SHUMAKER
Consulting Engineering & Land Surveying, D.P.C.

August 15, 2017

Mr. Payson Long
New York State Department of Environmental Conservation
Division of Environmental Remediation
525 Broadway
Albany, NY 12233

Re: Annual Report of Landfill Operations – Calendar Year 2016
Town of Conklin Landfill
Conklin, New York
SCE No. R09357.09

Dear Mr. Long:

Shumaker Consulting Engineering & Land Surveying, D.P.C. (SCE) has been contracted by the Town of Conklin (Town) to assist, monitor, and report on the ongoing Operation and Maintenance activities at the Town of Conklin Landfill site.

The current Site Management Plan (SMP) for the Landfill, dated September 2015, calls for site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. The Annual Report will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage.
- An evaluation of the condition and continued effectiveness of ECs.
- General Site conditions at the time of the inspection.
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection.
- Compliance with permits and schedules included in the Operation and Maintenance Plan.
- Confirm that Site records are up to date.

This Annual Report has been prepared by SCE on behalf of the Town in support of the annual report commitment promulgated by the SMP. Further, the information included herein is very similar to the information provided in the Periodic Review Report (PRR) which is currently submitted on a tri-annual basis.

1.0 SITE HISTORY

Two (2) landfill areas originally existed at the "Conklin Dumps Site". The areas, referred to as the upper and lower landfills, operated during the 1960s and 1970s. The areas were studied extensively in the 1980s and were subsequently nominated to the National Priorities List (NPL). A remedial action plan was selected for the site. The plan ultimately called for excavating the lower landfill and placing it on top of the upper landfill. The combined landfill was then capped and a leachate collection system was installed.

Since the remedial activities at the landfill were completed in the mid-1990s, post-closure monitoring and maintenance has been conducted at the landfill in conformance with approved operations and maintenance plan and most recently, with the SMP of 2015.

2.0 ANNUAL INSPECTION OF LANDFILL

SCE technicians performed a visual inspection of the site on August 8, 2017. The inspectors coordinated with Mr. Thomas Delamarter, the Department of Public Works Superintendent for the Town of Conklin.

The following items were inspected:

- Perimeter fence and access roads
- Leachate collection system (trench manholes, pump station, storage tank, treatment building)
- Landfill cover for areas of instability, subsidence, erosion, discoloration, etc.
- Surface water drainage features for washouts, excessive sediment or debris in ditches, dislodged rip-rap, erosion, etc.
- Gas venting system to determine if the vents have been damaged or disturbed
- Monitoring and leachate recovery wells

Overall, the site appears to be in good condition. Mr. Delamarter reports that Town forces visually inspect the landfill monthly and make repairs as needed. However, a formal record of inspections and repair work performed is not maintained. Town forces mow the landfill area approximately twice a year; this mowing schedule is adequate for maintaining a short shallow-rooted vegetative cover – no trees were observed growing in or near the landfill cap. Access roads have been maintained and they are traversable. The site entrance is maintained and accessible. The security fence is in generally good condition. Surface drainage features appeared to be stable and in good condition. The landfill cover appeared to be in good condition.

Monitoring wells appeared to be in generally good repair. All well casings showed evidence of some rust, but repainting is not necessary at this time.

The operation of the leachate collection system was observed and tested during this field visit. With the exception of Recovery Well No. 3, the pumps, level monitors, and controls appeared to be functioning normally. The well level reading for Recovery Well No. 3 indicated -11.5' which is below the normal range of level indications (typically between 4.0' – 8.0'). When tested in 'hand', the well pump ran and leachate was pumped from the well, so proper operation of the pump was verified. Mr. Delamarter was advised that a maintenance check on the Recovery Well No. 3 level indicator is warranted.

The leachate handling system was also inspected as part of this assessment. The exterior of the building that houses the leachate handling system was noted to be in deteriorating condition, with evidence that the exterior plywood is becoming detached from the underlying framing. No major structural or plumbing deficiencies were noted on the interior components. The secondary containment for the leachate tank has accumulated some stormwater due to the northern side of the rain skirt being missing. This section of the rain skirt should be replaced and the secondary containment fully drained.

Interior components within the leachate handling building were inspected, and no deficiencies were noted. The tank level monitor is fully operational, and the sump pump was inspected and its operation verified.

Although no longer used for regular inspection, well DC-1 was observed to be heaved out of the ground and the hinge of the well cap broken. It is recommended that this well be removed and capped during the next major landfill maintenance effort. This was also a noted deficiency comment on the 2016 Site inspection.

The site inspection report for the August 8, 2016 site inspection is included as **Appendix A** herein.

3.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

The performance and effectiveness of remedial actions taken at the site is determined by the Site Monitoring Plan as described in the September 2015 SMP. The plan calls for monitoring well sampling as well as routine inspections of the landfill cover and leachate collection system. As detailed in the SMP, groundwater and surface water sampling is conducted every fifth (5^{th}) quarter. Results of the inspections and sampling are reported on an annual basis. The key findings of the Monitoring Plan are as follows:

- Landfill indicator contaminants chlororethane, 1,2-dichloropropane, methylene chloride and xylenes have not been detected above the screening guidelines since the 1^{st} quarter of 2003.
- Total metals concentrations of iron, lead, manganese, magnesium, and sodium regularly exceeds the screening guidance values. In 2013, the collection of filtered inorganic samples was allowed in order to assess if the detected inorganics were dissolved contaminants, or the result of turbid samples placed in preserved sample containers.
- Beginning with 3^{rd} quarter sampling in 2013, filtered metals data was taken along with total metals samples. The results demonstrate that the historic elevated metals concentrations are the result of sampling methodology (three-volume purge and bailer). Select trend charts are included as **Appendix B.**
- Tables summarizing the data collected at the landfill since 2003, as well as a comparison of filtered and unfiltered inorganic data since 2014 are included as **Appendix C.**

4.0 INSTITUTIONAL CONTROL/ENGINEERING CONTROL (IC/EC) PLAN COMPLIANCE REPORT

4.1. IC/EC REQUIREMENTS AND COMPLIANCE

Since remaining contaminated material and groundwater exists beneath the site, IC/ECs are required to protect human health and the environment. The Town implemented an Environmental Easement which included the IC/EC Plan in January 2013. The IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site.

4.2. ENGINEERING CONTROLS

This section presents the Engineering Control Systems for the facility which includes the landfill cover, perimeter fence and gates, leachate collection and discharge system, gas venting system, environmental monitoring system, and surface water management system. All ECs for the site are designed to be protective of human health and the environment.

4.2.1 Upper Landfill Site

4.2.1.1 Leachate Collection and Storage System and 2017 Discharges

Leachate is captured by a collection trench made out of 940 lf of 6-inch diameter perforated PVC piping; leachate is gravity fed to a concrete pump station. There are also three (3) leachate recovery wells located in the waste mass area near the northeast corner of the landfill. The discharge of each recovery well is conveyed to the pump station where it is then transferred and pumped into a storage tank.

The purpose of the leachate collection trenches and recovery wells is to prevent leachate from migrating off site through surface seeps or shallow groundwater flow. The leachate storage system consists of one (1) 30,000-gallon capacity aboveground horizontal steel storage tank protected by a 33,000-gallon capacity steel secondary containment dike.

Before any leachate can be discharged to the sanitary sewer system for treatment at the Binghamton-Johnson City treatment plant, it must meet effluent limitations per the Industrial Wastewater Discharge Permit issued for the Town of Conklin Landfill by the BJCJSTP. On February 29, 2016, the BJCJSTP approved the chemical characterization for discharge; however, the leachate tank was frozen at that time and immediate discharge was not performed. One batch discharge of 28,000 gallons of accumulated leachate was conducted between January 3 – January 5, 2017 and the Discharge Monitoring analytical data for that discharge is included herein as **Appendix D**.

4.2.1.2 Landfill Cap and Venting System

Exposure to remaining contamination in soil/fill at the site is prevented by a multi-media cap system placed over the landfill area. The multi-media cap was constructed in conformance with 6NYCRR Part 360 standards which includes a flexible geomembrane cap, a geotextile soil drainage layer, and a nominal 2 feet of clean soil and topsoil. Topsoil is retained in place by a stable vegetated surface over the entire landfill site. The landfill cap is intact per the 2016 Annual Inspection; however, a few areas of woody vegetation were identified which warranted removal.

Surface water and sheet flow from the surface of the cap is removed by a surface drainage system and perimeter drainage ditches, respectively, which intercepts and directs surface water runoff to a stabilized

outlet at Carlin Creek. An annual inspection in October 2016 indicated that the surface drainage system is intact and working as designed.

