.50 U	0.17 J	.5 U	.5 U	.5 U
Chlorobenzene	µg/L	1.00 U	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	5.05 U	5.05 U	10 U	10.5 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	10.1 U	10.1 U	10 U	10.5 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10.1 U	10.1 U	10 U	10.5 U	10 U	10 U	10 U
2,5-Dichlorophenol	µg/L	10.1 U	10.1 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	10.1 U	10.1 U	10 U	10.5 U	10 U	10 U	10 U
4-Chlorophenol	µg/L	10.1 U	10.1 U	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	10.1 U	10.1 U	10 U	10.5 U	10 U	10 U	10 UJ
Metals								
Arsenic	µg/L	10.0 U	10.0 U	5.6 J	2.6 J	10 U	10 U	10 U
Mercury	µg/L	-	-	-	-	-	-	.2 U
Pesticides								
alpha-BHC	µg/L	0.0551 J	0.0404 UJ	0.051 J	R	.013 U	.05 UJ	.05 UJ
beta-BHC	µg/L	0.0505 UJ	0.0505 UJ	0.025 UJ	R	.025 U	.05 UJ	.05 UJ
delta-BHC	µg/L	0.0669 J	0.0606 UJ	0.012 J	R	.013 U	.05 UJ	.05 UJ
gamma-BHC (lindane)	µg/L	0.0404 UJ	0.0404 UJ	0.024 J	R	.013 U	.05 UJ	.05 UJ

