

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Part 811 Landfill Groundwater Inspection Checklist**

County: DeWitt LPC#: 0390055036 Region: 4 - Champaign
 Location/Site Name: Clinton/Clinton Landfill 3
 Date: 4/21/2016 Time: From 8:30 A.M. To 3:10 P.M. Previous GW Inspection Date: 4/2/2014
 Inspector: Jeff Turner Weather: Mostly cloudy, light breeze, ~70°F
 # of Photos Taken: 3 Samples Taken: Yes # 5 No
 Interviewed: Charles Hostetler et al—see narrative Facility Phone #: 217/935-8028

Permitted Owner Mailing Address

Clinton Landfill, Inc.
 Attn: Ron Welk
 4700 N. Sterling Avenue, POB 9071
 Peoria, IL 61612-9071

Permitted Operator Mailing Address

Clinton Landfill, Inc.
 Attn: Ron Welk
 4700 N. Sterling Avenue, POB 9071
 Peoria, IL 61612-9071

Chief Operator Mailing Address

Clinton Landfill 3
 Attn: James Decker
 4700 N. Sterling Avenue, POB 9071
 Peoria, IL 61612

Certified Operator Mailing Address

Clinton Landfill 3
 Attn: David Bryant
 9550 Heritage Road-C
 Clinton, IL 61727

Authorization:

Permit: 2005-070-LF
 Most recent mod #: 59

Operational Status:

Operating
 Closed—Not Cert.
 Closed—Certified

RECEIVED
 JUN 24 2016
IEPA/BOL

Date: _____

Section	Description	Viol.
Illinois Environmental Protection Act Requirements		
12(a)	Cause, threaten or allow water pollution in Illinois	<input type="checkbox"/>
12(d)	Deposit contaminants upon the land so as to create a water pollution hazard	<input type="checkbox"/>
21(d)	Conduct any waste-storage, waste-treatment, or waste-disposal operation:	
(1)	without a permit or in violation of any conditions of a permit (see permit provisions)	<input type="checkbox"/>
(2)	in violation of any regulations or standards adopted by the Board	<input type="checkbox"/>
21(e)	Dispose, treat, store, or abandon any waste, or transport any waste into the State at/to sites not meeting requirements of Act and regulations	<input type="checkbox"/>
21(o)	Conduct a sanitary landfill operation which results in any of the following conditions:	
(2)	leachate flows entering waters of the State	<input type="checkbox"/>
(3)	leachate flows exiting the landfill confines	<input type="checkbox"/>
(11)	failure to submit reports required by permits or Board regulations	<input type="checkbox"/>

IEPA DIVISION OF RECORDS MANAGEMENT
RELEASABLE

AUG 09 2016

REVIEWER: JKS

22.17	Landfill Post-Closure Care	
(a)	Failure to monitor gas, water, settling	<input type="checkbox"/>
(b)	Failure to take remedial action	<input type="checkbox"/>
35 Illinois Administrative Code Requirements Subtitle G		
Part 811 Subpart A	General Standards for All Landfills	
811.112(e)	Recordkeeping Requirements for MSWLF Units—groundwater program records	<input type="checkbox"/>
Part 811 Subpart C	Putrescible and Chemical Waste Landfills	
811.316	Plugging and Sealing of Boreholes	<input type="checkbox"/>
811.318	Design, Construction, and Operation of Groundwater Monitoring Systems	
(a)	Monitor groundwater, maintain wells, and keep records	<input type="checkbox"/>
(b)	Placement of wells	<input type="checkbox"/>
(d)	Monitoring well design, construction, development, and hydraulic testing standards	<input type="checkbox"/>
(e)	Standards for sample collection and analysis	<input type="checkbox"/>
811.319	Groundwater Monitoring Programs	
(a)	Detection Monitoring Program	<input type="checkbox"/>
(b)	Assessment Monitoring	<input type="checkbox"/> NA
(c)	Assessment Report	<input type="checkbox"/> NA
(d)	Remedial Action	<input type="checkbox"/> NA
811.320	Groundwater Quality Standards	
(a)	Applicable Groundwater Quality Standards (AGQSS)	<input type="checkbox"/>
(d)	Establishment of Background Concentrations	<input type="checkbox"/>
(e)	Statistical Analysis of Groundwater Monitoring Data	<input type="checkbox"/>
811.324	Corrective Action Measures for MSWLF Units	<input type="checkbox"/> NA
811.325	Selection of remedy for MSWLF Units	<input type="checkbox"/> NA
811.326	Implementation of the corrective action program at MSWLF Units	<input type="checkbox"/> NA
Part 813 Subpart E	Certification and Reports	
813.502	Groundwater Reports	<input type="checkbox"/>
813.503	Information to be Retained at or near the Waste Disposal Facility	<input type="checkbox"/>
813.504	Annual Report	<input type="checkbox"/>

THIS IS A COPY OF THE ORIGINAL RECORDS
 8/21/2016

Permit Provisions	
Permit	Description of Violation (condition # of permit, page # of permit, and/or page # of approved application)
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
Other Requirements	
	Description of Violation (examples: IPCB order, court order. Include case/order number and order entry date.)
	<input type="checkbox"/>
	<input type="checkbox"/>

- Informational Notes**
1. [Illinois] Environmental Protection Act: 415 ILCS 5/4.
 2. Illinois Pollution Control Board: 35 Ill. Adm. Code, Subtitle G.
 3. Statutory and regulatory references herein are provided for convenience only and should not be construed as legal conclusions of the Agency or as limiting the Agency's statutory or regulatory powers. Requirements of statutes and regulations cited are in summary format. Full text of requirements can be found in references listed in 1. and 2. above.
 4. The provisions of subsection (o) of Section 21 of the [Illinois] Environmental Protection Act shall be enforceable either by administrative citation under Section 31.1 of the Act or by complaint under Section 31 of the Act.
 5. This inspection was conducted in accordance with Sections 4(c) and 4(d) of the [Illinois] Environmental Protection Act: 415 ILCS 5/4(c) and (d).
 6. Items marked with an "NE" were not evaluated at the time of this inspection.
 7. Items marked with an "NA" were not applicable at the time of this inspection.

Illinois Environmental Protection Agency

Bureau of Land — Field Operations Section — Champaign Regional Office

0390055036—DeWitt County

Clinton/Clinton Landfill 3

Groundwater File

Inspection Date: 21 April 2016

Inspector: Jeff Turner

Landfill Groundwater Split-Sampling Inspection

Introduction

I conducted an inspection at this operating landfill. The purpose of the inspection was to split groundwater samples with the facility. I conducted the inspection in accordance with authority granted under sections 4(c) and 4(d) of the Illinois Environmental Protection Act and Standard Condition 4 of the site's permit.

I conducted these activities on 21 April 2016 from 8:30 A.M. to 3:10 P.M. (times approximate). I was assisted by Dustin Burger from my office. During the inspection, I interviewed the following personnel, all with PDC Technical Services: Charles Hostetler, Senior Program Manager; Dakota Ladwig, Staff Geologist; and Lindsey Hawksworth, Staff Geologist. The weather was mostly cloudy, clearing late in the inspection, with a light breeze and temperatures around 70°F. I took three photographs and collected groundwater split samples from four wells. I received analytical results from the Illinois EPA Laboratory on 10 May 2016 and from PDC Laboratories on 2 June 2016.

Site history and description

Clinton Landfill, Inc. is a subsidiary of Peoria Disposal Company (PDC). The complex of three landfills lies just east of US Route 51 south of Clinton.¹ The first landfill, listed in the Bureau of Land Site Inventory System as Clinton Landfill Inc (site #0398080005) but informally referred to as Clinton Landfill 1, began accepting waste in the mid-1970s and was certified closed in 1990. It remains in an extended post-closure care period, conducting corrective action for groundwater exceedances. Clinton Landfill 2 (site #0398080007), located immediately east of Clinton #1, began in 1990 and ceased accepting waste in mid-2010. Its closure certification application was approved by the Permit Section on 22 May 2013; its minimum 30-year post closure care period began 12 May 2011 and will therefore last until at least 12 May 2041.

¹ Not to be confused with similarly named sites such as Clinton Municipal #s 1–2, City of Clinton #s 1–2, etc. The only connections that I could determine between the current, privately owned complex and any of the other sites is that the site formerly known as Clinton Municipal #3 ultimately became Clinton Landfill, Inc. (#1), 0398080005. Similarly, the site formerly known as Clinton Municipal (0398080001) was on property now occupied by Clinton Landfill 2, 0398080007.

Clinton Landfill 3 lies directly east of Clinton Landfill 2. The #3 facility comprises approximately 225 acres of what was formerly primarily crop land and timber land. A 5-acre residential parcel (also owned by CLI) exists in the eastern portion of the site. Land use in the region is predominately agricultural, (i.e., row crops and livestock) with some rural single family dwellings and businesses scattered throughout the area.

Clinton Landfill 3 is the currently active facility in the Clinton Landfill complex. Its development was approved by Permit 2005-070-LF on 2 March 2007. The total footprint for waste will be approximately 157.451 acres, according to the permit.

Permit Modification 9 (8 January 2010) authorized the reconfiguration of the facility into two units, the Municipal Solid Waste Unit (MSWU) and the Chemical Waste Unit (CWU). Neither the MSWU nor the CWU is permitted to accept RCRA² hazardous waste.

Part of the MSWU will overlie the CWU. A separation berm will separate the two units horizontally and a separation layer will separate them vertically. The overlying portion of the MSWU is to be emplaced after the CWU is filled to capacity and the separation layer has been constructed. Although the MSWU and CWU are permitted for different types of waste, they are part of the same landfill, have the same groundwater monitoring network, will eventually have to be certified closed as one landfill, and will have the same post-closure care period.

General regulatory information

Information on how Clinton Landfill is regulated is provided for general informational purposes and is not meant as a substitute for the permit or regulations. Clinton Landfill 3 is subject to 35 Ill. Adm. Code Parts 811–813, as applicable. It is also subject to its permit, 2005-070-LF, first issued on 2 March 2007 and most recently modified on 5 April 2016 (modification 59, which approved construction documentation for gas management system components). Modification 9, issued on 8 January 2010, approved the reconfiguration of the facility into two units, a Municipal Solid Waste Unit (MSWU) and a Chemical Waste Unit (CWU), which will comprise 146.453 acres and 22.495 acres, respectively.

The MSWU is permitted for municipal solid waste and non-hazardous special waste. It first accepted waste in July 2009.

The CWU at the southwest corner of the overall landfill footprint is being constructed to a more stringent design standard. The CWU may accept non-hazardous special waste, inert waste, putrescible waste, and chemical wastes. The CWU first accepted waste on 28 April 2011, according to permit application Log 2011-448.

² “RCRA” refers to the federal Resource Conservation and Recovery Act of 1976, the principal federal law regulating the disposal of solid waste and hazardous waste in the United States. RCRA regulations define whether a waste is “hazardous” or not.

PDC intended the CWU to be able to accept manufactured gas plant waste exceeding RCRA toxicity thresholds³ and PCB wastes with PCB concentrations up to 500 parts per million. However, their application to do so was withdrawn.

Construction details

For the purposes of groundwater monitoring, closure, and post-closure, Clinton Landfill 3 is considered one unit. Both the MSWU and the CWU are monitored by the same well network (though the CWU has an expanded monitoring list). Both units will be certified closed as one facility, subject to a post-closure care period of thirty years minimum.

The MSWU is a solid waste landfill constructed according to the Illinois Pollution Control Board's RCRA Subtitle D regulations at 35 Ill. Adm. Code Part 811, including liners, leachate collection, and surface water management facilities. The CWU is constructed to a more stringent standard. The following information and diagram stem from the Illinois EPA's Clinton Landfill 3 Internet portal (<http://www.epa.state.il.us/community-relations/fact-sheets/clinton-3/index.html>).

The design of the liner and leachate drainage systems for the MSWU is one that is frequently used at non-hazardous waste landfills in Illinois. Starting from the bottom and going up, the liner consists of a layer of compacted clay three feet thick overlain by a 60-mil high density polyethylene (HDPE) geomembrane. The purpose of the liner is to stop leachate from migrating out of the waste and into the surrounding environment. On top of the liner is the leachate drainage layer, which consists of a one foot layer of sand overlain by a geotextile to exclude fine particles. The purpose of the sand layer, in conjunction with a network of pipes within it (known as the leachate collection system), is to prevent the height (or head) of leachate standing on the liner from exceeding one foot. The pipes conduct the leachate to a sump where it is pumped out of the landfill and into storage tanks. It may be solidified and placed back into the landfill or transported off-site for treatment. Permit modification 44 authorized the installation of leachate recirculation wells in the MSWU.

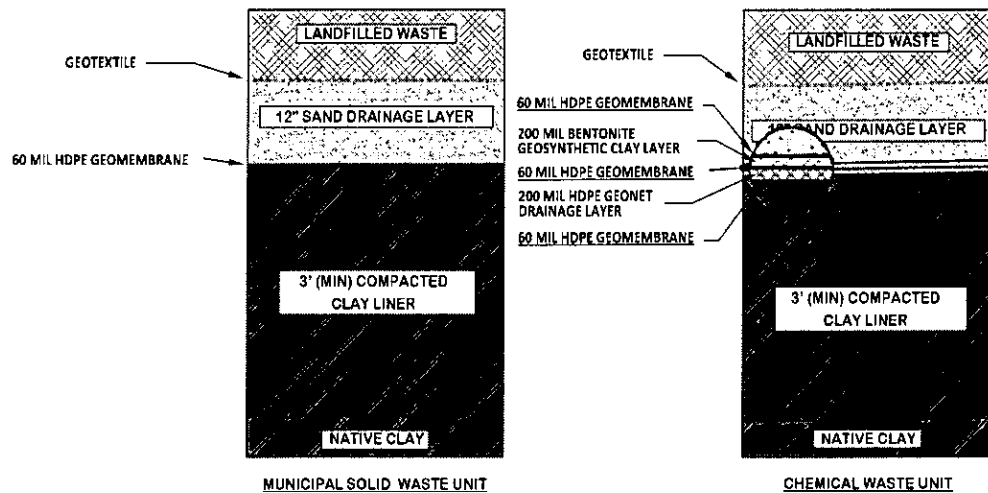
The design for the CWU exceeds Illinois' requirements for liner and leachate drainage systems in non-hazardous waste landfills. Under CWU design, again starting at the bottom, there is a three foot layer of compacted clay and a 60-mil HDPE geomembrane. These two layers constitute the secondary liner. On top of the secondary liner, there is a 200-mil HDPE geonet that serves as the secondary leachate drainage layer. On top of the geonet is a 200-mil bentonite geosynthetic clay liner (GCL) sandwiched between two layers of 60-mil HDPE geomembrane. This geomembrane/GCL/geomembrane sandwich serves as the primary liner system. Finally, on top of the primary liner system is the primary leachate drainage system composed of a foot of sand overlain by a geotextile.

The CWU design provides redundancy in the form of the secondary liner. If the primary liner system were to leak, the secondary liner is there to prevent leachate from escaping into the environment. Also, if leachate constituents were found in the secondary leachate drainage system, it would

³ Manufactured gas plant waste may exceed the toxicity thresholds of §721.124(b) without being a RCRA hazardous waste unless it is hazardous for ignitibility, corrosivity, or reactivity, per 35 Ill. Adm. Code §721.124(a).

provide an early warning that the primary liner system has failed. For this reason, the secondary leachate drainage system is sometimes called the witness zone.

CLINTON LANDFILL NO. 3 - TYPICAL FLOOR LINER SECTIONS



Compliance history

The last indication in Bureau of Land records of any apparent violations at the facility was in late 2009, when small amounts of uncovered waste from the previous operating day were seen in inspections. This operating practice issue was seen to have been corrected in a 16 February 2010 inspection and has not been cited as an apparent violation since then. No other problems or issues have been cited as apparent violations, and there are no court, administrative, or Illinois Pollution Control Board orders on this site.

Groundwater monitoring reports and responses to increases

All wells at this site are required to be sampled on a quarterly basis for List G1 parameters (field measurements and inorganic parameters), with collection to occur within the first two months of the quarter and reporting to occur by the fifteenth day of the following quarter. In addition, semi-annual sampling is required at all wells for List G2 (organic) parameters and at CWU wells for List G3 (additional organic) parameters, with collection to occur in April/May and October/November and reporting by 15 July and 15 January, respectively.

The permit sets four conditions that define “observed increases” beyond permitted limits when constituent concentrations are at or above the practical quantitation limit (PQL) and one or more of the four conditions are exceeded. These four trigger conditions are as follows.

- a. The concentration of any constituent in List G1 (indicator parameters and dissolved metals) of Condition VIII.12. shows a progressive increase over eight consecutive quarters.
- b. The concentration of any constituent monitored in accordance with List G1, List G2 (organics), or List G3 (more organics) of Condition VIII.12. exceeds the MAPC⁴ at an established monitoring point within the zone of attenuation.⁵
- c. The concentration of any organic constituent in List G2 or List G3 exceeds the preceding measured concentration at any established point.
- d. The concentration of any constituent monitored at or beyond the edge of the zone of attenuation (compliance boundary⁶) exceeds its AGQS⁷ or pursuant to 811.320(d), any constituent monitored at an upgradient well exceeds its AGQS.

An increase observed by any of the four conditions requires follow-up. Conditions VIII.14. and VIII.15. of the permit state the following.

For each round of sampling described in Condition 10 of this Section, the operator must determine if an observed increase has occurred within 90 days of the date [of] initial sampling. If an observed increase is identified, the operator must also notify the Illinois EPA in writing and follow the confirmation procedures of 35 Ill. Adm. Code, 811.319(a)(4)(B). Furthermore, the operator must complete the confirmation procedures within 180 days of the initial sampling event.

Upon confirmation of a monitored increase and within 180 days of the initial sampling date, the operator shall submit a permit application for a significant modification to demonstrate an alternate source per 35 Ill. Adm. Code 811.319(a)(4)(b)(iii) or begin an assessment monitoring program in order to determine whether the solid waste disposal facility is the source of the contamination and to provide information needed to carry out a groundwater impact assessment in accordance with 35 Ill. Adm. Code 811.319(b).

In other words, the landfill must re-sample the exceeding parameters in their respective wells to verify the exceedance. The mere detection of a parameter or exceedance of a limit in a sample does not automatically indicate that these same conditions exist in the aquifer. Various factors can affect sample results: sampling technique, contaminated sampled bottles, airborne contamination during sampling, cross-contamination in the laboratory, analytical variability, and so forth. Therefore, the regulations and permit use confirmation sampling to lessen the likelihood that the increase resulted from something other than an actual change in groundwater chemistry. If the exceedance is re-

⁴ MAPC = Maximum allowable predicted concentration. MAPCs are applicable to wells within the zone of attenuation.

⁵ §810.103 states, "Zone of attenuation' means the three dimensional region formed by excluding the volume occupied by the waste placement from the smaller of the volumes resulting from vertical planes drawn to the bottom of the uppermost aquifer at the property boundary or 100 feet from the edge of one or more adjacent units. Stated more simply, this is a buffer zone outside the waste footprint.

⁶ §811.318(b)(5) states, "A minimum of at least one monitoring well shall be established at the edge of the zone of attenuation and shall be located downgradient with respect to groundwater flow and not excluding the downward direction, from the unit. Such well or wells shall be used to monitor any statistically significant increase in the concentration of any constituent, in accordance with Section 811.320(e) and shall be used for determining compliance with an applicable groundwater quality standard of Section 811.320."

⁷ AGQS = Applicable groundwater quality standard. AGQSs are applicable to upgradient wells and compliance boundary wells. Both AGQSs and MAPCs are statistically derived from concentration data from multiple sampling events to represent expected background concentrations, i.e., natural conditions. Statistical methods used for this purpose are generally designed to allow a certain percentage of false positive results. In other words, it is expected that some exceedances will occur that are not actually statistically different from background concentrations.

observed during confirmation sampling, it is referred to as a “confirmed increase.” Even a confirmed increase does not automatically represent an impact from the facility, but the landfill must submit an application for a significant permit modification to address confirmed increases.

The significant permit modification application can either: 1) propose to demonstrate that an alternate source (i.e., something other than a release of waste constituents from the landfill) is responsible for the exceedance, or 2) propose groundwater assessment monitoring to determine the source of the exceedance. If the Illinois EPA approves the alternate source demonstration, the monitoring well returns to routine detection monitoring. Otherwise, the Illinois EPA requires the landfill to conduct groundwater assessment monitoring to determine the source of the exceedance, and submit follow-up assessment monitoring reports to the Agency. If the groundwater assessment monitoring shows a release from the landfill, the landfill must propose and carry out a groundwater corrective action plan. The landfill is then required to submit regular corrective action reports.

All wells at Clinton Landfill 3 are currently in detection monitoring⁸, although alternate source demonstrations are currently required for some observed increases and under review for others.

On a quarterly basis, the Illinois EPA’s groundwater data system manager queries a list of observed increases from the facility’s electronically submitted analytical data. This list is subsequently compared to the notifications submitted by Clinton Landfill to determine whether they have included all observed increases, whether they have confirmed the increases, and whether all confirmed increases have been included in a permit application. The findings of this review are forwarded to the Permit Section so that any facility omissions can be addressed during review of the application. Thus, the Illinois EPA evaluates the facility’s monitoring results on a routine basis.

Condition VIII.19. of the permit requires the site to survey and report the elevation of the top of the inner casing (“stick-up”) when wells are installed, every two years thereafter, and whenever there is reason to suspect the elevation may have changed. These measurements were last taken on 8 January 2015, so the facility is up to date on this item.

Well bottoms (a List G parameter that must be measured during second quarter, per Condition VIII.18.) must be measured and reported annually by 15 July for wells without dedicated pumps and every five years (or whenever the pump is removed) for wells with pumps. These values are included in the annual flow evaluation submitted each 15 July.

Monitoring Wells

Four hydrostratigraphic units are monitored at Clinton Landfill #3: the Roxana Silt (which may be the Robein Member), the Upper Radnor Till Sand, the Lower Radnor Till Sand, and the Organic Soil. Not all units are necessarily laterally continuous across the site or monitored at each monitoring point. The Organic Soil occurs within the Radnor Till Member of the Glasford Formation, as do,

⁸ Detection monitoring is the initial and basic mode at all groundwater monitoring sites. In detection monitoring, no releases have been confirmed and the facility carries out a monitoring program designed to identify any such releases.

obviously, the Upper and Lower Radnor Till Sands. The last letter of each well name indicates which unit that well monitors, as follows.

Letter	Meaning	Unit
R	Roxana/Robein	Roxana Silt/Robein Member
S	shallow	Upper Radnor Till Sand
M	middle	Lower Radnor Till Sand
D	deep	Organic Soil

The installation of monitoring wells and piezometers at Clinton 3 is phased in accordance with the landfill's ongoing development and includes both permanent and temporary monitoring points. Permanent wells/piezometers are those standing outside the final waste boundary, while temporary wells come and go within the footprint of the MSWU.

New MSWU cells are constructed proceeding southward from the northwest corner of the landfill. Because the northerly phases of the MSWU are remote from compliance boundary wells G39R, G39M, G39D, and G54S, temporary wells are installed downgradient (south) of new MSWU cells for early detection of any releases. Previous temporary wells and/or piezometers within the new cell's footprint must be plugged and abandoned, per Note iv. of the permit's phasing schedule.

The facility discusses upcoming abandonments with the Permit Section prior to implementing them. A formal permit modification is not required and wells can be verbally approved for abandonment prior to written approval of pending alternate source demonstrations (if any). The facility must time abandonments to occur after that quarter's samples have been taken.

At landfills with phased networks, abandonment of wells within new cell footprints and installation of replacement wells are considered approved by the issuance of operating authorization for the new cell, even though changes to the well network may not be spelled out in the introductory part of the permit where changes approved by the new permit are identified. Additionally, the well list in the permit may occasionally become out of sync with the actual network, which is currently the case. On 15 April 2016, the facility submitted an application to update the well list in the permit.

A summary table of pertinent well information—depths, elevations, construction materials, and so forth—is attached to this report. Top of casing and ground (surface pad) elevations are updated to the most recent survey (January 2015 for most wells, January 2016 for some). Most of the new elevations are within margin of error of the previous survey. A few were off by several feet. This is generally due to reconstruction or reconfiguration to correct pad heave or grade problems. PDC staff members compare new elevations to old ones to determine if there are well problems.

Upgradient locations

Wells designated as upgradient include G07S (for the Upper Radnor Till Sand); G01M, G04M, G05M, and G08M (for the Lower Radnor Till Sand); G01D, G02D, G03D, G07D, and G08D (for the Organic Soil); and G02R, G04R, G07R, R17R, and G58R (for the Roxana Silt). Most of these are along the north or northwest sides, except G07R (east of the southeast quarter of the site) and G58R (west of Cell 1A of the CWU).

Downgradient locations

Downgradient (zone of attenuation and compliance boundary) wells occur outside the east, west, and south site boundaries, and south of the currently active MSWU cell (5A/B) within the final waste boundary.

Construction materials

Almost all wells at the site are of hybrid construction: PVC casing above the water table and Schedule 304 stainless steel below it, with a stainless steel screen. For a very few wells, there were information gaps in the records (indicated by “?” in the table), but based on the prevalence of the hybrid casing/steel screen construction, it is still accurate to say that most of the wells at the site are of that construction.

Screen lengths, screened intervals, and total depths

Some wells at this site have (approximate) ten-foot screens while others have (approximate) five-foot screens. The “approximate” enters the description in that the segment comprising the screen is either five or ten feet long, but the distance from the first slot to the last slot varies slightly from screen to screen. Total depths and screened intervals range according to the water-bearing zone monitored and the topography of the site.

On-site evaluation

Inspection chronology

We arrived on-site on 21 April at approximately 8:30 A.M. After a safety briefing and an overview of the day’s plans, we loaded into our vehicles and proceeded to the G04 well cluster.

The goal for the event was to split samples on one upgradient well and three downgradient wells. We selected G04M for our upgradient split because it would provide sufficient sample volume for quality control samples.

The G04 cluster consists of two wells, G04M and G04R, standing near the eventual northeast corner of the landfill. Currently this area is remote from filling activities and is occupied by woods and farmland. While Ladwig was purging G04M, Hawksworth purged G04R. After purging was complete on G04M, I split samples with Ladwig. Hawksworth also collected samples on G04R after purging.