A total of four (4) gas vents have been installed within the landfill cap boundaries as shown on the Site Map in Figure 2. During installation, a geomembrane boot was placed and sealed around the vent pipe with stainless steel bands and then it was extrusion welded into place on the cap to completely seal the vent penetration. The October 2015 inspection showed that the gas vents are intact and in good working condition.

4.2.1.3 Monitoring Well Network and Sampling Schedule

The environmental monitoring system consists of a series of groundwater monitoring wells and groundwater level observation wells on and around the perimeter of the landfill site (see Figure 2). In addition, there is one (1) surface water sample point in Carlin Creek which flows to the north of the capped landfill site. The objectives of the Monitoring Well Network are to evaluate the condition of groundwater at the site and its effectiveness of limiting off-site transport of site related Contaminants of Concern (COC). Tabulated historic data shows that the monitoring well network is operating as planned with no off-site migration of COC. Sampling of the Monitoring Well Network has been switched to sampling every 5th quarter as detailed in the September 2015 SMP.

4.2.1.4 Perimeter Fence at Upper Landfill

To minimize the potential for trespassing, vehicular, or foot traffic across the landfill cap, an 8-foot chain link fence with gates has been installed around the entire Upper Landfill area. A total of three (3) 20-foot gates were constructed: two (2) on the east side adjacent to Broome Corporate Parkway and one (1) in the southwest corner of the site where an access road enters the site from an unnamed access road to the west of the site. All gates are chained and locked with padlocks to prevent entry by unauthorized personnel. The 2017 annual inspection found that the perimeter fence is intact; however, ongoing removal of woody vegetation remains critical to the longevity of the fence in this largely undeveloped area.

4.2.1.5 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when the effectiveness of monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when the remedial processes are complete is provided in Section 6.5 of NYSDEC DER-10 (May 2010). At this time, monitoring at the site indicates that the remedial processes are moving the site closer to achievement of remedial action objectives; therefore, no recommendations for change are being proposed at this time.

4.3. INSTITUTIONAL CONTROLS (IC)

A series of ICs is required by the ROD for the Upper and Lower Landfill sites. Unlike ECs, adherence with ICs is procedural and requires ongoing compliance activities. Adherence to these ICs on the site is required by the Environmental Easement and implemented under the September 2015 SMP. The identified ICs are:

4.3.1 Upper Landfill Site

ICs authorized for the Upper Landfill site are comprised of the following:

- Restrict activities that could affect the integrity of the landfill cover, including without limitation, excavating, digging, and construction activities which are prohibited on any portion of the Upper Landfill, unless the Town, USEPA, NYSDEC, or successor agency have given their prior written consent to any such intrusive activity.

- Prior to any earthwork on the Upper Landfill site which could impact the integrity of the composite cap, an Excavation Work Plan must be developed which is subject to the Town, NYSDEC, or successor agency, and USEPA approval before implementation. More information regarding the Excavation Work Plan and other procedures required for the Upper Landfill are included in the SMP.

- Groundwater wells for drinking water shall not be installed or used on any portion of the Upper Landfill.

- The Upper Landfill shall not be used for "Residential Use" and "Restricted Residential Use" as defined by NYSDEC Regulations 6NYCRR Part 375-1.8(g)(2)(i) and (ii). Allowable uses include "Commercial Use" and "Industrial Use" as defined in NYSDEC Regulation 6NYCRR Part 375–1.8(g)(2)(iii) and (iv).

4.3.2 Lower Landfill Site

ICs established for the Lower Landfill site include the following:

- Groundwater wells for drinking water shall not be installed or used on any portion of the Lower Landfill.
- The Lower Landfill shall not be used for "Residential Use" and "Restricted Residential Use" as defined by NYSDEC Regulations 6NYCRR Part 375-1.8(g)(2)(i) and (ii). Allowable uses include "Commercial Use" and "Industrial Use" as defined in NYSDEC Regulation 6NYCRR Part 375–1.8(g)(2)(iii) and (iv).

5.0 ANNUAL STATEMENT OF INSTITUTIONAL CONTROLS

During the 2017 site inspection, all institutional controls at the Upper and Lower landfill sites appear to be in place. Specifically, the following was observed:

- The landfill cap on the Upper landfill appears to remain in place and undisturbed.
- No groundwater wells for drinking water have been installed on the Upper or Lower landfill sites.
- The Upper and Lower landfill sites are not zoned to allow Residential use or Restricted-Residential use.

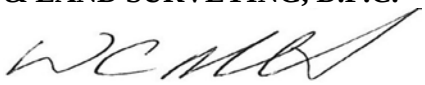
6.0 RECOMMENDATIONS

Based on the observations of the past year of landfill operations, SCE recommends the following:

- The level sensor in Recovery Well No. 3 should undergo a maintenance check to confirm proper operation.
- The exterior plywood on the leachate discharge building should have maintenance performed and repaired as required to maintain it weather-tight.
- As an ongoing recommendation, the Town should perform a limited amount of tree and brush removal outside of the perimeter fence, in order to ensure the long-term performance of the security fence.
- The rain skirt around the leachate collection tank should be re-installed to minimize rainwater accumulation within the secondary containment dike.

Very truly yours,

SHUMAKER CONSULTING ENGINEERING
& LAND SURVEYING, D.P.C.



W. Curtis Nichols, P.E., LEED-AP
Managing Engineer

WCN/vma

Enclosures

cc: Tom Delamarter, Town of Conklin

APPENDIX A

SITE INSPECTION RECORD FORM

This summary inspection checklist is to be completed during **each site inspection at least** once per month. Note all items which require repair or **maintenance. Use the last page to annotate** any additional comments, unusual events or information **observed during this inspection.**

Name of inspector(s): W.C. Nichols, M. Smith

Date of Inspection: 8-8-17

Arrival Time: 10:45 Departure Time: 2:00

Weather Conditions: Sunny Temperature 75°

Reason for Visit: Annual inspection

General Inspection (Monthly)

	OK:	Comments:
Site Entrance		Needs mowing
Access Roads		Needs mowing
Overall Appearance (litter/trash)	✓	
Treatment Building Exterior		Siding needs spot repairs, paint peeling, W soffit missing, hornet nests
Building Interior	✓	
Heater	✓	
Heat Tracing	✓	Visually OK, not tested
Exhaust Ventilation	N/A	Removed
Lighting	✓	
Building Sump	✓	Was off. Ran manually. Does not shut off automatically.
Bar Grating	✓	
Perimeter Fence and Gates	✓	Outside Southern fence - saplings to be removed.

Leachate Storage System Inspection (Monthly)

	OK:	Comments:
Storage Tank and Pipe Venting	✓	
Secondary Containment Dike	✓	
Rain Skirt		Rain guards missing on N side
Level Control System	✓	
Treatment Building Sump Pump		See notes on pg. 1
Transfer Pump	✓	
Exterior/Interior Paint		Some peeling on exterior

Leachate Collection System Inspection (Monthly)

	OK:	Comments:
Pump Station (Structure)	✓	
Leachate Collection Trench Manholes	✓	
Leachate Collection Trench Piping	✓	
Pump Station Pump	✓	
Recovery Wells		
Well Pumps	✓	
Well Casing	✓	
Monitoring Wells (casings)	✓	
Recovery Well Metering Pit		
Flow Meters		N/A
Meter Control Panel	✓	
Meter Pit (Structure)	✓	
Pump Control Panel	✓	

Inspection Data Measurements

Leachate Depth: _____

Leachate Volume: 19,000

Leachate Collection System Operational Check (Monthly)

Open the control panel near the entrance gate and check to see if any low level lights are on. For each Pump Record the well/sump level (feet). Then switch the pump control from auto to hand. Observe the level decreasing. If it does not decrease then the pump or control panel may not be functioning properly. Turn switch back to auto and record the new level (or the same level if no change occurred). Additionally Record the Pump Run time (hour).

	OK	Initial Level	Final Level	Run Time
Recovery Well No. 1	✓	10.61	4.00	
Recovery Well No. 2	✓	7.58	4.00	
Recovery Well No. 3		-11.55		
Pump Station	✓			

→ Pump run light comes on in manual mode. Level does not change.