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*
Sample ID:		*PCM-01-1107*	*PCM-01-0508*	*PCM-01-1108*	*PCM-01-309*	*PCM-011009*	*PCM-01-310*
Sample Date:		*11/13/2007*	*5/27/2008*	*11/10/2008*	*3/18/2009*	*10/21/2009*	*4/13/2010*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.50 UJ	0.50 UJ	0.50 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
2,4,5-Trichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
2,4-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
2,5-Dichlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
2-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
4-Chlorophenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
Phenol	µg/L	5.0 U	5.0 U	5.0 U	10 U	10 U	9.6 U
Metals							
Arsenic	µg/L	10.0 U	10.0 U	10.0 UJ	10 U	3.8 J	7.1 J
Mercury	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U
Pesticides							
alpha-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.048 U
beta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.048 U
delta-BHC	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 UJ	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*	*PCM-01*
Sample ID:		*PCM-01-1010*	*PCM-01-0411*	*PCM-01-1011*	*PCM-01-1012*	*PCM-01-1013*
Sample Date:		*10/11/2010*	*4/14/2011*	*10/19/2011*	*10/2/2012*	*10/9/2013*
Parameters	***Units***					
Volatile Organic Compounds						
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds						
1,2,4,5-Tetrachlorobenzene	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
2,4-Dichlorophenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
2,5-Dichlorophenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
2-Chlorophenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
4-Chlorophenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
Phenol	µg/L	9.4 U	9.5 U	9.6 U	9.5 U	9.5 U
Metals						
Arsenic	µg/L	6.6 J	10.0 U	2.9 J	10 U	10 U
Mercury	µg/L	0.060 J	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides						
alpha-BHC	µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.048 U
beta-BHC	µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.048 U
delta-BHC	µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.048 U
gamma-BHC (lindane)	µg/L	0.047 U	0.048 U	0.047 U	0.047 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*
Sample ID:		*PCM-02-502*	*PCM-12-502*	*PCM-02-802*	*PCM-02-1202*	*PCM-02-303*	*PCM-02-603*
Sample Date:		*6/3/2002*	*6/3/2002 (Duplicate)*	*8/28/2002*	*12/17/2002*	*3/31/2003*	*6/26/2003*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	0.246 J
2-Chlorotoluene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U
Benzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	1.00 U	1.00 U	0.178 J
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	5.00 U	4.72 U	4.67 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U
Metals							
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-
Pesticides							
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0505 U	0.0660	0.0467 U
beta-BHC	µg/L	0.0500 U	0.00720 J	0.0500 U	0.0505 U	0.0472 U	0.0467 U
delta-BHC	µg/L	0.0500 U	0.0384 J	0.0500 U	0.0505 U	0.0783	0.0467 U
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0467 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*
Sample ID:		*PCM-02-1003*	*PCM-02-1203*	*PCM-02-1204*	*PCM-02-605*	*PCM-02-1005*	*PCM-02-706*
Sample Date:		*10/2/2003*	*12/30/2003*	*12/16/2004*	*6/23/2005*	*10/27/2005*	*7/7/2006*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	.5 U
1,4-Dichlorobenzene	µg/L	1.00 U	0.221 J	1.00 U	0.50 U	0.50 U	.26 J
2-Chlorotoluene	µg/L	1.00 U	0.639 J	1.00 U	0.27 J	0.15 J	.5 U
Benzene	µg/L	1.00 U	1.00 U	1.00 U	0.20 J	0.16 J	.15 J
Chlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	0.50 U	0.16 J	.22 J
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	4.67 U	4.72 U	5.05 U	10 U	10.0 U	10 U
2,4,5-Trichlorophenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10.0 U	10 U
2,4-Dichlorophenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10.0 U	10 U
2,5-Dichlorophenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10.0 U	10 U
4-Chlorophenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10 U	10 U
Phenol	µg/L	9.35 U	9.43 U	10.1 U	10 U	10.0 U	10 U
Metals							
Arsenic	µg/L	12.1 U	14.4	10.0 U	7.2 J	10.0 U	10 U
Mercury	µg/L	-	-	-	-	-	-
Pesticides							
alpha-BHC	µg/L	0.0541 U	0.0374 U	0.0404 UJ	0.019 J	R	.0047 J
beta-BHC	µg/L	0.0748 J	0.0467 U	0.0505 UJ	0.025 UJ	0.0074 J	.025 U
delta-BHC	µg/L	0.0991 J	0.0561 U	0.0606 UJ	0.013 UJ	R	.008 J
gamma-BHC (lindane)	µg/L	0.0467 U	0.0374 U	0.0404 UJ	0.0064 J	R	.013 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*
Sample ID:		*PCM-02-1206*	*PCM-02-607*	*PCM-02-1107*	*PCM-02-0508*	*PCM-02-1108*	*PCM-02-309*
Sample Date:		*12/12/2006*	*6/14/2007*	*11/8/2007*	*5/27/2008*	*11/11/2008*	*3/18/2009*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	.5 U	.5 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	.5 U	.5 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2-Dichlorobenzene	µg/L	.5 U	.5 U	0.50 U	0.50 U	0.50 U	1.0 U
1,4-Dichlorobenzene	µg/L	.2 J	0.27 J	0.33 J	0.50 U	0.20 J	1.0 U
2-Chlorotoluene	µg/L	.5 U	.5 U	0.85 U	0.50 U	0.50 U	1.0 U
Benzene	µg/L	.5 U	0.14 J	0.19 J	0.50 U	0.13 J	1.0 U
Chlorobenzene	µg/L	.19 J	.5 U	0.50 U	0.21 J	0.19 J	1.0 U
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
2,5-Dichlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
2-Chlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
4-Chlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
Phenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U
Metals							
Arsenic	µg/L	10 U	10 U	11.2	10.0 U	10.0 U	10 U
Mercury	µg/L	-	.2 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides							
alpha-BHC	µg/L	.05 UJ	.05 UJ	0.050 U	0.050 UJ	0.050 U	0.050 U
beta-BHC	µg/L	.05 UJ	.05 UJ	0.01 J	0.050 UJ	0.050 U	0.050 U
delta-BHC	µg/L	.05 UJ	.05 UJ	0.050 U	0.050 UJ	0.050 U	0.050 U
gamma-BHC (lindane)	µg/L	.05 UJ	.05 UJ	0.050 U	0.050 UJ	0.050 U	0.050 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*	*PCM-02*
Sample ID:		*PCM-021009*	*PCM-02-310*	*PCM-02-1010*	*PCM-02-0411*	*PCM-02-1011*	*PCM-02-1012*	*PCM-02-1013*
Sample Date:		*10/23/2009*	*4/13/2010*	*10/11/2010*	*4/15/2011*	*10/19/2011*	*10/2/2012*	*10/9/2013*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	0.12 J	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	0.16 J	1.0 U	0.16 J	0.14 J	1.0 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
2,4,5-Trichlorophenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
2,4-Dichlorophenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
2,5-Dichlorophenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
2-Chlorophenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
4-Chlorophenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
Phenol	µg/L	10 U	9.7 U	9.5 U	9.5 U	9.7 U	9.6 U	9.7 U
Metals								
Arsenic	µg/L	10 U	4.6 J	2.7 J	10.0 U	2.8 J	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides								
alpha-BHC	µg/L	0.050 U	0.048 U	0.045 J	0.048 U	0.048 U	0.047 U	0.047 U
beta-BHC	µg/L	0.050 U	0.048 U	0.047 U	0.048 U	0.048 U	0.047 U	0.047 U
delta-BHC	µg/L	0.050 U	0.048 U	0.047 U	0.048 U	0.048 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.050 U	0.048 U	0.047 U	0.048 U	0.048 U	0.047 U	0.047 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*
Sample ID:		*PCM-03-502*	*PCM-03-802*	*PCM-03-1202*	*PCM-12-1202*	*PCM-03-303*	*PCM-12-303*	*PCM-03-603*
Sample Date:		*5/31/2002*	*8/28/2002*	*12/12/2002*	*12/12/2002 (Duplicate)*	*3/28/2003*	*3/28/2003 (Duplicate)*	*6/18/2003*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	125 U	100 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	125 U	100 U	10.0 U	10.0 U	1.00 U	20.0 U	1.00 U
1,2-Dichlorobenzene	µg/L	71.1 J	63.4 J	86.9	84.7	99.8	79.0	95.4
1,4-Dichlorobenzene	µg/L	217	199	291	281	280	273	267
2-Chlorotoluene	µg/L	125 U	100 U	9.36 U	9.91 U	11.4	20.0 U	8.93
Benzene	µg/L	82.6 J	82.4 J	133	131	131	105	107
Chlorobenzene	µg/L	3600	3810	3590	3790	3860	3830	3540
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 UJ	5.00 U	5.00 U	4.72 U	4.72 U	4.72 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.43 U	9.43 U
2,4-Dichlorophenol	µg/L	17.1	10.0 U	3.20 J	10.0 U	15.3	7.25 J	15.2 J
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	9.43 U	9.43 U	9.43 U
2-Chlorophenol	µg/L	42.7	4.51 J	5.40 J	4.20 J	12.8	7.40 J	27.4 J
4-Chlorophenol	µg/L	84.7	15.4	10.0 U	10.0 U	28.9	17.0	53.5 J
Phenol	µg/L	5.10 J	10.0 U	10.0 U	10.0 U	9.43 U	9.43 U	3.79 J
Metals								
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0501 U	0.0688	0.0685	0.0469 U
beta-BHC	µg/L	0.0500 U	0.0820	0.107	0.0870	0.133	0.130	3.75 J
delta-BHC	µg/L	0.0500 U	0.679	0.666 J	0.353 J	1.28	1.25	1.13 J
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0500 U	0.0472 U	0.0472 U	0.0469 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*
Sample ID:		*PCM-03-903*	*PCM-03-1203*	*PCM-03-304*	*PCM-03-1204*	*PCM-03-605*	*PCM-03-1005*	*PCM-03-606*
Sample Date:		*9/29/2003*	*12/23/2003*	*3/11/2004*	*12/13/2004*	*6/21/2005*	*10/18/2005*	*6/26/2006*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	0.50 U	36 J	25 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	0.412 J	1.00 U	1.00 U	0.22 J	41 J	25 U
1,2-Dichlorobenzene	µg/L	99.9	117	77.6	72.4	73 J	87 J	11 J
1,4-Dichlorobenzene	µg/L	252	250	207	181	280	300	47
2-Chlorotoluene	µg/L	10.4 U	12.5	8.24	8.10	9.5 J	28 J	25 U
Benzene	µg/L	94.2	141	99.8	72.8	73 J	61 J	8.9 J
Chlorobenzene	µg/L	3640	3550	3010	2890	4100	4000	680
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	4.72 U	4.76 U	4.72 U	4.67 U	10 U	10.0 U	10 U
2,4,5-Trichlorophenol	µg/L	9.43 U	9.52 U	9.43 U	9.35 U	10 U	10.0 U	10 U
2,4-Dichlorophenol	µg/L	10.8	22.6	25.6	9.35 U	11	6.62 J	3.5 J
2,5-Dichlorophenol	µg/L	9.43 U	9.52 U	9.43 U	17.1	10 U	10 U	10 U
2-Chlorophenol	µg/L	10.9	34.2	28.0	21.0	21	11.4	8.3 J
4-Chlorophenol	µg/L	21.9	70.6	59.1	41.8	60	20	10 U
Phenol	µg/L	9.43 U	4.32 J	4.84 J	9.35 U	0.56 J	0.628 J	10 U
Metals								
Arsenic	µg/L	7.34 J	8.61 J	10.0 U	10.0 U	10.0 UJ	10.0 U	10 U
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0509 U	0.0377 U	0.0374 UJ	0.0377 U	0.026 J	0.025 U	.019
beta-BHC	µg/L	0.0467 U	0.126	0.0467 UJ	0.236 U	0.34 J	0.28	.29
delta-BHC	µg/L	0.848	1.16	0.933 J	1.12 U	0.25 J	0.44	.65
gamma-BHC (lindane)	µg/L	0.0467 U	0.0377 U	0.0374 UJ	0.0377 U	0.013 UJ	0.013 U	.013 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*
Sample ID:		*PCM-03-1206*	*PCM-03-607*	*PCM-03-1107*	*PCM-03-0508*	*PCM-12-0508*	*PCM-03-1108*
Sample Date:		*12/14/2006*	*6/14/2007*	*11/8/2007*	*5/21/2008*	*5/21/2008 (Duplicate)*	*11/11/2008*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	25 U	250 U	130 U	130 U	130 U	130 U
1,2,4-Trichlorobenzene	µg/L	25 U	250 U	130 U	51 J	130 U	130 U
1,2-Dichlorobenzene	µg/L	66	68 J	67 J	130 U	130 U	87 J
1,4-Dichlorobenzene	µg/L	260	300	310	440	430	380
2-Chlorotoluene	µg/L	8.5 J	250 U	130 U	130 U	130 U	130 U
Benzene	µg/L	47	70 J	48 J	47 J	51 J	73 J
Chlorobenzene	µg/L	2700	3900	4000	4300	4300	4000
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	8 J	15	16	28	26	12
2,5-Dichlorophenol	µg/L	10 U	10 U	5.0 U	5.0 U	7.5	22
2-Chlorophenol	µg/L	12	20	19	37	35	13
4-Chlorophenol	µg/L	26	44	5.0 U	77	67	29
Phenol	µg/L	10 U	10 U	0.72 J	5.0 U	1.1 J	0.58 J
Metals							
Arsenic	µg/L	10 U	10 UJ	10.0 U	10.0 U	10.0 U	10.0 U
Mercury	µg/L	-	.2 UJ	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides							
alpha-BHC	µg/L	.25 U	.5 U	0.25 U	0.25 U	0.25 U	1.0 U
beta-BHC	µg/L	.25 U	0.08 J	0.076 J	0.48	0.46	5.6
delta-BHC	µg/L	.73	0.75	0.6 J	0.6	0.68	1.1
gamma-BHC (lindane)	µg/L	.25 U	.5 U	0.25 U	0.25 U	0.25 U	1.0 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*	*PCM-03*
Sample ID:		*PCM-03-309 031809*	*PCM-031009*	*PCM-03-310*	*PCM-03-1010*	*PCM-03-0411*	*PCM-03-1011*	*PCM-03-1012*	*PCM-03-1013*
Sample Date:		*3/18/2009*	*10/23/2009*	*4/6/2010*	*10/9/2010*	*4/13/2011*	*10/19/2011*	*10/2/2012*	*10/3/2013*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	250 U	200 U	120 U	130 U	130 U	4.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	250 U	200 U	120 U	130 U	130 U	4.0 U
1,2-Dichlorobenzene	µg/L	97	90	100 J	66 J	61 J	46 J	49 J	82
1,4-Dichlorobenzene	µg/L	440	500	510	340	310	220	260	450
2-Chlorotoluene	µg/L	12 U	1.0 U	120 J	200 U	120 U	130 U	130 U	16
Benzene	µg/L	84	73	76 J	50 J	62 J	34 J	44 J	58
Chlorobenzene	µg/L	4300	4900	5000	3500	3400	3000	3200	4600
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10 U	9.4 U	9.6 U	9.5 U	9.6 U	48 U	38 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	9.4 U	9.6 U	9.5 U	9.6 U	48 U	38 U
2,4-Dichlorophenol	µg/L	28	11 J	6.0 J	18	9.5 U	9.6 U	48 U	27 J
2,5-Dichlorophenol	µg/L	6.1 J	3.9 J	9.4 U	9.6 U	13	9.6 U	48 U	38 U
2-Chlorophenol	µg/L	41	16	5.9 J	14	9.0 J	9.6 U	16 J	18 J
4-Chlorophenol	µg/L	93	71	9.0 J	31	16	9.6 U	31 J	31 J