We then moved on to the G48 well cluster. It stands south of the CWU and includes wells G48M, G48D, and G48R. I split with Ladwig on G48M, including a field duplicate, while Burger collected a split with Hawksworth at G48R.

As we headed back toward the site, a brief but relatively heavy rain occurred. By the time we were back at the site and meeting up with the PDC crew, the rain had subsided to a few drops. We then

purged and sampled G08R west of the MSWU. Upon the completion of sampling at G08R, Burger and I departed the site and delivered the samples to the Illinois EPA Laboratory in Springfield.

Sampling oversight

One goal of the inspection was to observe PDC's samplers to verify that their technique conformed to recommended practices and the site's approved sampling and analysis plan (SAP). The activities that I observed appeared to be in accordance with the approved plan.

Groundwater samples collected

Wells sampled

Samples of groundwater were collected from four monitoring wells during the sampling event. With a project requirement of splitting on one upgradient well and three downgradient wells and having no other particular reason to choose one well over another, I relied on Hostetler to select wells based on ability to provide sufficient water for a split sample. These wells included G04M, an upgradient well; G48M and G48R, two wells adjacent to active or filled cells of the CWU; and G08R, a well adjacent to the MSWU.

Sampling procedure

The samples were collected using the dedicated bladder pumps installed in the wells, operated in accordance with the facility's approved Sampling and Analysis Plan. My split procedure was in general accordance with Illinois EPA Bureau of Land sampling standard operating procedures (SOPs). Because split samples from wells with dedicated pumps serve primarily as a comparison of the laboratories that analyze the samples, Ladwig and I alternated bottles as we filled our sample bottle sets to minimize variability caused by fluctuations in water chemistry during the course of pumping at each well. For parameters where the sample aliquot was held in multiple bottles (i.e., VOCs), we alternated by bottle. For bottles where the parameter aliquot was held in one bottle, we would each fill half a bottle, then let the other fill half a bottle, prior to completing our own bottle. Additionally, since I had extra bottles for volatile and semi-volatile matrix spikes and matrix spike duplicates for well G04M and a complete field duplicate for well G48M, I worked those bottles into the alternation to maximize their comparability to my primary sample and Ladwig's sample.

For sample aliquots for dissolved parameter analyses, a 0.45 μ disposable in-line filter cartridge was attached to the pump discharge tube after completion of the totals parameters aliquot. Several cycles' worth of water were discharged through the filter to flush and saturate it prior to dissolved aliquot collection.

Bottles filled

For each sample, I filled the following bottles: three 40 mL glass vials with polypropylene caps, Teflon-lined silicone septa, and HCl preservative (for volatile organic compound [VOC] analysis); one one-liter amber glass bottle with polypropylene caps and Teflon liners (for semi-volatile organic

compound [SVOC] analysis); one 250 mL glass bottle with polypropylene cap, pulp and Saran cap liner, and H₂SO₄ preservative (for total recoverable phenols analysis); one 250 mL polyethylene bottle with polypropylene cap, pulp and Saran cap liner, and HNO₃ preservative (for dissolved metals analysis); one 250 mL polyethylene bottle with polypropylene cap, pulp and Saran cap liner, and H₂SO₄ preservative (for dissolved ammonia and dissolved nitrate/nitrite analysis); one 250 mL polyethylene bottle with polypropylene cap, pulp and Saran cap liner, and NaOH preservative (for total cyanide analysis); one one-liter polyethylene bottle with polypropylene cap, pulp and Saran cap liner (for dissolved sulfate and dissolved chloride analysis); and one one-liter polyethylene bottle with polypropylene cap, pulp and Saran cap liner (for total dissolved solids analysis).

In addition to the above bottles, I also filled additional bottles for quality control purposes. For the G04M sample, I filled two additional 40 mL vials and two additional liter amber bottles for matrix spike and matrix spike duplicates for VOCs and semi-volatiles, respectively. At well G48M, I filled one complete additional sample set as a field duplicate sample. Finally, I also kept a pair of laboratory-prepared VOC trip blanks in my presence during sampling.

During sampling, I noted that for whatever reason, a few of the laboratory-provided VOC vials were unpreserved instead of being pre-preserved with hydrochloric acid. At this point, there was nothing I could do about it. However, on the day after the event, I informed the laboratory and they pulled the unpreserved vials. There had been only three, and by good fortune no more than one per sample set. While three vials are normally collected for VOCs, two vials provide sufficient sample, barring accidents. Therefore, the withdrawal of the unpreserved vials did not affect the analyses and my VOC data were not qualified for improper preservation.

Sample handling, custody procedures, and final disposition

Prior to the sampling event, I applied computer-generated self-adhesive labels to each bottle and secured them with transparent packing tape. The labels stated the name of the site, my name, the analytes, and the sampling date. Normally I would also have included the well number on the label, but I was unable to, not knowing the wells in advance. I designated the trip blank vials "Trip Blank."

At each well, I used a wax pencil to add the well designations to the bottle labels. I designated the field duplicate "G90M" to conceal its nature as a field duplicate from the laboratory to avoid any potential bias. I added a "T" and a "D" to the well names (and duplicate identifier G90M) to denote "total" and "dissolved," respectively. However, I was not entirely consistent with adding these suffixes to the well designations, forgetting at a couple of wells. The day after the sampling event, I emailed laboratory personnel and instructed them on how to distinguish the total samples from the dissolved samples. They had already figured it out.

For each sample, I placed the glass bottles (amber liters, VOC vials, and phenol bottles) into bubble pouches to protect them from breakage. I then placed the pouched bottles and the plastic bottles together into a food grade plastic bag. Total and dissolved aliquots were considered separate samples and thus were bagged separately from each other.

After placing bottles into bags, I tied the top of the bag in a knot, taped the knot down with packing tape, and sealed it with evidence tape. I wrote my initials, the date, and the time on the evidence tape

with a china marker. I photographed each sealed sample near the well from which it had been collected. I placed the sealed samples into coolers containing both bottles of water ice.

I documented the samples on the DLPC/FOS Chain of Custody Document (COCD; see attached copy) and obtained Hostetler's signature on the "receipt for samples" section of the form. The "Receipt for Samples" is simply an attestation from a facility representative that the samples came from the referenced facility, and in this case that they were split samples. At the Laboratory, I relinquished the samples to Matt Neely at 4:15 P.M. Scott Clark later emailed me a scan of the COCD with laboratory numbers assigned.

Parameters requested

Parameters were chosen to approximate the facility's routine second quarter analyte list and included volatile and semi-volatile organic compounds, total recoverable phenols, total cyanide, total dissolved solids, dissolved inorganic parameters (metals, ammonia, nitrate/nitrite,⁹ sulfate, and chloride), pH, and specific conductance. For the most part, parameters will be run by SW-846 methods. For some parameters, the Laboratory may use equivalent non-SW-846 methods.

Review of split sample results

I entered Illinois EPA and PDC data into an Excel spreadsheet for presentation and comparison. The results are discussed below.

Illinois EPA results

Organics

No organics were detected above the reporting limit.¹⁰

Inorganics

As seen in the attached spreadsheet, many of the permit-required inorganic constituents were not detected above their laboratory reporting limits.

I compared results from the G48M/G90M primary/duplicate sample set where given constituents were detected above reporting limits in both samples. For each pair of results, I compared the two numbers to each other using relative percent difference (RPD) thusly,

$$RPD = \left| \frac{x_1 - x_2}{(x_1 + x_2)/2} \right| \times 100$$

⁹ Clinton Landfill's permit actually specifies nitrate, but the Illinois EPA laboratory currently runs nitrate/nitrite. The result is the total amount of nitrate and nitrite.

¹⁰ A reporting limit is the lowest concentration of a constituent that can be reliably quantified in a sample. It is not the same as a detection limit, which is the lowest concentration that can be detected (but not reliably quantified) above background noise.

where x_1 and x_2 are the two values to be compared. Stated in words, RPD is the *difference* between two numbers divided by their *average*. RPD is often used to compare the closeness of two values that should be the same (e.g., split sample results).

The primary and duplicate samples compared quite well—the average RPD was 1.90%. Most of the individual RPDs were around or less than 1%, with only one (arsenic) appreciably greater at 11.24%. In accordance with the Bureau of Land Standard Operating Procedure for Quality Control Samples, RPDs less than 20% are acceptable without further interpretation. Beyond that, the very low RPDs demonstrate that overall, the Illinois EPA's sampling and analysis efforts introduced little to no bias into the final results, and that the data are usable for the purposes of the sampling event.

Qualified results

The Illinois EPA Laboratory qualified (indicated results may not be completely accurate) for a number of constituents. The Laboratory qualified pH results for being beyond the holding time of two hours. However, the pH results still compared well to Clinton Landfill's field-measured pH values, so the holding time excursion did not appear to significantly impact the pH data.

The Laboratory qualified two phthalate results, dimethylphthalate and diethylphthalate, in the G04M results. The reason given for the qualification was "The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects." In other words, something about the sample caused the analysis not to meet quality control for those two constituents. Both results were less than the reporting limit. As other organic results from the split samples were below reporting limits, I doubt the true results for the two qualified organics would have been above reporting limits.

Lastly, the Laboratory qualified the total recoverable phenols result from all samples due to a sulfur odor from the samples. Sulfur is a known interferent for this type of phenol analysis, so the total recoverable phenols results should be viewed as suspect. Phenol was reported above the reporting limit by the Illinois EPA Laboratory in only one sample, G48R. Because of the qualification, I would consider that result inaccurate (and in its portion of the sample, PDC Laboratories reported phenol below the reporting limit of 5 µg/L).

Clinton Landfill results

PDC also collected and analyzed a field duplicate, at G04M. While I did not calculate RPDs for their results, they visually appeared to be quite close, indicating their sampling and analysis efforts introduced little to no bias into their data. On the attached spreadsheet, for each PDC parameter from G04M I gave the average of the primary and duplicate results except in one instance where one of the results was less than the reporting limit. In that instance I gave the other result.

Comparison of Clinton Landfill results to Illinois EPA results

Inorganics

I calculated RPDs for each Clinton Landfill result and corresponding Illinois EPA result (or to the Illinois EPA average result for G48M and its field duplicate G90M). There were certain result pairs for which I could not generate an RPD. For any constituent where either or both laboratories re-

ported a result less than the reporting limit, no RPD could be calculated and no meaningful comparison could be made—the true values are not known.

To determine if one laboratory tended to report higher values, I used the raw RPD instead of taking the absolute value. For consistency, I always subtracted the CLI result from the Illinois EPA result. Wherever CLI reported a greater value than the Illinois EPA did, the resultant RPD was negative. This “negative” has no connotation or meaning other than that the facility reported a higher result.

Of thirty-three total RPDs calculated, nineteen were positive and fourteen were negative. The average RPD overall was -0.36%. Thus, while the Illinois EPA laboratory reported a higher result slightly more often, PDC Laboratories reported higher concentrations overall. To estimate the comparability of the two data sets in another way, I looked at the magnitude of the RPDs. Of thirty-three RPDs, twenty-one were 10% or less, and thirty-one were 20% or less.

When even field duplicates run by the same laboratory do not result in identical analytical results, the use of different laboratories obviously may yield greater analytical variation. The Illinois EPA Laboratory has stated that analytical variation between two laboratories running split samples can easily be twenty-five percent, even when both laboratories are using approved methodology. None of the RPDs from this split event were as high as twenty-five percent, and most were much lower.

Considering all the foregoing, the PDC Laboratories data set should be viewed as acceptable.

Organics

No organics were detected above reporting limits in Clinton Landfill’s results from the four wells split during the sampling event. This compares well with the Illinois EPA laboratory results, which included no organic detections.

Observed exceedances

There was one exceedance of AGQS/MAPCs in Clinton Landfill’s data, specific conductance in G48R (which also exceeded in the Illinois EPA data). The total dissolved solids result from the well also exceeded the MAPC in the Illinois EPA data, though not in the Clinton Landfill data. Given the overall comparability of the two laboratories results, there is no reason to accord the Illinois EPA laboratory’s results more weight than PDC’s for determining whether there was an exceedance. In any event, the facility’s obligation under its permit and the regulations is to respond to observed increases above AGQs/MAPCs in its own data, not in Illinois EPA split results.

Summary of apparent violations

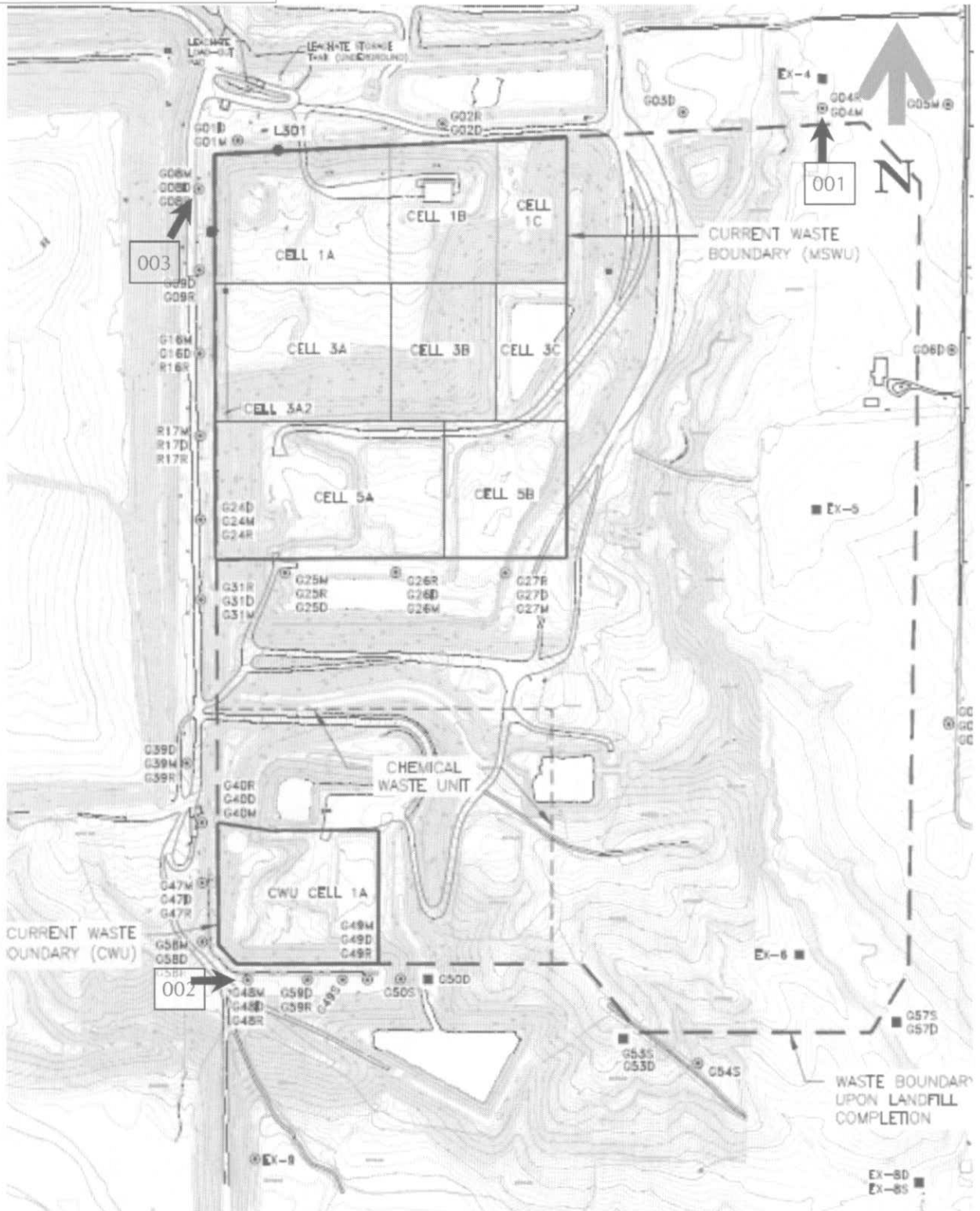
No apparent violations are cited as a result of this inspection.

Attachments

1. Facility diagram

2. Inspection photos
3. Well information table
4. Chain of Custody
5. Sampling and Analysis/Health and Safety Plan
6. Illinois EPA Laboratory results
7. PDC Laboratories results
8. Comparison spreadsheet

0390055036—DeWitt County
Clinton/Clinton Landfill 3
4/21/2016
Groundwater File



Key: ← Photographs (# = exp. #)
 Locations/directions approximate



DIGITAL PHOTOGRAPHS

File Names: 0390055036 ~ 04212016-[Exp. #].jpg



Date: 4/21/2016
Time: 11:49 A.M.
Direction: North
Photo by: Jeff Turner
Exposure #: 001
Comments: G04M and
sample



Date: 4/21/2016
Time: 1:24 P.M.
Direction: East
Photo by: Jeff Turner
Exposure #: 002
Comments: G48 cluster
and samples from
G48M and G48R



DIGITAL PHOTOGRAPHS File Names: 0390055036 ~ 04212016-[Exp. #].jpg



Date: 4/21/2016
Time: 2:57 P.M.
Direction: Northeast
Photo by: Jeff Turner
Exposure #: 003
Comments: G08R and
sample

MONITORING WELL INFORMATION

Well Number		G07S	G49S	G50S	G54S	G53S	G57S
Completion Date		1/14/2003	3/7/2011	3/11/2011	3/8/2011	10/7/2003	1/29/2003
Total Depth (ft.)		70.5	48.72	39.71	41.98	58.00	18.20
Ground Elevation (ft. MSL)		711.18	701.44	684.43	689.20	700.78	667.48
Top of Casing Elevation (ft. MSL)		713.25	703.67	687.16	692.01	702.92	669.45
Borehole Diameter (in.)		8	8	8	8	8	8
Zone Monitored		Upper Radnor	Upper Radnor	Upper Radnor	Upper Radnor	Upper Radnor	Upper Radnor
Area Monitored		Upgr/E MSWU	ZOA/S CWU 1A	ZOA/S CWU	CBW/S MSWU	PZ/S MSWU	PZ/SE MSWU
Contractor		SKS	Roberts	Roberts	Roberts	SKS	SKS
Geologist		Berry	Whelpley	Whelpley	Whelpley	Berry	Berry
Drilling Method		HSA	HSA	HSA	HSA	HSA	HSA
Sampling Interval/Method		CS	CS	CS	CS	CS	CS
Surface Seal Depth (ft.)		3	3	2.71	3	3	3
Grout Depth, Top/Base (ft.)		3 | 53.99	3 | 39.50	2.71 | 29.91	3 | 31.92	3 | 43.50	3 | 4
CASING	Type Material	?/SS304	PVC/SS304	PVC/SS304	PVC/SS304	PVC/SS304	SS304
	Diameter (in.)	2	2	2	2	2	2
	Stick-up Length (ft.)	2.28	2.83	3.06	3.29	2.74	2.33
	Depth (ft.)	58.99	43.74	34.74	37.01	47.57	8.05
SEAL	Type Material	slurry	pellets	pellets	pellets	slurry	pellets
	Depth, Top/Base (ft.)	53.99 | 56.99	39.50 | 42.51	29.91 | 32.91	31.92 | 34.92	43.50 | 45.50	4.00 | 6.00
PACK	Type Material	40 mesh silica sand	20-40 mesh silica sand	20-40 mesh silica sand	20-40 mesh silica sand	40 mesh silica sand	40 mesh silica sand
	Depth, Top/Base (ft.)	56.99 | 70.5	42.51 | 48.72	32.91 | 39.71	34.92 | 41.98	45.50 | 57.61	6.00 | 18.16
SCREEN	Type Material	SS304	SS304	SS304	SS304	SS304	SS304
	Diameter (in.)	2	2	2	2	2	2
	Length (ft.)	9.67	4.58	4.59	4.59	9.70	9.77
	Slot Size	0.010 "	0.010 "	0.010 "	0.010 "	0.010 "	0.010 "
	Depth, Top/Base (ft.)	58.99 | 68.66	43.74 | 48.32	34.74 | 39.33	37.01 | 41.60	47.57 | 57.27	8.05 | 17.82
MISC	Backfill Type	silica sand	—	—	—	silica sand	silica sand
	Depth, Top/Base (ft.)	69 | 70.5	— | —	— | —	— | —	57.61 | 58.00	18.16 | 18.20

MONITORING WELL INFORMATION

Well Number		G01M		G04M		G05M		G08M		G16M		R17M	
Completion Date		9/11/2007		3/15/2011		1/8/2003		8/20/2010		2/23/2011		9/16/2011	
Total Depth (ft.)		94		85.43		94.50		95.25		93.21		95.81	
Ground Elevation (ft. MSL)		733.17		723.36		731.97		734.91		735.26		737.44	
Top of Casing Elevation (ft. MSL)		735.11		725.50		734.07		737.15		737.99		739.59	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor	
Area Monitored		Upgr/N 1A		Upgr/N MSWU		Upgr/NE MSWU		Upgr/W 1A		ZOAW 3A2		ZOAW 5A	
Contractor		SKS		Roberts		SKS		SKS		Roberts		SKS	
Geologist		Berry		Day		Berry		Day		Whelpley		Whelpley	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		adjacent to logged well		CS/SS		CS		CS		CS/SS		SS	
Surface Seal Depth (ft.)		3		3		3		3		3		3	
Grout Depth, Top/Base (ft.)		3	76.60	3	74.95	3	77	N/A	N/A	3	78.11	3	86.21
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	2.20		2.28		2.63		2.97		2.80		3.03	
	Depth (ft.)	82.08		79.03		82.47		85.01		83.20		91.08	
SEAL	Type Material	slurry		pellets		slurry		slurry		pellets		pellets	
	Depth, Top/Base (ft.)	76.60	79.60	74.95	77.98	77	80	3	82.65	78.11	81.11	86.21	89.25
PACK	Type Material	40 mesh silica		20-40 mesh silica sand		40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	79.60	94.0	77.98	84	80	94.5	82.65	95.25	81.11	93.21	89.25	95.81
SCREEN	Type Material	SS 304		SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	9.68		4.67		9.69		9.67		9.66		4.81	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	82.08	91.76	79.03	83.70	82.47	92.16	85.01	94.68	83.20	92.86	91.08	95.89
MISC	Backfill Type	silica sand		bentonite pellets		silica sand		silica sand		—		—	
	Depth, Top/Base (ft.)	92.1	94.0	84	85.43	92.5	94.5	95.02	95.25	—	—	—	—

MONITORING WELL INFORMATION

Well Number		G25M		G26M		G27M		G40M		G47M		G48M	
Completion Date		12/5/2012		12/10/2012		9/23/2014		1/27/2003		2/9/2011		2/14/2011	
Total Depth (ft.)		33.10		34.62		33.47		89.80		80.17		64.80	
Ground Elevation (ft. MSL)		674.35		674.34		674.78		724.19		716.80		701.31	
Top of Casing Elevation (ft. MSL)		677.22		677.21		676.89		726.54		718.82		703.49	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor		Lower Radnor	
Area Monitored		ZOAW 5A2		ZOAS 5A		ZOAS 5B		ZOAW CWU		ZOAW CWU 1A		ZOAS CWU 1A	
Contractor		SKS		SKS		SKS		SKS		Roberts		Roberts	
Geologist		Carlson		Connell		Ladwig		Berry		Whelpley		Day	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		CS		CS		blind drill		CS		CS		SS	
Surface Seal Depth (ft.)		3		3.42		3		3		3		3	
Grout Depth, Top/Base (ft.)		3	22.96	3.42	21.22	3	19.40	3	74.30	3	64.98	3	54
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	5.22		4.89		2.65		2.53		2.36		2.39	
	Depth (ft.)	27.01		26.06		23.68		79.98		70.15		2.39	
SEAL	Type Material	pellets		pellets		pellets		slurry		pellets		pellets	
	Depth, Top/Base (ft.)	22.96	25.99	21.22	24.42	19.40	21.30	74.30	77.20	64.98	67.98	54	57.5
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	25.99	32.01	24.42	31.07	21.30	33.47	77.20	89.80	67.98	80.17	57.5	64.5
SCREEN	Type Material	SS304		SS304		SS304		?		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	4.66		4.66		9.45		9.78		9.67		4.59	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	27.01	31.67	26.06	30.72	23.68	33.13	79.98	89.76	70.15	79.82	59.52	64.11
MISC	Backfill Type	silica sand		silica sand		—		—		—		formation materials	
	Depth, Top/Base (ft.)	32.01	33.10	31.07	34.62	—	—	—	—	—	—	64.5	64.8

MONITORING WELL INFORMATION

Well Number		G49M	G58M	G39M	EX-4	EX-5	EX-6		
Completion Date		2/17/2011	1/26/2011	3/9/2011	4/6/2000	4/5/2000	4/3/2000		
Total Depth (ft.)		58.82	82.00	94.50	93.5	92.23	58.8		
Ground Elevation (ft. MSL)		700.69	704.81	731.29	724.90	728.08	694.51		
Top of Casing Elevation (ft. MSL)		702.63	707.28	733.11	727.39	730.31	696.79		
Borehole Diameter (in.)		8	8	8	8	8	8		
Zone Monitored		Lower Radnor	Lower Radnor	Lower Radnor	Lower Radnor	Lower Radnor	Lower Radnor		
Area Monitored		ZOAS CWU 1A	ZOAW CWU 1A	CBW/W CWU	PZ/N MSWU	PZ/E MSWU	PZ/S MSWU		
Contractor		Roberts	Roberts	Roberts	SKS	SKS	SKS		
Geologist		Day	Day	Day	Berry	Berry	Berry		
Drilling Method		HSA	HSA	HSA	HSA	HSA	HSA		
Sampling Interval/Method		CS	CS/SS	SS	CS	CS	CS		
Surface Seal Depth (ft.)		3	3	3	3	3	3		
Grout Depth, Top/Base (ft.)		3 | 49.05	3 | 54.38	3 | 78.99	3 | 78.2	3 | 76.5	3 | 42.5		
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2	
	Stick-up Length (ft.)	2.32		2.63		2.80		2.43	
	Depth (ft.)	54.01		59.90		84.09		81.97	
SEAL	Type Material	pellets		pellets		slurry		slurry	
	Depth, Top/Base (ft.)	49.05 | 52.05	54.38 | 57.38	78.99 | 81.99	78.2 | 81.2	76.5 | 79.5	42.5 | 46.5		
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	52.05 | 58.82	57.38 | 70.30	81.99 | 94	81.2 | 93.5	79.5 | 92.23	45.5 | 58.8		
SCREEN	Type Material	SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2	
	Length (ft.)	4.59		9.67		9.65		9.68	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	54.01 | 58.60	59.90 | 69.57	84.09 | 93.74	83.5 | 93.15	81.97 | 91.65	47.87 | 57.55		
MISC	Backfill Type	—		bentonite pellets		formation materials		—	
	Depth, Top/Base (ft.)	— | —	70.3 | 82	94 | 94.5	— | —	92 | 92.23	57.9 | 58.8		