Landfill Cover Inspection (Monthly) * However water is pumped, as confirmed at Sump Outlet (WC 11)

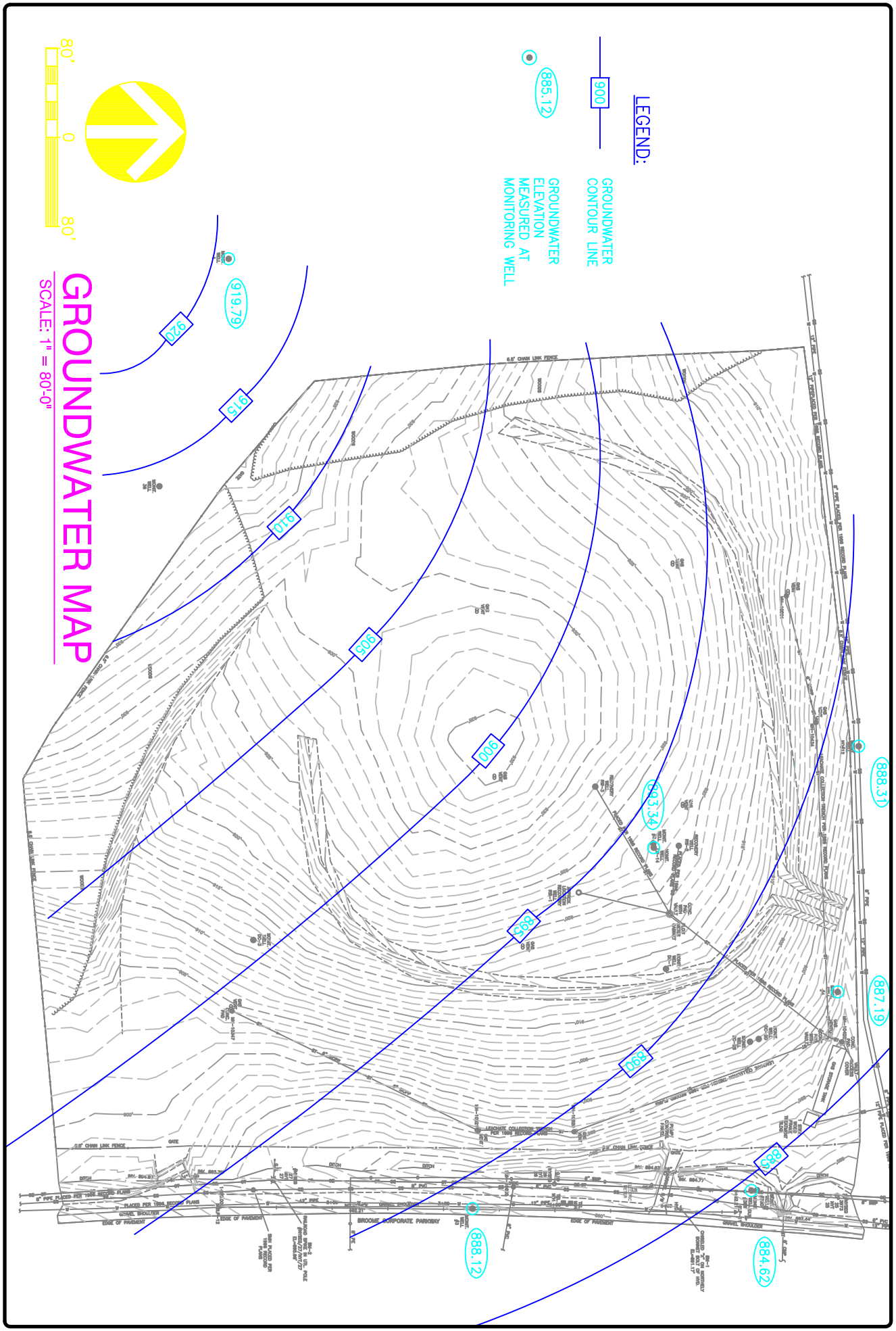
	OK:	Comments:
Final Cover	✓	
Landfill Slope	✓	
Gas Vents	✓	
Vegetative Cover	✓	
Drainage Down Chute		Woody veg. needs to be removed.
Perimeter Drainage	✓	

Well Level Measurements (Quarterly)

	Top of Casing Elev. (ft)	- Depth to Water (ft)	=	Water Level Elev. (ft)
MW-1	946.69	- 12.69	=	934.00
MW-2	925.73	- Blocked	=	—
MW-3	892.40	- 4.28	=	888.12
MW-4	897.18	- 9.99	=	887.19
MW-12	901.08	- 26.90	=	874.18
MW-37	908.71	- 8.23	=	900.48
MW-38S	890.13	- 5.51	=	884.62
MW-38D	888.34	- 6.67	=	881.67
LW-14	926.24	- 32.90	=	893.34

↳ Cap won't set. Dummy locked.

Notes/Explanations:
(Please indicate additional information on those items which require attention indicated above)



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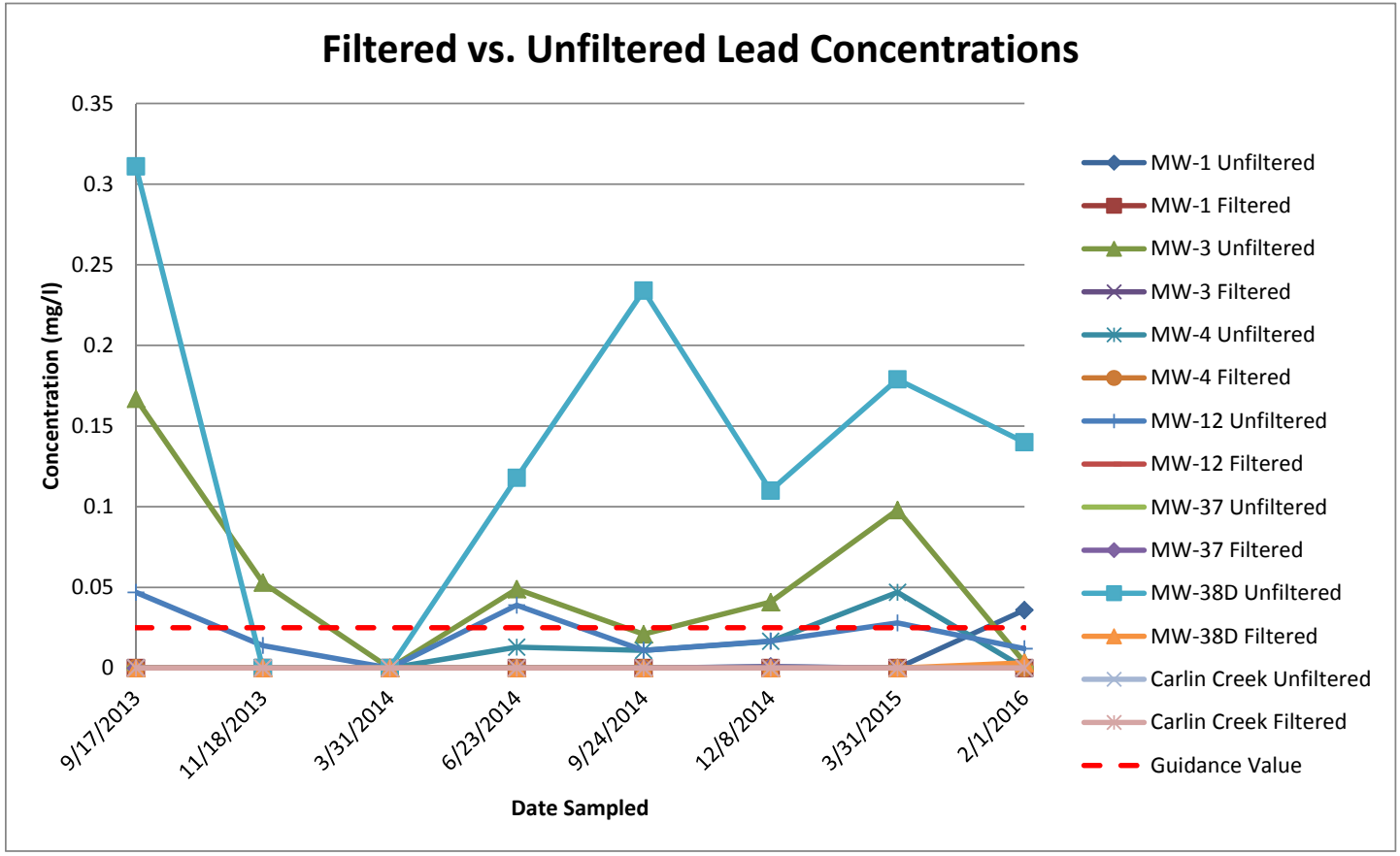
CONKLIN LANDFILL
FOLLOW-UP REPORT
1271 CONKLIN ROAD — CONKLIN, NEW YORK