Phenol	µg/L	4.2 J	1.3 J	9.4 U	1.7 J	0.91 J	9.6 U	48 U	38 U
Metals									
Arsenic	µg/L	10 U	10 U	5.7 J	10.0 U	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.95	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U
beta-BHC	µg/L	0.072	0.12	0.060	0.046 J	0.059	0.048 U	0.061	0.093
delta-BHC	µg/L	2.0	1.5	1.0	0.59	0.075	0.048 U	0.91	0.86
gamma-BHC (lindane)	µg/L	0.050 U	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*
Sample ID:		*PCM-04-602*	*PCM-04-802*	*PCM-04-1202*	*PCM-04-303*	*PCM-04-603*	*PCM-12-603*	*PCM-04-903*
Sample Date:		*6/4/2002*	*8/30/2002*	*12/10/2002*	*3/28/2003*	*6/23/2003*	*6/23/2003 (Duplicate)*	*9/30/2003*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	20.0 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	66.9	52.5	27.2	53.4	50.0	48.7	41.7 J
1,4-Dichlorobenzene	µg/L	261	272	154	269	259	266	267 J
2-Chlorotoluene	µg/L	5.00 U	5.00 U	20.0 U	2.73	1.57 U	1.61 U	3.25 U
Benzene	µg/L	228 J	218	143	225	204	202	185 J
Chlorobenzene	µg/L	6080	6290	4210	6210	6870	6760	7010 J
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.05 U	4.72 U	4.67 U	4.67 U	4.72 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.35 U	9.43 U
2,4-Dichlorophenol	µg/L	6.19 J	4.69 J	10.1 U	6.48 J	4.15 J	3.79 J	4.20 J
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.1 U	9.43 U	9.35 U	9.35 U	9.43 U
2-Chlorophenol	µg/L	19.3	18.8	12.4 J	23.5	20.4	20.1	18.0
4-Chlorophenol	µg/L	48.6	37.3	32.6 J	45.2	38.0	38.4	35.4
Phenol	µg/L	3.60 J	10.0 U	10.1 U	3.91 J	9.35 U	9.35 U	9.43 U
Metals								
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U	10.0 U	12.8
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0642	0.0467 U	0.0467 U	0.0479 U
beta-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0361 J	0.0467 U	0.0467 U	0.0467 U
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0467 U	0.0467 U	1.38
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0467 U	0.0467 U	0.0467 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*
Sample ID:		*PCM-04-1203*	*PCM-04-304*	*PCM-04-1204*	*PCM-04-605*	*PCM-04-1005*	*PCM-12-1005*	*PCM-04-606*
Sample Date:		*12/29/2003*	*3/12/2004*	*12/15/2004*	*6/22/2005*	*10/19/2005*	*10/19/2005 (Duplicate)*	*6/26/2006*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	250 U	13 U	13 U	250 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	250 U	13 U	13 U	250 U
1,2-Dichlorobenzene	µg/L	31.1	45.9	1.00 U	250 U	20	21	250 U
1,4-Dichlorobenzene	µg/L	240	229	245	300	250	260	330
2-Chlorotoluene	µg/L	3.17	2.45	2.13 U	250 U	13 U	13 U	250 U
Benzene	µg/L	161	195	178	140 J	85	86	69 J
Chlorobenzene	µg/L	6470	6330 J	7220	8600	6600	8000	10000
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	4.76 U	4.67 U	5.05 U	10 U	10.0 U	10.0 U	10 U
2,4,5-Trichlorophenol	µg/L	9.52 U	9.35 U	10.1 U	10 U	10.0 U	10.0 U	10 U
2,4-Dichlorophenol	µg/L	9.52 U	4.69 J	10.1 U	3.0 J	1.38 J	1.36 J	4.3 J
2,5-Dichlorophenol	µg/L	9.52 U	9.35 U	10.1 U	10 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	11.4	28.1	13.9	20	15.6	15.0	14
4-Chlorophenol	µg/L	27.9	55.3	28.3	32	42	32	34
Phenol	µg/L	9.52 U	5.67 J	10.1 U	10 U	10.0 U	10.0 U	10 U
Metals								
Arsenic	µg/L	7.61 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10 U
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0374 U	0.0374 UJ	0.0400 U	0.013 U	0.013 U	0.013 U	.013 U
beta-BHC	µg/L	0.0467 U	0.0467 UJ	0.0500 U	0.025 U	0.025 U	0.025 U	.025 U
delta-BHC	µg/L	0.895	0.0561 UJ	1.40 U	0.05	0.035	0.035	.032
gamma-BHC (lindane)	µg/L	0.0374 U	0.0374 UJ	0.0400 U	0.013 U	0.013 U	0.013 U	.013 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*
Sample ID:		*PCM-04-1206*	*PCM-04-607*	*PCM-12-607*	*PCM-04-1107*	*PCM-04-0508*	*PCM-04-1108*	*PCM-04-309*	*PCM-041009*
Sample Date:		*12/14/2006*	*6/18/2007*	*6/18/2007 (Duplicate)*	*11/9/2007*	*5/21/2008*	*11/11/2008*	*3/18/2009*	*10/23/2009*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	250 U	310 U	310 U	210 U	500 U	360 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	250 U	310 U	310 U	210 U	500 U	360 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	250 U	310 U	310 U	210 U	500 U	360 U	1.0 U	18 J
1,4-Dichlorobenzene	µg/L	260	330	320	300	400 J	400	290	300
2-Chlorotoluene	µg/L	250 U	310 U	310 U	210 U	500 U	360 U	2.1 U	1.0 U
Benzene	µg/L	65 J	110 J	100 J	48 J	500 U	360 U	41 J	25 J
Chlorobenzene	µg/L	7100	10000	11000	8600	12000	11000	10000	10000
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	10 U	5.0 U	5.0 U	5.0 U	10 U	10 U
2,4-Dichlorophenol	µg/L	1.4 J	10 U	10 U	1.2 J	1.6 J	0.88 J	1.8 J	10 U
2,5-Dichlorophenol	µg/L	1.5 J	10 U	10 U	5.0 U	2.0 J	5.0 U	1.9 J	1.4 J
2-Chlorophenol	µg/L	14	14	15	5.0 U	5.0 U	10	34	24
4-Chlorophenol	µg/L	28	26	26	25	35	30	66	49
Phenol	µg/L	10 U	10 U	10 U	5.0 U	5.0 U	5.0 U	2.4 J	7.2 J
Metals									
Arsenic	µg/L	10 U	10 U	10 U	10.0 U	10.0 U	10.0 U	10 U	10 U
Mercury	µg/L	-	0.10 J	.2 U	0.11 J	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	.05 UJ	0.0081 J	.05 U	0.050 U	0.050 U	0.25 U	0.050 U	0.050 U
beta-BHC	µg/L	.05 UJ	0.14 J	0.16	0.050 U	0.050 U	0.25 U	0.050 U	0.050 U
delta-BHC	µg/L	.057 J	.05 UJ	.05 U	0.025 J	0.12	1.1	1.2	0.050 U
gamma-BHC (lindane)	µg/L	.05 UJ	.05 UJ	.05 U	0.050 U	0.050 U	0.25 U	0.050 U	0.050 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*	*PCM-04*
Sample ID:		*PCM-04-310*	*PCM-04-1010*	*PCM-04-0411*	*PCM-04-1011*	*PCM-04-1012*	*PCM-04-1013*
Sample Date:		*4/6/2010*	*10/9/2010*	*4/13/2011*	*10/19/2011*	*10/2/2012*	*10/3/2013*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	500 U	500 U	500 U	500 U	400 U	4.0 U
1,2,4-Trichlorobenzene	µg/L	500 U	500 U	500 U	500 U	400 U	4.0 U
1,2-Dichlorobenzene	µg/L	500 U	500 U	500 U	500 U	400 U	20
1,4-Dichlorobenzene	µg/L	380 J	210 J	220 J	200 J	170 J	340
2-Chlorotoluene	µg/L	500 U	500 U	500 U	500 U	400 U	4.0 U
Benzene	µg/L	500 U	500 U	500 U	500 U	400 U	33
Chlorobenzene	µg/L	12000	7700	8400	8000	7000	10000 J
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	9.4 U	9.5 U	9.5 U	48 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.5 U	9.5 U	48 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	1.1 J	0.98 J	0.90 J	48 U	0.54 J	0.71 J
2,5-Dichlorophenol	µg/L	9.4 U	9.5 U	9.5 U	48 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	14	14	12	39 J	8.0 J	11
4-Chlorophenol	µg/L	24	27	28	48 U	18	18
Phenol	µg/L	9.4 U	9.5 U	9.5 U	48 U	9.6 U	9.6 U
Metals							
Arsenic	µg/L	3.2 J	10.0 U	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.060 J	0.11 J	0.064 J	0.071 J	0.20 U
Pesticides							
alpha-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U	0.048 U
beta-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U	0.048 U
delta-BHC	µg/L	0.10	0.13 J	0.13	0.090	0.053	0.81
gamma-BHC (lindane)	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.048 U	0.048 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*
Sample ID:		*PCM-05-602*	*PCM-05-802*	*PCM-05-1202*	*PCM-05-303*	*PCM-05-603*	*PCM-05-903*	*PCM-12-903*
Sample Date:		*6/4/2002*	*8/29/2002*	*12/12/2002*	*3/28/2003*	*6/24/2003*	*9/30/2003*	*9/30/2003 (Duplicate)*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	2.00 U	1.00 U	1.00 U	1.13 U	1.01 U
Benzene	µg/L	5.91	2.79 J	1.23	3.79	4.44	1.39	1.22
Chlorobenzene	µg/L	96.8	69.9	47.8	56.2	76.2	49.7	45.3
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	4.72 U	4.67 U	4.72 U	4.72 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	9.43 U	9.35 U	9.43 U	9.43 U
Metals								
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	15.4	18.5
Mercury	µg/L	-	-	-	-	-	-	-
Pesticides								
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0613	0.0472 U	0.0511 U	0.0471 U
beta-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0472 U	0.0467 U	0.0467 U
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0472 U	0.0467 U	0.0467 U
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0505 U	0.0472 U	0.0472 U	0.0467 U	0.0467 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*
Sample ID:		*PCM-05-1203*	*PCM-05-304*	*PCM-05-1204*	*PCM-05-605*	*PCM-05-1005*	*PCM-05-706*
Sample Date:		*12/29/2003*	*3/15/2004*	*12/14/2004*	*6/20/2005*	*10/20/2005*	*7/5/2006*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	4.2 U	3.1 U	13 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	4.2 U	3.1 U	13 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	4.2 U	3.1 U	13 U
1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	4.2 U	3.1 U	13 U
2-Chlorotoluene	µg/L	1.00 U	0.288 J	1.00 U	4.2 U	3.1 U	13 U
Benzene	µg/L	0.690 J	1.71	5.68	7.0	3.1 U	13 U
Chlorobenzene	µg/L	49.6	56.1	94.9	120	77	87
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	4.81 U	4.76 U	4.67 U	10 U	10.0 U	10 U
2,4,5-Trichlorophenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10.0 U	10 U
2,4-Dichlorophenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10.0 U	10 U
2,5-Dichlorophenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10.0 U	10 U
4-Chlorophenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10 U	1.4 J
Phenol	µg/L	9.62 U	9.52 U	9.35 U	10 U	10.0 U	10 U
Metals							
Arsenic	µg/L	7.09 J	8.71 J	10.0 U	10.0 UJ	10.0 U	10 UJ
Mercury	µg/L	-	-	-	-	-	-
Pesticides							
alpha-BHC	µg/L	0.0374 U	0.0374 U	0.0377 U	0.022	0.013 U	.013 U
beta-BHC	µg/L	0.0467 U	0.0467 U	0.0472 U	0.025 U	0.025 U	.025 U
delta-BHC	µg/L	0.0561 U	0.0561 U	0.0566 U	0.011 J	0.025	.013 U
gamma-BHC (lindane)	µg/L	0.0374 U	0.0374 U	0.0377 U	0.015	0.013 U	.013 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*
Sample ID:		*PCM-05-1206*	*PCM-05-607*	*PCM-05-1107*	*PCM-05-0508*	*PCM-05-1108*	*PCM-05-309*
Sample Date:		*12/13/2006*	*6/18/2007*	*11/9/2007*	*5/22/2008*	*11/11/2008*	*3/18/2009*
Parameters	***Units***						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	.5 U	.5 U	1.8 U	2.5 U	3.6 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	.5 U	.5 U	1.8 U	2.5 U	3.6 U	1.0 U
1,2-Dichlorobenzene	µg/L	.5 U	.5 U	1.8 U	2.5 U	3.6 U	1.0 U
1,4-Dichlorobenzene	µg/L	.79 J	.5 U	1.8 U	2.5 U	3.6 U	1.0 U
2-Chlorotoluene	µg/L	.5 U	.5 U	1.8 U	2.5 U	3.6 U	1.0 U
Benzene	µg/L	3.4	4.9	0.68 J	2.2 J	5.5	9.2
Chlorobenzene	µg/L	91	100	61	72	110	190
Semi-volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10 U	5.0 U	5.0 UJ	R	10 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	R	5.0 UJ	R	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	R	5.0 UJ	R	10 U
2,5-Dichlorophenol	µg/L	10 U	10 U	R	5.0 UJ	R	10 U
2-Chlorophenol	µg/L	10 U	10 U	R	5.0 UJ	R	0.78 J
4-Chlorophenol	µg/L	10 U	10 U	R	5.0 UJ	R	2.9 J
Phenol	µg/L	10 U	10 U	R	5.0 UJ	R	10 U
Metals							
Arsenic	µg/L	10 U	10 U	10.0 U	10.0 U	10.0 U	10 U
Mercury	µg/L	-	.2 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides							
alpha-BHC	µg/L	.05 U	.05 U	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	.05 U	.05 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	µg/L	.05 U	.05 U	0.050 UJ	0.050 U	0.050 U	0.050 U
gamma-BHC (lindane)	µg/L	.05 U	.05 U	0.050 U	0.050 U	0.050 U	0.050 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*	*PCM-05*
Sample ID:		*PCM-051009*	*PCM-05-310*	*PCM-05-1010*	*PCM-05-0411*	*PCM-05-1011*	*PCM-05-1012*	*PCM-05-1013*
Sample Date:		*10/23/2009*	*4/16/2010*	*10/9/2010*	*4/13/2011*	*10/18/2011*	*10/2/2012*	*10/3/2013*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 U	4.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 U	4.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 U	4.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 U	4.0 U
2-Chlorotoluene	µg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 U	4.0 U
Benzene	µg/L	4.5	4.3 J	1.8 J	2.4 J	5.0 U	4.0 U	4.0 U
Chlorobenzene	µg/L	150	130	100	87	81	80	150
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
2,5-Dichlorophenol	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
4-Chlorophenol	µg/L	10 U	1.5 J	9.5 U	1.7 J	2.8 J	9.6 U	1.1 J
Phenol	µg/L	10 U	9.4 U	9.5 U	9.5 U	9.7 U	9.6 U	9.6 U
Metals								
Arsenic	µg/L	10 U	10.0 U	6.7 J	10.0 U	10 U	5.0 J	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides								
alpha-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
beta-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
delta-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		***PCM-06***	***PCM-06***	***PCM-06***
Sample ID:		***PCM-06-1010***	***PCM-06-1012***	***PCM-06-1013***
Sample Date:		***10/11/2010***	***10/1/2012***	***10/10/2013***
Parameters	***Units***			
Volatile Organic Compounds				
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds				
1,2,4,5-Tetrachlorobenzene	µg/L	-	11 U	-
2,4,5-Trichlorophenol	µg/L	-	11 U	-
2,4-Dichlorophenol	µg/L	-	11 U	-
2,5-Dichlorophenol	µg/L	-	11 U	-
2-Chlorophenol	µg/L	-	11 U	-
4-Chlorophenol	µg/L	-	11 U	-
Phenol	µg/L	-	11 U	-
Metals				
Arsenic	µg/L	-	10 U	-
Mercury	µg/L	-	0.20 U	-
Pesticides				
alpha-BHC	µg/L	-	0.048 U	-
beta-BHC	µg/L	-	0.048 U	-
delta-BHC	µg/L	-	0.048 U	-
gamma-BHC (lindane)	µg/L	-	0.048 U	-