MONITORING WELL INFORMATION

Well Number		G01D	G02D	G03D	G07D	G08D	G09D				
Completion Date		9/6/2007	7/28/2008	12/18/2002	1/14/2003	8/23/2007	8/14/2007				
Total Depth (ft.)		103.90	103.00	93.50	88	109.50	113				
Ground Elevation (ft. MSL)		733.39	733.97	726.84	710.95	734.39	735.72				
Top of Casing Elevation (ft. MSL)		735.02	736.53	728.88	713.34	735.79	737.88				
Borehole Diameter (in.)		8	8	8	8	8	8				
Zone Monitored		Organic Soil	Organic Soil	Organic Soil	Organic Soil	Organic Soil	Organic Soil				
Area Monitored		Upgr/N 1A	Upgr/N 1B	Upgr/N MSWU	Upgr/E MSWU	Upgr/W 1A	ZOAW 1A				
Contractor		SKS	SKS	SKS	SKS	SKS	SKS				
Geologist		Berry	Berry	Berry	Berry	Whelpley	Whelpley				
Drilling Method		HSA	HSA	HSA	HSA	HSA	HSA				
Sampling Interval/Method		adjacent to logged well	CS/ST	CS	CS	CS	CS				
Surface Seal Depth (ft.)		3	3	3	3	3	3				
Grout Depth, Top/Base (ft.)		3 | 88.1	3 | 87.40	3 | 78	3 | 72.5	3 | 94	3 | 94.2				
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2	
	Stick-up Length (ft.)	2.33		2.55		2.17		2.61		2.13	
	Depth (ft.)	93.19		92.98		82.96		77.39		99.27	
SEAL	Type Material	slurry		slurry		slurry		slurry		slurry	
	Depth, Top/Base (ft.)	88.1 | 91.1	87.40 | 90.40	78 | 81	72.5 | 75.5	94 | 97	94.2 | 97.2				
PACK	Type Material	40 mesh silica sand		40-60 mesh silica sand		40 mesh silica sand		40 mesh silica sand		40 mesh silica sand	
	Depth, Top/Base (ft.)	91.1 | 103.90	90.40 | 103.00	81 | 93.5	75.5 | 88	97 | 109.50	97.2 | 113				
SCREEN	Type Material	SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2	
	Length (ft.)	9.81		2.55		9.70		9.69		9.67	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	93.19 | 103	92.98 | 102.66	82.96 | 92.66	77.39 | 87.08	99.27 | 108.94	100 | 109.67				
MISC	Backfill Type	silica sand		—		silica sand		silica sand		silica sand	
	Depth, Top/Base (ft.)	103.40 | 103.90	— | —	93 | 93.5	87.5 | 88	109.29 | 109.50	100.32 | 113				

MONITORING WELL INFORMATION

Well Number		G16D		R17D		G25D		G26D		G27D		G40D	
Completion Date		2/22/2011		9/14/2011		12/4/2012		12/6/2012		9/23/2014		1/19/2011	
Total Depth (ft.)		106.85		107.33		42.64		43.91		48.10		99.34	
Ground Elevation (ft. MSL)		735.35		737.38		673.96		674.18		674.47		724.27	
Top of Casing Elevation (ft. MSL)		738.00		740.05		677.16		677.41		676.99		726.76	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Organic Soil		Organic Soil		Organic Soil		Organic Soil		Organic Soil		Organic Soil	
Area Monitored		ZOAW 3A2		ZOAW 5A		ZOA/S 5A		ZOA/S 5A		ZOA/S 5B		ZOAW CWU	
Contractor		Roberts		SKS		SKS		SKS		SKS		Roberts	
Geologist		Whelpley		Whelpley		Connell		Carlson		Ladwig		Day	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		CS/SS		SS		CS/SS		CS/SS		CS		SS	
Surface Seal Depth (ft.)		3		3		3		3.51		3		3.29	
Grout Depth, Top/Base (ft.)		3	91.40	NA	NA	3	32.20	3.51	33.01	3	41.30	3.29	88.79
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	2.81		2.82		5.32		5.08		2.90		2.18	
	Depth (ft.)	96.80		99.03		37.73		37.61		43.08		94.34	
SEAL	Type Material	pellets		Benseal slurry		pellets		pellets		pellets		pellets	
	Depth, Top/Base (ft.)	91.40	94.40	3	98.03	32.20	35.20	33.01	36.51	41.30	42.00	88.79	91.79
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	94.40	106.85	98.03	105.53	35.20	42.64	36.51	42.51	42.00	48.10	91.79	99.34
SCREEN	Type Material	SS304		SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	9.68		2.82		4.87		4.86		4.68		4.64	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	96.80	106.48	99.03	103.64	37.73	42.60	37.61	42.47	43.08	47.76	94.34	98.98
MISC	Backfill Type	—		formation/ filter pack		—		silica sand		—		—	
	Depth, Top/Base (ft.)	—	—	105.53	107.33	—	—	42.51	43.91	—	—	—	—

MONITORING WELL INFORMATION

Well Number		G47D	G48D	G49D	G58D	G59D	G39D		
Completion Date		1/28/2011	2/10/2011	2/16/2011	2/22/2011	2/14/2011	3/8/2011		
Total Depth (ft.)		90	73.70	74.38	78.34	74.55	101.35		
Ground Elevation (ft. MSL)		717.05	701.30	700.63	704.77	701.47	731.33		
Top of Casing Elevation (ft. MSL)		719.17	703.59	702.52	707.33	703.93	732.95		
Borehole Diameter (in.)		8	8	8	8	8	8		
Zone Monitored		Organic Soil	Organic Soil	Organic Soil	Organic Soil	Organic Soil	Organic Soil		
Area Monitored		ZOAW CWU 1A	ZOA/S CWU 1A	ZOA/S CWU 1A	ZOA/SW CWU 1A	ZOA/S CWU 1A	CBW/W CWU		
Contractor		Roberts	Roberts	Roberts	Roberts	Roberts	Roberts		
Geologist		Whelpley	Day	Day	Day	Whelpley	Day		
Drilling Method		HSA	HSA	HSA	HSA	HSA	HSA		
Sampling Interval/Method		CS	SS	CS	CS/SS	CS	CS		
Surface Seal Depth (ft.)		3.20	3	2.78	3	3	3.10		
Grout Depth, Top/Base (ft.)		3.20 | 80.02	3 | 64.72	2.78 | 61.38	3 | 68.52	3 | 65.35	3.10 | 92.39		
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2	
	Stick-up Length (ft.)	1.99		2.12		2.60		2.92	
	Depth (ft.)	85.02		68.72		64.36		73.11	
SEAL	Type Material	pellets		pellets		pellets		pellets	
	Depth, Top/Base (ft.)	80.02 | 83.02	64.72 | 67.72	61.38 | 74.01	68.52 | 71.52	65.35 | 68.35	92.39 | 95.39		
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	83.02 | 90	67.72 | 73.70	62.18 | 74.38	71.52 | 78.34	68.35 | 74.55	95.39 | 101.35		
SCREEN	Type Material	SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2	
	Length (ft.)	4.60		4.59		9.65		4.59	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	85.02 | 89.62	68.72 | 73.31	64.36 | 74.01	73.11 | 77.70	69.41 | 74.02	96.39 | 100.97		
MISC	Backfill Type	—		—		—		—	
	Depth, Top/Base (ft.)	— | —	— | —	— | —	— | —	— | —	— | —		

MONITORING WELL INFORMATION

Well Number		G06D		G50D		G02R		G25R		G07R		R17R	
Completion Date		1/10/2003		2/3/2003		3/9/2011		12/7/2012		3/1/2011		9/19/2011	
Total Depth (ft.)		98.00		35.80		71.60		12.30		46.40		78.12	
Ground Elevation (ft. MSL)		727.81		665.73		734.06		673.92		711.05		736.86	
Top of Casing Elevation (ft. MSL)		729.82		668.93		736.57		676.97		713.42		739.71	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Organic Soil		Organic Soil		Roxana Silt		Roxana Silt		Roxana Silt		Roxana Silt	
Area Monitored		PZ/E MSWU		PZ/S CWU		Upgr/N 1B		ZOA/S 5A1		Upgr/E MSWU		Upgr/W 5A	
Contractor		SKS		SKS		Roberts		SKS		Roberts		SKS	
Geologist		Berry		Kuhn		Whelpley		Connell		Day		Whelpley	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		CS		CS				SS		CS		CS	
Surface Seal Depth (ft.)		3		3		3.15		2.90		3.20		3	
Grout Depth, Top/Base (ft.)		3	83.50	3	19.30	3.15	56.47	NA	NA	3.20	31.39	3	62.92
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	2.33		2.64		2.24		5.10		2.29		2.43	
	Depth (ft.)	87.46		25.19		61.57		7.29		36.39		68.17	
SEAL	Type Material	slurry		slurry		pellets		pellets		pellets		pellets	
	Depth, Top/Base (ft.)	83.50	85.46	19.30	22.30	56.47	59.57	2.90	5.70	31.39	34.39	62.92	65.92
PACK	Type Material	40 mesh silica sand		40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	85.46	97.50	22.30	35.30	59.57	71.60	5.70	12.30	34.39	46.40	65.92	78.12
SCREEN	Type Material	?		SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	9.69		9.77		9.66		4.66		9.66		9.67	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	87.46	97.15	25.19	34.96	61.57	71.23	7.29	11.95	36.39	46.05	68.17	77.84
MISC	Backfill Type	silica sand		silica sand		—		—		—		—	
	Depth, Top/Base (ft.)	97.50	98.00	35.30	35.80	—	—	—	—	—	—	—	—

MONITORING WELL INFORMATION

Well Number		G58R	G08R	G09R	R16R	G53D	G57D
Completion Date		1/31/2011	8/31/2007	8/15/2007	9/16/2011	1/3/2003	1/29/2003
Total Depth (ft.)		42.38	76.00	82.5	73.43	67.40	40.75
Ground Elevation (ft. MSL)		704.98	734.54	735.82	735.33	701.49	667.38
Top of Casing Elevation (ft. MSL)		707.38	736.04	738.24	737.34	703.50	669.17
Borehole Diameter (in.)		8	8	8	8	8	8
Zone Monitored		Roxana Silt	Roxana Silt	Roxana Silt	Roxana Silt	Organic Soil	Organic Soil
Area Monitored		Upgr/W CWU 1A	ZOAW 1A	ZOAW 1A	ZOAW 3A	PZ/SE CWU	PZ/SE CWU
Contractor		Roberts	SKS	SKS	SKS	SKS	SKS
Geologist		Day	Whelpley	Whelpley	Whelpley	Kuhn	Berry
Drilling Method		HSA	HSA	HSA	HSA	HSA	HSA
Sampling Interval/Method		CS/SS	adjacent to logged well	adjacent	CS	CS	CS
Surface Seal Depth (ft.)		3.1	3	3	3	3	3
Grout Depth, Top/Base (ft.)		3.1 | 27.2	3 | 59.4	3 | 60	3 | 57.33	3 | 51.50	3 | 25
CASING	Type Material	PVC/?	PVC/SS304	PVC/SS304	PVC/SS304	PVC/SS304	?/SS304
	Diameter (in.)	2	2	2	2	2	2
	Stick-up Length (ft.)	2.66	2.07	3.03	2.36	2.84	2.04
	Depth (ft.)	32.35	65.32	65.5	62.93	57.12	30.13
SEAL	Type Material	pellets	slurry	slurry	pellets	slurry	Benseal
	Depth, Top/Base (ft.)	27.2 | 30.2	59.4 | 62.4	60 | 63	57.33 | 60.33	51.50 | 54.50	25.00 | 28.00
PACK	Type Material	20-40 mesh silica sand	40 mesh silica sand	40 mesh silica sand	20-40 mesh silica sand	40 mesh silica sand	40 mesh silica sand
	Depth, Top/Base (ft.)	30.20 | 42.38	62.4 | 76	63 | 82.5	60.33 | 73.43	54.50 | 66.80	28.00 | 40.20
SCREEN	Type Material	SS304	SS304	SS304	SS304	SS304	SS304
	Diameter (in.)	2	2	2	2	2	2
	Length (ft.)	9.68	9.68	9.67	9.68	9.64	9.73
	Slot Size	0.010 "	0.010 "	0.010 "	0.010 "	0.010 "	0.010 "
	Depth, Top/Base (ft.)	32.35 | 42.03	65.32 | 75	65.5 | 75.17	62.93 | 72.91	57.12 | 66.76	30.13 | 39.86
MISC	Backfill Type	—	silica sand	bentonite & sand	—	silica sand	silica sand
	Depth, Top/Base (ft.)	— | —	75.35 | 76	75.52 | 82.5	— | —	66.80 | 67.40	40.20 | 40.75

MONITORING WELL INFORMATION

Well Number		G27R		G40R		G47R		G48R		G49R		G59R	
Completion Date		9/23/2014		1/20/2011		2/10/2011		2/15/2011		2/18/2011		2/6/2011	
Total Depth (ft.)		16.68		62.72		57.87		45.90		45.12		37.65	
Ground Elevation (ft. MSL)		674.58		724.78		716.77		701.36		700.24		701.49	
Top of Casing Elevation (ft. MSL)		676.42		726.79		718.54		703.74		702.76		703.92	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Roxana Silt		Roxana Silt		Roxana Silt		Roxana Silt		Roxana Silt		Roxana Silt	
Area Monitored		PZ/S 5B		ZOAW CWU		ZOAW CWU 1A		ZOA/S CWU 1A		ZOA/S CWU 1A		ZOAW CWU 1A	
Contractor		SKS		Roberts		Roberts		Roberts		Roberts		Roberts	
Geologist		Ladwig		Day		Whelpley		Day		Whelpley		Whelpley	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		CS		SS		CS		SS		CS		CS	
Surface Seal Depth (ft.)		3		3		3		3		3		3	
Grout Depth, Top/Base (ft.)		NA	NA	3	47.6	3	42	3	30.7	3	30	3	22.80
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	2.23		2.49		1.99		2.49		2.52		2.59	
	Depth (ft.)	6.88		52.70		47.02		35.89		35.09		27.64	
SEAL	Type Material	pellets		pellets		pellets		pellets		pellets		pellets	
	Depth, Top/Base (ft.)	3.00	4.60	47.6	50.6	42	45.01	30.70	33.89	30	33	22.80	25.45
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	4.60	16.68	50.60	62.72	45.01	57.05	33.89	45.90	33	45.12	25.45	37.65
SCREEN	Type Material	SS304		SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	9.46		9.68		9.67		9.65		9.68		9.66	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	6.88	16.34	52.7	62.38	47.02	56.69	35.89	45.54	35.09	44.77	27.64	37.30
MISC	Backfill Type	—		—		silica sand		—		—		—	
	Depth, Top/Base (ft.)	—	—	—	—	57.05	57.87	—	—	—	—	—	—

MONITORING WELL INFORMATION

Well Number		G39R		G26R		G04R		EX-8S		EX-8D		EX-9	
Completion Date		3/2/2011		12/7/2012		3/17/2011		3/29/2001		3/29/2001		3/28/2001	
Total Depth (ft.)		71.72		12.47		58.52		22.5		44.5		29.00	
Ground Elevation (ft. MSL)		731.32		674.21		723.11		654.71		654.56		648.30	
Top of Casing Elevation (ft. MSL)		733.64		676.90		725.68		656.99		656.79		651.08	
Borehole Diameter (in.)		8		8		8		8		8		8	
Zone Monitored		Roxana Silt		Roxana Silt		Roxana Silt		Lower Radnor		Other		Other	
Area Monitored		CBW/W CWU		ZOAS 5A		PZ/N MSWU		PZ/SE MSWU		PZ/SE MSWU		PZ/S CWU 1A	
Contractor		Roberts		SKS		Roberts		SKS		SKS		SKS	
Geologist		Whelpley		Connell		Day		Berry		Berry		Berry	
Drilling Method		HSA		HSA		HSA		HSA		HSA		HSA	
Sampling Interval/Method		CS		CS		CS/SS		CS		CS		CS	
Surface Seal Depth (ft.)		3		3.17		3.01		3		3		3	
Grout Depth, Top/Base (ft.)		3	55.82	NA	NA	3.01	43.53	3	8	3	28.2	3	13.30
CASING	Type Material	PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		PVC/SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Stick-up Length (ft.)	3.19		4.70		2.78		2.71		2.59		2.52	
	Depth (ft.)	61.48		6.90		48.50		12.58		33.35		17.71	
SEAL	Type Material	pellets		pellets		pellets		pellets		pellets		pellets	
	Depth, Top/Base (ft.)	55.82	58.82	3.17	6.17	43.53	46.53	8	10	28.2	31.2	13.30	15.30
PACK	Type Material	20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand		20-40 mesh silica sand	
	Depth, Top/Base (ft.)	58.82	71.50	6.17	11.97	46.53	58.52	10	22.5	31.2	44.5	15.30	27.50
SCREEN	Type Material	SS304		SS304		SS304		SS304		SS304		SS304	
	Diameter (in.)	2		2		2		2		2		2	
	Length (ft.)	9.67		4.72		9.67		9.88		9.77		9.74	
	Slot Size	0.010 "		0.010 "		0.010 "		0.010 "		0.010 "		0.010 "	
	Depth, Top/Base (ft.)	61.48	71.15	6.90	11.62	48.5	58.17	12.58	22.46	33.35	43.17	17.71	27.45
MISC	Backfill Type	bentonite		silica sand		—		—		silica sand		silica sand	
	Depth, Top/Base (ft.)	71.50	71.72	11.97	12.47	—	—	—	—	43.16	44.5	27.50	29.00

MONITORING WELL INFORMATION

Well Number	G31D	G31M	G31R	G24R	G24M	G24D
Completion Date	12/3/2012	12/13/2012	12/18/2012	1/7/2013	12/19/2012	12/14/2012
Total Depth (ft.)	105.18	99.2	77.30	11.73	100.01	108.55
Ground Elevation (ft. MSL)	736.62	736.70	736.64	737.14	737.22	737.36
Top of Casing Elevation (ft. MSL)	739.08	739.21	739.14	739.54	739.99	739.64
Borehole Diameter (in.)	8	8	8	8	8	8
Zone Monitored	Organic Soil	Lower Radnor	Roxana Silt	Roxana Silt	Lower Radnor	Organic Soil
Area Monitored	ZOA/ SW 5A	ZOA/ SW 5A	ZOA/ SW 5A	ZOAW 5A	ZOAW 5A	ZOAW 5A
Contractor	SKS	SKS	SKS	SKS	SKS	SKS
Geologist	Connell	Connell	Carlson	Connell	Connell	Carlson
Drilling Method	HSA	HSA	HSA	HSA	HSA	HSA
Sampling Interval/Method	CS	CS	SS	CS/SS	CS/SS	CS/SS
Surface Seal Depth (ft.)	3	3	3	2.90	3	3
Grout Depth, Top/Base (ft.)	3 | 95.2	3 | 88	3 | 60.30	2.90 | 62.69	3 | 87.61	3 | 97.65
CASING	Type Material	PVC/SS304	PVC/SS304	PVC/SS304	PVC/SS304	PVC/SS304
	Diameter (in.)	2	2	2	2	2
	Stick-up Length (ft.)	2.97	3.01	2.92	2.67	3.34
	Depth (ft.)	100.29	93.49	66.92	67.77	93.41
SEAL	Type Material	pellets	pellets	pellets	pellets	pellets
	Depth, Top/Base (ft.)	95.2 | 98.2	88.0 | 91.0	60.30 | 63.90	62.69 | 65.77	87.61 | 92.21
PACK	Type Material	20-40 mesh silica sand	20-40 mesh silica sand	20-40 mesh silica sand	20-40 mesh silica sand	20-40 mesh silica sand
	Depth, Top/Base (ft.)	98.2 | 105.18	91.00 | 98.50	63.90 | 76.90	65.77 | 77.73	92.21 | 98.41
SCREEN	Type Material	SS304	SS304	SS304	SS304	SS304
	Diameter (in.)	2	2	2	2	2
	Length (ft.)	4.84	4.66	9.66	9.67	4.66
	Slot Size	0.010 "	0.010 "	0.010 "	0.010 "	0.010 "
	Depth, Top/Base (ft.)	100.29 | 105.13	93.49 | 98.15	66.92 | 76.58	67.77 | 77.44	93.41 | 98.07
MISC	Backfill Type	—	silica sand	silica sand	—	silica sand
	Depth, Top/Base (ft.)	— | —	98.5 | 99.2	76.92 | 77.30	— | —	98.41 | 100.01

Project Manager's Name/Address/Phone #: Jeff Turner, c/o IEPA
 2125 S. 1st St.
 Illinois EPA Laboratory
 825 N. Rutledge Street, Springfield, IL 62702
 2177782-9780; 2177557-0274

Fund	LP43	BOL #	0390055036	County	Clinton	Locality	Clinton
Section	F	USEPA ID#		Site Name	Clinton Landfill 3	File Category	Groundwater
Champaign, IL 61820				Other Laboratory Name, Address, and Phone #			
217/278-5800, fax 278-5808				Delivered by JST			

Lab Sample #	Parameter Group & Other Analytes				Field Sample #	Legal Hold?	Spill?	# of BOTTLES	Volume (g or mL)	Date Collected & Sealed	Time Collected (24 hr clock)	Time Sealed (24 hr clock)	Sampler's Initials	Collector or Laboratory Comments Do not include personal identifier information for samples collected on private residential property.	Seal Intact? (Y/N)
	VOC	SVOC	GWDIS	GWT01											
16D0532-01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	604MT			11	4.7 L	4/21/16	11:48	11:45	JT	delete alkalinity & fluoride	
-02	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	604MD			3	1.5 L	4/21/16	11:48	11:45	JT	delete alkalinity & fluoride	
-03	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	648MT			7	2.62 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-04	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	648MB			3	1.5 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	648ST			7	2.62 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-06	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	648RD			3	1.5 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	690MT			7	2.62 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-08	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	690MD			3	1.5 L	4/21/16	13:15	13:20	JT	delete alkalinity & fluoride	
-09	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	690ST			7	2.62 L	4/21/16	14:50	14:55	JT	delete alkalinity & fluoride	
-10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	690RD			3	1.5 L	4/21/16	14:50	14:55	JT	delete alkalinity & fluoride	

Receipt for Samples: Collection of these sample(s) at the above-named site is hereby acknowledged.
 Signature of Facility Representative: *Paul Bundy* Date: *4/21/16*
 Signature of Laboratory Representative: *Jeff Turner* Date: *4/21/16*
 Sealers: I certify that I sealed the samples listed above and I wrote my initials, the date, and the time on the seal(s).
 Sealer's Signature: *Jeff Turner* Date: *4/21/2016*
 Time (24 hr clock): *14:00*

Carriers: I certify that I received the above sample(s) with the seal(s) intact and the sealer's initials and seal(s) date written on the seal(s).
 Relinquished by: *Stam* Date: *4/21/16*
 Received by: *Paul Bundy* Date: *4-21-16*
 Time (24 hr clock): *16:15*

Laboratory Custodian: I certify that I received the above sample(s) with the seal integrity as indicated and the sealer's initials and the date written on the seal(s). After being received, this/these sample(s) will be retained by laboratory personnel at all times or locked in a secured area.
 Printed Name and Signature: *Paul Bundy* Date: *4-21-16*
 Time (24 hr clock): *16:15*
 Sample Temp. (°C): *17°C*

IL 532-2311
 LPC 525
 REV. 7/18/13

Project Manager's Name/Address/Phone #: Illinois EPA Laboratory
Jeff Turner, c/o IEPA 825 N. Rutledge Street Springfield, IL 62702
2125 S. 1st St. 2177782-9780; 217/557-0274

Champaign, IL 61820
217/278-5800 fax 278-5808
Case # (if applicable) VOC
Lab Sample # 1690532-11

Parameter Group & Other Analyses	Field Sample #	Trip Blank	Legal Hold?	Split?	Collection Information				Seal Intact ? (y/n)		
					# Bottles	Volume (g or ml)	Date Collected & Sealed	Time Collected (24 hr clock)		Time Sealed (24 hr clock)	Sampler's Initials
VOC					3	80 ml	4/21/16	8:55 AM	ST		

Signature/Title of Facility Representative: Jeff Turner
Date: 4/21/16
Seal (s) Offered? Accepted?

Carrier: Jeff Turner
Date: 4/21/16
Time (24 hr clock): 16:15
Sealer: Jeff Turner
Date: 4/21/16
Time (24 hr clock): 14:00
Received by: PMB
Date: 4/21/16
Time (24 hr clock): 16:15

Laboratory Custodian: Paul Bandy
Date: 4-21-16
Time (24 hr clock): 16:15
Sample Temp (°C): 17°C
Signature of Laboratory Supervisor Releasing Results: [Signature] Date: [Blank]

Illinois Environmental Protection Agency

Sampling and Analysis Plan (SAP) and Health and Safety Plan (HASP)

for

0390055036—DeWitt County

Clinton/Clinton Landfill 3

Groundwater File

30 March 2016

Prepared by:

Jeff Turner

Illinois Environmental Protection Agency

Bureau of Land

Field Operations Section

Champaign Regional Office

2125 South First Street

Champaign, Illinois 61820

Glossary

BOL	Bureau of Land
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Chain of Custody
COCD	Chain of Custody Document
DLPC	Division of Land Pollution Control
DRM	Division of Remediation Management
FID	Flame Ionization Detector
FOS	Field Operations Section
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
Illinois EPA	Illinois Environmental Protection Agency
MSDS	Material Safety Data Sheet
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety & Health Administration
OSE	Office of Site Evaluation
PID	Photo Ionization Detector
PPE	Personal Protective Equipment
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
SAP	Sampling Analysis Plan
SCBA	Self Contained Breathing Apparatus
SOP	Standard Operating Procedure
TVA	Toxic Vapor Analyzer
UIC	Underground Injection Control

1. Introduction

This Sampling Analysis Plan (SAP) and Health and Safety Plan (HASP) document has been prepared by the Illinois Environmental Protection Agency (Illinois EPA) as a project planning document for the implementation of a series of groundwater sampling events at Clinton Landfill 3. It is anticipated that groundwater samples will be split with the facility every third quarter, beginning in second quarter 2016, over the course of a three-year period of enhanced oversight of operating landfills overlying the Mahomet Aquifer in central Illinois.