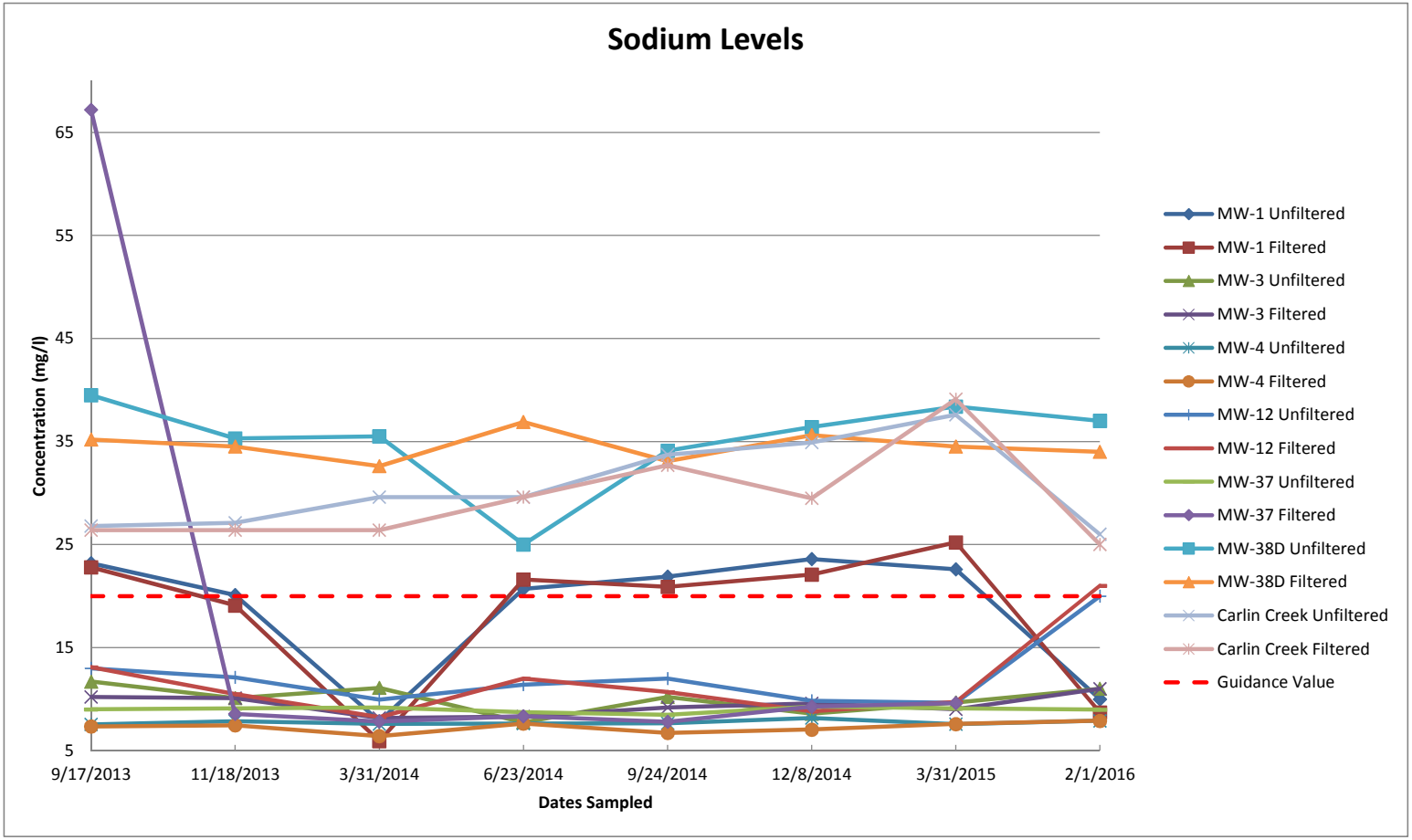
DRAWING TITLE
AUGUST 2017
GROUNDWATER
POTENTIOMETRIC MAP

Drawn By:	CAB
Checked By:	WCN
Project Mgr:	WCN
Date:	8/10/17
Project No:	R09357

FIGURE
1

APPENDIX B


Filtered vs. Unfiltered Lead Concentrations
Concentration (mg/l)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
9/17/2013
11/18/2013
3/31/2014
6/23/2014
9/24/2014
12/8/2014
3/31/2015
2/1/2016
Date Sampled
MW-1 Unfiltered
MW-1 Filtered
MW-3 Unfiltered
MW-3 Filtered
MW-4 Unfiltered
MW-4 Filtered
MW-12 Unfiltered
MW-12 Filtered
MW-37 Unfiltered
MW-37 Filtered
MW-38D Unfiltered
MW-38D Filtered
Carlin Creek Unfiltered
Carlin Creek Filtered
Guidance Value


Sodium Levels
Concentration (mg/l)
65
55
45
35
25
15
5
9/17/2013
11/18/2013
3/31/2014
6/23/2014
9/24/2014
12/8/2014
3/31/2015
2/1/2016
Dates Sampled
MW-1 Unfiltered
MW-1 Filtered
MW-3 Unfiltered
MW-3 Filtered
MW-4 Unfiltered
MW-4 Filtered
MW-12 Unfiltered
MW-12 Filtered
MW-37 Unfiltered
MW-37 Filtered
MW-38D Unfiltered
MW-38D Filtered
Carlin Creek Unfiltered
Carlin Creek Filtered
Guidance Value