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*
Sample ID:		*PCM-07-502*	*PCM-07-802*	*PCM-07-1202*	*PCM-07-303*	*PCM-07-603*	*PCM-07-1003*	*PCM-07-1203*	*PCM-07-304*
Sample Date:		*6/3/2002*	*8/29/2002*	*12/18/2002*	*4/3/2003*	*6/27/2003*	*10/6/2003*	*12/31/2003*	*4/14/2004*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	2.32 U	0.490 J	1.00 U
Benzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	5.81 U	4.67 U	4.67 U	4.67 U	5.05 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	9.35 U	9.35 U	10.1 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	9.35 U	9.35 U	10.1 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	9.35 U	9.35 U	10.1 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	9.35 U	9.35 U	10.1 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	9.35 U	9.35 U	10.1 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	11.6 U	9.35 U	3.49 J	9.35 U	10.1 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	4.61 J	25.4	19.8	9.55 J
Mercury	µg/L	-	-	-	-	-	-	-	-
Pesticides									
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0510 U	0.0642	0.0467 U	0.0467 U	0.0374 U	0.0404 U
beta-BHC	µg/L	0.0500 U	0.0500 U	0.0510 U	0.0472 U	0.0467 U	0.0467 U	0.0467 U	0.0505 U
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0510 U	0.0472 U	0.0467 U	0.0561 U	0.0664	0.0606 U
gamma-BHC (lindane)	µg/L	0.00810 J	0.0500 U	0.0510 U	0.0575	0.0467 U	0.0374 U	0.0374 U	0.0404 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07*	*PCM-07R*	*PCM-07R*
Sample ID:		*PCM-07-1204*	*PCM-07-605*	*PCM-07-1005*	*PCM-07-706*	*PCM-07-1206*	*PCM-07-607*	*PCM-7R-1108*	*PCM-7R-309*
Sample Date:		*12/21/2004*	*6/23/2005*	*10/31/2005*	*7/5/2006*	*12/13/2006*	*6/19/2007*	*11/12/2008*	*3/19/2009*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.21 J	1.0 U
1,2-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	1.0 U
2-Chlorotoluene	µg/L	1.00 U	0.32 J	0.50 U	.5 U	.5 U	.5 U	0.79	1.0 U
Benzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	1.0 U
Chlorobenzene	µg/L	1.00 U	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	4.72 U	10 U	10.0 U	10 U	10 U	10 U	5.0 U	10 U
2,4,5-Trichlorophenol	µg/L	9.43 U	10 U	10.0 U	10 U	10 U	10 U	5.0 U	10 U
2,4-Dichlorophenol	µg/L	9.43 U	10 U	10.0 U	10 U	10 U	10 U	5.0 U	10 U
2,5-Dichlorophenol	µg/L	9.43 U	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U
2-Chlorophenol	µg/L	9.43 U	10 U	10.0 U	10 U	10 U	10 U	5.0 U	10 U
4-Chlorophenol	µg/L	9.43 U	10 U	10 U	10 U	10 U	10 U	5.0 U	10 U
Phenol	µg/L	9.43 U	10 U	10.0 U	10 U	10 U	10 UJ	5.0 U	10 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10 U	10 U	10 U	10.0 U	10 U
Mercury	µg/L	-	-	-	-	-	.2 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.0377 UJ	0.055	R	.013 U	.05 U	0.013 J	0.11	0.052
beta-BHC	µg/L	0.0472 UJ	0.025 U	R	.025 U	.05 U	.05 U	0.19	0.050 U
delta-BHC	µg/L	0.0566 UJ	0.013 U	R	.013 U	.05 U	0.011 J	0.062	0.038 J
gamma-BHC (lindane)	µg/L	0.0377 UJ	0.024	R	.013 U	.05 U	.05 U	0.11	0.051