A SAP is required by the Illinois EPA Quality Management Plan, the RCRA/UIC Quality Program Plan, and the BOL General Sampling SOP. The HASP presents the methods used to conduct the field investigation, document the field activities, analyze the samples, and ensure the health and safety of the sampling team during sampling activities. Section 1 discusses the background and goals of the project. Section 2 discusses field methods for sample collection. Section 3 describes documentation requirements and Section 4 describes the reporting requirements for the projects. The HASP is contained in Section 5 and discusses the health and safety measures that will be followed by sampling team members in the field. The HASP gives site-specific health and safety information, such as site hazards, type of air monitoring to be performed, protective equipment to be worn, local emergency numbers and maps to nearest emergency facilities.

1.1 Site Description

Clinton Landfill, Inc. is owned by Peoria Disposal Company (PDC)/Area Disposal. The complex of three landfills lies just east of US Route 51 south of Clinton. The first landfill, listed in the Bureau of Land Site Inventory System as Clinton Landfill Inc (site #0398080005) but informally referred to as Clinton Landfill #1, began accepting waste in the mid-1970s and was certified closed in 1990. It remains in an extended post-closure care period, conducting corrective action for groundwater exceedances. Clinton Landfill #2 (site #0398080007), located immediately east of Clinton #1, began in 1990 and ceased accepting waste in mid-2010. Its closure certification application was approved by the Permit Section on 22 May 2013; its minimum 30-year post closure care period began 12 May 2011 and will therefore last until at least 12 May 2041.

Clinton Landfill 3 lies directly east of Clinton Landfill 2. The majority of Clinton Landfill 3 lies within the southwest quarter of Section 11, and the North one-half of the Northwest quarter of Section 14, Township 19 North, Range 2 East of the 3rd Principal Meridian, DeWitt County, Illinois. The property comprises approximately 225 acres of what was formerly primarily crop land and timber land. A 5-acre residential parcel (owned by CLI) exists in the eastern portion of the site. Land use in the region is predominately agricultural, (i.e., row crops and livestock) with some rural single family dwellings scattered throughout the area.

The subject of this sampling event, Clinton Landfill 3, is the currently active facility in the Clinton Landfill complex. Its development was approved by Permit 2005-070-LF on 2 March 2007. The total footprint for waste will be approximately 157.451 acres, according to the permit.

Permit Modification 9, issued on 8 January 2010, reconfigured the facility into two units, a Municipal Solid Waste Unit (MSWU) of 146.453 acres and a Chemical Waste Unit (CWU) of 22.495 acres in the southwest corner of the overall landfill footprint. Neither the MSWU nor the CWU is permitted

to accept RCRA hazardous waste.

Part of the MSWU will overlie the CWU. A separation berm will separate the two units horizontally and a separation layer will separate them vertically. The overlying portion of the MSWU is to be emplaced after the CWU is filled to capacity and the separation layer has been constructed. Although the MSWU and CWU are permitted for different types of waste, they are part of the same landfill, have the same groundwater monitoring network, will eventually have to be certified closed as one landfill, and will have the same post-closure care period.

Clinton Landfill 3 is subject to 35 Ill. Adm. Code Parts 811–813, as applicable. It is also subject to its permit, 2005-070-LF, first issued on 2 March 2007 and modified frequently to authorize the ongoing development of the facility, among other reasons.

The MSWU is permitted for municipal solid waste and non-hazardous special waste. It first accepted waste in July 2009, according to Dustin Burger's inspection report of 4 August 2009.

The CWU is being constructed to a more stringent design standard. The CWU may accept non-hazardous special waste, inert waste, putrescible waste, and chemical wastes. PDC originally intended the CWU to be able to accept polychlorinated biphenyl (PCB) waste, and manufactured gas plant (MGP) waste exceeding the toxicity characteristic thresholds of 35 Ill. Adm. Code §721.124(b), but the proposals were withdrawn due to public opposition.

The CWU first accepted waste on 28 April 2011, according to permit application Log 2011-448. No PCB was ever accepted. While MGP waste was accepted, under a settlement between PDC and a coalition of local governments and other concerned entities, MGP waste already buried in the CWU will be allowed to remain.

The Illinois EPA inspects Clinton Landfill 3 approximately five times a year for general solid waste compliance, typically finding it in full compliance each time. I have previously split groundwater samples with the facility twice, once in 2012 and once in 2014, the latter event being part of a comprehensive evaluation of the facility's groundwater monitoring program. The 2014 evaluation found the groundwater monitoring program in general compliance and cited no violations.

While Clinton Landfill 3 routinely reports observed groundwater parameter increases over the thresholds in its permit, and often reports confirmed increases, all of its alternate source demonstrations to date have been approved (the most recent, Log 2016-037, is currently pending). Therefore, there have been no changes in groundwater quality attributable to a release from the landfill.

1.2 Purpose of the Sampling Event

The purpose of the sampling event is to determine the chemical composition of groundwater at Clinton Landfill 3. The purpose of this project is to obtain representative samples of groundwater as part of an evaluation of the facility's monitoring program. The resultant data will be used by the Illinois EPA as a check on PDC Laboratories.

1.3 Sampling Team

Project team members and their roles include the following personnel. I anticipate being present at each split event over the three year project. At least one additional Illinois EPA staff member will assist; the specific staff member will be chosen shortly in advance of each sampling event, based on their availability. There is also possibility that I might be unavailable for a scheduled split event, in which two other staff members would participate in the event.

	Member	Role in the sampling event
1	Jeff Turner	Project Manager/Safety Officer/Sampler
2	Other Illinois EPA staff, as available	Support

In advance of mobilizing to the facility, all members of the sampling team will have reviewed pertinent BOL Sampling SOPs to refresh themselves on sampling methods and procedures.

2. Sampling Activities

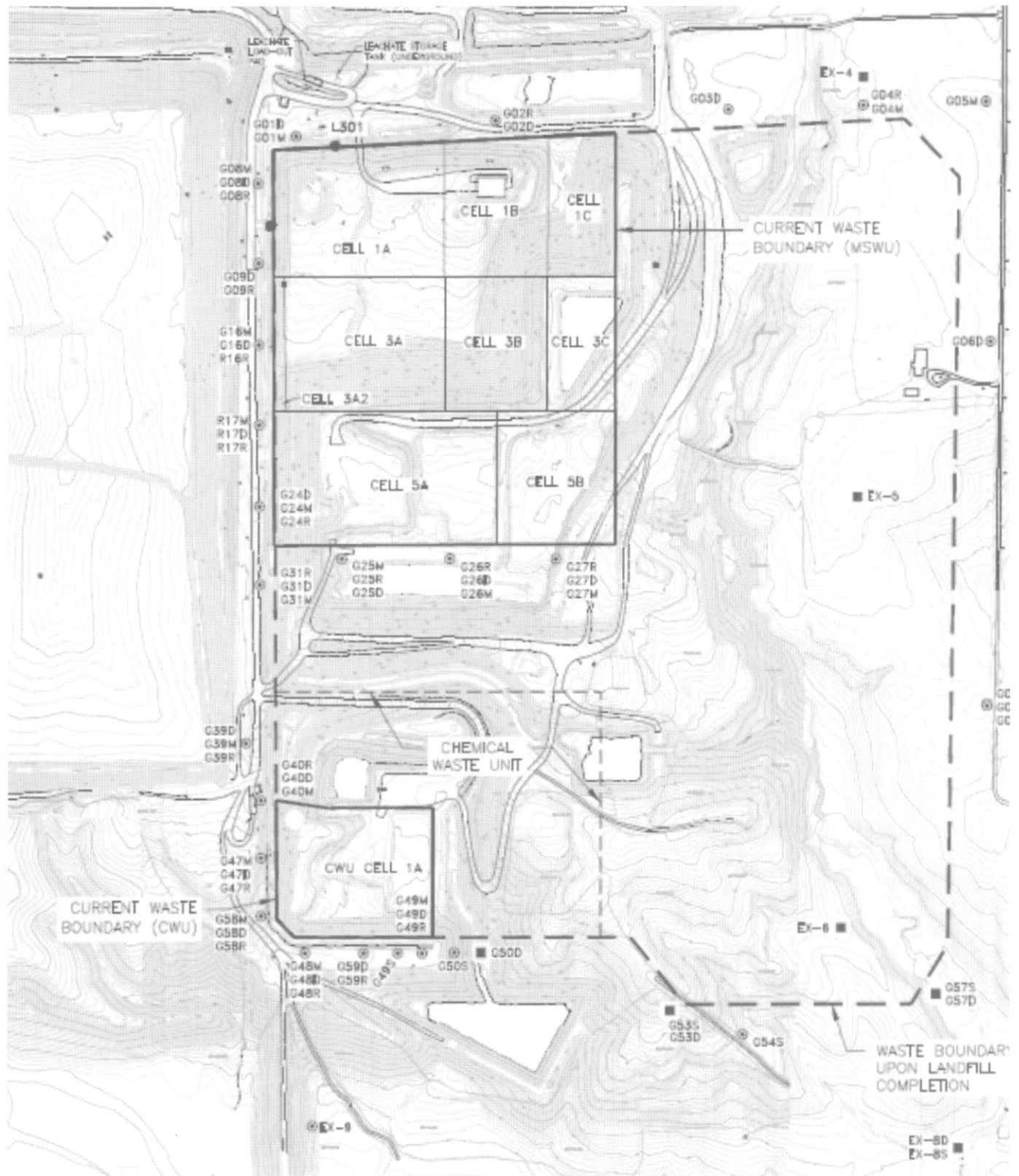
2.1 Proposed Sampling Locations, Media, and Methods

Samples of groundwater will be collected from selected groundwater monitoring wells on dates to be determined. For each split sampling event, splits will be obtained from one upgradient monitoring well and three downgradient monitoring wells. The wells to be sampled will be selected in accordance with the following criteria.

- a. The assigned reviewer from the Permit Section's Groundwater Unit will be consulted for their preference on best wells to split.
- b. If the groundwater reviewer does not have an opinion, the FOS inspector may review the site file and choose on that basis.
- c. Failing the first two options, wells will be chosen based on other criteria, with the ultimate intent of no repetition or minimal repetition during the course of the study.
- d. Any previously sampled well with spurious results (e.g., large relative percent difference in split comparison) may also be prioritized for resampling during the next split event at that facility.

The samples will be collected by PDC employees using their own equipment. Most wells at Clinton Landfill 3 are equipped with bladder pumps, though other methods may also be employed at non-pump wells, in accordance with the facility's approved sampling and analysis plan. The procedures in the facility's plan are very similar to those in the Illinois EPA's Groundwater Sampling and General Sampling SOPs.

Quality control samples will also be collected: matrix spike/matrix spike duplicate aliquot on one well and a field duplicate on a different well. Laboratory-prepared VOC trip blanks will accompany VOC vials during the event.



2.2 Sample Designation, Labeling, and Processing

All samples will be identified by field sample numbers in accordance with the BOL General Sampling SOP and as described in §§2.3 and 3 of this document. The field numbers will be the well names plus "T" for "total" and "D" for dissolved, as applicable. The field duplicate will be blind-labeled "G90D" plus "T" or "D." The Division of Laboratories will assign its own identifying numbers upon sample receipt.

Sample containers will be clearly labeled with field sample numbers according to applicable program QAPPs and COC SOPs. Black ink will be used. At a minimum, sample labels will contain the following information:

- Sample identification numbers (field numbers)
- Sample date
- Site name
- Sampler name

The sample label will be attached to the sample container prior to, or just after, the container is filled and the lid secured. As an added measure of security, the finished label should be covered with clear packaging tape to protect the ink from moisture and to tightly secure the label to the sample container.

Field sample numbers will be used to identify the samples on the COCD and other field documentation. Information on the sample label must match the information on the COCD and other field documents.

2.4 Proposed Analyses

The samples collected will be analyzed for the following, chosen to approximate the facility's required analytical parameters as closely as possible. For events that occur in the second and fourth quarters of the year, the analyses will include the following.

- Volatile Organic Compounds, SW-846 Method 8260
- Semi-volatile Organic Compounds, SW-846 Method 8270
- BOL Parameter Group GWT01, cyanide, total dissolved solids, total recoverable phenolics, and miscellaneous inorganic parameters, SW-846 and other methods
- BOL Parameter Group GWDIS, field-filtered inorganics, SW-846 and other methods

For sampling events that occur in the first or third quarters of the year, analyses will include only the GWT01 and GWDIS parameter groups.

The analytical results will be used to evaluate the facility's laboratory relative to the Illinois EPA Laboratory. The Illinois EPA results may also be compared to action levels in the facility's permit, but it is the facility's responsibility to take appropriate action based on their own data.

2.5 Equipment Decontamination

Disposable sampling equipment will be used to the maximum extent possible. Pre-cleaned, reusable equipment will be used only if necessary. This should eliminate the need for any decontamination in the field. Non-disposable equipment used during this study will be decontaminated at the site or at Illinois EPA offices, if on-site decontamination is not possible, as described in BOL General Sampling SOP.

Any disposable equipment that comes into contact with the material being sampled is potentially contaminated by hazardous constituents, and therefore will be handled accordingly. Contamination of equipment, clothing, safety gear, and other miscellaneous material will be kept to a minimum. The Illinois EPA sampler will use his/her judgment in determining if they have generated any contaminated objects or materials during sampling activities. Any contaminated materials will be placed in a trash bag and properly disposed of.

3. Project Documentation

3.1 Field Notes

Sampling team members will take field notes as a record of investigation operations as sampling activities proceed. The notes will contain the date, time, and description of all field activities performed; names of personnel; weather conditions; names of visitors to the site; areas where photographs were taken; and any other data pertinent to the project. The field notes will also contain all sample collection and identification information and a drawing of the area sampled, along with the approximate location of where each sample was taken. The notes from all team members will be compiled by the lead inspector and incorporated into an inspection report. The inspection report is the official, legal record of site activities.

3.2 Photo Documentation

Photographs will be taken of the total sample area and of each sample. These photos will help identify the location and will provide an accurate visual record of the material being sampled. All photographs taken will be identified in the field notes. Photos will be identified, described and managed according to Administrative Procedure #41, Digital Photograph Management.

3.3 Field Change Procedure

When in the field, it may be necessary to deviate from the procedures outlined in this plan or in BOL SOPs. It will ultimately be the responsibility of the lead inspector/sampler to decide when such changes are to be made. When it becomes necessary to modify a program or task, the changes will be documented in the field notes and justified in the inspection report.

3.4 Sample Custody and Transportation

The samples must be traceable from the time they are collected until the resultant data are used in the final report. In general, the following provisions apply to sample handling:

- All appropriate documentation forms will be used, including sample labels, COCDs, and any other appropriate forms. Documentation will be completed neatly using black ink.
- When transferring custody of samples, the individuals relinquishing and receiving them will sign, date, and note the time on the COCD per its instructions.
- Samples will be sealed in accordance with the applicable COC SOP. The sealed samples will be packed in coolers with water ice, blue ice, or dry ice so that the samples are properly cooled. The sampling team leader is responsible for selecting and obtaining the appropriate type of ice prior to sampling.
- If multiple shipping containers are being shipped by commercial carrier, each container must contain its own COCD (sealed in a ziplock or other waterproof bag) documenting the samples in that shipping container. Thus, if the containers arrive separately at the laboratory, the laboratory will have the appropriate paperwork for each sample received. If multiple shipping containers are being hand-delivered to the laboratory by an Illinois EPA representative, each container need not have its own COCD, as long as sufficient COCDs are presented to document all samples. A copy of the COCDs will be retained by the sampling team leader for inclusion in the field report.
- All samples will be delivered in accordance with the BOL Sample Shipping Policy.

BOL COC procedures including COCDs, sample labels, custody seals or evidence tape, and other sample documents are detailed in BOL COC SOPs. The COC SOP will be followed to maintain a defensible chain of custody for all samples collected. The COCD will be filled out as the samples are collected and will be double-checked prior to the transport of the samples to the laboratory. Copies of the COCD will be included in the inspection report. At a minimum, the COCD will contain the following information:

- Name of site
- Names of samplers/processing personnel
- Sample identification numbers
- Sampling date
- Sampling time
- Number of containers per sample and volume of sample
- Analyses requested

The Division of Laboratories is responsible for maintaining custody of samples once they have accepted them.

4. Reports

Reporting for this project includes laboratory reports, quality assurance reports, and the inspection report.

4.1 Laboratory/Quality Assurance Reports

A final laboratory report will be prepared by the Illinois EPA's Division of Laboratories or private laboratory contracted by the Illinois EPA. The laboratory procedures applicable to this project can be found in the BOL program QAPPs and the Division of Laboratories SOPs. The final written laboratory chemical analyses report will contain the following:

- Site name
- BOL ID number
- Sample collector's name
- Date sample received in the laboratory
- Funding code
- Field ID number
- Lab ID number
- Matrix
- Date/time collected
- Sample Type
- Method sample was analyzed by
- Date analysis performed
- Result
- Result units
- Reporting limit
- Sample/analyte qualifiers
- Regulatory level (if applicable)

The laboratory also completes a quality assurance/quality control (QA/QC) and data validation report. This report will identify any laboratory activities that deviated from the referenced protocols and a statement will be made regarding the overall validity of the data.

4.2 Inspection Report

A final written report will be prepared documenting all activities associated with collection, transportation and analysis of samples. The laboratory reports (and/or appropriate summaries) will be included. At a minimum, the following will be included in the final report:

- Description of the project and its objectives
- Type of sampling equipment used
- Identification and description of protocols used during sampling and testing and an explanation of any deviations from the sampling plan protocols
- Description or summary of sampling procedures
- Descriptions of each sample (i.e., sample logs)
- A site map showing the actual sampling locations
- Summary of all test results/data (included in subsequent record review after analytical results are received)

5. Health and Safety Plan (HASP)

This HASP is required by OSHA regulation 29 CFR §1910.120(b)(4), the BOL Health & Safety Program and Procedures, the General Sampling SOP, and the RCRA/UIC QAPP (available on the BOL intranet). The HASP details the site's health and safety hazards, job tasks and operations, and the specific control measured to be used to ensure sampling team member health and safety. BOL safety SOPs will be followed. All sampling team members must read, sign, and follow the HASP, and it must be readily available to them on site.

5.1 Tasks to be Accomplished

Task A

Collect groundwater split samples

Start Date/Time: TBD for each event **Complete Date/Time:** TBD for each event

5.2 Hazard Evaluation

No wells at this site have been found to be contaminated; therefore, no chemical hazards from the site itself are anticipated. In this broad open area, wind is expected to keep the breathing zone clear of any vapors potentially emanating from monitoring wells.

Based on the site description as presented in §1.1 of this document, the following physical hazards are anticipated, and control measures are recommended

Hazard	Hazard control
Back strain from lifting heavy coolers	Proper lifting procedures
Contact with waste or sample preservatives	Personnel protective equipment

5.3 Health and Safety SOPs and Other Policies

- Sampling will be conducted in accordance with the BOL Sampling SOPs designated in §2.1 of this document.
- All activities on site must be cleared through the sampling team leader. There will be a minimum of two people assigned to each task (buddy system).
- Communications: A cell phone is mandatory. On-site signal strength will be tested upon arrival.

- If adverse weather is possible, monitor a local radio broadcast station or other service to stay abreast of the weather.
- All operations and equipment will comply with OSHA regulation 29 CFR §1910.120 and other applicable elements of OSHA 29 CFR Parts 1910 and 1926. Before site operations begin, all employees involved in these operations will have read and understood this HASP.
- All site personnel, working in the hot zone or contamination reduction zone, are required to have 40-hour HAZWOPER training and respirator fitness certification. Employees with 24-hour training and level D certification (awareness training and no respirator certification), may perform specific tasks, provided that it is ensured that they will not be exposed to health hazards above permissible exposure limits.
- BOL Health & Safety SOPs will be followed (available from the BOL Intranet): Chemical-Protective Clothing.

5.4 Personal Protective Equipment (PPE)

The following descriptions of PPE levels are derived from USEPA. Level A is not included because BOL policy prohibits entry to Level A environments, and equipment is not available.

Level B protection is required under circumstances requiring the highest level of respiratory protection, with lesser level of skin protection. At most abandoned outdoor hazardous waste sites, ambient atmospheric vapors or gas levels have not approached sufficiently high concentrations to warrant level A protection. Examples of Level B protection include:

- positive pressure, full face-piece self contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA;
- inner and outer chemical-resistant gloves;
- face shield;
- hooded chemical resistant clothing;
- coveralls; and
- outer chemical-resistant boots.

Level C protection is required when the concentration and type of airborne substances is known and the criteria for using air purifying respirators is met. Typical Level C equipment includes:

- full-face air purifying respirators;
- inner and outer chemical-resistant gloves;
- hard hat;
- escape mask; and
- disposable chemical-resistant outer boots.

Level D protection is the minimum protection required. Level D protection may be sufficient when no contaminants are present or work operations preclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Appropriate Level D protective equipment may include:

- gloves;
- coveralls;
- safety glasses;

- face shield; and
- chemical-resistant, steel-toe boots or shoes.

While these are general guidelines for typical equipment to be used in certain circumstances, other combinations of protective equipment may be more appropriate, depending upon specific site characteristics. Based on evaluation of potential hazards, the following levels of personal protective equipment have been designated for the applicable work areas or tasks. No changes to the specified levels of protection shall be made without the approval of the site safety officer and the project team leader.

Work Area/Zone	Job Function/Task	Level of Protection (B/C/D/Other)
Wellhead vicinity	Collect sample	D+

The following specific PPE items have been selected.

	Vinyl gloves	X	Nitrile gloves		Neoprene gloves
	Butyl gloves		Silver Shield gloves		Chemical-resistant boots
X	Disposable boot covers		Tyvek coveralls		Tychem coveralls
	APR respirator		SCBA		Hardhat
	APR cartridge:		Safety glasses	X	Safety goggles
	Hearing protection		Cotton coveralls	X	Raingear:
	½ face respirator (for dust only)		Other:	X	Other: Work boots, safety vest, dust mask

5.5 Air Monitoring

Past sampling has not revealed any contamination of the monitoring wells; additionally, wind is anticipated to keep the breathing zone clear. Therefore, no air monitoring or respiratory protection will be utilized.

5.6 Site Work Zones

To reduce the accidental spread of hazardous substances by team members from contaminated areas to clean areas, zones will be delineated on the site where different types of operations will occur, and the flow of personnel among the zones will be controlled. A review of the work zones must be conducted on site with all sampling personnel. The establishment of work zones will help ensure that personnel are properly protected against the hazards present where they are working, work activities and contamination are confined to the appropriate areas, and personnel can be located and evacuated in an emergency.

Hazardous waste sites should be divided into as many different zones as needed to meet operational and safety objectives. The following three zones are frequently used, though the sampling team leader is free to establish additional or different zones based on the complexity of the site and event.

- Exclusion Zone - The contaminated area
- Contamination Reduction Zone - The area where decontamination takes place
- Support Zone - The uncontaminated area where workers should not be exposed to hazardous conditions

Based on past sampling and monitoring results, no formal designation of multiple zones will be made. The immediate vicinity of the wellhead, where sampling occurs, would be equivalent to the Exclusion Zone, but in the absence of data to suggest contamination is present or will occur, that designation is not being used.

5.7 Decontamination Procedures

Decontamination procedures will be conducted in accordance with the General Sampling SOP. The sampling team leader must plan decontamination needs in advance of the event, based on the media expected to be sampled, scale of the event, and so forth. Detailed decontamination procedures may be found in Chapter 10 of OSHA's *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* and can be excerpted into this HASP document to the extent necessary. Decontamination equipment available through the Illinois EPA includes garbage bags, wet wipes, paper towels, pump sprayers, detergent solution, water, brushes, and containment pool. In general, due to the logistics and difficulty of decontamination, contamination of personnel, monitoring equipment, and sampling equipment should be avoided to the maximum extent possible.

To minimize personnel contamination, wear disposable coveralls, disposable outer boots, and disposable outer gloves. Avoid walking on, kneeling on, or sitting on contaminated surfaces. Avoid contaminating any non-disposable clothing or equipment. Used disposable PPE will be removed, bagged, and properly disposed of in accordance with the BOL Investigation Derived Waste SOP.

It may be possible to minimize contamination of certain types of monitoring equipment or other pieces of field equipment such as cameras or GPS units by placing them in a clear, disposable plastic bag. Remember that this may not be appropriate for all types of equipment, as devices may need free flow of air to operate or to dissipate heat. This will be determined in advance for each piece of equipment.