APPENDIX C

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Land88
SCE Project 0812600

Monitoring Well 1		Date Sampled	3/24/2003	6/2/2003	9/8/2003	11/6/2003	3/31/2004	6/14/2004	9/13/2004	11/6/2004	3/30/2005	6/30/2005	9/20/2005	##########	3/15/2006	6/20/2006	9/28/2006	##########	3/7/2007	5/7/2007	9/13/2007	11/6/2007	3/17/2008	6/9/2008	9/17/2008	12/8/2008	3/17/2009	6/23/2009	9/18/2009	##########	3/10/2010	6/2/2010	9/20/2010	##########	3/9/2011	6/29/2011	9/21/2011	##########	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	6/6/2013	9/17/2013	##########	3/31/2014	6/22/2014	9/22/2014	12/8/2014	3/31/2015	7/1/2015
Analyte (Note 1)	Units	Guidance Value																																																
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.0	-	-	-	<5.0	-	-	-	-	<0.005	-	-	<0.001	-	-	<0.005	<0.0050	-	-	<0.001	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.002
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.0	-	-	-	<5.0	-	-	-	-	<0.005	-	-	<0.001	-	-	<0.005	<0.0050	-	-	<0.001	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Methylene chloride	mg/l	0.005	12	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.0	-	-	-	<5.0	-	-	-	-	<0.005	-	-	<0.001	-	-	<0.005	<0.0050	-	-	<0.001	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.0	-	-	-	<5.0	-	-	-	-	<0.005	-	-	<0.001	-	-	<0.005	<0.0050	-	-	<0.001	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-
m,p-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.0	-	-	-	<5.0	-	-	-	-	<0.005	-	-	<0.001	-	-	<0.005	<0.0050	-	-	<0.001	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.002	-	-
Alkalinity as CaCO3	mg/l		243	233	241	244	258	236	242	256	258	257	245	256	252	248	244	244	222	116	250	230	236	232	242	238	253	246	230	254	26	242	244	134	258	246	222	254	254	250	176	238	248	252	142	272	250	272	268	320
Ammonia as N	mg/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.335	<0.1	<0.1	<0.100	<0.100
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	13	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	15.0	<6	<3	<3.00	<3.00
Chloride	mg/l	250	3	4	2	3	5	3	3	2	8	7	2	2	5	4	5	4	3	10	2	1.25	1.6	1.23	1.74	1.85	2.97	2.49	2.38	2.24	1.57	1.23	0.94	1.32	1.52	1.20	1.72	<10.0	<10.0	<10.0	1.6	2.2	1.3	2.1	3.50	2.60	1.60	2.10	1.40	2.00
Chemical Oxygen Demand	mg/l		<10	58	<10	26	16	17	<10	<10	<10	<10	26	<10	<10	<10	<10	<10	<10	31	17	<10	<10	<10	47	<10	<10	<10	<10	<10	24	14	28	<10	<10	21	<10	<10	11	32	<10	<10	<10	<10	31	29.9	13.3	<10	<10.0	76.7
Hexavalent Chromium	mg/l		<0.01	-	-	-	-	<0.010	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-	<0.01	-	-	<0.01	-	-	-	-	<0.01	<0.01	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	<0.010	-	0.0127
Nitrate as N	mg/l	10	<0.05	<0.05	<0.05	0.38	<0.05	<0.05	0.08	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.36	0.29	0.08	0.17	0.24	0.22	0.11	0.1	0.05	<0.05	0.18	0.07	<0.05	<0.05	0.39	0.2	0.15	0.10	0.08	0.07	<0.05	<0.05	0.06	0.07	<0.05	0.08	0.15	0.07	0.08	0.424	0.550	0.166	0.0537	<0.0500
pH	pH Units	6.5-8.5	7.23	7.41	7.38	7.28	7.52	7.56	7.48	7.5	7.51	7.41	7.55	7.48	6.57	7.6	7.72	7.76	7.7	6.23	6.97	7.26	8.22	7.7	7.71	7.69	7.54	7.69	7.21	7.77	7.39	7.58	7.44	7.75	7.68	7.47	7.16	7.74	7.51	7.44	7.26	7.49	7.54	7.35	7.59	7.05	6.81	7.72	7.46	7.16
Phenol	mg/l	0.001	0.103	0.629	<0.036	<0.036	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.03	0.036	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.039	<0.025	0.084	<0.025	0.077	<0.025	0.029	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.0258
Total Dissolved Solids	mg/l	500	264	288	295	232	221	116	249	239	266	245	255	254	238	264	250	241	150	210	223	266	260	250	218	205	443	372	228	284	275	233	303	226	244	227	291	238	262	225	250	252	271	254	262	250	201	230	250	306
Sulfate as SO4	mg/l	250	14	16	18	11	12	<11	<11	11	<11	<10	12	<11	<11	<11	<11	<11	<11	26	<11	5.88	5.76	6.21	5.8	5.67	6.15	6.1	7.75	8.6	14.3	10.2	11.4	11.1	10.3	9.52	8.16	<10.0	<10.0	<10	5.77	614	6.8	7.47	5.65	7.45	6.85	7.03	6.41	9.50
Total Kjeldahl Nitrogen	mg/l		2.4	<1.0	2.5	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	2.9	1.1	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	1.1	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.54	<1.0	<1.0	<1.00	2.69
Total Organic Carbon	mg/l		-	-	-	-	-	-	3.7	3.2	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	1.2	1	2.5	1.2	0.8	1.3	0.7	<0.5	<0.5	0.7	<0.5	0.6	0.5	0.6	<0.5	<0.5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	1.1	2.5	<0.5	1.50	2.75	1.30	0.579	0.93	2.28
Total Hardess as CaCO3	mg/l		220	234	176	220	250	232	290	222	226	216	256	220	200	224	212	212	204	124	220	256	203	206	192	207	205	211	220	238	260	219	232	223	230	215	218	227	196	221	220	208	212	207	142	-	222	232	229	330
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	12	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<5	-	-	<5	-	-	-	-	<5	<5	-	-	-	<5	-	-	-	-	-	<5	-	-	-	-	<5	-	-
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	<0.025	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	<0.010	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<5.00
Bromide	mg/l	2	<0.100	<0.100	<0.100	<0.100	2	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.298	<0.100	<0.050	<0.050	<0.25	<0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.05	0.58	<0.20	<0.20	<0.020	<0.200	<0.200
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	-	<0.0002	<0.0002	-	-	-	<0.0002	-	-	-	-	-	<0.0002	-	-	-	-	<0.0006	-	<0.0002
Silver	mg/l	0.05	<0.0050	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.002	-	-	<0.002	-	-	-	-	<0.002	<0.002	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Aluminum	mg/l		0.89	-	-	-	-	0.058	-	-	0.071	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	0.567	-	-	-	-	<0.050	7.85	-	-	-	<0.025	-	-	-	-	-	<0.025	-	-	-	-	<0.025	-	17
Arsenic	mg/l	0.025	<0.005	-	-	-	-	<0.005	-	-	<0.010	-	-	-	<0.003	-	-	-	<0.003	-	-	-	-	<0.025	-	-	<0.025	-	-	-	-	<0.025	<0.025	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	0.011
Boron	mg/l	1	<0.10	-	-	-	-	<0.10	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.10	-	-	-	-	<0.100	-	-	<0.100	-	-	-	-	<0.100	<0.100	-	-	-	0.075	-	-	-	-	-	-	-	-	-	-	<0.125	-	0.015
Barium	mg/l	1	<0.050	-	-	-	-	<0.050	-	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	0.013	-	-	0.026	-	-	-	-	0.023	0.078	-	-	-	0.022	-	-	-	-	-	0.038	-	-	-	-	0.029	-	0.3
Beryllium	mg/l	0.03	<0.0020	-	-	-	-	<0.0020	-	-	<0.0020	-	-	-	<0.0020	-	-	-	<0.0020	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	<0.001	<0.001	-	-	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Calcium	mg/l	-	62	67	65	64	59	64	65	64	62	58	55	63	60	58	52	58	55	28	53	52.8	<0.001	51.4	47.6	52.2	53.4	52.1	55.9	60.8	61.7	56	60.6	56.8	61.0	55	56.1	59.9	50.3	58.1	57.3	52.9	53.5	53.5	36.9	55.9	58.7	60.5	61.3	110
Cadmium	mg/l	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.0029	<0.010	<0.010	<0.010	<00020	<0.010	<0.010	<0.010	<0.0020	<0.010	<0.010	<0.010	50.3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Cobalt	mg/l		<0.010	-	-	-	-	<0.020	-	-	<0.020	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	<0.010	-	-	-	<0.002	-	-	-	-	-	0.004	-	-	-	-	0.006	-	0.02
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	0.010	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	0.053
Copper	mg/l	0.2	0.0067	-	-	-	-	<0.050	-	-	<0.0050	-	-	-	<0.0050	-	-	-	<0.0050	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	0.029	-	-	-	<0.002	-	-	-	-	-	0.006	-	-	-	-	0.003	-	0.038
Iron	mg/l	0.3	0.8	1.2	1	0.071	0.33	0.15	0.29	0.062	0.14	0.39	3.7	0.076	<0.050	0.074	<0.050	0.24	0.08	17	0.098	0.206	0.126	<0.020	0.949	<0.020	0.865	<0.020	0.048	18.2	12.5	0.064	14.2	0.170	0.066	0.047	0.026	0.084	0.019	0.023	0.093	0.195	0.819	0.149	0.426	0.272	0.037	0.076	0.114	34
Potassium	mg/l		1.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2.19	2.25	1.88	1.74	1.6	1.84	1.77	3.09	4.9	1.62	2.85	1.95	1.66	1.58	1.53	1.51	1.44	1.49	1.73	1.76	1.98	1.78	1.06	2.24	1.73	1.48	1.60	3.90
Magnesium	mg/l	35	17	17	18	18	19	20	18	20	21	19	18	19	18	18	17	19	18	11	19	17.5	16.7	18.9	17.8	18.7	17.4	19.6	19.3	21	20.6	19.1	19.6	19.8	19	18.9	18.9	18.7	17.1	18.5	18.7	18	18.9	17.8	12.1	21.1	18.2	19.7	18.5	27
Manganese	mg/l	0.3	0.046	0.2	0.14	<0.0050	0.39	0.25	0.055	0.093	0.59	0.13	0.35	0.14	0.11	0.045	0.0073	0.68	0.069	2.6	0.26	0.268	0.834	0.074	0.079	0.011	0.067	0.017	0.111	0.753	0.449	0.133	0.592	0.067	0.251	0.080	0.062	0.047	0.008	0.011	0.381	0.132	0.273	0.057	0.038	0.226	0.024	0.16	0.072	1.4
Sodium	mg/l	20	19	18	21	21	17	19	21	22	20	19	17	22	19	20	16	17	16	9.1	15	12.7	15	16.7	12.9	18.2	20.9	19.3	21.5	22.5	26	20.4	23.6	24.1	21.5	19.3	20.8	19.6	16.4	21.4	20.2	21.1	23.2	20.1	7.85	20.7 L	21.9 L	23.6 L	22.6	10
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.20	-	-	<0.20	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	0.012	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	0.042
Lead	mg/l	0.025	0.003	0.007	0.01	<0.001	<0.001	<0.001	<0.001	<0.040	<0.001	<0.001	<0.001	0.018	<0.001	<0.001	<0.0020	0.005	0.001	0.011	<0.001	<0.001	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.001	<0.010	0.036
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-	-	-	<0.040	-	-	-	<0.040	-	-	-	-	<0.020	-	-	<0.020	-	-	-	-	<0.020	<0.020	-	-	-	<0.020	-	-	-	-	-	<0.020	-	-	-	-	<0.020	-	<0.003
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.005
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	0.012	0.018	<0.010	0.011	<0.010	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.026
Zinc	mg/l	2	<0.011	0.021	0.016	<0.010	0.014	0.014	0.01	0.053	<0.010	<0.010	0.079	<0.010	0.018	0.057	0.011	0.041	0.02	0.051	0.013	0.018	0.008	<0.005	0.011	<0.005	0.008	<0.005	<0.005	0.055	0.036	0.008	0.043	0.014	<0.005	0.010	0.006	<0.005	<0.005	<0.005	0.007	0.017	0.038	0.012	0.009	0.024	<0.005	0.007	<0.010	0.12
Selenium	mg/l	0.01	<0.010	-	-	-	-	<0.005	-	-	<0.005	-	-	-	<0.005	-	-	-	<0.005	-	-	-	-	<0.040	-	-	<0.040	-	-	-	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	-	-	<0.040	-	-	-	-	<0.040	-	<0.005