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-07R*	*PCM-07R*	*PCM-07R*	*PCM-07R*	*PCM-07R*	*PCM-07R*	*PCM-07R*
Sample ID:		*PCM-071009*	*PCM-07R-310*	*PCM-07R-1010*	*PCM-07R-0411*	*PCM-07R-1011*	*PCM-07R-1012*	*PCM-07R-1013*
Sample Date:		*10/23/2009*	*4/16/2010*	*10/11/2010*	*4/14/2011*	*10/18/2011*	*10/1/2012*	*10/9/2013*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	0.18 J	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
2,4,5-Trichlorophenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
2,4-Dichlorophenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
2,5-Dichlorophenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
2-Chlorophenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
4-Chlorophenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
Phenol	µg/L	10 U	9.6 U	9.6 U	9.6 U	9.7 U	9.8 U	9.6 U
Metals								
Arsenic	µg/L	1.8 J	10.0 U	-	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	-	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides								
alpha-BHC	µg/L	0.060	0.048 U	0.053 J	0.033 J	0.048 U	0.048 U	0.048 U
beta-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U
delta-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.032 J	0.057 J	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.028 J	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*
Sample ID:		*PCM-08-602*	*PCM-08-1202*	*PCM-08-1107*	*PCM-08-0508*	*PCM-08-1108*	*PCM-08-309*	*PCM-081009*	*PCM-08-310*
Sample Date:		*6/4/2002*	*12/13/2002*	*11/12/2007*	*5/23/2008*	*11/10/2008*	*3/19/2009*	*10/21/2009*	*4/6/2010*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	5.00 U	1.47 U	0.50 U	0.50 U	2.8	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	-	5.00 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
2,5-Dichlorophenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
2-Chlorophenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
4-Chlorophenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
Phenol	µg/L	-	10.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	10 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10 U	10 U	10.0 U
Mercury	µg/L	-	-	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	-	0.0500 U	0.050 U	0.050 U	0.014 J	0.050 U	0.050 U	0.047 U
beta-BHC	µg/L	-	0.0500 U	0.050 U	0.050 U	0.072	0.050 U	0.050 U	1.0
delta-BHC	µg/L	-	0.0500 U	0.0073 J	0.050 U	0.050 U	0.050 U	0.050 U	0.047 U
gamma-BHC (lindane)	µg/L	-	0.0500 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.047 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*	*PCM-08*
Sample ID:		*PCM-08-1010*	*PCM-08-0411*	*PCM-08-1011*	*PCM-08-1012*	*PCM-08-1013*
Sample Date:		*10/11/2010*	*4/14/2011*	*10/19/2011*	*10/1/2012*	*10/9/2013*
Parameters	***Units***					
Volatile Organic Compounds						
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds						
1,2,4,5-Tetrachlorobenzene	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
2,5-Dichlorophenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
4-Chlorophenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
Phenol	µg/L	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U
Metals						
Arsenic	µg/L	10.0 U	10.0 U	10 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides						
alpha-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U
beta-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U
delta-BHC	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U
gamma-BHC (lindane)	µg/L	0.048 U	0.048 U	0.048 U	0.047 U	0.047 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-09*	*PCM-09*	*PCM-09*	*PCM-09*	*PCM-09*
Sample ID:		*PCM-09-309*	*PCM-09-310*	*PCM-09-0411*	*PCM-09-1011*	*PCM-09-1013*
Sample Date:		*3/19/2009*	*4/6/2010*	*4/14/2011*	*10/18/2011*	*10/9/2013*
Parameters	***Units***					
Volatile Organic Compounds						
1,2,3-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds						
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
2,4,5-Trichlorophenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
2,4-Dichlorophenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
2,5-Dichlorophenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
2-Chlorophenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
4-Chlorophenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
Phenol	µg/L	10 U	9.5 U	9.5 U	9.7 U	9.7 U
Metals						
Arsenic	µg/L	10 U	10.0 U	10.0 U	10 U	10 U
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides						
alpha-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.047 U	0.048 U
beta-BHC	µg/L	0.050 U	0.25	0.048 U	0.047 U	0.048 U
delta-BHC	µg/L	0.050 U	0.048 U	0.048 U	0.047 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 U	0.048 U	0.048 U	0.047 U	0.048 U

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*
Sample ID:		*PCM-10-602*	*PCM-10-802*	*PCM-10-1202*	*PCM-10-303*	*PCM-10-603*	*PCM-10-1003*	*PCM-10-1203*	*PCM-10-304*
Sample Date:		*6/4/2002*	*8/29/2002*	*12/18/2002*	*4/2/2003*	*6/24/2003*	*10/2/2003*	*12/31/2003*	*4/13/2004*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.16 U	0.805 J	1.00 U
Benzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.00 U	5.00 U	5.00 U	4.95 U	4.67 U	4.67 U	4.67 U	4.67 U
2,4,5-Trichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
2,4-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
2,5-Dichlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
2-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
4-Chlorophenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
Phenol	µg/L	10.0 U	10.0 U	10.0 U	9.90 U	9.35 U	9.35 U	9.35 U	9.35 U
Metals									
Arsenic	µg/L	10.0 U	10.0 U	20.0 U	8.98 J	5.48 J	10.0 U	23.5	16.1
Mercury	µg/L	-	-	-	-	-	-	-	-
Pesticides									
alpha-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0791	0.0472 U	0.0837 U	0.0374 U	0.0662
beta-BHC	µg/L	0.0662	0.0500 U	0.0677	0.122	0.138	0.126	0.0467 U	0.0725
delta-BHC	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0640	0.0472 U	0.0467 U	0.0561 U	0.0676
gamma-BHC (lindane)	µg/L	0.0500 U	0.0500 U	0.0500 U	0.0594	0.0472 U	0.0467 U	0.0374 U	0.0404 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*
Sample ID:		*PCM-10-605*	*PCM-10-1005*	*PCM-10-706*	*PCM-10-1206*	*PCM-10-607*	*PCM-10-1107*	*PCM-10-0508*
Sample Date:		*6/23/2005*	*10/31/2005*	*7/6/2006*	*12/12/2006*	*6/19/2007*	*11/12/2007*	*5/23/2008*
Parameters	***Units***							
Volatile Organic Compounds								
1,2,3-Trichlorobenzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
1,4-Dichlorobenzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
2-Chlorotoluene	µg/L	0.17 J	0.11 J	.5 U	.5 U	0.53 U	0.50 U	0.50 U
Benzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
Chlorobenzene	µg/L	0.50 U	0.50 U	.5 U	.5 U	.5 U	0.50 U	0.50 U
Semi-volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	µg/L	10 U	10.0 U	10 U	10 U	10 U	5.0 U	5.0 U
2,4,5-Trichlorophenol	µg/L	10 U	10.0 U	10 U	10 U	10 U	5.0 U	5.0 U
2,4-Dichlorophenol	µg/L	10 U	10.0 U	10 U	10 U	10 U	5.0 U	5.0 U
2,5-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U	5.0 U	5.0 U
2-Chlorophenol	µg/L	10 U	10.0 U	10 U	10 U	10 U	5.0 U	5.0 U
4-Chlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U	5.0 U	5.0 U
Phenol	µg/L	10 U	10.0 U	10 U	10 U	10 UJ	5.0 U	5.0 U
Metals								
Arsenic	µg/L	10.0 U	10.0 U	10 U	10 U	10 U	10.0 U	10.0 U
Mercury	µg/L	-	-	-	-	.2 U	0.20 U	0.20 U
Pesticides								
alpha-BHC	µg/L	0.038	R	.026	.03 J	0.014 J	0.0054 J	0.019 J
beta-BHC	µg/L	0.078	0.062 J	.06	.06 U	0.022 J	0.02 J	0.058 U
delta-BHC	µg/L	0.0062 J	R	.0062 J	.05 U	0.0089 J	0.050 UJ	0.050 U
gamma-BHC (lindane)	µg/L	0.0092 J	R	.013 U	.05 U	.05 U	0.050 U	0.050 U

TABLE D.1

HISTORIC GROUNDWATER MONITORING RESULTS
GLENN SPRINGS HOLDINGS, INC.
1O2ND STREET LANDFILL SITE

Sample Location:		*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*	*PCM-10*
Sample ID:		*PCM-101108*	*PCM-10-309*	*PCM-101009*	*PCM-10-310*	*PCM-10-1010*	*PCM-10-0411*	*PCM-10-1011*	*PCM-10-1012*
Sample Date:		*11/10/2008*	*3/19/2009*	*10/21/2009*	*4/13/2010*	*10/11/2010*	*4/15/2011*	*10/18/2011*	*10/1/2012*
Parameters	***Units***								
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
2,4,5-Trichlorophenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
2,5-Dichlorophenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
4-Chlorophenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
Phenol	µg/L	5.0 U	10 U	10 U	9.7 U	9.5 U	9.5 U	9.6 U	9.6 U
Metals									
Arsenic	µg/L	10.0 U	10 U	2.9 J	10.0 U	10.0 U	10.0 U	10 U	2.7 J
Mercury	µg/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Pesticides									
alpha-BHC	µg/L	0.064 J	0.050 U	0.040 J	0.048 U	0.055 J	0.047 U	0.048 U	0.048 U
beta-BHC	µg/L	0.19 J	0.050 U	0.13	0.048 U	0.048 U	0.047 U	0.045 J	0.048 U
delta-BHC	µg/L	0.016 J	0.050 U	0.050 U	0.048 U	0.048 U	0.047 U	0.048 U	0.048 U
gamma-BHC (lindane)	µg/L	0.050 UJ	0.050 U	0.050 U	0.048 U	0.048 U	0.047 U	0.048 U	0.048 U

Notes:
µg/L - Micrograms per liter
U - Non-detect at associated value
"-" - Data not available
J - Estimated at associated value
R - Data rejected