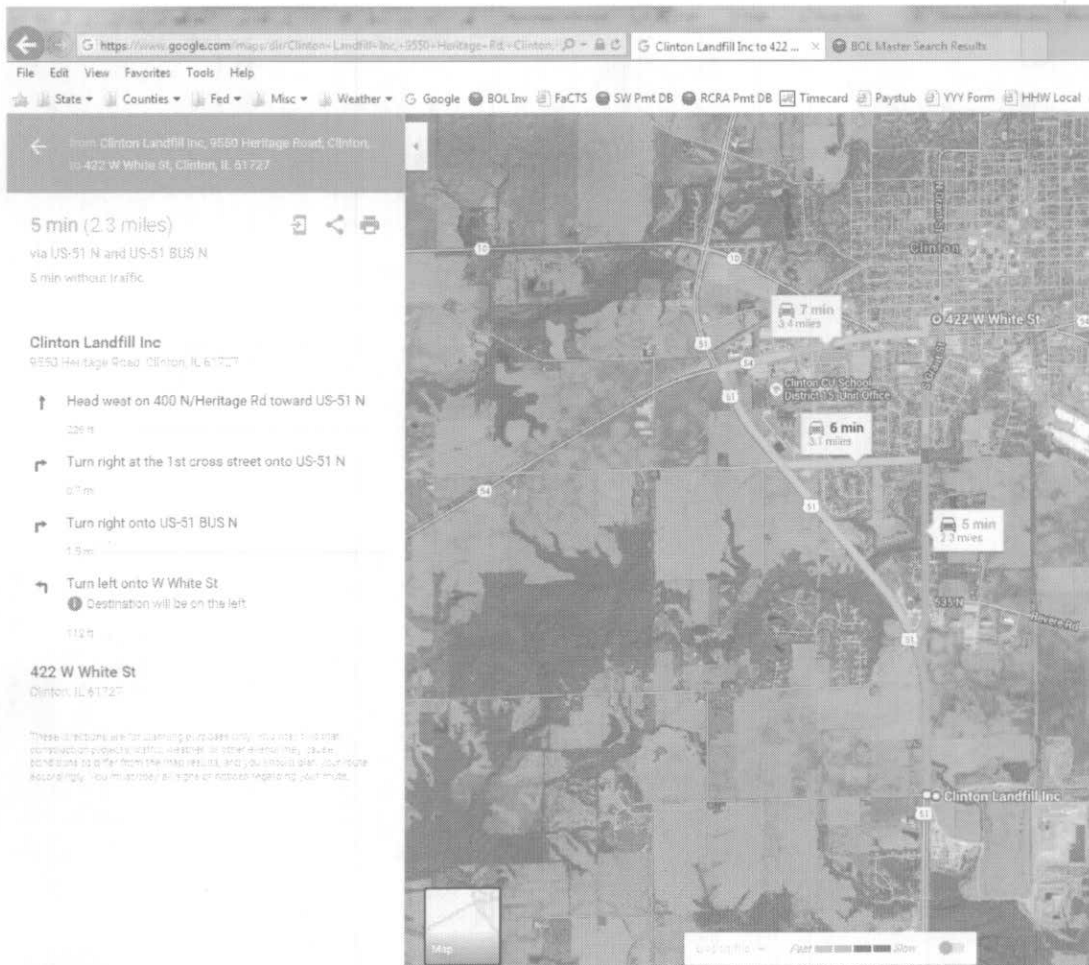
To minimize sample equipment contamination, use disposable sampling equipment to the extent possible. Decontamination of reusable, non-disposable equipment (stainless steel spoons, split spoons, measuring tape, etc) will be in accordance with the General Sampling SOP.

5.8 Emergency Procedures

The health and safety officer shall be responsible for ensuring that the appropriate procedures are followed and will be notified of any on-site emergencies.

Directions to the Selected Hospital

Dr. John Warner Hospital
422 W White St, Clinton, IL
217/935-9571



Procedures

Personnel Injury in the Exclusion Zone: Upon notification of an injury in the Exclusion Zone, all site personnel shall assemble at the decontamination line. The rescue team will enter the Exclusion Zone (if required) to remove the injured person to the hotline (boundary between Exclusion Zone and Contaminant Reduction Zone). The health and safety officer and sampling team leader will evaluate the nature of the injury and the affected person will be decontaminated to the extent possible prior to movement to the Support Zone. Appropriate first aid shall be initiated, and contact should be made for an ambulance and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms is determined.

Personnel Injury in the Support Zone: Upon notification of an injury in the Support Zone, the health and safety officer and sampling team leader will assess the nature of the injury. If the cause of the injury does not affect the performance of site personnel, operations may continue, with the on-site first aid initiated and necessary follow-up as stated above. If the injury increases the risk to

others, all site personnel shall move to the decontamination line for further instructions. Activities on-site will stop until the added risk is removed or minimized.

Fire/Explosion: Upon notification of a fire or explosion on-site, all site personnel shall be assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

Personal Protective Equipment Failure: If any site worker experiences a failure or malfunction of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

Other Equipment Failure: If any other equipment on-site fails to operate properly, the health and safety officer and sampling team leader shall be notified and then determine the effect of this failure on continuing operations on-site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions taken.

First-aid equipment available on-site: First-aid kit, emergency eyewash.

In all situations, when an on-site emergency results in evacuation of the Exclusion Zone, personnel shall not re-enter until:

1. The hazards have been reassessed
2. The conditions resulting in the emergency have been corrected
3. The HASP has been reviewed and revised as necessary
4. Site personnel have been briefed on any changes of the HASP

List of emergency phone numbers

- Police: 217/935-9441
- Fire: 217/935-3712
- Ambulance: 217/935-9441
- Hospital: 217/935-9571

5.9 Certification (Mandatory)

Personnel signing below certify that they have read and understand this site safety plan.



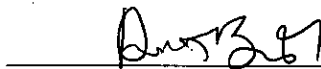
Reviewed & Approved by: Supervisor
(Required by Section 2 of the RCRA QAPP)

4/20/16
Date



Project Manager/Safety Office

4/20/2016
Date



Team Member & Role/Responsibility

4/20/16
Date

6. References (available on the BOL intranet)

BOL General Sampling SOPs

BOL Health & Safety SOPs

NIOSH/OSHA/USCG/EPA. 1985. *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*. www.osha.gov/Publications/complinks/OSHG-HazWaste/all-in-one.pdf

7. Appendices/Attachments

Included:

1. Site Permit (groundwater monitoring section)
2. Inspection Rights—§4(c) and (d) of the Illinois Environmental Protection Act (415 ILCS 5/4(c) and (d))
3. Inspection Rights—§3007 of RCRA (42 USC 6927)
4. Inspection Rights—CERCLA (42 USC 9604(e))

Incorporated by reference:

1. Applicable BOL Health and Safety Procedures
2. BOL General Sampling SOP
3. BOL Groundwater SOP
4. Chain of Custody Document and Instructions

Groundwater Monitoring Section of Permit 2005-070-LF, Modification #58

VIII. GROUNDWATER MONITORING

1. The groundwater monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect, from all potential sources of discharge, any releases to groundwater within the facility. The Illinois EPA reserves the right to require installation of additional monitoring wells as may be necessary to satisfy the requirements of this permit.
2. The groundwater monitoring wells shall be constructed and maintained in accordance with the requirements of 35 Ill. Adm. Code, 811.318(d) and designs approved by the Illinois EPA.
3. Groundwater monitoring wells shall be installed in the locations shown in Drawing P-GWMP, of the February 18, 2011 addendum of the permit application, Log No. 2010-268 and application Log No. 2010-316 and screened in the hydrogeologic unit(s) identified as potential contaminant pathway(s) within the zone of attenuation. All wells as listed in Condition VIII.9 must be installed so that samples may be taken prior to waste placement.
4. Within 60 days of installation of any groundwater monitoring well, boring logs compiled by a qualified geologist, well development data and as-built diagrams shall be submitted to the Illinois EPA utilizing the enclosed "Well Completion Report" form. For each well installed pursuant to this permit, one form must be completed.
5. Groundwater monitoring wells shall be easily visible, labeled with the Illinois EPA monitoring point designations and fitted with padlocked protective covers.
6. In the event that any well becomes consistently dry or unserviceable and therefore requires replacement, a replacement well shall be installed within ten (10) feet of the existing well. The Illinois EPA shall be notified in writing at least 15 days prior to the installation of all replacement wells. A replacement well that is more than ten feet from the existing well or which does not monitor the same geologic zone is considered to be a new well and must be approved via a significant modification permit.
7. All borings, wells and piezometers not used as monitoring points shall be abandoned in accordance with the standards in 35 Ill. Adm. Code 811.316, and the decommissioning and reporting procedures contained in the Illinois Department of Public Health's (IDPH) Water Well Construction Code, 77 Ill. Adm. Code, Part 920 (effective 1/1/92). In the event specific guidance is not provided by IDPH procedures, the enclosed Illinois EPA monitoring well plugging procedures shall be followed.
8. Groundwater sampling and analysis shall be performed in accordance with the requirement of 35 Ill. Adm. Code 811.318(e) and the specific procedures and methods

Groundwater Monitoring Section of Permit 2005-070-LF, Modification #58

VIII. GROUNDWATER MONITORING

1. The groundwater monitoring program must be capable of determining background groundwater quality hydraulically upgradient of and unaffected by the units and to detect, from all potential sources of discharge, any releases to groundwater within the facility. The Illinois EPA reserves the right to require installation of additional monitoring wells as may be necessary to satisfy the requirements of this permit.
2. The groundwater monitoring wells shall be constructed and maintained in accordance with the requirements of 35 Ill. Adm. Code, 811.318(d) and designs approved by the Illinois EPA.
3. Groundwater monitoring wells shall be installed in the locations shown in Drawing P-GWMP, of the February 18, 2011 addendum of the permit application, Log No. 2010-268 and application Log No. 2010-316 and screened in the hydrogeologic unit(s) identified as potential contaminant pathway(s) within the zone of attenuation. All wells as listed in Condition VIII.9 must be installed so that samples may be taken prior to waste placement.
4. Within 60 days of installation of any groundwater monitoring well, boring logs compiled by a qualified geologist, well development data and as-built diagrams shall be submitted to the Illinois EPA utilizing the enclosed "Well Completion Report" form. For each well installed pursuant to this permit, one form must be completed.
5. Groundwater monitoring wells shall be easily visible, labeled with the Illinois EPA monitoring point designations and fitted with padlocked protective covers.
6. In the event that any well becomes consistently dry or unserviceable and therefore requires replacement, a replacement well shall be installed within ten (10) feet of the existing well. The Illinois EPA shall be notified in writing at least 15 days prior to the installation of all replacement wells. A replacement well that is more than ten feet from the existing well or which does not monitor the same geologic zone is considered to be a new well and must be approved via a significant modification permit.
7. All borings, wells and piezometers not used as monitoring points shall be abandoned in accordance with the standards in 35 Ill. Adm. Code 811.316, and the decommissioning and reporting procedures contained in the Illinois Department of Public Health's (IDPH) Water Well Construction Code, 77 Ill. Adm. Code, Part 920 (effective 1/1/92). In the event specific guidance is not provided by IDPH procedures, the enclosed Illinois EPA monitoring well plugging procedures shall be followed.
8. Groundwater sampling and analysis shall be performed in accordance with the requirement of 35 Ill. Adm. Code 811.318(e) and the specific procedures and methods

proposed in Application Log No. 2012-484 and approved by the Illinois EPA on March 2, 2013 as Permit Modification No. 36.

9. The following monitoring points are to be used in the groundwater detection monitoring program for this facility:

UPPER RADNOR TILL SAND (URTS)

Temporary Upgradient Well

Applicant Designation

Illinois EPA Designation

EX-23S

G07S

Wells Within the Zone of Attenuation

Applicant Designation

Illinois EPA Designation

G49S

G49S

G50S

G50S

Compliance Boundary Wells

Applicant Designation

Illinois EPA Designation

G54S

G54S

Piezometers

Applicant Designation

Illinois EPA Designation

G53S

G53S

G57S

G57S

EX-8S^

EX-8S^

LOWER RADNOR TILL SAND WELLS

Upgradient Wells

Applicant Designation

Illinois EPA Designation

G01M

G01M

G04M

G04M

G05M

G05M

G08M

G08M

Wells Within Zone of Attenuation

Applicant Designation

Illinois EPA Designation

G16M		G16M
R17M	R17M	
G18M		G18M
G19M		G19M
G20M		G20M
G40M		G40M
G47M		G47M
G48M		G48M
G49M		G49M
G58M		G58M

Compliance Boundary Wells

Applicant Designation

Illinois EPA Designation

G39M		G39M
------	--	------

Piezometers

Applicant Designation

Illinois EPA Designation

EX-4		EX-4
EX-5		EX-5
EX-6		EX-6

ORGANIC SOIL WELLS

Upgradient Wells

Applicant Designation

Illinois EPA Designation

G01D		G01D
G02D		G02D
G03D		G03D
G07D		G07D
G08D		G08D

Wells Within Zone of Attenuation

Applicant Designation

Illinois EPA Designation

G09D		G09D
------	--	------

G16D	G16D
R17D	R17D
G18D	G18D
R19D	R19D
G20D	G20D
G40D	G40D
G47D	G47D
G48D	G48D
G49D	G49D
G58D	G58D
G59D	G59D

Compliance Boundary Wells

Applicant Designation

Illinois EPA Designation

G39D	G39D
Piezometers	

Applicant Designation

Illinois EPA Designation

G06D	G06D
G50D	G50D
EX-8D^	EX-8D^

ROXANA SILT-ROBEIN MEMBER WELLS

Upgradient Wells

Applicant Designation

Illinois EPA Designation

G02R	G02R
G04R	G04R
G07R	G07R

ROXANA SILT-ROBEIN MEMBER WELLS

Upgradient Wells

Applicant Designation

Illinois EPA Designation

G04R	G04R
R17R	R17R
G58R	G58R

Wells Within Zone of Attenuation

<u>Applicant Designation</u>	<u>Illinois EPA Designation</u>
G08R	G08R
G09R	G09R
R16R	R16R
G18R	G18R
G19R	G19R
G20R	G20R
G40R	G40R
G47R	G47R
G48R	G48R
G49R	G49R
G59R	G59R

Compliance Boundary Wells

<u>Applicant Designation</u>	<u>Illinois EPA Designation</u>
G39R	G39R

Piezometers

<u>Applicant Designation</u>	<u>Illinois EPA Designation</u>	
G20R#		G20R#
EX-9^	EX-9^	

- * represents monitoring point(s) added to the monitoring program.
- # represents monitoring point(s) deleted from the monitoring program.
- ^ represents piezometer located outside the main facility property boundary

NOTES:

- a. Upgradient wells screened in the Roxana Silt-Robein Member shall be installed if a down-gradient well screened in that zone contains sufficient water and is able to be monitored.
- b. Wells are to be phased in according to the schedule provided in Attachment 3 of Application Log No. 2012-216, and as shown on Drawing Nos. P-PP2 through P-PP12 of Application Log No. 2012-216. The following table shows this schedule:
- c. Piezometers are monitored for groundwater elevation data only. Piezometers denoted with a "G" will be incorporated into the detection monitoring program, in accordance with the

permitted Phasing Plan. Piezometers denoted with an "EX" will be abandoned as site development progresses.

Groundwater Monitoring Well Network List Updated in Log No. 2014-491 (Modification No. 53).

- d. Groundwater Monitoring Wells G39D, G39M, G39R, G40D, G40M, G40R, G47D, G47M, G47R, G48D, G48M, G48R, G49D, G49M, G49R, G49S, G50S, G54S, G58D, G58M, G58R, G59D and G59R monitor the Chemical Waste Unit.

Phase	Operating Cell		Perimeter Monitoring Wells ³	Temporary Monitoring Wells ⁴
	MSW	CWU		
1	1		G01M ¹ , G01D ¹ , G02D ¹ , G02R ¹ G08M ¹ , G08D ¹ , G08R, G09D, G09R	G10M, G10R, G10D, G11M, G11R, G11D, G12D
2	3A – 3B	CWU-1A	G04M ¹ , G04R ¹ , G06D ¹ , G16M, G16D, R16R, R17M, R17D, R17R, G39M ² , G39D ² , G39R ² , G54S ² , G03D ¹ , G05M ¹ , G07S ¹ , G07D ¹ , G07R ¹ , G40M, G40D, G40R, G47M, G47D, G47R, G48M, G48D, G48R, G49M, G49D, G49R, G49S, G50S, G58M, G58D, G58R, G59D, G59R	G18M, G18D, G18R, G19M, R19D, G19R, G20M, G20D, G20R
3	5A		G24M, G24D, G24R, G31M, G31D, G31R	G25M, G25D, G25R, G26M, G26D, G26R, G20M, G20D, G20R
4	3C – 5B	CWU-1B	G50D, G50R, G51M, G51D, G51R, G51S, G52S, G52M, G52D, G52R	G25M, G25D, G25R, G26M, G26D, G26R, G27M, G27D, G27R
5	7		G32M, G32D, G32R	G33M ⁶ , G33D ⁶ , G33R ⁶ , G34M ⁶ , G34D ⁶ , G34R ⁶ , G35M ⁶ , G35D ⁶ , G35R ⁶
6	2	CWU-2		G13M, G13D, G13R, G14M, G14D, G14R, G15M, G15D, G15R
7	4			G21M, G21D, G21R, G22M, G22D, G22R, G23M, G23D, G23R
8	6			G28M, G28D, G28R, G29M, G29D, G29R, G30S, G30M, G30D, G30R
9	8			G36S, G36M, G36D, G36R,

Phase	Operating Cell		Perimeter Monitoring Wells ³	Temporary Monitoring Wells ⁴
	MSW	CWU		
				G37S, G37M, G37D, G37R, G38S, G38M, G38D, G38R
10	9			G44S, G44M, G44D, G44R, G45S, G45M, G45D, G45R, G46S, G46M, G46D, G46R
11	10		G53S, G53D, G53R, G54M ² , G54D ² , G54R ² , G55S, G55M, G55D, G55R, G56S, G56M, G56D, G56R, G57S, G57D, G57R	

NOTES:

- i. Wells noted with a ⁽¹⁾ are upgradient wells.
- ii. Wells denoted with a ⁽²⁾ are compliance boundary wells.
- iii. Perimeter Monitoring Wells are intended to be monitored through the end of the Post-Closure Care Period once becoming active. Active perimeter wells for each phase include the listed wells and all previously installed active perimeter wells.
- iv. Temporary wells are installed to monitor downgradient groundwater quality from the MSW Unit only and are to be abandoned during the development of the adjacent landfill cell to the south.
- v. Upgradient Monitoring Wells apply to all cells once they become active.
- vi. Groundwater Monitoring Wells G33M, G33D, G33R, G34M, G34D, G34R, G35M, G35D, and G35R will be installed only if MSW Unit Cell 7 is operated prior to the construction Chemical Waste Unit Cell CWU-2.
- vii. Groundwater Monitoring Wells G02R and G04R were added to the groundwater monitoring program, and g58R was re-designated as an upgradient well through the issuance of Permit Modification No. 37 (approved April 11, 2013, and amended April 18, 2013).
10. The monitoring program, approved by Permit No. 2008-054, shall continue for a minimum period of 30 years after closure and shall not cease until the conditions described in 35 Ill. Adm. Code, 811.319(a)(1)(C) have been achieved. The operator shall collect samples from all of the monitoring points listed in Condition VIII.9, test the samples for the parameters listed in Condition VIII.12 (Lists G1 and G2), and report the results to the Illinois EPA, all in accordance with the schedule in Condition VIII.18.
11. The applicable groundwater quality standards (AGQS) and the maximum allowable predicted concentrations (MAPC), as listed in Attachment 1, are subject to the following conditions:

- a. Temperature and the field parameters involving depth or elevation are not considered groundwater constituents and do not need AGQS.
 - b. For constituents which have not been detected in the groundwater, either the practical quantitation limit (PQL) or the method detection limit (MDL) shall be used as the AGQS.
 - c. MAPCs are only applicable to those wells within the zone of attenuation.
 - d. AGQS are only applicable to upgradient/background and compliance boundary wells.
12. AGQS and MAPC values must be determined for all of the parameters which appear in either Lists G1 or G2 (not including groundwater depth or elevations). The AGQS values shall be calculated using a minimum of four (4) consecutive quarters of groundwater monitoring data and employing the Upper 95% Tolerance Limit (95% UTL) statistical method described in the January 11, 2007 addendum to the application, Log No. 2005-070.

LIST G (Groundwater - Variable)

GROUNDWATER MONITORING PARAMETER STORETS

Elevation of Bottom of Well (ft. MSL) (Annually without dedicated pumps; every 5 years with dedicated pumps or whenever the pump is pulled)	72020
---	-------

LIST G1 (Groundwater - Quarterly)

<u>FIELD PARAMETERS</u>	<u>STORETS</u>
pH	00400
Specific Conductance	00094
Temperature of Water Sample (°F)	00011
Depth to Water (ft. below land surface)	72019
Depth to Water (ft. below measuring point)	72109
Elevation of Measuring Point (Top of casing ft. MSL)	72110
Elevation of Groundwater Surface (ft. MSL)	71993
 <u>INDICATOR PARAMETERS</u>	 <u>STORETS</u>
Ammonia (as Nitrogen; Dissolved) mg/L	00608
Arsenic (Dissolved) ug/L	01000
Boron (Dissolved) ug/L	01020
Cadmium (Dissolved) ug/L	01025

Chloride (Dissolved) mg/L	00941
Chromium (Dissolved) ug/L	01030
Cyanide (Total) mg/L	00720
Lead (Dissolved) ug/L	01049
Magnesium (Dissolved) mg/L	00925
Mercury (Dissolved) ug/L	71890
Nitrate (as Nitrogen, Dissolved) mg/L	00618
Sulfate (Dissolved) mg/L	00946
Total Dissolved Solids (TDS, 180°C; Dissolved) mg/L	70300
Zinc (Dissolved) ug/L	01090

NOTES:

- i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.
- ii. Maximum allowable predicted concentrations (MAPCs) and applicable groundwater quality standards (AGQS) are given in ug/L except as otherwise noted. Also, the monitoring results should be reported in ug/L units unless otherwise indicated.
- iii. List G1 and List G2 AGQS/MAPC values are included in Attachment 1.

LIST G2 (Groundwater - Semiannual)

<u>PARAMETERS (ug/L)</u>	<u>STORETS</u>
Acetone	81552
Acrylonitrile	34215
Benzene	34030
Bromobenzene	81555
Bromochloromethane (chlorobromomethane)	77297
Bromodichloromethane	32101
Bromoform (Tribromomethane)	32104
n-Butylbenzene	77342
sec-Butylbenzene	77350
tert-Butylbenzene	77353
Carbon Disulfide	77041
Carbon Tetrachloride	32102
Chlorobenzene	34301
Chloroethane (Ethyl Chloride)	34311
Chloroform (Trichloromethane)	32106
o-Chlorotoluene	77275
p-Chlorotoluene	77277
Dibromochloromethane	32105
1,2-Dibromo-3-Chloropropane	38760
1,2-Dibromoethane	77651
1,2-Dichlorobenzene	34536

1,3-Dichlorobenzene	34566
1,4-Dichlorobenzene	34571
trans-1,4-Dichloro-2-Butene	49263
Dichlorodifluoromethane	34668
1,1-Dichloroethane	34496
1,2-Dichloroethane	34531
1,1-Dichloroethylene	34501
cis-1,2-Dichloroethylene	77093
trans-1,2-Dichloroethylene	34546
1,2-Dichloropropane	34541
1,3-Dichloropropane	77173
2,2-Dichloropropane	77170

LIST G2 (Groundwater - Semiannual) (Cont.)

PARAMETERS (ug/L)

STORETS

1,1-Dichloropropene	77168
1,3-Dichloropropene	34561
cis-1,3-Dichloropropene	34704
trans-1,3-Dichloropropene	34699
Ethylbenzene	78113
Hexachlorobutadiene	39702
2-Hexanone (Methyl Butyl Ketone)	77103
Isopropylbenzene	77223
p-Isopropyltoluene	77356
Methyl Bromide (Bromomethane)	34413
Methyl Chloride (Chloromethane)	34418
Methylene Bromide (Dibromomethane)	77596
Dichloromethane	34423
Methyl Ethyl Ketone	81595
Methyl Iodide (Iodomethane)	77424
4-Methyl-2-Pentanone	78133
Naphthalene	34696
Oil (Hexane-Soluble) (mg/L)	00550
n-Propylbenzene	77224
Styrene	77128
1,1,1,2-Tetrachloroethane	77562
1,1,2,2-Tetrachloroethane	34516
Tetrachloroethylene	34475
Tetrahydrofuran	81607
Toluene	34010
Total Phenolics	32730
1,2,3-Trichlorobenzene	77613
1,2,4-Trichlorobenzene	34551
1,1,1-Trichloroethane	34506
1,1,2-Trichloroethane	34511
Trichloroethylene	39180
Trichlorofluoromethane	34488

1,2,3-Trichloropropane	77443
1,2,4-Trimethylbenzene	77222
1,3,5-Trimethylbenzene	77226
Vinyl Acetate	77057
Vinyl Chloride	39175
Xylenes	81551

LIST G3 (Groundwater-Semiannual)

<u>PARAMETERS</u> (ug/L)	<u>STORETS</u>
Acenaphthene	34205
Acenaphthylene	34200
Anthracene	34220
Benzene	34030
Benzo(a)anthracene	34526
Benzo(a)pyrene	34247
Benzo(b)fluoranthene	34230
Benzo(ghi)perylene	34521
Benzo(k)fluoranthene	34242
Crysene	34320
Pentachlorophenol	39032
Dibenzo(a,h)anthracene	34556
Ethylbenzene	78113
Fluoranthene	34376
Indeno(1,2,3-cd)pyrene	34403
Naphthalene	34696
Phenanthrene	34461
Pyrene	34469
Toluene	34010
Xylenes-Total	81551

NOTES:

- i. All parameters with the "(Dissolved)" label to the right shall be determined using groundwater samples which have been filtered through a 0.45 micron filter. All other parameters shall be determined from unfiltered samples.
- ii. Maximum allowable predicted concentrations (MAPCs) and applicable groundwater quality standards (AGQS) are given in ug/L except as otherwise noted. Also, the monitoring results should be reported in ug/L units unless otherwise indicated.
- iii. List G1 and List G2 AGQS/MAPC values are included in Attachment 1.
13. Pursuant to 35 Ill. Adm. Code, 811.319(a)(4)(A), any of the following events shall constitute an observed increase only if the concentrations of the constituents monitored can be measured at or above the practical quantitation limit (PQL):

- a. The concentration of any constituent in List G1 of Condition VIII.12 shows a progressive increase over eight (8) consecutive quarters.
 - b. The concentration of any constituent monitored in accordance with List G1, List G2, or List G3 of Condition VIII.12 exceeds the MAPC at an established monitoring point within the zone of attenuation.
 - c. The concentration of any organic constituent in List G2 or List G3, monitored in accordance with Condition VIII.12 exceeds the preceding measured concentration at any established point.
 - d. The concentration of any constituent monitored at or beyond the edge of the zone of attenuation (compliance boundary) exceeds its AGQS, or pursuant to 811.320(d) any constituent monitored at an upgradient well, exceeds its AGQS.
14. For each round of sampling described in Condition 10 of this Section, the operator must determine if an observed increase has occurred within 90 days of the date initial sampling. If an observed increase is identified, the operator must also notify the Illinois EPA in writing and follow the confirmation procedures of 35 Ill. Adm. Code, 811.319(a)(4)(B). Furthermore, the operator must complete the confirmation procedures within 180 days of the initial sampling event.
 15. Upon confirmation of a monitored increase and within 180 days of the initial sampling date, the operator shall submit a permit application for a significant modification to demonstrate an alternate source per 35 Ill. Adm. Code 811.319(a)(4)(b)(iii) or begin an assessment monitoring program in order to determine whether the solid waste disposal facility is the source of the contamination and to provide information needed to carry out a groundwater impact assessment in accordance with 35 Ill. Adm. Code 811.319(b).
 16. In the event that an alternative source demonstration is denied, pursuant to 35 Ill. Adm. Code 813.105, the operator must commence sampling for the constituents listed in 35 Ill. Adm. Code 811.319(b)(5), and submit an assessment monitoring plan as a significant permit modification, both within 30 days after the dated notification of Agency denial. The operator must sample the well or wells that exhibited the confirmed increase.