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected.
   Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride,
   which has been detected above standards in one sampling event.
2. Highlighted cell indicates compount detected above applicable regulatory limit.
L = laboratory flag indicating a value above calibration range but within annual verified linear range

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.00

Monitoring Well 3

Analyte (Note 1)	Units	Guidance Value	3/24/2003	6/2/2003	9/8/2003	11/3/2003	3/15/2004	6/14/2004	9/13/2004	11/1/2004	3/29/2005	6/29/2005	9/20/2005	11/16/2005	3/15/2006	6/20/2006	8/28/2006	11/13/2006
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
Methylene chloride	mg/l	0.005	13	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
m,p-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
Alkalinity as CaCO3	mg/l		83	93	104	101	103	107	116	112	-	-	125	-	252	-	-	118
Ammonia as N	mg/l	2	<0.1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.1	ND	-	-	<0.1	-	<0.1	-	-	0.1
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	ND	-	-	<6	-	<6	-	-	<6
Chloride	mg/l	250	103	48	83	33	80	27	130	61	-	-	147	-	5	-	-	50
Chemical Oxygen Demand	mg/l		37	100	135	72	23	29	52	14	-	-	21	-	<10	-	-	<10
Hexavalent Chromium	mg/l		<0.01	-	-	-		<0.010	-	-	-	-	-	-	<0.01	-	-	
Nitrate as N	mg/l	10	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	<0.05	ND	-	-	<0.05	-	<0.05	-	-	0.46
pH	pH Units	6.5-8.5	6.92	6.96	7.06	6.87	6.63	7.12	6.74	6.59	-	-	6.82	-	8.57	-	-	7
Phenol	mg/l	0.001	<0.023	<0.023	<0.036	<0.036	0.057	<0.025	<0.025	ND	-	-	-	-	0.03	-	-	<0.025
Total Dissolved Solids	mg/l	500	241	247	287	201	218	462	369	250	-	-	376	-	238	-	-	222
Sulfate as SO4	mg/l	250	15	21	16	14	15	15	<11	11	-	-	17	-	<11	-	-	14
Total Kjeldahl Nitrogen	mg/l		9.6	7.1	5.3	1.2	1.7	<1.0	1.1	ND	-	-	2.4	-	<1.0	-	-	<1.0
Total Organic Carbon	mg/l		-	-	-	-	-	-	<1.0	2.8	-	-	2.6	-	<1.0	-	-	3.7
Total Hardess as CaCO3	mg/l		230	268	280	152	240	128	260	138	-	-	530	-	200	-	-	152
Color	Color Units	5	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<5.00	-	-	-
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	-	-	-	-	<0.010	-	-	-
Bromide	mg/l	2	<0.100	<0.100	<0.100	<0.100	<5.00	<1.00	<10.0	ND	-	-	<5.0	-	<1.00	-	-	<0.100
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	-	-	-	-	<0.0002	-	-	-
Silver	mg/l	0.05	<0.0050	-	-	-	-	<0.010	-	-	-	-	-	-	<0.010	-	-	-
Aluminum	mg/l		1.1	-	-	-	-	1.1	-	-	-	-	-	-	<0.050	-	-	-
Arsenic	mg/l	0.025	0.016	-	-	-	-	0.014	-	-	-	-	-	-	<0.003	-	-	-
Boron	mg/l	1	<0.10	-	-	-	-	<0.010	-	-	-	-	-	-	<0.10	-	-	-
Barium	mg/l	1	0.26	-	-	-	-	0.13	-	-	-	-	-	-	<0.050	-	-	-
Beryllium	mg/l	0.03	<0.0020	-	-	-	-	<0.0020	-	-	-	-	-	-	<0.0020	-	-	-
Calcium	mg/l		38	44	68	58	39	39	49	42	-	-	42	-	60	-	-	43
Cadmium	mg/l	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	ND	-	-	<0.010	-	<0.0020	-	-	<0.010
Cobalt	mg/l		<0.010	-	-	-	-	<0.020	-	-	-	-	-	-	<0.020	-	-	-
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	-	-	-	-	<0.010	-	-	-
Copper	mg/l	0.2	0.025	-	-	-	-	<0.050	-	-	-	-	-	-	<0.0050	-	-	-
Iron	mg/l	0.3	8.9	8	6.1	28	30	10	5.6	11	-	-	4.2	-	<0.050	-	-	12
Potassium	mg/l		1.1	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	-	-	<5.0	-	<5.0	-	-	<5.0
Magnesium	mg/l	35	8.8	10	17	12	9.4	10	10	9.8	-	-	8.8	-	18	-	-	8.1
Manganese	mg/l	0.3	4.4	4.7	7.2	3.8	4.5	3.2	4	3.7	-	-	4.1	-	0.11	-	-	15
Sodium	mg/l	20	43	26	-	15	45	12	300	28	-	-	72	-	19	-	-	31
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.020	-	-	-	-	-	-	<0.020	-	-	-
Lead	mg/l	0.025	0.005	0.051	0.026	0.047	0.002	0.01	0.003	ND	-	-	0.005	-	<0.001	-	-	0.004
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	-	-	-	-	<0.040	-	-	-
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	ND	-	-	<0.002	-	<0.002	-	-	<0.002
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	ND	-	-	<0.020	-	<0.020	-	-	<0.020
Zinc	mg/l	2	0.38	0.05	0.032	0.07	0.032	0.024	<0.020	0.048	-	-	0.036	-	0.018	-	-	0.045
Selenium	mg/l	0.01	<0.010	-	-	-	-	<0.0050	-	-	-	-	-	-	<0.005	-	-	-