Appendix E

Concentration Trend Graphs

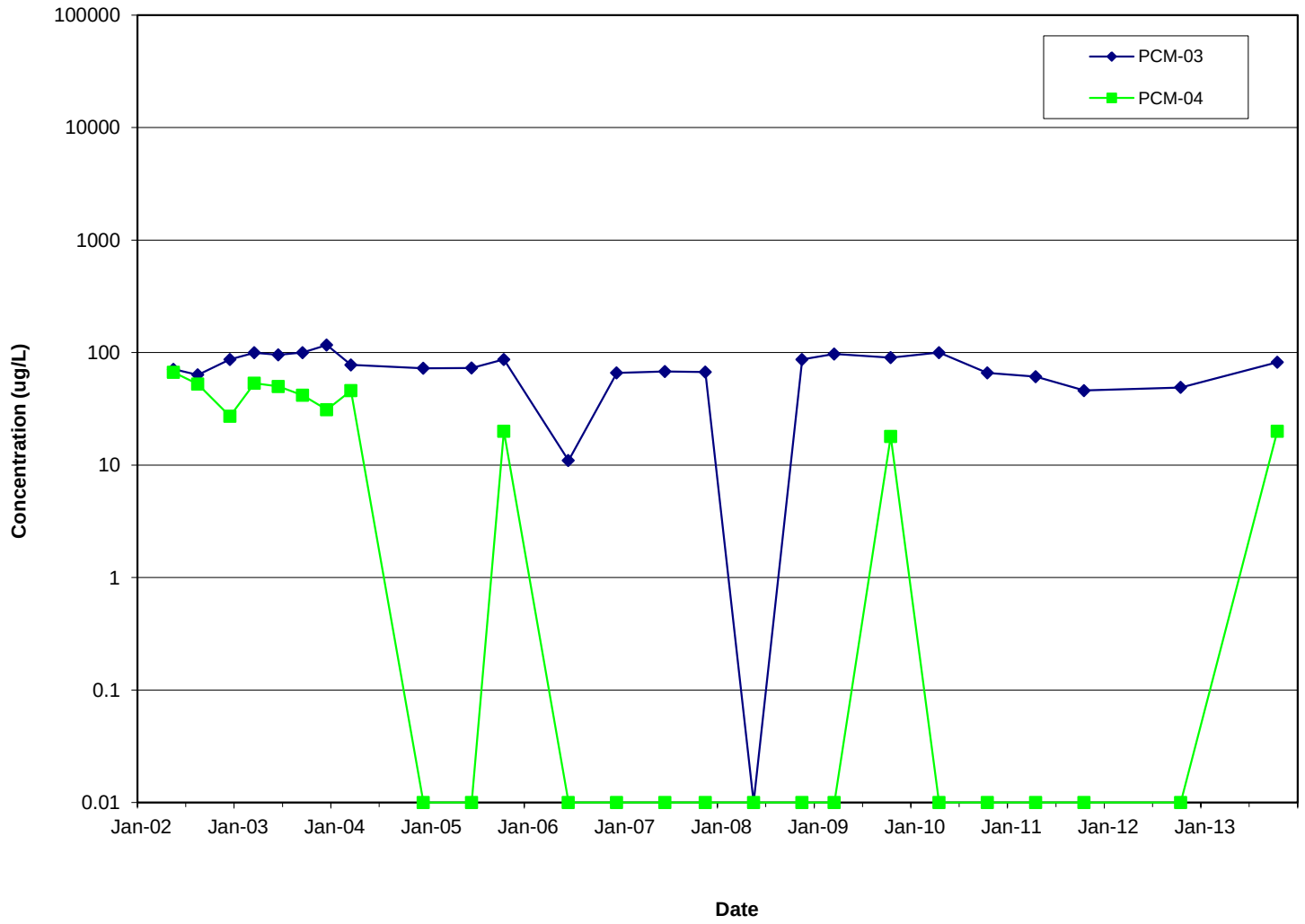


figure 1
CONCENTRATION OF 1,2-DICHLOROBENZENE vs. TIME
102ND STREET LANDFILL

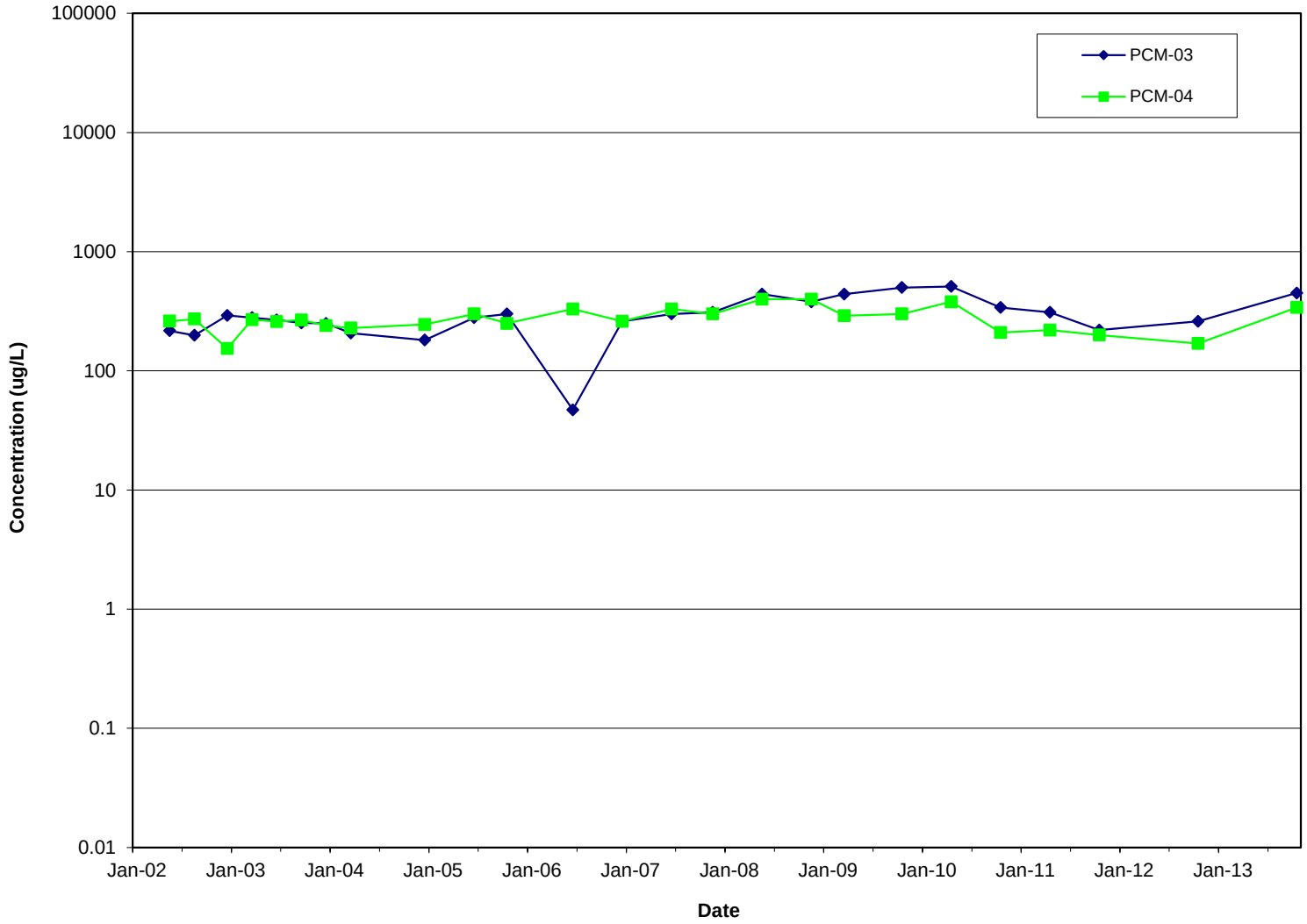


figure 2
CONCENTRATION OF 1,4-DICHLOROBENZENE vs. TIME
102ND STREET LANDFILL

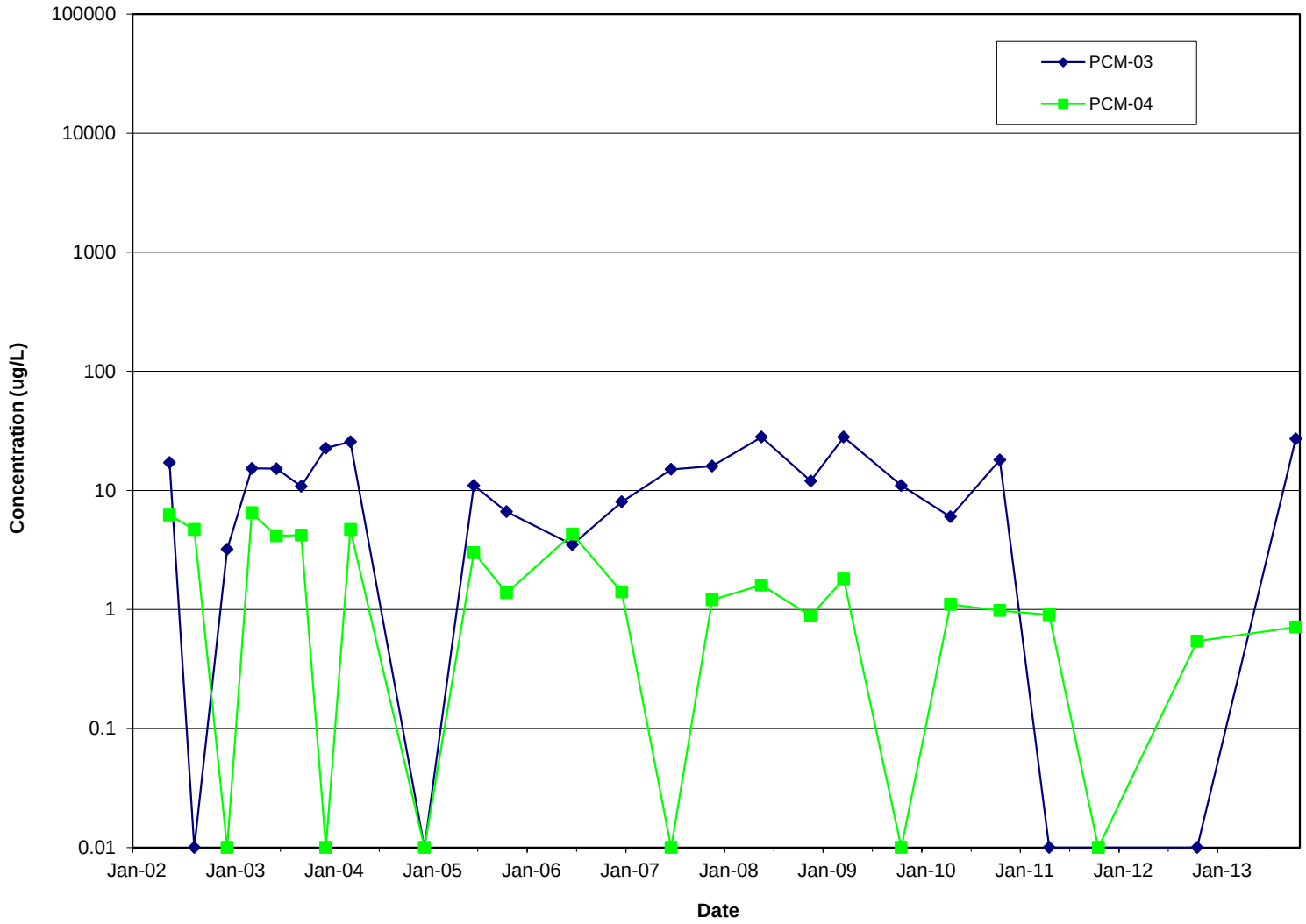


figure 3
CONCENTRATION OF 2,4-DICHLOROPHENOL vs. TIME
102ND STREET LANDFILL

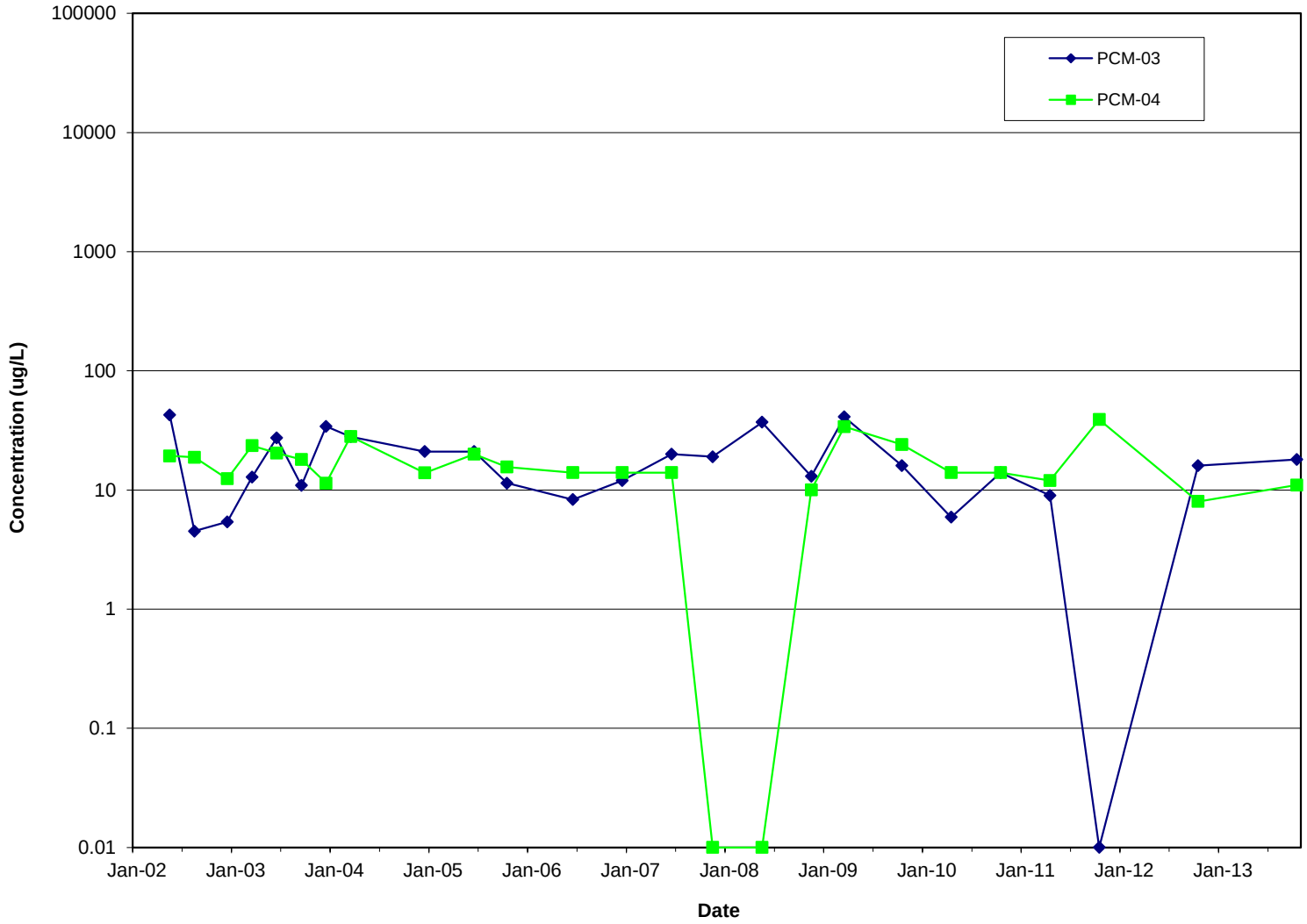


figure 4
CONCENTRATION OF 2-CHLOROPHENOL vs. TIME
102ND STREET LANDFILL

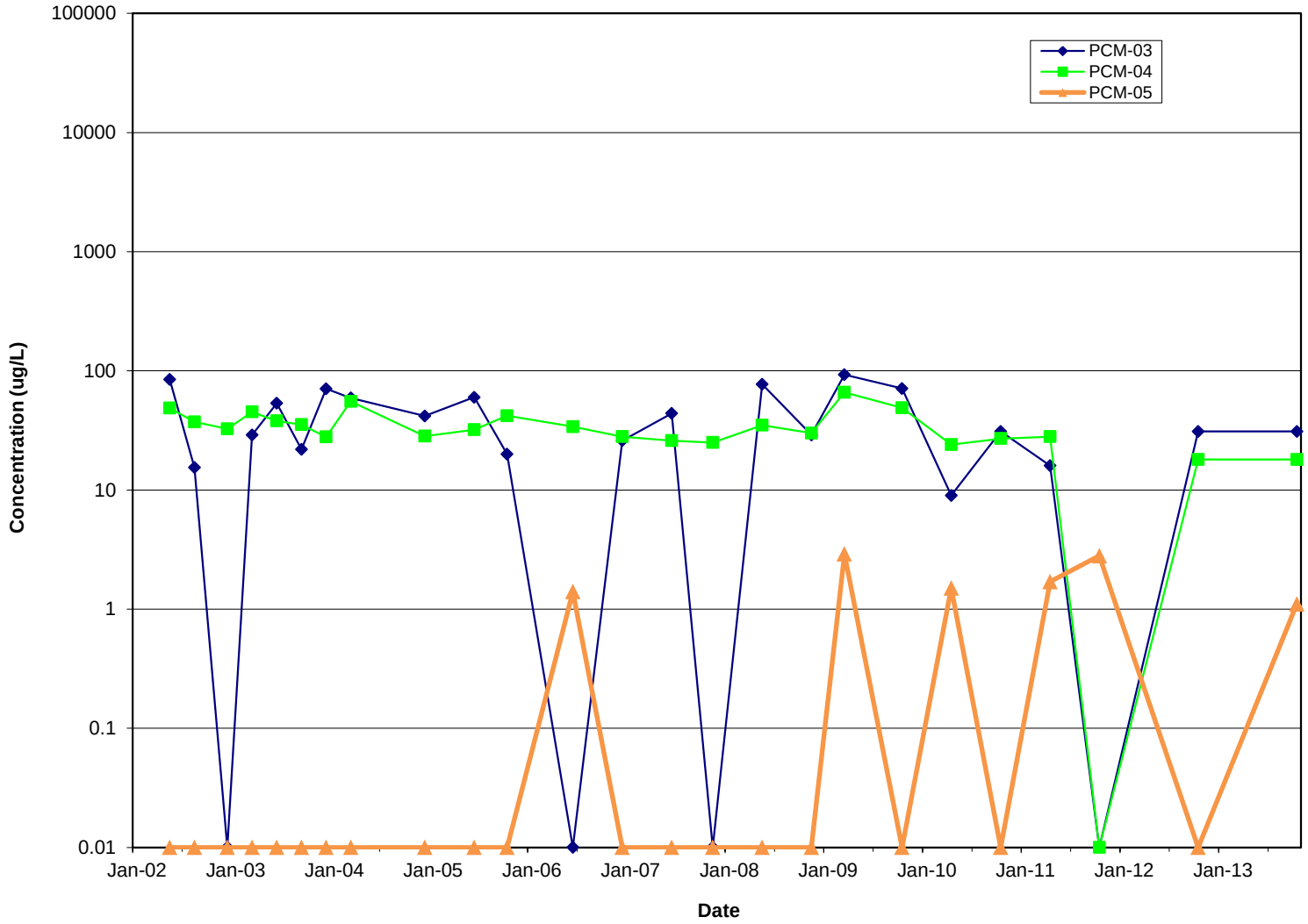


figure 5
CONCENTRATION OF 4-CHLOROPHENOL vs. TIME
102ND STREET LANDFILL

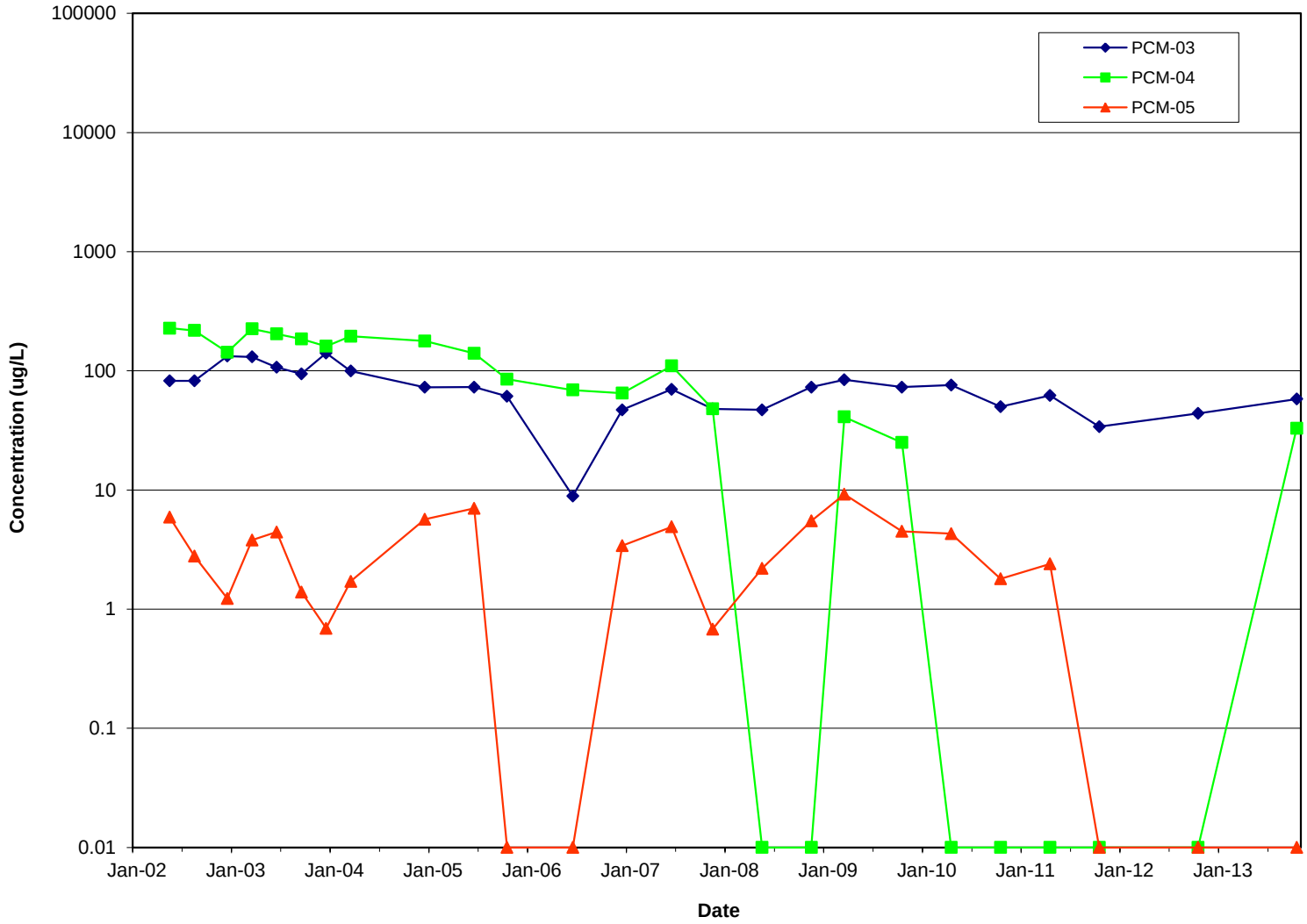


figure 6
CONCENTRATION OF BENZENE vs. TIME
102ND STREET LANDFILL

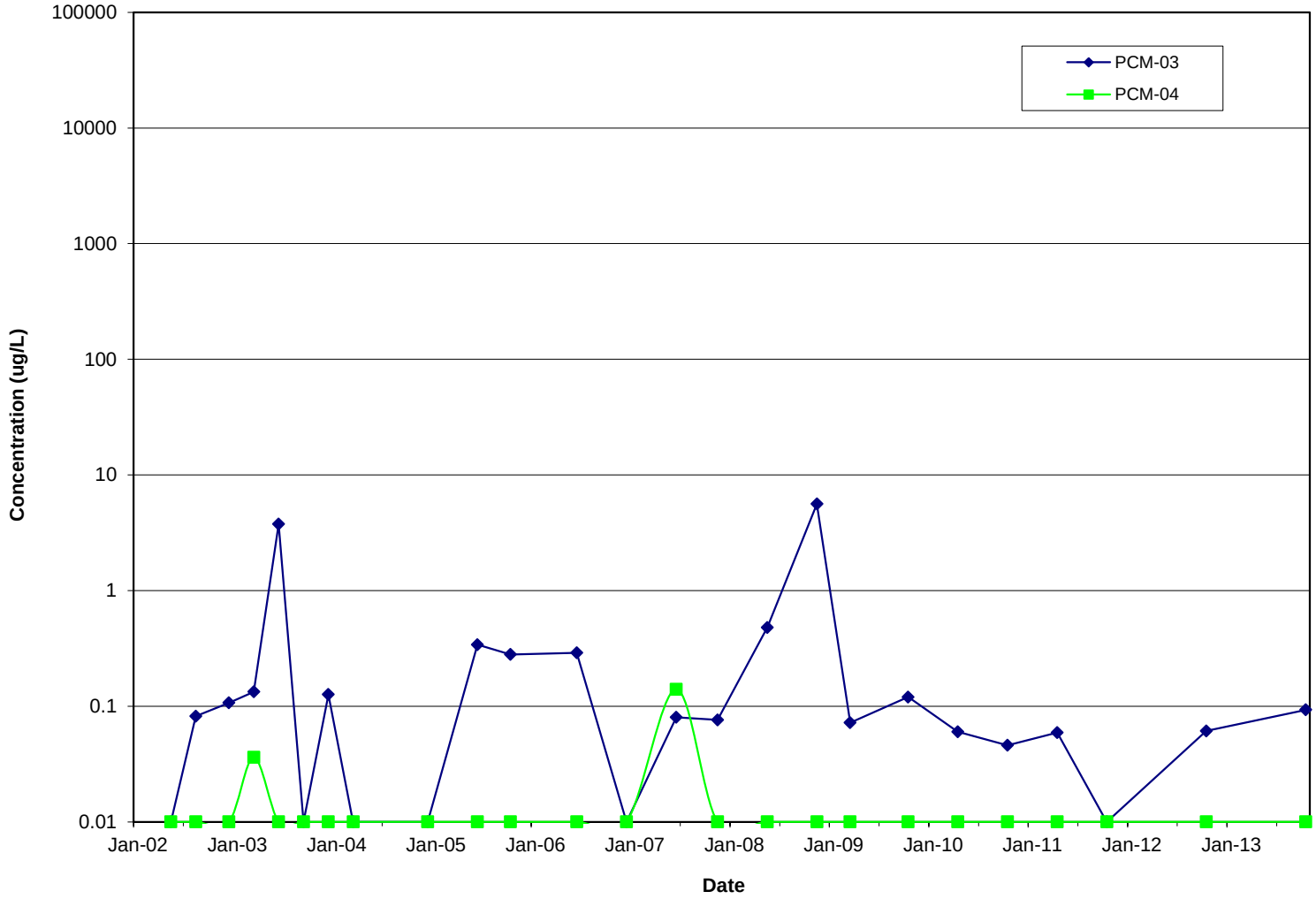


figure 7
CONCENTRATION OF BETA-BHC vs. TIME
102ND STREET LANDFILL

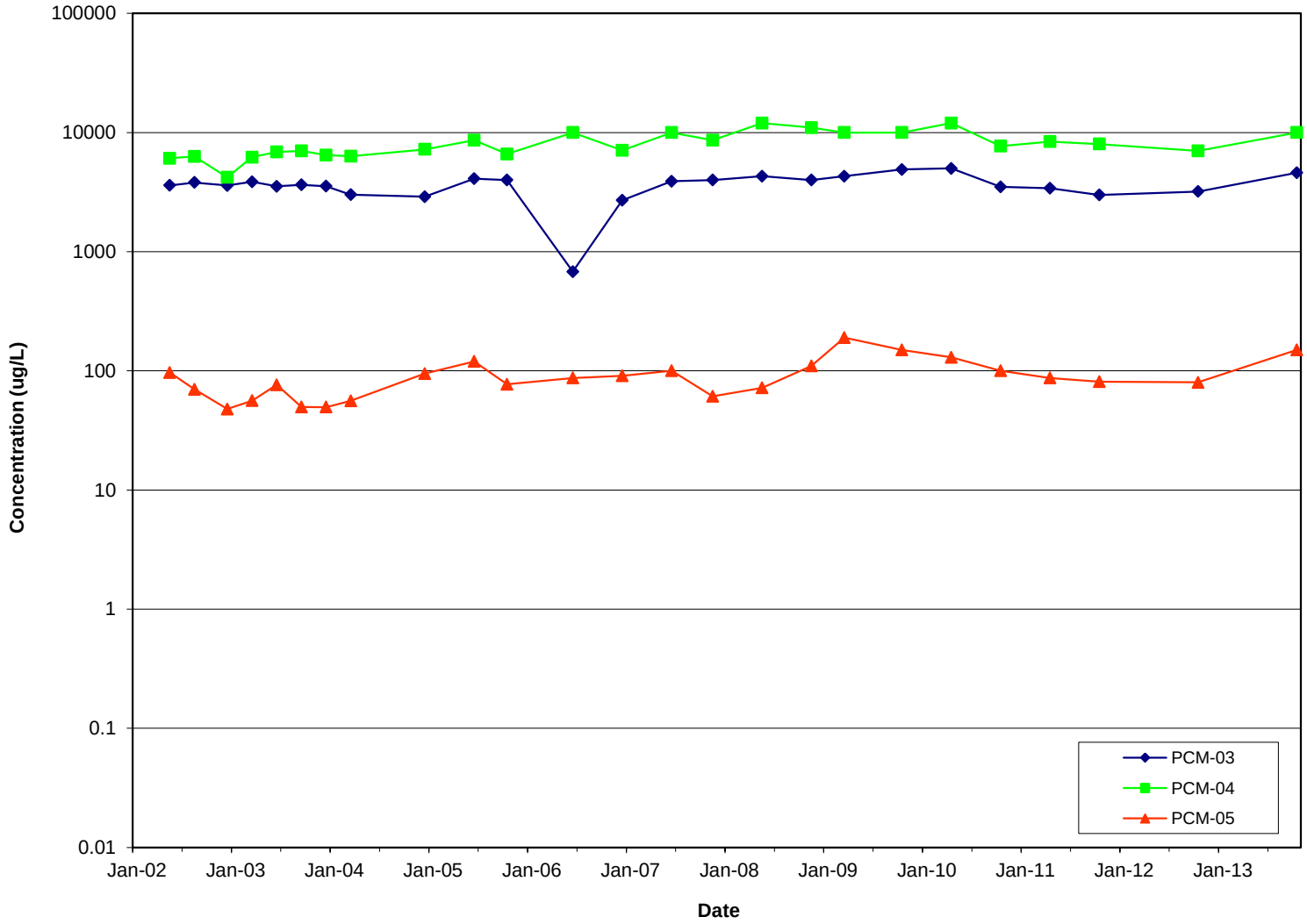


figure 8
CONCENTRATION OF CHLOROBENZENE vs. TIME
102ND STREET LANDFILL

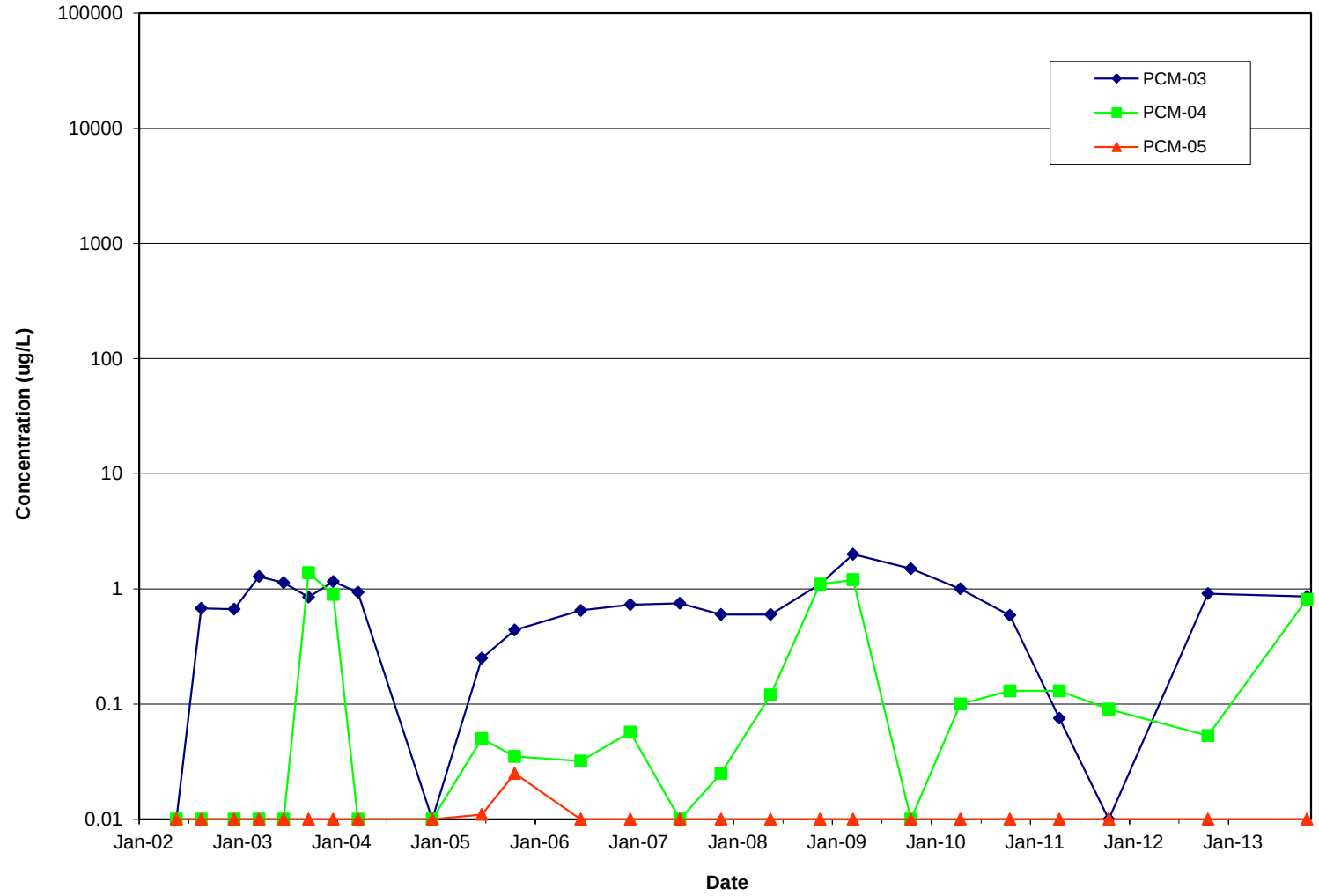


figure 9
CONCENTRATION OF DELTA-BHC vs. TIME
102ND STREET LANDFILL