In the event that assessment monitoring is required as a result of organic detections in the G52 well nest, well nest G53 shall be installed and monitored as part of the assessment.

Should the results of the assessment monitoring plan indicate impacts due to the facility, the requirements and timelines of 35 Ill. Adm. Code 811.324, 811.325 and 811.326 must be followed and address the entirety of the Uppermost Aquifer, which includes the Mahomet Aquifer.

17. The first quarterly statistical evaluations shall be performed on groundwater samples taken during the months of July – August, 2007 and the results submitted to the Illinois EPA by October 15, 2007.
18. The schedule for sample collection and submission of quarterly monitoring results is as follows:

<u>Sampling Quarter</u>	<u>Sampling Due</u>	<u>Report Due Date</u>
Jan-Feb (1st)	List G1	April 15
April-May (2nd)	List G, G1 and G2	July 15
July-Aug (3rd)	List G1	October 15
Oct-Nov (4th)	List G1 and G2	January 15

G – Well Depth

G1 - Routine Groundwater Parameters

G2 - Semiannual Groundwater Parameters

In addition, all wells installed for CWU1 and CWU2 (listed in Condition No. VIII.9) shall monitor List G3 for the 2nd and 4th quarter events.

19. Elevation of stick-up is to be surveyed and reported to the Illinois EPA:
 - a. When the well is installed (with the as-built diagrams),
 - b. Every two years thereafter, or
 - c. Whenever there is reason to believe that the elevation has changed.
20. Annually, the operator shall prepare an evaluation of the groundwater flow direction and the hydraulic gradients at the facility using the groundwater surface elevations (Storet #71993) determined for each monitoring event. This assessment shall be submitted with the monitoring results due on July 15.
21. All monitoring points shall be maintained in accordance with the approved permit application such that the required samples and measurements may be obtained.
22. Background concentrations which exhibit a statistically significant change shall be adjusted and updated in accordance with 35 Ill. Adm. Code 811.320(d)(2) and submitted to the Illinois EPA as a permit modification.
23. Information required by Conditions VIII.10 and VIII.18 must be submitted in an electronic format. The information is to be submitted, as fixed-width text files formatted as found at www.epa.state.il.us/land/waste-mgmt/groundwater-monitoring.html.
24. Note b in Condition No. VIII.9 identifies the phases in which this landfill will be developed and the groundwater monitoring wells associated with each phase. Operat-

ing authorization allowing waste disposal to begin in a new phase will not be approved unless the operator has, in a permit application, either:

- a. Provided documentation that the groundwater monitoring wells, associated with the new phase, have been installed, or
- b. Satisfactorily demonstrated that any wells associated with the new phase, which have not been installed, are not necessary to adequately monitor the groundwater.

Appendix 5. Inspection Rights—§4(c) and (d) of the Illinois Environmental Protection Act (415 ILCS 5/4(c) and (d))

- (c) The Agency shall have authority to conduct a program of continuing surveillance and of regular or periodic inspection of actual or potential contaminant or noise sources, of public water supplies, and of refuse disposal sites.
- (d) In accordance with constitutional limitations, the Agency shall have authority to enter at all reasonable times upon any private or public property for the purpose of:
 - (1) Inspecting and investigating to ascertain possible violations of this Act, any rule or regulation adopted under this Act, any permit or term or condition of a permit, or any Board order; or
 - (2) In accordance with the provisions of this Act, taking whatever preventive or corrective action, including but not limited to removal or remedial action, that is necessary or appropriate whenever there is a release or a substantial threat of a release of (A) a hazardous substance or pesticide or (B) petroleum from an underground storage tank.

Appendix 6. Inspection Rights—§3007 of RCRA (42 USC 6927)

- (a) Access/Entry. For purposes of developing or assisting in the development of any regulation or enforcing the provisions of this chapter, any person who generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous wastes shall, upon request of any officer, employee or representative of the Environmental Protection Agency, duly designated by the Administrator, or upon request of any duly designated officer, employee or representative of a State having an authorized hazardous waste program, furnish information relating to such wastes and permit such person at all reasonable times to have access to, and to copy all records relating to such wastes. For the purposes of developing or assisting in the development of any regulation or enforcing the provisions of this chapter, such officers, employees or representatives are authorized—

- (1) to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from;
- (2) to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes.

Each such inspection shall be commenced and completed with reasonable promptness. If the officer, employee or representative obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

Appendix 7. Inspection Rights—CERCLA (42 USC 9604(e))

(e) Information Gathering and Access

- (1) **Action Authorized.** Any officer, employee, or representative of the President, duly designated by the President, is authorized to take action under paragraph (2), (3), or (4) (or any combination thereof) at a vessel, facility, establishment, place, property, or location or, in the case of paragraph (3) or (4), at any vessel, facility, establishment, place, property, or location which is adjacent to the vessel, facility, establishment, place, property, or location referred to in such paragraph (3) or (4). Any duly designated officer, employee, or representative of a State or political subdivision under a contract or cooperative agreement under subsection (d)(1) of this section is also authorized to take such action. The authority of paragraphs (3) and (4) may be exercised only if there is a reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant. The authority of this subsection may be exercised only for the purposes of determining the need for response, or choosing or taking any response action under this subchapter, or otherwise enforcing the provisions of this subchapter.
- (2) **Access to information.** Any officer, employee, or representative described in paragraph (1) may require any person who has or may have information relevant to any of the following to furnish, upon reasonable notice, information or documents relating to such matter:
 - (A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility.
 - (B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility.
 - (C) Information relating to the ability of a person to pay for or to perform a cleanup.

In addition, upon reasonable notice, such person either (i) shall grant any such officer, employee, or representative access at all reasonable times to any vessel, facility, establishment, place, property, or location to inspect and copy all documents or records relating to such matters or (ii) shall copy and furnish to the officer, employee, or representative all such documents or records, at the option and expense of such person.

- (3) **Entry.** Any officer, employee, or representative described in paragraph (1) is authorized to enter at reasonable times any of the following:
 - (A) Any vessel, facility, establishment, or other place or property where any hazardous substance or pollutant or contaminant may be or has been generated, stored, treated, disposed of, or transported from.
 - (B) Any vessel, facility, establishment, or other place or property from which or to which a hazardous substance or pollutant or contaminant has been or may have been released.

- (C) Any vessel, facility, establishment, or other place or property where such release is or may be threatened.
 - (D) Any vessel, facility, establishment, or other place or property where entry is needed to determine the need for response or the appropriate response or to effectuate a response action under this subchapter.
- (4) Inspection and samples
- (A) Authority. Any officer, employee or representative described in paragraph (1) is authorized to inspect and obtain samples from any vessel, facility, establishment, or other place or property referred to in paragraph (3) or from any location of any suspected hazardous substance or pollutant or contaminant. Any such officer, employee, or representative is authorized to inspect and obtain samples of any containers or labeling for suspected hazardous substances or pollutants or contaminants. Each such inspection shall be completed with reasonable promptness.
 - (B) Samples. If the officer, employee, or representative obtains any samples, before leaving the premises he shall give to the owner, operator, tenant, or other person in charge of the place from which the samples were obtained a receipt describing the sample obtained and, if requested, a portion of each such sample. A copy of the results of any analysis made of such samples shall be furnished promptly to the owner, operator, tenant, or other person in charge, if such person can be located.

Fund LP43
 Section F
 County DeWitt
 Localities Clinton
 File Category Groundwater

BOL # 0390055036
 USEPA ID#
 RECEIVED ENVIRONMENTAL
 PROJECT ON AGING
 Illinois EPA Laboratory
 825 N. Ruffledge Street, Springfield, IL 62702 CHAMPAIGN
 217/782-9780; 217/557-0274
 Delivered by JST

Lab Sample #	Parameter Group & Other Analytes	Field Sample #	Legal Hold?	Split?	# Bottles	Volume (give units)	Collection Information			Collector or Laboratory Comments Do not include personal identifier information for samples collected on private residential property.	Seal Intact? (y/n)	
							Date Collected & Sealed	Time Collected (24 hr clock)	Time Sealed (24 hr clock)			Sampler's Initials
16D0532-01	VOC <input checked="" type="checkbox"/>	004MT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11	4.7 L	4/21/16	11:40	11:45	JR	delete alkalinity & fluoride	
-02	VOC <input type="checkbox"/>	001MD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	1.5 L	4/21/16	11:40	11:45	JR	delete alkalinity & fluoride	
-03	VOC <input checked="" type="checkbox"/>	048MT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	2.62 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-04	VOC <input type="checkbox"/>	044MB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	1.5 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-05	VOC <input checked="" type="checkbox"/>	048RT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	2.62 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-06	VOC <input type="checkbox"/>	048RD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	1.5 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-07	VOC <input checked="" type="checkbox"/>	090MT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	2.62 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-08	VOC <input type="checkbox"/>	090ND	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	1.5 L	4/21/16	13:15	13:20	JR	delete alkalinity & fluoride	
-09	VOC <input checked="" type="checkbox"/>	090RT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	2.62 L	4/21/16	14:00	14:55	JR	delete alkalinity & fluoride	
-10	VOC <input type="checkbox"/>	090RD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	1.5 L	4/21/16	14:00	14:55	JR	delete alkalinity & fluoride	

Receipt for Samples: Collection of these sample(s) at the above-named site is hereby acknowledged.
 Signature of Facility Representative, Date
 Paul Bundy 4/21/16

Samplers (printed names and signatures)
 Paul Bundy
 Sealer: I certify that I sealed the samples listed above and I wrote my initials, the date, and the time on the seal(s).
 Sealer's Signature: Paul Bundy Date: 4/21/16 Time (24 hr clock): 14:00

Carriers: I certify that I received the above sample(s) with the seal(s) intact and the sealer's initials and seal(s) date written on the seal(s).
 Relinquished by (Sealer) Paul Bundy Date: 4/21/16 Time (24 hr clock): 16:15
 Received by (Carrier) PMB Date: 4-21-16 Time (24 hr clock): 16:15

To Container for Shipment by Commercial Carrier
 Laboratory Custodian: I certify that I received the above sample(s) with the seal integrity as indicated and the sealer's initials and the date written on the seal(s). After being received, this same sample(s) will be retained by laboratory personnel at all times or locked in a secured area.
 Printed Name and Signature: PAUL BUNDY Date: 4-21-16
 Sample Temp. (°C): 17°C
 Signature of laboratory supervisor releasing results: Paul Bundy Date: 5/11/16

Illinois Environmental Protection Agency
Bureau of Land, DLPC/FOS
Chain of Custody Document
Page 2 of 2

Fund LP43 BOL # 0390055036 County DeWitt Locality Clinton
 Section F USEPA ID# Clinton Landfill 3 File Category Groundwater
 Project Manager's Name/Address/Phone #: Illinois EPA Laboratory
 Jeff Turner, c/o IEPA 825 N. Rutledge Street, Springfield, IL 62702
 2125 S. 1st St. 217/782-9780; 217/557-0274
 Other Laboratory Name, Address, and Phone #
 Delivered by JST

Parameter Group & Other Analytes	Collection Information		Collection Information				Split?	Legal Hold?	Field Sample #	# Bottles	Volume (give units)	Date Collected & Sealed	Time Collected (24 hr clock)	Time Sealed (24 hr clock)	Sampler's Initials	Collector or Laboratory Comments Do not include personal identifier information for samples collected on private residential property.	Seal Intact? (y/n)
	VOC	Lab Sample #	Time Collected & Sealed	Time Collected (24 hr clock)	Time Sealed (24 hr clock)	Sampler's Initials											
16D0532-11	<input checked="" type="checkbox"/>	16D0532-11	3	80 mL	4/21/16	13:55	14:00	JT									
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																
	<input type="checkbox"/>																

Receipt for Samples: Collection of these sample(s) at the above-named site is hereby acknowledged. Split(s) Offered? Accepted?

Signature/Title of Facility Representative, Date
 Samplers (printed names and signatures)
 Jeff Turner Date 4/21/16 Time (24 hr clock) 14:00

Carriers: Verify that I received the above sample(s) with the seal(s) intact and the sealer's initials and sealing date written on the seal(s).
 Relinquished by Jeff Turner Date 4/21/16 Time (24 hr clock) 16:15
 (Sealer) Received by PMS Date 4/21/16 Time (24 hr clock) 16:15

To Container for Shipment by Commercial Carrier
 Laboratory Custodian: I certify that I received the above sample(s) with the seal integrity as indicated and the sealer's initials and the date written on the seal(s). After being received, this/these sample(s) will be retained by laboratory personnel at all times or locked in a secured area.
 Signature of laboratory supervisor releasing results Date
 PAUL BUNDY 4-21-16 16:15 Sample Temp. (°C) 17°C
 REV. 1/18/13

1/16



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 15:38

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 1 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 15:38

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 2 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 3 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: CLINTON LANDFILL #3

Project/Facility Number: 0390055036

Funding Code: LP43

Trip ID:

Client Sample ID: G04MT

Matrix: Water

Sample Type:

Collected By: JT

Sample Depth:

Date Received : 04/21/16

Visit Number:

Temperature C: 17.0

Lab Sample ID: 16D0532-01

Date/Time Collected: 04/21/16 11:40

Total Depth:

Semivolatiles by GC/MS

Method: 8270

Units: ug/L

Prepared: 04/26/16 07:44

Analyzed: 05/02/16 10:00

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND		1.5	
Hexachlorocyclopentadiene	ND		1.5	
2,4,6-Trichlorophenol	ND		1.5	
2,4,5-Trichlorophenol	ND		1.5	
Safrole	ND		1.5	
2-Chloronaphthalene	ND		1.5	
1-Chloronaphthalene	ND		1.5	
2-Nitroaniline	ND		1.5	
1,4-Dinitrobenzene	ND		1.5	
Dimethylphthalate	ND	J3	1.5	
1,3-Dinitrobenzene	ND		1.5	
2,6-Dinitrotoluene	ND		1.5	
Acenaphthylene	ND		1.5	
1,2-Dinitrobenzene	ND		1.5	
3-Nitroaniline	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 4 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		1.5	
2,4-Dinitrophenol	ND		5.0	
4-Nitrophenol	ND		1.5	
Dibenzofuran	ND		1.5	
2,4-Dinitrotoluene	ND		1.5	
Pentachlorobenzene	ND		1.5	
1-Naphthylamine	ND		1.5	
2-Naphthylamine	ND		1.5	
2,3,4,6-Tetrachlorophenol	ND		1.5	
Diethylphthalate	ND	J3	1.5	
4-Chlorophenyl phenyl ether	ND		1.5	
Fluorene	ND		1.5	
4-Nitroaniline	ND		1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 5 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND		1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 6 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:17

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	ND		1.00	

Cyanide by EPA Method 335.4

Method: 335.4 Prepared: 04/28/16 09:28

Units: mg/L Analyzed: 04/28/16 14:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Cyanide	ND		0.005	

pH

Method: SM 4500H+B Prepared: 04/22/16 15:48

Units: PH Analyzed: 04/22/16 15:51

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Laboratory pH	7.1	Q	0.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 7 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Phenols by EPA Method 420.4

Method: 420.4 Prepared: 04/26/16 07:29

Units: ug/L Analyzed: 04/26/16 07:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phenol	ND	I	10.0	

Specific Conductance by Standard Method 2510B

Method: 2510B Prepared: 05/04/16 10:16

Units: umho/cm Analyzed: 05/04/16 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Specific Conductance	916.0		10.00	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:17

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	ND		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 8 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MT** Lab Sample ID: **16D0532-01**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Sample Depth: Total Depth:

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C

Method: 2540C Prepared: 04/25/16 11:35

Units: mg/L Analyzed: 04/26/16 15:11

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Total Dissolved Solids	496		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 9 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MD** Lab Sample ID: **16D0532-02**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Dissolved Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	ND		1.00	

Mercury by EPA Method 245.1

Method: 245.1 Prepared: 05/03/16 09:54

Units: ug/L Analyzed: 05/04/16 09:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Mercury	ND		0.06	

Metals by EPA 6000/7000 Series Methods

Method: 6020 Prepared: 04/29/16 12:30

Units: ug/L Analyzed: 05/02/16 09:23

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Antimony	ND		2.00	
Arsenic	62.6		0.50	
Lead	ND		5.00	
Selenium	ND		2.00	
Thallium	ND		2.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 10 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MD** Lab Sample ID: **16D0532-02**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Dissolved Sample Depth: Total Depth:

Metals (Minerals) by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: mg/L Analyzed: 05/02/16 12:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Calcium	95.7		0.30	100000
Magnesium	42.2		0.30	100000
Potassium	2.84		1.40	100000
Sodium	29.7		0.30	
Hardness	413		1.98	

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	277		60.0	40000
Barium	219		5.00	
Beryllium	ND		1.00	
Boron	386		10.0	
Cadmium	ND		3.00	
Chromium	ND		5.00	
Cobalt	ND		10.0	
Copper	ND		10.0	
Iron	4800		50.0	40000
Manganese	50.1		15.0	
Nickel	ND		5.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 11 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MD** Lab Sample ID: **16D0532-02**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Dissolved Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Silver	ND		3.00	
Strontium	612		5.00	
Vanadium	ND		5.00	
Zinc	ND		25.0	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method: 353.2 Prepared: 04/25/16 09:23

Units: mg/L Analyzed: 04/25/16 12:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Colorimetric, Automated Phenate by EPA Method 350.1

Method: 350.1 Prepared: 04/27/16 13:49

Units: mg/L Analyzed: 04/27/16 13:49

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Ammonia as N	9.81		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 12 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G04MD** Lab Sample ID: **16D0532-02**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 11:40

Sample Type: Dissolved Sample Depth: Total Depth:

Phosphorus, All Forms, Colorimetric, Automated, by EPA Method 365.1

Method: 365.1 Prepared: 04/26/16 12:46

Units: mg/L Analyzed: 04/27/16 12:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phosphorus as P	0.254		0.0050	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	ND		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 13 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 16:12

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 14 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 16:12

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 15 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 16 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND		1.5	
Hexachlorocyclopentadiene	ND		1.5	
2,4,6-Trichlorophenol	ND		1.5	
2,4,5-Trichlorophenol	ND		1.5	
Safrole	ND		1.5	
2-Chloronaphthalene	ND		1.5	
1-Chloronaphthalene	ND		1.5	
2-Nitroaniline	ND		1.5	
1,4-Dinitrobenzene	ND		1.5	
Dimethylphthalate	ND		1.5	
1,3-Dinitrobenzene	ND		1.5	
2,6-Dinitrotoluene	ND		1.5	
Acenaphthylene	ND		1.5	
1,2-Dinitrobenzene	ND		1.5	
3-Nitroaniline	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 17 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		1.5	
2,4-Dinitrophenol	ND		5.0	
4-Nitrophenol	ND		1.5	
Dibenzofuran	ND		1.5	
2,4-Dinitrotoluene	ND		1.5	
Pentachlorobenzene	ND		1.5	
1-Naphthylamine	ND		1.5	
2-Naphthylamine	ND		1.5	
2,3,4,6-Tetrachlorophenol	ND		1.5	
Diethylphthalate	ND		1.5	
4-Chlorophenyl phenyl ether	ND		1.5	
Fluorene	ND		1.5	
4-Nitroaniline	ND		1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 18 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND		1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 19 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:37

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	4.88		1.00	

Cyanide by EPA Method 335.4

Method: 335.4 Prepared: 04/28/16 09:28

Units: mg/L Analyzed: 04/28/16 14:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Cyanide	ND		0.005	

pH

Method: SM 4500H+B Prepared: 04/22/16 15:48

Units: PH Analyzed: 04/22/16 15:51

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Laboratory pH	7.1	Q	0.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 20 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MT** Lab Sample ID: **16D0532-03**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Phenols by EPA Method 420.4

Method: 420.4 Prepared: 04/26/16 07:29

Units: ug/L Analyzed: 04/26/16 07:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phenol	ND	I	10.0	

Specific Conductance by Standard Method 2510B

Method: 2510B Prepared: 05/04/16 10:16

Units: umho/cm Analyzed: 05/04/16 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Specific Conductance	1098		10.00	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:37

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	29.2		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 21 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	CLINTON LANDFILL #3		Date Received :	04/21/16
Project/Facility Number:	0390055036		Visit Number:	
Funding Code:	LP43		Temperature C:	17.0
Trip ID:			Lab Sample ID:	16D0532-03
Client Sample ID:	G48MT		Date/Time Collected:	04/21/16 13:15
Matrix:	Water	Collected By: JT		
Sample Type:		Sample Depth:	Total Depth:	

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C

Method:	2540C	Prepared:	04/25/16 11:35
Units:	mg/L	Analyzed:	04/26/16 15:11

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Total Dissolved Solids	620		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 22 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MD** Lab Sample ID: **16D0532-04**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:46

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	4.82		1.00	

Mercury by EPA Method 245.1

Method: 245.1 Prepared: 05/03/16 09:54

Units: ug/L Analyzed: 05/04/16 09:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Mercury	ND		0.06	

Metals by EPA 6000/7000 Series Methods

Method: 6020 Prepared: 04/29/16 12:30

Units: ug/L Analyzed: 05/02/16 09:26

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Antimony	ND		2.00	
Arsenic	8.06		0.50	
Lead	ND		5.00	
Selenium	ND		2.00	
Thallium	ND		2.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 23 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MD** Lab Sample ID: **16D0532-04**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals (Minerals) by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: mg/L Analyzed: 05/02/16 12:47

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Calcium	121		0.30	100000
Magnesium	53.9		0.30	100000
Potassium	3.39		1.40	100000
Sodium	25.7		0.30	
Hardness	525		1.98	

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:47

Analyte	Result	Qualifier	Reporting Limit	Regulatory Level
Aluminum	94.2		60.0	40000
Barium	281		5.00	
Beryllium	ND		1.00	
Boron	260		10.0	
Cadmium	ND		3.00	
Chromium	ND		5.00	
Cobalt	ND		10.0	
Copper	ND		10.0	
Iron	3620		50.0	40000
Manganese	40.5		15.0	
Nickel	ND		5.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 24 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MD** Lab Sample ID: **16D0532-04**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Silver	ND		3.00	
Strontium	754		5.00	
Vanadium	ND		5.00	
Zinc	ND		25.0	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method: 353.2 Prepared: 04/25/16 09:23

Units: mg/L Analyzed: 04/25/16 12:48

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Colorimetric, Automated Phenate by EPA Method 350.1

Method: 350.1 Prepared: 04/27/16 13:57

Units: mg/L Analyzed: 04/27/16 13:57

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Ammonia as N	7.96		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 25 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48MD** Lab Sample ID: **16D0532-04**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Phosphorus, All Forms, Colorimetric, Automated, by EPA Method 365.1

Method: 365.1 Prepared: 04/26/16 12:46

Units: mg/L Analyzed: 04/27/16 12:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phosphorus as P	0.231		0.0050	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:46

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	26.2		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 26 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 16:46

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 27 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: CLINTON LANDFILL #3
 Project/Facility Number: 0390055036 Date Received : 04/21/16
 Funding Code: LP43 Visit Number:
 Trip ID: Temperature C: 17.0
 Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**
 Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15
 Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00
 Units: ug/L Analyzed: 04/22/16 16:46

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
 05/11/16 12:53
 Page 28 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:53

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 29 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:53

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND		1.5	
Hexachlorocyclopentadiene	ND		1.5	
2,4,6-Trichlorophenol	ND		1.5	
2,4,5-Trichlorophenol	ND		1.5	
Safrole	ND		1.5	
2-Chloronaphthalene	ND		1.5	
1-Chloronaphthalene	ND		1.5	
2-Nitroaniline	ND		1.5	
1,4-Dinitrobenzene	ND		1.5	
Dimethylphthalate	ND		1.5	
1,3-Dinitrobenzene	ND		1.5	
2,6-Dinitrotoluene	ND		1.5	
Acenaphthylene	ND		1.5	
1,2-Dinitrobenzene	ND		1.5	
3-Nitroaniline	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 30 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:53

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		1.5	
2,4-Dinitrophenol	ND		5.0	
4-Nitrophenol	ND		1.5	
Dibenzofuran	ND		1.5	
2,4-Dinitrotoluene	ND		1.5	
Pentachlorobenzene	ND		1.5	
1-Naphthylamine	ND		1.5	
2-Naphthylamine	ND		1.5	
2,3,4,6-Tetrachlorophenol	ND		1.5	
Diethylphthalate	ND		1.5	
4-Chlorophenyl phenyl ether	ND		1.5	
Fluorene	ND		1.5	
4-Nitroaniline	ND		1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 31 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 10:53

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND		1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 32 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 12:56

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	12.2		1.00	

Cyanide by EPA Method 335.4

Method: 335.4 Prepared: 04/28/16 09:28

Units: mg/L Analyzed: 04/28/16 14:24

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Cyanide	ND		0.005	

pH

Method: SM 4500H+B Prepared: 04/22/16 15:48

Units: PH Analyzed: 04/22/16 15:51

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Laboratory pH	6.7	Q	0.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 33 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Phenols by EPA Method 420.4

Method: 420.4 Prepared: 04/26/16 07:29

Units: ug/L Analyzed: 04/26/16 07:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phenol	14.5	1	10.0	

Specific Conductance by Standard Method 2510B

Method: 2510B Prepared: 05/04/16 10:16

Units: umho/cm Analyzed: 05/04/16 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Specific Conductance	1680		10.00	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/29/16 11:55

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	224		40.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 34 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RT** Lab Sample ID: **16D0532-05**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C