Analyte (Note 1)	3/7/2007	5/7/2007	8/13/2007	11/5/2007	3/17/2008	6/24/2008	3/17/2009	6/3/2009	8/19/2009	10/21/2009	3/10/2010	6/2/2010	9/20/2010	12/28/2010	3/30/2011	6/29/2011
Chloroethane	-	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	-	-
1,2-Dichloropropane	-	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	-	-
Methylene chloride	-	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	-	-
o-Xylene	-	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	-	-
m,p-Xylene	-	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	-	-
Alkalinity as CaCO3	-	-	-	204	172	148	168	82	105	144	122	140	140	126	154	126
Ammonia as N	-	-	-	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Biochemical Oxygen Demand-5	-	-	-	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Chloride	-	-	-	147	366	120	20.6	20.4	16.3	15.3	11.2	11.4	11.7	13.5	14.2	12.1
Chemical Oxygen Demand	-	-	-	45	53	108	23	23	70	<10	13	<10	58	114	92	69
Hexavalent Chromium	-	-	-	-	-	<0.01	-	-	<0.01	-	-	-	-	<0.01	<0.01	-
Nitrate as N	-	-	-	0.17	0.15	0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06
pH	-	-	-	6.86	7.77	6.89	6.74	6.45	6.49	6.71	6.51	6.61	6.36	6.52	6.45	6.68
Phenol	-	-	-	-	<0.025	<0.025	<0.025	<0.025	<0.025	0.074	<0.025	<0.025	0.036	<0.025	<0.025	<0.025
Total Dissolved Solids	-	-	-	487	784	304	70	242	16,200	370	163	290	189	208	212	-
Sulfate as SO4	-	-	-	18.3	20.6	19.3	18.6	15.9	16	14.2	12.2	14.5	13.4	10.8	11.1	11.5
Total Kjeldahl Nitrogen	-	-	-	<1.0	<1.0	1.9	2	<1.0	<1.0	<1.0	<1.0	<1.0	3.9	<1.0	<1.0	1.2
Total Organic Carbon	-	-	-	5.6	2.3	2.2	2.1	2	2	2	1.6	2	1.9	1.6	1.6	1.7
Total Hardess as CaCO3	-	-	-	200	155	217	2099	290	289	354	197	694	140	203	237	156
Color	-	-	-	-	-	8	-	-	<5	-	-	-	-	15	12	-
Cyanide	-	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.010	<0.010	-
Bromide	-	-	-	<0.050	<0.25	<0.25	0.11	0.09	0.11	0.12	0.09	<0.05	0.09	0.09	0.09	0.09
Mercury	-	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	-	<0.0002	<0.0002	-
Silver	-	-	-	-	-	<0.002	-	-	0.002	-	-	-	-	0.005	<0.002	-
Aluminum	-	-	-	-	-	13	-	-	61.5	-	-	-	-	44.6	58.5	-
Arsenic	-	-	-	-	-	<0.025	-	-	0.039	-	-	-	-	0.032	0.040	-
Boron	-	-	-	-	-	<0.100	-	-	<0.1	-	-	-	-	<0.100	<0.100	-
Barium	-	-	-	-	-	0.289	-	-	0.868	-	-	-	-	0.217	0.293	-
Beryllium	-	-	-	-	-	<0.001	-	-	0.004	-	-	-	-	0.002	0.003	-
Calcium	-	-	-	61.1	47.2	56.8	205	69.5	65.2	51.9	40.5	90.6	96.6	42.3	48.1	38.8
Cadmium	-	-	-	<0.010	<0.001	<0.001	0.034	<0.001	<0.001	<0.005	<0.001	<0.009	<0.009	<0.001	0.002	<0.001
Cobalt	-	-	-	-	-	0.012	-	-	0.071	-	-	-	-	0.4	0.053	-
Chromium	-	-	-	-	-	0.021	-	-	0.065	-	-	-	-	0.054	0.074	-
Copper	-	-	-	-	-	0.067	-	-	0.132	-	-	-	-	0.071	0.094	-
Iron	-	-	-	13	4.04	31.5	1970	97.3	114	302	94.1	627	628	96.2	125	36.9
Potassium	-	-	-	<5.00	1.34	3.15	34.3	4.98	5.69	6.32	4.36	10.3	10.7	4.54	4.73	1.98
Magnesium	-	-	-	7.98	8.98	18.1	386	28.3	30.6	54.7	23.3	114	112	23.5	28.3	14.4
Manganese	-	-	-	11	5.17	12.5	74.5	4.77	3.47	3.49	1.18	10.1	7.92	1.25	1.52	0.631
Sodium	-	-	-	107	227	38.3	22.9	12.4	14.9	12.8	11.7	13.6	11.8	12	10.7	12.1
Nickel	-	-	-	-	-	0.023	-	-	0.119	-	-	-	-	0.09	0.116	-
Lead	-	-	-	0.0087	<0.010	0.021	1.33	0.064	0.077	0.121	0.041	0.309	0.292	0.038	0.054	0.012
Antimony	-	-	-	-	-	<0.020	-	-	<0.02	-	-	-	-	<0.020	<0.020	-
Thallium	-	-	-	<0.001	<0.025	<0.025	<0.425	0.072	<0.025	<0.125	0.034	0.313	<0.225	<0.225	<0.025	<0.025
Vanadium	-	-	-	<0.020	<0.010	<0.020	1.1	0.067	0.078	0.157	0.056	0.308	0.317	0.054	0.080	0.021
Zinc	-	-	-	0.057	0.015	0.087	6.32	0.505	0.33	0.733	0.226	1.52	1.44	0.226	0.304	0.105
Selenium	-	-	-	-	-	<0.040	-	-	<0.040	-	-	-	-	<0.040	<0.040	-

Analyte (Note 1)	8/31/2011	11/28/2011	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	6/4/2013	9/17/2013	11/26/2013	3/31/2014	6/23/2014	9/24/2014	12/8/2014	3/31/2015	2/1/2016
Chloroethane	-	-	<0.005	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.002
1,2-Dichloropropane	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Methylene chloride	-	-	<0.005	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
o-Xylene	-	-	<0.005	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-
m,p-Xylene	-	-	<0.005	-	-	-	-	-	<0.001	-	-	-	-	<0.002	-	-
Alkalinity as CaCO3	128	122	124	124	122	122	132	120	128	130	130	134	134	132	126	104
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.121	<0.100	0.104
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<3	<3.00	<3.00
Chloride	10.2	11.1	7.88	<10	<10.0	<10	7.3	3.9	6.4	7.4	5.00	4.50	7.6	9.80	8.00	36.20
Chemical Oxygen Demand	91	36	29	<10	<10	120	16	47	<10	11	20	13.5	10.9	52.1	<10.0	<10.0
Hexavalent Chromium	-	-	<0.01	-	-	-	-	-	<0.01	-	-	-	-	<0.010	-	<0.0100
Nitrate as N	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0500	<0.0500
pH	6.46	6.32	6.54	6.40	6.37	6.13	6.19	6.07	6.19	6.20	6.43	6.37	6.47	6.52	6.47	6.38
Phenol	0.138	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.033	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.0250	<0.0250
Total Dissolved Solids	196	133	154	122	140	148	192	161	187	143	666	141	96.0	162	129	176
Sulfate as SO4	11.6	11.1	10.5	<10.0	<10	<10.00	12.4	7.54	8.93	8.01	6.1	7.37	7.35	7.32	6.76	5.64
Total Kjeldahl Nitrogen	1.7	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	1.6	<1.0	2.9	<1.0	<1.0	<1.00	<1.00
Total Organic Carbon	1.6	1.5	1.4	1.5	1.6	4.1	1.8	1.4	1.5	1.7	2.6	1.59	1.80	1.60	1.65	1.9
Total Hardess as CaCO3	279	198	255	319	116	146	570	140	519	220	2.6	-	172	207	295	160
Color	-	-	100	-	-	-	-	-	<5	-	174	-	-	<5	-	<5.00
Cyanide	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.0100
Bromide	0.08	0.07	0.16	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.07	0.47	<0.20	<0.20	<0.20	6.76	<0.200
Mercury	-	-	<0.0002	-	-	-	-	-	<0.0040	-	-	-	-	<0.0002	-	<0.0002
Silver	-	-	<0.002	-	-	-	-	-	<0.010	-	-	-	-	<0.002	-	<0.002
Aluminum	-	-	76.6	-	-	-	-	-	-	-	-	-	-	15.1 L	-	1.8
Arsenic	-	-	0.06	-	-	-	-	-	0.201	-	-	-	-	<0.010	-	<0.005
Boron	-	-	0.053	-	-	-	-	-	-	-	-	-	-	0.026	-	0.022
Barium	-	-	0.308	-	-	-	-	-	1.41	-	-	-	-	0.448	-	0.035
Beryllium	-	-	0.003	-	-	-	-	-	0.007	-	-	-	-	0.002	-	<0.001
Calcium	49.0	40.4	43.3	47.4	32.5	35.8	76.3	39.2	103	43.6	40.9	60.2	46.8	59.6	49.2	45
Cadmium	0.002	<0.001	0.002	<0.005	<0.001	<0.001	<0.005	<0.001	<0.005	0.002	<0.001	<0.001	0.001	<0.001	<0.003	<0.002
Cobalt	-	-	0.076	-	-	-	-	-	0.167	-	-	-	-	0.026	-	0.0032
Chromium	-	-	0.105	-	-	-	-	-	0.139	-	-	-	-	0.010	-	<0.002
Copper	-	-	0.167	-	-	-	-	-	0.225	-	-	-	-	0.070	-	0.0038
Iron	182	97.3	181	336	4.95	33.4	487	12	261	117	51.5	22.4	27.9	13.6	214	3.2
Potassium	5.35	4.24	5.4	6.86	1.13	2.49	9.75	1.15	7.87	4	3.11	1.38	3.02	0.796	6.89	0.91
Magnesium	38.2	23.5	35.8	48.7	8.53	13.6	92.4	10.3	63.8	26.9	17.5	15.9	13.4	14.0	41.8	11
Manganese	2.1	1.23	2.11	3.26	0.273	0.71	5.78	0.693	4.23	1.46	0.931 L	0.996 L	0.59	0.786	2.27	0.51
Sodium	11.1	11.0	10.4	10.3	11.3	11.3	10.3	9.81	11.7	10.1	11.1	7.74	10.2	8.58	9.68	11
Nickel	-	-	0.176	-	-	-	-	-	0.267	-	-	-	-		-	0.0052
Lead	0.082	0.039	0.07	0.098	<0.010	0.015	0.251	0.02	0.167	0.053	<0.010	0.049	0.021	0.0409	0.098	0.0036
Antimony	-	-	<0.020	-	-	-	-	-	<0.100	-	-	-	-	<0.020	-	<0.003
Thallium	<0.025	<0.025	<0.025	<0.125	<0.025	<0.025	<0.125	<0.025	<.0125	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.005
Vanadium	0.098	0.052	0.106	0.183	<0.005	0.016	0.218	0.01	0.118	0.053	0.030	0.024	0.025	0.017	0.107	<0.002
Zinc	0.446	0.244	0.444	0.809	<0.019	0.089	1.19	0.049	0.789	0.286	0.139	0.147	0.083	0.115	0.513	0.015
Selenium	-	-	<0.040	-	-	-	-	-	<0.200	-	-	-	-	<0.040	-	<0.0051

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compount detected above applicable regulatory limit.