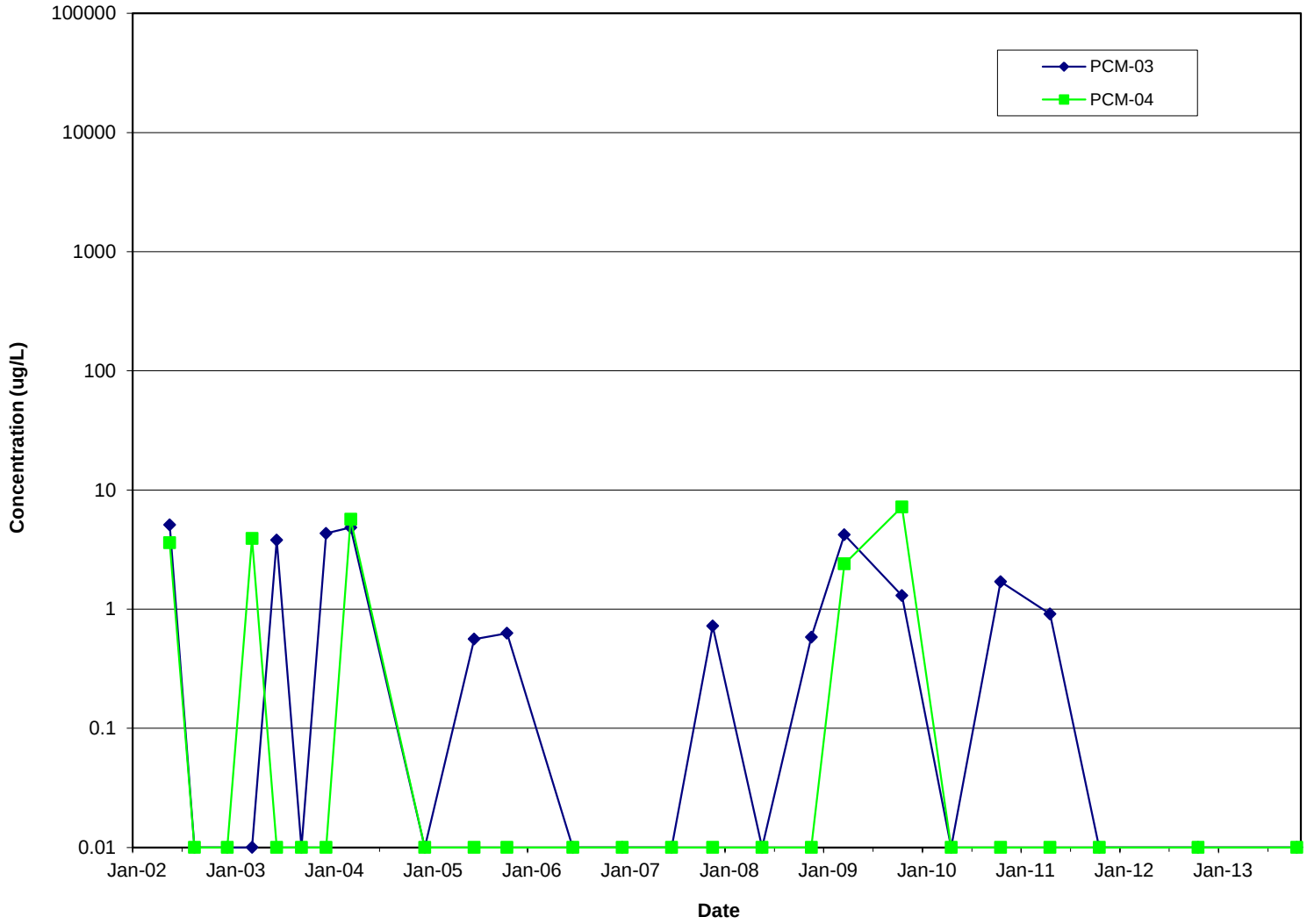


figure 10
CONCENTRATION OF PHENOL vs. TIME
102ND STREET LANDFILL

Appendix F

Monitoring Well Purge Records

Sample ID PCM-03-1013

Time 1430

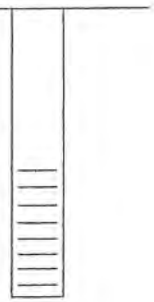
MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102nd Street Annual
Ref. No.: 53716-D23150-410
Date: 10-3-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCM-03
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 13.07



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1401		13.29	0.22	14.70	5.19	6.01	0.73	6.68	-229		
1406				14.87	5.19	6.54	0.69	6.69	-216		
1411	110			14.98	5.16	8.19	0.36	6.69	-212		
1416				14.89	5.14	6.43	0.28	6.69	-213		
1421				15.04	5.11	6.07	0.26	6.67	-211		
1426				15.25	5.09	6.11	0.27	6.69	-208		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 07182
MP-20 06187
Turb 06192

Start Purge @ 1337

David J Tyson

Sample ID PCM-04-1013
Time 1225

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:
Project Name: 102nd Street Annual
Ref. No.: 53716 D23150.410
Date: 10.3.13
Personnel: DJT