Method: 2540C Prepared: 04/25/16 11:35

Units: mg/L Analyzed: 04/26/16 15:11

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Total Dissolved Solids	1170		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 35 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RD** Lab Sample ID: **16D0532-06**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:06

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	12.2		1.00	

Mercury by EPA Method 245.1

Method: 245.1 Prepared: 05/03/16 09:54

Units: ug/L Analyzed: 05/04/16 09:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Mercury	ND		0.06	

Metals by EPA 6000/7000 Series Methods

Method: 6020 Prepared: 04/29/16 12:30

Units: ug/L Analyzed: 05/02/16 09:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Antimony	ND		2.00	
Arsenic	ND		0.50	
Lead	ND		5.00	
Selenium	ND		2.00	
Thallium	ND		2.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 36 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RD** Lab Sample ID: **16D0532-06**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals (Minerals) by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: mg/L Analyzed: 05/02/16 13:06

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Calcium	240		0.30	100000
Magnesium	99.6		0.30	100000
Potassium	ND		1.40	100000
Sodium	11.4		0.30	
Hardness	1010		1.98	

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND		60.0	40000
Barium	105		5.00	
Beryllium	ND		1.00	
Boron	164		10.0	
Cadmium	ND		3.00	
Chromium	ND		5.00	
Cobalt	ND		10.0	
Copper	ND		10.0	
Iron	4660		50.0	40000
Manganese	471		15.0	
Nickel	ND		5.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 37 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RD** Lab Sample ID: **16D0532-06**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Silver	ND		3.00	
Strontium	323		5.00	
Vanadium	ND		5.00	
Zinc	ND		25.0	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method: 353.2 Prepared: 04/25/16 09:23

Units: mg/L Analyzed: 04/25/16 12:49

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Colorimetric, Automated Phenate by EPA Method 350.1

Method: 350.1 Prepared: 04/27/16 14:00

Units: mg/L Analyzed: 04/27/16 14:00

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Ammonia as N	0.22		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 38 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G48RD** Lab Sample ID: **16D0532-06**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Phosphorus, All Forms, Colorimetric, Automated, by EPA Method 365.1

Method: 365.1 Prepared: 04/26/16 12:46

Units: mg/L Analyzed: 04/27/16 12:01

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phosphorus as P	0.0440		0.0050	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/29/16 12:05

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	226		40.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 39 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 17:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 40 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 17:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 41 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 42 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND		1.5	
Hexachlorocyclopentadiene	ND		1.5	
2,4,6-Trichlorophenol	ND		1.5	
2,4,5-Trichlorophenol	ND		1.5	
Safrole	ND		1.5	
2-Chloronaphthalene	ND		1.5	
1-Chloronaphthalene	ND		1.5	
2-Nitroaniline	ND		1.5	
1,4-Dinitrobenzene	ND		1.5	
Dimethylphthalate	ND		1.5	
1,3-Dinitrobenzene	ND		1.5	
2,6-Dinitrotoluene	ND		1.5	
Acenaphthylene	ND		1.5	
1,2-Dinitrobenzene	ND		1.5	
3-Nitroaniline	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 43 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		1.5	
2,4-Dinitrophenol	ND		5.0	
4-Nitrophenol	ND		1.5	
Dibenzofuran	ND		1.5	
2,4-Dinitrotoluene	ND		1.5	
Pentachlorobenzene	ND		1.5	
1-Naphthylamine	ND		1.5	
2-Naphthylamine	ND		1.5	
2,3,4,6-Tetrachlorophenol	ND		1.5	
Diethylphthalate	ND		1.5	
4-Chlorophenyl phenyl ether	ND		1.5	
Fluorene	ND		1.5	
4-Nitroaniline	ND		1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 44 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND		1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 45 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name:	CLINTON LANDFILL #3		
Project/Facility Number:	0390055036	Date Received :	04/21/16
Funding Code:	LP43	Visit Number:	
Trip ID:		Temperature C:	17.0
Client Sample ID:	G90MT	Lab Sample ID:	16D0532-07
Matrix:	Water	Collected By: JT	Date/Time Collected: 04/21/16 13:15
Sample Type:		Sample Depth:	Total Depth:

Chloride by Ion Chromatography 300.0

Method:	300.0	Prepared:	04/27/16 08:27
Units:	mg/L	Analyzed:	04/28/16 13:35

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	4.91		1.00	

Cyanide by EPA Method 335.4

Method:	335.4	Prepared:	04/28/16 09:28
Units:	mg/L	Analyzed:	04/28/16 14:25

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Cyanide	ND		0.005	

pH

Method:	SM 4500H+B	Prepared:	04/22/16 15:48
Units:	PH	Analyzed:	04/22/16 15:51

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Laboratory pH	7.1	Q	0.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 46 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Phenols by EPA Method 420.4

Method: 420.4 Prepared: 04/26/16 07:29

Units: ug/L Analyzed: 04/26/16 07:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phenol	ND	1	10.0	

Specific Conductance by Standard Method 2510B

Method: 2510B Prepared: 05/04/16 10:16

Units: umho/cm Analyzed: 05/04/16 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Specific Conductance	1100		10.00	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:35

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	30.5		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 47 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MT** Lab Sample ID: **16D0532-07**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Sample Depth: Total Depth:

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C

Method: 2540C Prepared: 04/25/16 11:35

Units: mg/L Analyzed: 04/26/16 15:11

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Total Dissolved Solids	616		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 48 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MD** Lab Sample ID: **16D0532-08**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	4.85		1.00	

Mercury by EPA Method 245.1

Method: 245.1 Prepared: 05/03/16 09:54

Units: ug/L Analyzed: 05/04/16 09:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Mercury	ND		0.06	

Metals by EPA 6000/7000 Series Methods

Method: 6020 Prepared: 04/29/16 12:30

Units: ug/L Analyzed: 05/02/16 09:32

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Antimony	ND		2.00	
Arsenic	9.02		0.50	
Lead	ND		5.00	
Selenium	ND		2.00	
Thallium	ND		2.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 49 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MD** Lab Sample ID: **16D0532-08**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals (Minerals) by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: mg/L Analyzed: 05/02/16 12:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Calcium	124		0.30	100000
Magnesium	53.3		0.30	100000
Potassium	3.30		1.40	100000
Sodium	24.7		0.30	
Hardness	530		1.98	

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND		60.0	40000
Barium	291		5.00	
Beryllium	ND		1.00	
Boron	258		10.0	
Cadmium	ND		3.00	
Chromium	ND		5.00	
Cobalt	ND		10.0	
Copper	ND		10.0	
Iron	3710		50.0	40000
Manganese	41.4		15.0	
Nickel	ND		5.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 50 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MD** Lab Sample ID: **16D0532-08**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Silver	ND		3.00	
Strontium	736		5.00	
Vanadium	ND		5.00	
Zinc	ND		25.0	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method: 353.2 Prepared: 04/25/16 09:23

Units: mg/L Analyzed: 04/25/16 12:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Colorimetric, Automated Phenate by EPA Method 350.1

Method: 350.1 Prepared: 04/27/16 14:03

Units: mg/L Analyzed: 04/27/16 14:03

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Ammonia as N	7.88		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 51 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G90MD** Lab Sample ID: **16D0532-08**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 13:15

Sample Type: Dissolved Sample Depth: Total Depth:

Phosphorus, All Forms, Colorimetric, Automated, by EPA Method 365.1

Method: 365.1 Prepared: 04/26/16 12:46

Units: mg/L Analyzed: 04/27/16 12:02

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phosphorus as P	0.239		0.0050	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	25.8		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 52 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 17:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 53 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/22/16 10:00

Units: ug/L Analyzed: 04/22/16 17:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 54 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 55 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND		1.5	
Hexachlorocyclopentadiene	ND		1.5	
2,4,6-Trichlorophenol	ND		1.5	
2,4,5-Trichlorophenol	ND		1.5	
Safrole	ND		1.5	
2-Chloronaphthalene	ND		1.5	
1-Chloronaphthalene	ND		1.5	
2-Nitroaniline	ND		1.5	
1,4-Dinitrobenzene	ND		1.5	
Dimethylphthalate	ND		1.5	
1,3-Dinitrobenzene	ND		1.5	
2,6-Dinitrotoluene	ND		1.5	
Acenaphthylene	ND		1.5	
1,2-Dinitrobenzene	ND		1.5	
3-Nitroaniline	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 56 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		1.5	
2,4-Dinitrophenol	ND		5.0	
4-Nitrophenol	ND		1.5	
Dibenzofuran	ND		1.5	
2,4-Dinitrotoluene	ND		1.5	
Pentachlorobenzene	ND		1.5	
1-Naphthylamine	ND		1.5	
2-Naphthylamine	ND		1.5	
2,3,4,6-Tetrachlorophenol	ND		1.5	
Diethylphthalate	ND		1.5	
4-Chlorophenyl phenyl ether	ND		1.5	
Fluorene	ND		1.5	
4-Nitroaniline	ND		1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 57 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 04/26/16 07:44

Units: ug/L Analyzed: 05/02/16 11:47

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND		1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 58 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	7.61		1.00	

Cyanide by EPA Method 335.4

Method: 335.4 Prepared: 04/28/16 09:28

Units: mg/L Analyzed: 04/28/16 14:27

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Cyanide	ND		0.005	

pH

Method: SM 4500H+B Prepared: 04/22/16 15:48

Units: PH Analyzed: 04/22/16 15:51

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Laboratory pH	7.2	Q	0.1	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 59 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Phenols by EPA Method 420.4

Method: 420.4 Prepared: 04/26/16 07:29

Units: ug/L Analyzed: 04/26/16 07:29

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phenol	ND	I	10.0	

Specific Conductance by Standard Method 2510B

Method: 2510B Prepared: 05/04/16 10:16

Units: umho/cm Analyzed: 05/04/16 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Specific Conductance	1276		10.00	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 13:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	86.1		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 60 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RT** Lab Sample ID: **16D0532-09**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Sample Depth: Total Depth:

Total Dissolved Solids, Gravimetric, Dried at 180oC by Std. Method 2540C

Method: 2540C Prepared: 04/25/16 11:35

Units: mg/L Analyzed: 04/26/16 15:11

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Total Dissolved Solids	764		10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 61 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RD** Lab Sample ID: **16D0532-10**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Dissolved Sample Depth: Total Depth:

Chloride by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 14:04

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloride *	7.67		1.00	

Mercury by EPA Method 245.1

Method: 245.1 Prepared: 05/03/16 09:54

Units: ug/L Analyzed: 05/04/16 09:54

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Mercury	ND		0.06	

Metals by EPA 6000/7000 Series Methods

Method: 6020 Prepared: 04/29/16 12:30

Units: ug/L Analyzed: 05/02/16 09:35

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Antimony	ND		2.00	
Arsenic	1.58		0.50	
Lead	ND		5.00	
Selenium	ND		2.00	
Thallium	ND		2.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 62 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RD** Lab Sample ID: **16D0532-10**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Dissolved Sample Depth: Total Depth:

Metals (Minerals) by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: mg/L Analyzed: 05/02/16 12:57

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Calcium	153		0.30	100000
Magnesium	73.5		0.30	100000
Potassium	3.88		1.40	100000
Sodium	28.1		0.30	
Hardness	685		1.98	

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:57

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND		60.0	40000
Barium	294		5.00	
Beryllium	ND		1.00	
Boron	228		10.0	
Cadmium	ND		3.00	
Chromium	ND		5.00	
Cobalt	ND		10.0	
Copper	ND		10.0	
Iron	3440		50.0	40000
Manganese	80.5		15.0	
Nickel	ND		5.00	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 63 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RD** Lab Sample ID: **16D0532-10**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Dissolved Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: 6010 Prepared: 04/27/16 14:27

Units: ug/L Analyzed: 05/02/16 12:57

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Silver	ND		3.00	
Strontium	883		5.00	
Vanadium	ND		5.00	
Zinc	ND		25.0	

Nitrate-Nitrite, Colorimetric, Automated Cadmium by EPA Method 353.2

Method: 353.2 Prepared: 04/25/16 09:23

Units: mg/L Analyzed: 04/25/16 12:52

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Nitrogen, Nitrite (NO2) + Nitrate (	ND		0.100	

Nitrogen, Ammonia, Colorimetric, Automated Phenate by EPA Method 350.1

Method: 350.1 Prepared: 04/27/16 14:06

Units: mg/L Analyzed: 04/27/16 14:06

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Ammonia as N	5.08		0.10	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 64 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **G08RD** Lab Sample ID: **16D0532-10**

Matrix: Water Collected By: JT Date/Time Collected: 04/21/16 14:50

Sample Type: Dissolved Sample Depth: Total Depth:

Phosphorus, All Forms, Colorimetric, Automated, by EPA Method 365.1

Method: 365.1 Prepared: 04/26/16 12:46

Units: mg/L Analyzed: 04/27/16 12:02

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Phosphorus as P	0.295		0.0050	

Sulfate by Ion Chromatography 300.0

Method: 300.0 Prepared: 04/27/16 08:27

Units: mg/L Analyzed: 04/28/16 14:04

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Sulfate *	89.0		10.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 65 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **TRIP BLANKS** Lab Sample ID: **16D0532-11**

Matrix: Water Collected By: Date/Time Collected: 04/21/16 13:55

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/25/16 10:00

Units: ug/L Analyzed: 04/25/16 15:06

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 66 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Client Sample ID: **TRIP BLANKS** Lab Sample ID: **16D0532-11**

Matrix: Water Collected By: Date/Time Collected: 04/21/16 13:55

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 04/25/16 10:00

Units: ug/L Analyzed: 04/25/16 15:06

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 67 of 68



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **CLINTON LANDFILL #3**

Project/Facility Number: 0390055036 Date Received : 04/21/16

Funding Code: LP43 Visit Number:

Trip ID: Temperature C: 17.0

Notes and Definitions

- Q Maximum holding time exceeded.
- J3 The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.
- I See Case Narrative for more information.
- ND Analyte NOT DETECTED at or above the reporting limit
- * Non-NELAP accredited

Samples 16D0532-01, -03, -05, -07 and -09 were I qualified because of a sulfur smell to the sample. Sulfur is a known interferent for phenol analysis. 16D0532-05 sample peak was the only sample indicative of interference (only detected value).

Method 8270: Tentatively Identified Compounds (TICs) were detected in the semi-volatile analysis of the samples 16D0532-05 and -07. Please contact the laboratory if additional information about the TICs is needed.

Report Authorized by:

Matthew C. Neely
Organic Analysis Unit Supervisor

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
05/11/16 12:53
Page 68 of 68



PDC Laboratories, Inc.

PROFESSIONAL • DEPENDABLE • COMMITTED

June 02, 2016

Charles Hostetler
Clinton Landfill
9550 Heritage Rd
Clinton, IL 61727

Dear Charles Hostetler:

Please find enclosed the analytical results for the samples that the laboratory has received. All testing is performed according to our current TNI certifications unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Vice President, John LaPayne with any feedback you have about your experience with our laboratory.

Sincerely,

Lisa Grant
Project Manager
(309) 692-9688 x1764
lgrant@pdclab.com





ANALYTICAL RESULTS

Sample: 6043531-01
 Name: G08R
 Matrix: Ground Water - Grab

Sampled: 04/21/16 15:00
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Field - PIA							
BTM Well Elev	657.86	Feet		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Depth of Water (ft below LS)	53.89	Feet		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Depth, From Measuring Point	55.52	Feet		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Elevation of GW	680.44	Feet		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Elevation of Measuring Point (TOC)	735.96	Feet		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
pH, Field Measured	7.04	pH Units		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Specific Conductance, Field Measured	1254	umhos/cm		04/21/16 15:00	04/21/16 15:00	FIELD	Field*
Temperatura, Field Measured	57.5	°F		04/21/16 15:00	04/21/16 15:00	FIELD	SM 2550 B*
General Chemistry - PIA							
Cyanide	< 0.0050	mg/L		04/22/16 15:16	04/22/16 15:16	sjf	ASTM D7511
Oil & Grease - total	< 5.5	mg/L		04/26/16 08:07	04/26/16 15:11	JMD	EPA 1664
Phenolics	< 5.0	ug/L		04/28/16 16:42	04/29/16 11:14	lgiaz	EPA 420.4 - QC 10-210-00-1-A
Solids - total dissolved solids (TDS)	630	mg/L		04/22/16 14:06	04/22/16 15:29	DMB	SM 2540C
Soluble Anions - PIA							
Chloride, Dissolved	9.5	mg/L		04/22/16 19:53	04/22/16 19:53	BRS	EPA 300.0
Nitrate, Dissolved	< 0.02	mg/L		04/22/16 19:53	04/22/16 19:53	BRS	EPA 300.0
Sulfate, Dissolved	90	mg/L		04/22/16 20:10	04/22/16 20:10	BRS	EPA 300.0
Soluble Metals - PIA							
Arsenic, Dissolved	1.4	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Boron, Dissolved	240	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Magnesium, Dissolved	72	mg/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:15	JMW	SW 6020
Soluble Nutrients - PIA							
Ammonia, Dissolved	6.1	mg/L		04/26/16 11:33	04/26/16 11:33	SJW	EPA 350.1 - QC 10-107-06-2-C
Volatile Organics - PIA							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043531-01
Name: G08R
Matrix: Ground Water - Grab

Sampled: 04/21/16 15:00
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Bromodichloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Bromoform	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Bromomethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Carbon disulfide	< 4.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Carbon tetrachloride	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Chlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Chloroethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Chloroform	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Chloromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Dibromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Dibromomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Dichlorodifluoromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Ethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Hexachlorobutadiene	< 10	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Iodomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Isopropylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043531-01
Name: G08R
Matrix: Ground Water - Grab

Sampled: 04/21/16 15:00
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Methylene chloride	< 7.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Naphthalene	< 10	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
n-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
n-Propylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
p-Isopropyl toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
sec-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Styrene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
tert-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Tetrachloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Tetrahydrofuran	< 10	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B*
Toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
trans-1,4-Dichloro-2-butene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Trichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Vinyl chloride	< 2.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B
Xylenes- Total	< 3.0	ug/L		04/26/16 00:00	04/26/16 12:37	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-01
Name: G48M
Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
Received: 04/22/16 09:00

Table with columns: Parameter, Result, Unit, Qualifier, Prepared, Analyzed, Analyst, Method. Includes sections for Field - PIA, General Chemistry - PIA, Herbicides - PIA, Polynuclear Aromatic Hydrocarbons - PIA, Soluble Anions - PIA, and Soluble Metals - PIA.



ANALYTICAL RESULTS

Sample: 6043534-01
 Name: G48M
 Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
Magnesium, Dissolved	56	mg/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:19	JMW	SW 6020
<u>Soluble Nutrients - PIA</u>							
Ammonia, Dissolved	9.2	mg/L		04/26/16 11:33	04/26/16 11:33	SJW	EPA 350.1 - QC 10-107-06-2-O
<u>Volatile Organics - PIA</u>							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-01
Name: G48M
Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Bromodichloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Bromoform	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Bromomethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Carbon disulfide	< 4.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Carbon tetrachloride	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Chlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Chloroethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Chloroform	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Chloromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Dibromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Dibromomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Dichlorodifluoromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Ethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Hexachlorobutadiene	< 10	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Iodomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Isopropylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Methylene chloride	< 7.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Naphthalene	< 10	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
n-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
n-Propylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
p-Isopropyl toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
sec-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Styrene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
tert-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Tetrachloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Tetrahydrofuran	< 10	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B*
Toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
trans-1,4-Dichloro-2-butene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Trichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Vinyl chloride	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B
Xylenes- Total	< 3.0	ug/L		04/26/16 00:00	04/26/16 13:03	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-02
 Name: G48R
 Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Field - PIA							
BTM Well Elv	655.45	Feet		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Depth of Water (ft below LS)	28.18	Feet		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Depth, From Measuring Point	30.93	Feet		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Elevation of GW	672.72	Feet		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Elevation of Measuring Point (TOC)	703.65	Feet		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
pH, Field Measured	6.61	pH Units		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Specific Conductance, Field Measured	1651	umhos/cm		04/21/16 13:20	04/21/16 13:20	FIELD	Field*
Temperature, Field Measured	56.5	*F		04/21/16 13:20	04/21/16 13:20	FIELD	SM 2550 B*
General Chemistry - PIA							
Cyanide	< 0.0050	mg/L		04/22/16 14:48	04/22/16 14:48	sjf	ASTM D7511
Oil & Grease - total	< 5.5	mg/L		04/26/16 08:07	04/26/16 15:12	JMD	EPA 1664
Phenolics	< 5.0	ug/L		04/28/16 16:42	04/29/16 11:23	lglaz	EPA 420.4 - QC 10-210-00-1-A
Solids - total dissolved solids (TDS)	970	mg/L		04/22/16 14:06	04/22/16 15:29	DMB	SM 2540C
Herbicides - PIA							
Pentachlorophenol	< 0.040	ug/L		05/03/16 08:08	05/04/16 17:15	JMT	EPA 515.3
Polynuclear Aromatic Hydrocarbons - PIA							
Acenaphthene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Acenaphthylene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Benzo(a)anthracene	< 0.13	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Benzo(a)pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Benzo(b)fluoranthene	< 0.18	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Benzo(g,h,i)perylene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Benzo(k)fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Chrysene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Dibenzo(a,h)anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Indeno(1,2,3-cd)pyrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Phenanthrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:11	ELS	SW 8310
Soluble Anions - PIA							
Chloride, Dissolved	14	mg/L		04/26/16 01:33	04/26/16 01:33	SCR	EPA 300.0
Nitrate, Dissolved	< 0.02	mg/L		04/22/16 15:14	04/22/16 15:14	BRS	EPA 300.0
Sulfate, Dissolved	220	mg/L		04/26/16 01:49	04/26/16 01:49	SCR	EPA 300.0
Soluble Metals - PIA							
Arsenic, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Boron, Dissolved	160	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020



ANALYTICAL RESULTS

Sample: 6043534-02
 Name: G48R
 Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Magnesium, Dissolved	100	mg/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:22	JMW	SW 6020
<u>Soluble Nutrients - PIA</u>							
Ammonia, Dissolved	0.25	mg/L		04/26/16 11:39	04/26/16 11:39	SJW	EPA 350.1 - QC 10-107-06-2-O
<u>Volatile Organics - PIA</u>							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-02
 Name: G48R
 Matrix: Ground Water - Grab

Sampled: 04/21/16 13:20
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Bromodichloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Bromofom	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Bromomethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Carbon disulfida	< 4.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Carbon tetrachloride	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Chlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Chloroethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Chloroform	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Chloromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Dibromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Dibromomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Dichlorodifluoromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Ethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Hexachlorobutadiene	< 10	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Iodomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Isopropylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Methylene chloride	< 7.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Naphthalene	< 10	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
n-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
n-Propylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
p-Isopropyl toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
sec-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Styrene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
tert-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Tetrachloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Tetrahydrofuran	< 10	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B*
Toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
trans-1,4-Dichloro-2-butene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Trichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Vinyl chloride	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B
Xylenes- Total	< 3.0	ug/L		04/26/16 00:00	04/26/16 13:30	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-03
 Name: G04M
 Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Field - PIA							
BTM Well Elev	637.52	Feet		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Depth of Water (ft below LS)	29.95	Feet		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Depth, From Measuring Point	32.37	Feet		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Elevation of GW	693.05	Feet		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Elevation of Measuring Point (TOC)	725.42	Feet		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
pH, Field Measured	6.75	pH Units		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Specific Conductance, Field Measured	914.0	umhos/cm		04/21/16 11:53	04/21/16 11:53	FIELD	Field*
Temperature, Field Measured	56.0	°F		04/21/16 11:53	04/21/16 11:53	FIELD	SM 2550 B*
General Chemistry - PIA							
Cyanide	< 0.0050	mg/L		04/26/16 10:21	04/27/16 09:22	lgaz	SM 4500-CN C - EPA 335.4
Oil & Grease - total	< 5.6	mg/L		04/26/16 08:07	04/26/16 15:12	JMD	EPA 1664
Phenolics	< 5.0	ug/L		04/28/16 16:42	04/29/16 11:24	lgaz	EPA 420.4 - QC 10-210-00-1-A
Solids - total dissolved solids (TDS)	420	mg/L		04/22/16 14:06	04/22/16 15:29	DMB	SM 2540C
Herbicides - PIA							
Pentachlorophenol	< 0.040	ug/L		05/03/16 08:08	05/04/16 17:43	JMT	EPA 515.3
Polynuclear Aromatic Hydrocarbons - PIA							
Acenaphthene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Acenaphthylene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Benzo(a)anthracene	< 0.13	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Benzo(a)pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Benzo(b)fluoranthene	< 0.18	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Benzo(g,h,i)perylene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Benzo(k)fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Chrysene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Dibenzo(a,h)anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Indeno(1,2,3-cd)pyrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Phenanthrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 19:37	ELS	SW 8310
Soluble Anions - PIA							
Chloride, Dissolved	1.8	mg/L		04/22/16 16:20	04/22/16 16:20	BRS	EPA 300.0
Nitrate, Dissolved	< 0.02	mg/L		04/22/16 16:20	04/22/16 16:20	BRS	EPA 300.0
Sulfate, Dissolved	1.4	mg/L		04/22/16 16:20	04/22/16 16:20	BRS	EPA 300.0
Soluble Metals - PIA							
Arsenic, Dissolved	65	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Boron, Dissolved	370	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020



ANALYTICAL RESULTS

Sample: 6043534-03
 Name: G04M
 Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Magnesium, Dissolved	43	mg/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:26	JMW	SW 6020
<u>Soluble Nutrients - PIA</u>							
Ammonia, Dissolved	11	mg/L		04/26/16 11:40	04/26/16 11:40	SJW	EPA 350.1 - QC 10-107-06-2-O
<u>Volatile Organics - PIA</u>							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 13:56	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-03
Name: G04M
Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53

Received: 04/22/16 09:00

Table with 8 columns: Parameter, Result, Unit, Qualifier, Prepared, Analyzed, Analyst, Method. Lists various chemical compounds and their detection results.



ANALYTICAL RESULTS

Sample: 6043534-04
 Name: FD - G04M
 Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
<u>General Chemistry - PIA</u>							
Cyanide	< 0.0050	mg/L		04/26/16 10:21	04/27/16 09:25	lglaz	SM 4500-CN C - EPA 335.4
Oil & Grease - total	< 5.5	mg/L		04/26/16 08:07	04/26/16 15:12	JMD	EPA 1664
Phenolics	< 5.0	ug/L		04/28/16 16:42	04/29/16 11:25	lglaz	EPA 420.4 - QC 10-210-00-1-A
Solids - total dissolved solids (TDS)	410	mg/L		04/22/16 14:06	04/22/16 15:29	DMB	SM 2540C
<u>Herbicides - PIA</u>							
2,4,5-T	< 0.050	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3*
2,4-D	< 0.10	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Dalapon	< 1.5	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Dicamba	< 0.30	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Dinoseb	< 0.20	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Pentachlorophenol	< 0.040	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Picloram	< 0.20	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
Silvex	< 0.050	ug/L		05/03/16 08:08	05/04/16 18:11	JMT	EPA 515.3
<u>Polynuclear Aromatic Hydrocarbons - PIA</u>							
Acenaphthene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Acenaphthylene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Benzo(a)anthracene	< 0.13	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Benzo(a)pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Benzo(b)fluoranthene	< 0.18	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Benzo(g,h,i)perylene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Benzo(k)fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Chrysene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Dibenzo(a,h)anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Indeno(1,2,3-cd)pyrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Phenanthrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
Pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:03	ELS	SW 8310
<u>Soluble Anions - PIA</u>							
Chloride, Dissolved	1.9	mg/L		04/22/16 17:26	04/22/16 17:26	BRS	EPA 300.0
Nitrate, Dissolved	< 0.02	mg/L		04/22/16 17:26	04/22/16 17:26	BRS	EPA 300.0
Sulfate, Dissolved	< 1.0	mg/L		04/22/16 17:26	04/22/16 17:26	BRS	EPA 300.0
<u>Soluble Metals - PIA</u>							
Arsenic, Dissolved	61	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Boron, Dissolved	350	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020



ANALYTICAL RESULTS

Sample: 6043534-04
 Name: FD - G04M
 Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Magnesium, Dissolved	40	mg/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:29	JMW	SW 6020
<u>Soluble Nutrients - PIA</u>							
Ammonia, Dissolved	11	mg/L		04/26/16 11:41	04/26/16 11:41	SJW	EPA 350.1 - QC 10-107-06-2-O
<u>Volatile Organics - PIA</u>							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Bromodichloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Bromoform	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-04
Name: FD - G04M
Matrix: Ground Water - Grab

Sampled: 04/21/16 11:53
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Bromomethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Carbon disulfide	< 4.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Carbon tetrachloride	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Chlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Chloroethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Chloroform	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Chloromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
cis-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Dibromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Dibromomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Dichlorodifluoromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Ethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Hexachlorobutadiene	< 10	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Iodomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Isopropylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Methylene chloride	< 7.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Naphthalene	< 10	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
n-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
n-Propylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
p-Isopropyl toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
sec-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Styrene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
tert-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Tetrachloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Tetrahydrofuran	< 10	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B*
Toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
trans-1,4-Dichloro-2-butene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Trichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Vinyl chloride	< 2.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B
Xylenes- Total	< 3.0	ug/L		04/26/16 00:00	04/26/16 14:23	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-06
 Name: Field Blank 1
 Matrix: Ground Water - Field Blank

Sampled: 04/21/16 10:50
 Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
General Chemistry - PIA							
Cyanide	< 0.0050	mg/L		04/22/16 15:06	04/22/16 15:06	sjf	ASTM D7511
Oil & Grease - total	< 5.5	mg/L		04/26/16 08:07	04/26/16 15:27	JMD	EPA 1664
Phenolics	< 5.0	ug/L		04/28/16 16:42	04/29/16 11:28	Iglaz	EPA 420.4 - QC 10-210-00-1-A
Solids - total dissolved solids (TDS)	< 17	mg/L		04/22/16 14:06	04/22/16 15:29	DMB	SM 2540C
Herbicides - PIA							
Pentachlorophenol	< 0.040	ug/L		05/03/16 08:08	05/04/16 19:07	JMT	EPA 515.3
Polynuclear Aromatic Hydrocarbons - PIA							
Acenaphthene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Acenaphthylene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Benzo(a)anthracene	< 0.13	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Benzo(a)pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Benzo(b)fluoranthene	< 0.18	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Benzo(g,h,i)perylene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Benzo(k)fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Chrysene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Dibenzo(a,h)anthracene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Fluoranthene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Indeno(1,2,3-cd)pyrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Phenanthrene	< 2.0	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Pyrene	< 0.20	ug/L		04/25/16 10:43	04/26/16 20:54	ELS	SW 8310
Soluble Anions - PIA							
Chloride, Dissolved	< 1.0	mg/L		04/22/16 19:20	04/22/16 19:20	BRS	EPA 300.0
Nitrate, Dissolved	< 0.02	mg/L		04/22/16 19:20	04/22/16 19:20	BRS	EPA 300.0
Sulfate, Dissolved	< 1.0	mg/L		04/22/16 19:20	04/22/16 19:20	BRS	EPA 300.0
Soluble Metals - PIA							
Arsenic, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Boron, Dissolved	< 10	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Cadmium, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Chromium, Dissolved	< 4.0	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Lead, Dissolved	< 1.0	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Magnesium, Dissolved	< 0.10	mg/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Mercury, Dissolved	< 0.20	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Zinc, Dissolved	< 6.0	ug/L		04/29/16 08:49	04/29/16 11:51	JMW	SW 6020
Soluble Nutrients - PIA							
Ammonia, Dissolved	< 0.10	mg/L		04/26/16 11:43	04/26/16 11:43	SJW	EPA 350.1 - QC 10-107-06-2-O



ANALYTICAL RESULTS

Sample: 6043534-06
Name: Field Blank 1
Matrix: Ground Water - Field Blank

Sampled: 04/21/16 10:50
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
Volatile Organics - PIA							
1,1,1,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1,1-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1,2,2-Tetrachloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1,2-Trichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,1-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2,3-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2,3-Trichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2,4-Trichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2,4-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2-Dibromo-3-Chloropropane	< 0.05	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2-Dibromoethane	< 0.05	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2-Dichloroethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,3,5-Trimethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,3-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,3-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
1,3-Dichloropropene- Total	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B*
1,4-Dichlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
2,2-Dichloropropane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
2-Butanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
2-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
2-Hexanone	< 5.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
4-Chlorotoluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
4-Methyl-2-pentanone (MIBK)	< 5.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Acetone	< 10	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Acrylonitrile	< 50	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Benzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Bromobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Bromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Bromodichloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Bromoform	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Bromomethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Carbon disulfide	< 4.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Carbon tetrachloride	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Chlorobenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Chloroethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Chloroform	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Chloromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B



ANALYTICAL RESULTS

Sample: 6043534-06
Name: Field Blank 1
Matrix: Ground Water - Field Blank

Sampled: 04/21/16 10:50
Received: 04/22/16 09:00

Parameter	Result	Unit	Qualifier	Prepared	Analyzed	Analyst	Method
cis-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
cis-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Dibromochloromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Dibromomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Dichlorodifluoromethane	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Ethylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Hexachlorobutadiene	< 10	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Iodomethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Isopropylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Methylene chloride	< 7.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Naphthalene	< 10	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
n-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
n-Propylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
p-Isopropyl toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
sec-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Styrene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
tert-Butylbenzene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Tetrachloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Tetrahydrofuran	< 10	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B*
Toluene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
trans-1,2-Dichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
trans-1,3-Dichloropropene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
trans-1,4-Dichloro-2-butene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Trichloroethene	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Trichlorofluoromethane	< 1.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Vinyl acetate	< 5.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Vinyl chloride	< 2.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B
Xylenes- Total	< 3.0	ug/L		04/26/16 00:00	04/26/16 15:16	JMB	SW 8260B



PDC Laboratories, Inc.

2231 West Altorfer Drive

Peoria, IL 61615

(800) 752-6651

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
-----------	--------	------	------	-------------	---------------	------	-------------	-----	-----------



PDC Laboratories, Inc.

2231 West Altorfer Drive

Peoria, IL 61615

(800) 752-6651

NOTES

Specific method revisions used for analysis are available upon request.

Certifications

PIA - Peoria, IL

TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230

Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17553

Missouri Department of Natural Resources Certificate of Approval for Microbiological Laboratory Service No. 870

Drinking Water Certifications: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Hazardous/Solid Waste Certifications: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO

USEPA DMR-QA Program

STL - St. Louis, MO

TNI Accreditation for Wastewater, Hazardous and Solid Wastes Fields of Testing through KS Lab No. E-10389

Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 171050

Drinking Water Certifications: Missouri (1050)

Missouri Department of Natural Resources

* Not a TNI accredited analyte

Certified by: Lisa Grant, Project Manager



CHAIN OF CUSTODY RECORD

PDC LABORATORIES, INC.
 2231 WEST ALTORFER DRIVE
 PEORIA, IL 61615
 PHONE # 309-692-9688
 FAX # 309-692-9689

ALL SHADED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT		PROJECT NUMBER		P.O. NUMBER		MEANS SHIPPED		3 ANALYSIS REQUESTED		4 (FOR LAB USE ONLY)	
CLINTON LANDFILL #3		PDC		PDC		DATE SHIPPED		NH3, NH3, NO2NO3*, NO2NO3, NO2, NO3 SO4, TDS, CL, NO3, ALK CO3, ALK, HCO3, NO3 Ag, B, Cd, Fe, Hg, Mn, Pb, Zn, Ca, K, Na, P		PHENOLS GREASE & OIL 8260	
9550 HERITAGE ROAD		PHONE NUMBER		FAX NUMBER		DATE SHIPPED		Ag, B, Cd, Fe, Hg, Mn, Pb, Zn, Ca, K, Na, P		LOGIN # <u>6043531-1</u> LOGGED BY: <u>ALJ</u> LAB PROJ. # _____ TEMPLATE: CLIN3_G2 PROJ. MGR: LISA Y GRANT PERMIT NO. 2005-070-LF #003 37	
CLINTON, IL 61727		SAMPLER (PLEASE PRINT)		SAMPLER'S SIGNATURE		DATE COLLECTED		NH3, NH3, NO2NO3*, NO2NO3, NO2, NO3 SO4, TDS, CL, NO3, ALK CO3, ALK, HCO3, NO3		REMARKS	
CHARLES HOSTETLER		SAMPLER'S SIGNATURE		SAMPLER'S SIGNATURE		DATE COLLECTED		NH3, NH3, NO2NO3*, NO2NO3, NO2, NO3 SO4, TDS, CL, NO3, ALK CO3, ALK, HCO3, NO3		* = DISSOLVED	
SAMPLE DESCRIPTION		DATE COLLECTED		TIME COLLECTED		MATRIX TYPE		NH3, NH3, NO2NO3*, NO2NO3, NO2, NO3 SO4, TDS, CL, NO3, ALK CO3, ALK, HCO3, NO3		PHENOLS GREASE & OIL 8260	
G08R		4/21/16	1500	X		GW	11	X	X	X	X
G09D				X		GW	11	X	X	X	X
G09R				X		GW	11	X	X	X	X
G16D				X		GW	11	X	X	X	X
G16M				X		GW	11	X	X	X	X
R16R				X		GW	11	X	X	X	X
R17D				X		GW	11	X	X	X	X
R17M				X		GW	11	X	X	X	X
G24D				X		GW	11	X	X	X	X
FD - G24D				X		GW	11	X	X	X	X
G24M				X		GW	11	X	X	X	X
TURNAROUND TIME REQUESTED (PLEASE CIRCLE)		NORMAL		RUSH		6		The sample temperature will be measured upon receipt at the lab. By initiating this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0-14.0°C. By not initiating this area you allow the lab to proceed with analytical testing regardless of the sample temperature.			
RUSH RESULTS VIA (PLEASE CIRCLE)		FAX		PHONE		6					
RELINQUISHED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1645		4/21/16		1700		4/21/16	
RECEIVED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RELINQUISHED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RECEIVED AT LAB BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RELINQUISHED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RECEIVED AT LAB BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RELINQUISHED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RECEIVED AT LAB BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RELINQUISHED BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	
RECEIVED AT LAB BY (SIGNATURE)		DATE		TIME		DATE		TIME		DATE	
<i>[Signature]</i>		4/21/16		1700		4/21/16		1700		4/21/16	

PAGE 22 OF 25
 4/21/16
 4 of 4

CHAIN OF CUSTODY RECORD

PDC LABORATORIES, INC.
 2231 WEST ALTORFER DRIVE
 PEORIA, IL 61615
 PHONE # 309-692-9688
 FAX # 309-692-9689

ALL SHADED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT CLINTON LANDFILL #3 ADDRESS 9550 HERITAGE ROAD CITY CLINTON, IL 61727 STATE IL ZIP CONTACT PERSON CHARLES HOSTETLER		PROJECT NUMBER P.O. NUMBER PHONE NUMBER FAX NUMBER		MEANS SHIPPED PDC DATE SHIPPED	
2 SAMPLE DESCRIPTION G40R G47D G47M G47R G48D G48M G48R G49D G49M G49R G49S		SAMPLER (PLEASE PRINT) DAVE LEWIS DATE COLLECTED 4/21/16 TIME COLLECTED 13:20 DATE COLLECTED 4/21/16 TIME COLLECTED 13:20		MATRIX TYPE GW GW GW GW GW GW GW GW GW GW GW	
ANALYSIS REQUESTED NH3-NH3, NO2NO3*, NO2NO3, NO2, NH3 SO4, TDSS, CL-, NO3, ALK CO3, ALK HCO3-, NO3 AS-, B-, CD-, FE-, HG-, MN-, PB-, ZN-, CA-, K-, NA-		MATRIX TYPES: WW- WASTEWATER DW- DRINKING WATER GW- GROUND WATER SW- SURFACE WATER MS- SLUDGE SAS- SOLID OTHER:		TOTAL # OF CONT. 15 15 15 15 15 15 15 15 15 15 15 15	
REMARKS * = DISSOLVED		ANALYSIS REQUESTED PHENOLS GREASE & OIL 8260, 8082, 915, 8310		REMARKS * = DISSOLVED	

(FOR LAB USE ONLY)
 4
 LOGIN # 6043534-26
 LAB PROJ. #
 TEMPLATE: CLIN3_G3
 PROJ. MGR.: LISA Y GRANT
 PERMIT NO. 2005-070-LF MOD 37

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND BURCHARGE) RUSH RESULTS VIA (PLEASE CIRCLE) NORMAL RUSH PHONE # IF DIFFERENT FROM ABOVE:		DATE 4/21/16 TIME 7:20	
RECEIVED BY: (SIGNATURE) Charles Hostetler		RECEIVED BY: (SIGNATURE) Charles Hostetler	
DATE 4/21/16 TIME 9:00		DATE 4/21/16 TIME 9:00	
RECEIVED AT LAB BY: (SIGNATURE) Charles Hostetler		RECEIVED AT LAB BY: (SIGNATURE) Charles Hostetler	
RELINQUISHED BY: (SIGNATURE) Charles Hostetler		RELINQUISHED BY: (SIGNATURE) Charles Hostetler	
DATE 4/21/16 TIME 9:00		DATE 4/21/16 TIME 9:00	
COMMENTS: (FOR LAB USE ONLY) SAMPLE TEMPERATURE UPON RECEIPT CHILL PROCESS STARTED PRIOR TO RECEIPT SAMPLE(S) RECEIVED ON ICE BOTTLES RECEIVED IN GOOD CONDITION BOTTLES FILLED TO APPROX. THE NECK SAMPLES RECEIVED WITHIN HOLD TIME(S)		COMMENTS: (FOR LAB USE ONLY) SAMPLE TEMPERATURE UPON RECEIPT CHILL PROCESS STARTED PRIOR TO RECEIPT SAMPLE(S) RECEIVED ON ICE BOTTLES RECEIVED IN GOOD CONDITION BOTTLES FILLED TO APPROX. THE NECK SAMPLES RECEIVED WITHIN HOLD TIME(S)	

PAGE 3 OF 4
 3 of 4

CHAIN OF CUSTODY RECORD

PDC LABORATORIES, INC.
 2231 WEST ALTORFER DRIVE
 PEORIA, IL 61615

PHONE # 309-692-9688
 FAX # 309-692-9689

ALL SHADED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT		PROJECT NUMBER		P.O. NUMBER		MEANS SHIPPED		3 ANALYSIS REQUESTED		(FOR LAB USE ONLY)	
CLINTON LANDFILL #3						PDC				4	
ADDRESS		PHONE NUMBER		FAX NUMBER		DATE SHIPPED				LOGGED BY:	
9550 HERITAGE ROAD										LAB PROJ. #	
CITY		SAMPLER (PLEASE PRINT)		SAMPLER'S SIGNATURE		MATRIX TYPES:				TEMPLATE: CLIN3_G3	
CLINTON, IL 61727		Dialytic Loads				WW-WASTEWATER DW-DRINKING WATER GW-GROUND WATER VWV-BLUDGE NAS-SOLID OTHER:				PROJ. MGR: LISA Y GRANT	
CONTACT PERSON		DATE COLLECTED		TIME COLLECTED		MATRIX TYPE				PERMIT NO. 2005-070-LF-MOD 37	
CHARLES HOSTETLER		DATE COLLECTED		TIME COLLECTED		TOTAL # OF CONT				REMARKS	
		DATE COLLECTED		TIME COLLECTED						* = DISSOLVED	
G01D - U						GW	15	X	X	X	X
G01M - U						GW	15	X	X	X	X
G02D - U						GW	15	X	X	X	X
G02R - U						GW	15	X	X	X	X
G03D - U						GW	15	X	X	X	X
G04M - U		4/21/16		1153		GW	13 ⁴⁵	X	X	X	X
FD - G04M		4/21/16		1153		GW	13 ⁴⁵	X	X	X	X
G04R - U		4/21/16		1050		GW	13 ⁴⁵	X	X	X	X
G05M - U						GW	15	X	X	X	X
G06D - U						GW	15	X	X	X	X
G07D - U						GW	15	X	X	X	X

6 TURNAROUND TIME REQUESTED (PLEASE CIRCLE)
 (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
 RUSH RESULTS VIA (PLEASE CIRCLE)
 NORMAL RUSH PHONE
 FAX # IF DIFFERENT FROM ABOVE: PHONE # IF DIFFERENT FROM ABOVE:

7 RELINQUISHED BY: (SIGNATURE)

 RECEIVED BY: (SIGNATURE)

8 COMMENTS: (FOR LAB USE ONLY)
 DATE 4/21/16 TIME 7:30
 DATE 4/21/16 TIME 9:00
 SAMPLE TEMPERATURE UPON RECEIPT FOR N °C
 CHILL PROCESS STARTED PRIOR TO RECEIPT FOR N °C
 BOTTLES RECEIVED IN GOOD CONDITION FOR N °C
 BOTTLES FILLED TO APPROX. THE NECK FOR N °C
 SAMPLES RECEIVED WITHIN HOLD TIME(S) FOR N °C

CHAIN OF CUSTODY RECORD

PDC LABORATORIES, INC.
 2231 WEST ALTORFER DRIVE
 PEORIA, IL 61615

PHONE # 309-692-9688
 FAX # 309-692-9689

ALL SHADED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT CLINTON LANDFILL #3 ADDRESS 9550 HERITAGE ROAD CITY CLINTON IL 61727 STATE IL CONTACT PERSON CHARLES HOSTETLER		PROJECT NUMBER P.O. NUMBER MEANS SHIPPED PDC		ANALYSIS REQUESTED 8260, 8082, 818, 8310 GREASE & OIL PHENOLS CN AS, B, C, D, FE, HG, MN, NP, P, ZN, CA, K, NA SO4, TDS, CL, NO3, ALK CO3, ALK HCOT, NO3 NH3, NH3, NO2/NO3, NO2/NO3, ND, NT		(FOR LAB USE ONLY) 4 LOGIN # LOGGED BY: LAB PROJ. # TEMPLATE: CLIN3_G3 PROJ. MGR.: LISA Y GRANT PERMIT NO. 2005-070-LF MOD 37	
2 SAMPLE DESCRIPTION FIELD BLANK 1 FIELD BLANK 2 FIELD BLANK 3 FIELD BLANK 4 FIELD BLANK 5 FIELD BLANK 6		DATE COLLECTED 4/22/16 1050 TIME COLLECTED 1050 DATE COLLECTED TIME COLLECTED DATE COLLECTED TIME COLLECTED DATE COLLECTED TIME COLLECTED DATE COLLECTED TIME COLLECTED	MATRIX TYPE GW GW GW GW GW GW	TOTAL # OF CONT 15 15 15 15 15 15	MATRIX TYPES: WW- WASTEWATER DW- DRINKING WATER GW- GROUND WATER WWBL- SLUDGE NAS- SOLID OTHER:	REMARKS * = DISSOLVED	
6 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE) RUSH RESULTS VIA (PLEASE CIRCLE) NORMAL RUSH FAX PHONE PHONE # IF DIFFERENT FROM ABOVE:		RECEIVED BY: (SIGNATURE) Charles Hostetler RECEIVED AT LAB BY: (SIGNATURE) Charles Hostetler		COMMENTS: (FOR LAB USE ONLY) SAMPLE TEMPERATURE UPON RECEIPT CHILL PROCESS STARTED PRIOR TO RECEIPT FOR N SAMPLE(S) RECEIVED ON ICE FOR N BOTTLES RECEIVED IN GOOD CONDITION FOR N BOTTLES FILLED TO APPROX. THE NECK FOR N SAMPLES RECEIVED WITHIN HOLD TIME(S) FOR N		DATE 4/22/16 TIME 9:00	
7 RELINQUISHED BY: (SIGNATURE) Charles Hostetler RELINQUISHED BY: (SIGNATURE) Charles Hostetler		DATE 4/22/16 TIME 9:00		DATE 4/22/16 TIME 9:00		DATE 4/22/16 TIME 9:00	

* CDX 4/21/16

PAGE 25 OF 25
 2 of 4

Illinois EPA/Clinton Landfill 3 Groundwater Results

21 April 2016

Parameters	Interwell L. Radnor	G04M			G48M				
		IEPA	CLI	RPD	IEPA 1°	IEPA Dupe	IEPA 1°/ Dupe RPD	CLI	RPD
Ammonia, dissolved (mg/L)	24	9.81	11	-11.44%	7.96	7.88	1.01%	9.2	-14.95%
Arsenic, dissolved (µg/L)	273.5	62.6	63	-0.64%	8.06	9.02	11.24%	7.9	7.79%
Boron, dissolved (µg/L)	622	386	360	6.97%	260	258	0.77%	260	-0.39%
Cadmium, dissolved (µg/L)	1	<3	<1	N/C	<3	<3	N/C	<1	N/C
Chloride, dissolved (mg/L)	51.8	<1	1.85	N/C	4.82	4.85	0.62%	6.3	-26.31%
Chromium, dissolved (µg/L)	4.6	<5	<4	N/C	<5	<5	N/C	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	<0.005	N/C	<0.005	N/C
Lead, dissolved (µg/L)	1	<5	<1	N/C	<5	<5	N/C	<1	N/C
Magnesium, dissolved (mg/L)	82.2	42.2	41.5	1.67%	53.9	53.3	1.12%	56	-4.38%
Mercury, dissolved (µg/L)	0.2	<0.06	<0.20	N/C	<0.06	<0.06	N/C	<0.20	N/C
Nitrate, dissolved (mg/L)*	0.14	<0.1	<0.02	N/C	<0.1	<0.1	N/C	<0.02	N/C
pH	5.79-7.97	7.1	6.75	5.05%	7.1	7.1	0.00%	7.05	0.71%
Phenols	5	<10	<5	N/C	<10	<10	N/C	<5	N/C
Spec. Cond. (µmhos/cm)	1457	916	914	0.22%	1098	1100	0.18%	1049	4.66%
Sulfate, dissolved (mg/L)	65	<10	1.4	N/C	26.2	25.8	1.54%	27	-3.77%
Total Dissolved Solids (mg/L)	870	496	415	17.78%	620	616	0.65%	540	13.47%
Zinc, dissolved (µg/L)	22	<25	<6	N/C	<25	<25	N/C	<6	N/C

Ave RPD, IEPA 1°/Dupe: 1.90%

Parameters	Interwell R-R Silt	G08R			G48R		
		IEPA	CLI	RPD	IEPA	CLI	RPD
Ammonia, dissolved (mg/L)	30	5.08	6.1	-18.25%	0.22	0.25	-12.77%
Arsenic, dissolved (µg/L)	11	1.58	1.4	12.08%	<0.5	<1	N/C
Boron, dissolved (µg/L)	666	228	240	-5.13%	164	160	2.47%
Cadmium, dissolved (µg/L)	5.2	<3	<1	N/C	<3	<1	N/C
Chloride, dissolved (mg/L)	71	7.67	9.5	-21.32%	12.2	14	-13.74%
Chromium, dissolved (µg/L)	4.8	<5	<4	N/C	<5	<4	N/C
Cyanide, total (mg/L)	0.005	<0.005	<0.005	N/C	<0.005	<0.005	N/C
Lead, dissolved (µg/L)	3.6	<5	<1	N/C	<5	<1	N/C
Magnesium, dissolved (mg/L)	114	73.5	72	2.06%	99.6	100	-0.40%
Mercury, dissolved (µg/L)	0.2	<0.06	<0.20	N/C	<0.06	<0.20	N/C
Nitrate, dissolved (mg/L)*	0.06	<0.1	<0.02	N/C	<0.1	<0.02	N/C
pH	6.07-8.22	7.2	7.04	2.25%	6.7	6.61	1.35%
Phenols	14	<10	<5	N/C	14.5	<5	N/C
Spec. Cond. (µmhos/cm)	1543	1276	1254	1.74%	1680	1651	1.74%
Sulfate, dissolved (mg/L)	286	89	90	-1.12%	226	220	2.69%
Total Dissolved Solids (mg/L)	1064	764	630	19.23%	1170	970	18.69%
Zinc, dissolved (µg/L)	20	<25	<6	N/C	<25	<6	N/C

total RPDs	33
≤10%	21
≤20%	31
RPDs > 0	19
RPDs < 0	14
Ave RPD	-0.36%

N/C = Not calculated
 IEPA 1° = IEPA primary sample of that well
 Dupe = field duplicate of that well
 RPD = Relative Percent Difference
 *IEPA result is for nitrate + nitrite
 <# = Below indicated reporting limit
Bold result = exceeds interwell