Monitoring Well Data:
Well No.: PCM-04
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 11.78

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1145	170	12.19	0.41	13.47	3.99	7.92	0.99	6.91	-163		
1150	150	12.29	0.51	13.47	3.82	6.90	0.47	6.91	-171		
1155				13.79	3.83	5.91	0.43	6.92	-174		
1200		12.31	0.53	14.29	3.85	4.53	0.41	6.92	-177		
1205	110	12.31	0.53	14.70	3.93	5.29	0.38	6.90	-179		
1210				14.72	3.96	5.58	0.32	6.91	-180		
1215		12.32	0.54	14.69	3.97	8.30	0.33	6.92	-182		
1220				14.78	3.97	1.64	0.31	6.91	-183		

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L*$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 06117
MP-20 06187
Turb 06192

Start Purge @ 1140

David S Tyan

Sample ID PCBM-01-1013

Time 1400

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

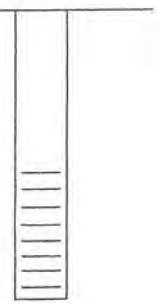
Project Name: 102nd Street Annual
Ref. No.: 53716-D23150-410

Date: 10-3-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCBM-01
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.77



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1326		12.87	0.10	12.96	4.51	1.58	1.23	7.21	-297		
1331	320	12.88	0.11	12.73	4.49	1.17	0.53	7.02	-322		
1336				12.66	4.60	1.13	0.30	7.03	-333		
1341	315	12.88	0.11	12.64	4.73	0.49	0.29	6.99	-335		
1346				12.71	4.77	0.52	0.23	6.97	-335		
1351				12.67	4.77	0.45	0.20	6.96	-336		
1356				12.72	4.78	0.37	0.18	6.96	-337		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 06117
MP-20 06187
Turb 06192

Start Purge @ 1321

Dave S Lyon

Sample ID PCBM-02-1013

Time 0940

MS/MSD

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102nd Street Annual
Ref. No.: 53716-D23150-410
Date: 10-3-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCBM-02
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.04

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
0902	180	12.08	0.04	12.23	4.19	1.56	1.63	6.97	-274		
0907		12.09	0.05	11.82	4.19	0.74	0.75	6.95	-303		
0912	200	12.08	0.04	11.78	4.29	~~0.53~~	0.53	6.93	-313	Turb	1.11
0917				11.79	4.34	0.99	0.41	6.93	-316		
0922		12.09	0.05	11.82	4.35	0.69	0.37	6.93	-319		
0927				11.80	4.35	0.65	0.33	6.93	-321		
0932	200	12.09	0.05	11.81	4.35	1.19	0.30	6.93	-323		
0937				11.84	4.34	0.77	0.27	6.94	-324		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L*$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 06117
MP-20 06187
Turb 06192

Start Purge @ 0852

Sample ID PCM-05-1013

Time 1030

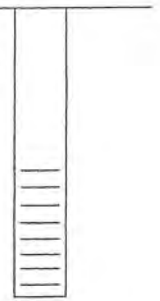
MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102nd Street Annual
Ref. No.: 53716 D23150 410
Date: 10-3-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCM-05
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.31



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
0945	108	13.51	1.20	12.78	3.84	52.4	0.63	7.31	-247		
0950		13.57	1.26	12.85	3.84	63.0	0.52	7.34	-244		
0955				12.87	3.83	68.0	0.46	7.34	-243		
1000				12.90	3.84	60.3	0.42	7.34	-242		
1005	96	13.67	1.36	13.00	3.82	40.5	0.38	7.34	-241		
1010				13.03	3.81	22.3	0.36	7.35	-240		
1015				13.21	3.80	13.7	0.33	7.35	-239		
1020				13.20	3.78	11.3	0.32	7.36	-239		
1025		13.75	1.44	13.14	3.75	7.51	0.30	7.38	-240		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #3
w/L Meter 07182
MP-20 06187
Turb. 06192

Start Purge @ 0919

SAMPLE ID# PCM-09-1013

SAMPLE TIME 1105

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102ND ST ANNUAL

Ref. No.: 53716-023150-410

Date: 10/9/13

Personnel: SS

Monitoring Well Data:

Well No.: PCM-09

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 6.66

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1044	48	6.89	0.23	17.63	0.584	17.5	3.71	7.34	26		
1049		6.98	0.32	17.72	0.545	15.2	4.05	7.41	32		
1054	48	7.02	0.36	18.00	0.529	14.5	4.20	7.45	42		
1059		7.05	0.39	17.89	0.522	14.0	4.19	7.46	46		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

INST CONTROL #S
MP20-00187
W/L METER - NF00118
TURBIDIMETER - 00192

START PURGE @ 1036

Shawn Maudrie

BLIND DUPLICATE - PCM-12-1013

SAMPLE TIME 1300

SAMPLE ID# PCBM-03-1013

SAMPLE TIME 1300

DUP

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102ND ST ANNUAL

Ref. No.: 53711-D23150-410

Date: 10/9/13

Personnel: SG

Monitoring Well Data:

Well No.: PCBM-03

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 15.90

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1245	230	16.42	0.52	12.89	5.67	13.7	0.24	6.98	-334		
1250		16.41	0.51	12.79	5.67	9.93	0.22	6.96	-337		
1255		16.44	0.54	12.81	5.67	7.54	0.21	6.94	-339		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.

(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

INST. CONTROL #S
MP20-06187
W/L METER - NF06118
TURBIDIMETER - 06192

START PURGE @ 1224

SAMPLE ID# PCM-08-1013 SAMPLE TIME 1405

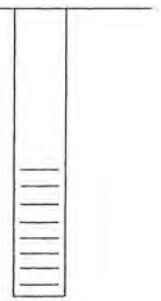
MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102ND ST ANNUAL
Ref. No.: 53716-D23150-410
Date: 10/9/13
Personnel: SG

Monitoring Well Data:

Well No.: PCM-08
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 8.40



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
Precision Required[5]:				*±3 %*	*±0.005 or 0.01[6]*	*±10 %*	*±10 %*	*±0.1 Units*	*±10 mV*		
1344	100	9.50	1.10	16.97	1.280	6.97	0.54	7.25	-175		
1349		9.87	1.47	16.90	1.211	1.99	0.40	7.18	-161		
1354	90	10.32	1.92	17.04	1.198	1.30	0.39	7.16	-150		
1359	90	10.50		16.96	1.193	1.28	0.42	7.16	-147		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

INST CONTROL #S
MP20-06187
W/L METER - NF06118
TURBIDIMETER - 06192

START PURGE @ 1332

SAMPLE ID# PCM-02-1013 SAMPLE TIME 1550

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 102ND ST ANNUAL
Ref. No.: 53711.0-023150-410
Date: 10/9/13
Personnel: SG

Monitoring Well Data:

Well No.: PCM-02
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 10.21

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged
			Precision Required[3]:	±3 %	±0.005 or 0.01[4]	±10 %	±10 %	±0.1 Units	±10 mV		
1522	120	10.61	0.40	14.54	1.015	2.64	0.66	6.95	-144		
1527		10.69	0.48	14.12	1.009	4.70	0.33	6.98	-151		
1532	120	10.68	0.47	14.11	1.007	4.30	0.47	6.99	-155		
1537		10.69	0.48	14.26	1.006	5.54	0.22	6.98	-157		
1542	124	10.69	0.48	14.29	1.005	1.35	0.20	6.97	-157		
1547		10.69	0.48	14.33	1.004	3.58	0.19	6.95	-158		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

INST CONTROL #S
MP20 - 06187
W/L METER - NF06118
TURBIDIMETER - 06192

START PURGE @ 1516

Shawn Vaudrey

Sample ID PCM-07R-1013

Time 1120

3x40ml VOCs
2x 1L SVOC
1x 1L BHC
1x 500ml As/MeC

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

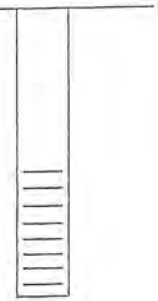
Project Name: 102nd Street Annual
Ref. No.: 53716-DZ3150-410

Date: 10-9-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCM-7R
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.28



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1041		12.66	0.38	16.91	1.63	6.13	1.19	7.97	24		
1046	50	12.78	0.50	16.75	1.62	4.83	0.74	8.25	9		
1051		12.92	0.64	16.37	1.63	4.82	0.56	8.39	5		
1056		13.03	0.75	16.24	1.62	3.50	0.55	8.51	2		
1101		13.12	0.84	16.26	1.61	3.18	0.67	8.69	-2		
1106	52	13.22	0.94	16.38	1.60	1.91	0.73	8.84	1		
1111		13.34	1.06	16.33	1.60	1.34	0.73	8.91	12		
1116				16.34	1.59	1.16	0.73	8.94	20		
			Partial Sample								

Inst. Control #'S
Turb NFO5040
MP-20 06184
W/L Meter 06117

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L*$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

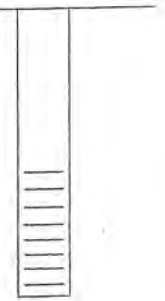
Start Purge @ 1027

Sample ID PCM-06-1013
Time 1200

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:
Project Name: 102nd Street Annual
Ref. No.: 53716 D23150-410
Date: 10-9-13
Personnel: DJT

Monitoring Well Data:
Well No.: PCM-06
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 11.91



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1204	84	12.24	0.33	18.11	4.56	>1000	0.91	7.61	34		
1209		12.32	0.41	18.03	4.52	386	0.55	7.55	14		
1214		12.42	0.51	18.23	4.43	157	0.54	7.78	-40		
1219	68	12.58	0.67	18.67	4.36	84.2	0.59	7.90	-60		
1224		12.81	0.90	18.48	4.36	46.3	0.64	8.01	-69		
1229				18.47	4.33	55.4	0.68	8.05	-77		
1234				18.66	4.27	63.5	1.36	8.10	-78		
				Well Dry Final w/l 13.42							
*	Sampled	3.40ml		VOCs	on	10/10/13		Well	Dry		

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s
W/L Meter 06117
Turb NF 05040
MP-20 06184

Start Purge @ 1159

Dave J Tyler

Sample ID PCM-10-1013
Time 1420

11.83

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:
Project Name: 102nd Street Annual
Ref. No.:
Date: 10-9-13
Personnel: DST

Monitoring Well Data:
Well No.: PCM-10
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):
Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 12.11

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[5]	±10 %	±10 %	±0.1 Units	±10 mV		
1312		12.44	0.33	15.53	2.97	18.7	0.75	8.41	8		
1317				14.94	2.95	3.59	0.44	8.43	-4		
1322		12.58	0.47	14.85	2.96	1.88	0.34	8.43	-4		
1327	64			14.37	2.96	1.23	0.32	8.41	2		
1332	80	12.64	0.53	13.87	2.74	1.04	0.32	8.40	11		
1337				13.88	2.50	0.84	0.28	8.36	6		
1342		12.78	0.67	13.82	2.35	0.94	0.26	8.33	-4		
1347				13.74	2.25	1.32	0.23	8.32	-10		
1352		12.88	0.77	13.69	2.15	0.65	0.24	8.30	-18		
1357				13.67	2.05	2.53	0.23	8.29	-31		
1402				13.41	2.01	0.77	0.22	8.28	-45		
1407	72			13.70	1.86	1.91	0.23	8.26	-69		
1412				13.58	1.80	1.81	0.23	8.25	-75		
1417		12.89	0.78	13.39	1.74	1.10	0.22	8.25	-79		

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst Control #'s
W/L Meter 06117
Turb NF 05040
MP-20 06184

Start Purge @ 1301

Dave J Tyler

Sample ID PCM-01-1013

Time 1450

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

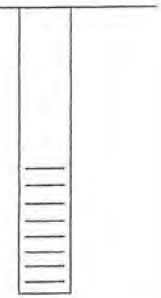
Project Name: 102nd Street Annual
Ref. No.: 53716.D23150-410

Date: 10-9-13
Personnel: DJT

Monitoring Well Data:

Well No.: PCM-01
Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 11.83



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1439	80			15.68	10.18	2.99	0.29	8.17	-133		
1444		13.12	1.29	15.90	10.20	3.02	0.29	8.19	-136		
1449				16.03	10.18	2.60	0.27	8.20	-137		

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
(5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Inst. Control #'s

W/L Meter NF06117
Turb NF05040
MP-20 06184

Start Purge @ 1359

Dave J Tryan