L = laboratory flag indicating a value above calibration range but within annual verified linear range

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.05

Monitoring Well 4		Date Sampled:																																								
Analyte (Note 1)	Units	Guidance Value	3/24/2003	6/1/2003	9/8/2003	11/3/2003	3/15/2004	6/14/2004	9/13/2004	11/12/2004	3/25/2005	6/28/2005	9/23/2005	11/16/2005	3/15/2006	6/20/2006	9/28/2006	11/13/2006	3/7/2007	6/4/2007	9/13/2007	11/5/2007	3/17/2008	6/26/2008	3/17/2009	6/3/2009	9/16/2009	6/21/2009	3/15/2010	6/2/2010	9/28/2010	11/29/2010	3/30/2011	6/20/2011	9/21/2011	11/9/2011	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	6/4/2013	9/17/2013	11/19/2013	3/31/2014	6/20/2014	9/24/2014	12/9/2014	3/31/2015	3/1/2016
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	<0.001	-	-	-	<0.001	-	<0.002
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	<0.001	-	-	-	<0.001	-	<0.001
Methylene chloride	mg/l	0.005	27	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	<0.001	-	-	-	<0.001	-	<0.001
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	<0.001	-	-	-	<0.001	-	-
m,p -Xylene		0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	<0.002	-	-	-	-	-	-
Alkalinity as CaCO3	mg/l		90	82	91	96	100	95	98	98	108	103	104	104	98	112	102	98	94	106	110	98	108	88	126	66	95	94	102	82	132	104	102	104	102	102	106	104	90	110	108	114	102	90	104	84.0	92.0	92.0	112	102
Ammonia as N	mg/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.121	<0.100	<0.100
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<3	<3.00	<3.300
Chloride	mg/l	250	8	7	8	8	10	11	4	7	6	4	10	6	6	6	6	5	7	9	9	5.63	7.16	9.45	10.1	10.6	13.7	18.9	16.2	17	14.3	15.2	18.9	17.7	15.7	20.4	25.4	21.9	16.1	27.7	27.5	26.9	27.3	20.2	27.7	18.8	21.2	26.7	26.6	32.8
Chemical Oxygen Demand	mg/l		198	15	15	17	65	17	<10	11	16	<10	11	27	<10	<10	<10	<10	<10	26	31	<10	<10	23	16	<10	41	<10	<10	<10	40	12	21	17	33	38	<10	<10	11	39	14	18	<10	<20	43	18.2	10.9	<10	<10.0	<10.0
Hexavalent Chromium	mg/l		<0.01	-	-	-	-	<0.010	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-	<0.01	-	-	<0.01	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-	<0.01	-	-	-	<0.010	-	<0.0100
Nitrate as N	mg/l	10	<0.05	<0.05	0.14	0.11	<0.05	0.09	0.09	0.05	0.1	<0.05	0.12	0.05	0.14	0.09	0.12	0.12	0.12	0.11	0.16	0.14	0.17	0.2	0.17	0.17	0.2	0.22	0.22	0.29	0.21	0.21	0.12	0.15	0.22	0.13	0.11	0.1	0.07	0.1	0.06	0.05	<0.05	0.06	0.07	<0.05	0.0642	<0.05	0.0598	<0.0500
pH	pH Units	6.5-8.5	6.74	6.98	7.05	6.96	6.98	7.18	7.03	6.84	7.13	7	7.16	6.82	8.18	7.06	6.9	7.1	7.15	7.04	7.1	6.71	8.1	6.94	7.42	7.02	6.76	6.69	6.43	7.15	6.94	7.06	7.08	6.76	7.01	7.02	7	6.88	6.36	6.74	6.92	6.76	6.73	6.41	6.76	5.96	6.76	7.06	6.92	6.46
Phenol	mg/l	0.001	0.023	0.027	<0.036	<0.036	0.039	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.046	0.061	<0.026	<0.026	<0.025	<0.025	0.044	<0.026	0.034	<0.025	<0.025	<0.026	<0.025	<0.025	<0.025	<0.025	<0.026	<0.025	<0.025	<0.025	<0.025	<0.026	0.0469	<0.0250
Total Dissolved Solids	mg/l	500	125	189	126	151	122	66	116	138	144	120	75	136	160	128	122	106	158	205	152	164	136	121	89	10	1060	269	118	185	155	128	179	146	138	142	173	154	131	176	329	228	232	162	192	190	79	124	129	196
Sulfate as SO4	mg/l	250	12	12	12	<11	11	<11	18	<11	14	10	19	14	12	<11	19	<11	15	27	15	8.89	9.11	13	8.65	8.69	10.1	8.58	8.86	9.24	9	8.5	9.29	11.1	9.82	9.45	9.52	<10.0	12.1	<10.0	8.27	8.18	8.19	10.9	8.1	11.2	10.5	9.48	9.27	9.08
Total Kjeldahl Nitrogen	mg/l		2.5	<1.0	2	1.5	<1.0	<1.0	<1.0	<1.0	1	1.1	1	1	1	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00
Total Organic Carbon	mg/l								1.7	1.2	1.8	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<0.5	<0.5	0.5	0.5	<0.5	<0.5	1.5	1.1	<0.5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.9	0.798	0.630	0.501	<0.500	<0.500
Total Hardess as CaCO3	mg/l		110	100	114	124	160	120	170	108	100	94	154	116	92	100	108	92	104	136	140	98	125	118	111	158	127	127	136	129	157	137	130	114	127	124	138	135	75.5	147	152	175	140	121	161	-	126	146	169	150
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	14	-	-	-	<5.00	-	-	-	25	-	-	-	-	10	-	-	5	-	-	-	-	20	10	-	-	-	-	-	-	-	-	<5	-	-	-	-	-	<5	-	<5.00	
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	<0.026	-	-	-	0.011	-	-	-	<0.010	-	-	-	-	<0.010	-	-	<0.010	0.07	-	-	-	<0.010	<0.010	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	<0.010	-	<0.0100	
Bromide	mg/l	2	<0.100	<0.100	<0.100	<1.00	2	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.050	<0.25	<0.050	<0.050	0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.20	<0.20	<0.20	<0.20	<0.20	<0.200	<0.200
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	-	<0.0002	<0.0002	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	<0.0002	-	<0.0002	
Silver	mg/l	0.05	<0.0050	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.002	-	-	<0.002	-	-	-	-	<0.002	<0.002	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	<0.002	-	<0.002	
Aluminum	mg/l		1.1	-	-	-	-	0.49	-	-	2.4	-	-	-	0.84	-	-	-	18	-	-	-	-	9.76	-	-	21.1	-	-	-	-	8.8	8.43	-	-	-	-	-	-	-	-	2.58	-	-	-	-	-	1.47	-	0.76	
Arsenic	mg/l	0.025	<0.005	-	-	-	-	<0.005	-	-	<0.010	-	-	-	<0.003	-	-	-	0.015	-	-	-	-	<0.025	-	-	<0.025	-	-	-	-	<0.025	<0.025	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	<0.010	-	<0.005	
Boron	mg/l	1	<0.10	-	-	-	-	< .10	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.10	-	-	-	-	<0.100	-	-	<0.100	-	-	-	-	<0.100	<0.100	-	-	-	-	-	-	-	-	0.029	-	-	-	-	-	<0.025	-	0.0098	
Barium	mg/l	1	<0.05	-	-	-	-	<0.050	-	-	<0.050	-	-	-	<0.050	-	-	-	0.26	-	-	-	-	0.112	-	-	0.239	-	-	-	-	0.09	0.091	-	-	-	-	-	-	-	-	0.033	-	-	-	-	-	0.073	-	0.027	
Beryllium	mg/l	0.03	<0.002	-	-	-	-	<0.0020	-	-	<0.0020	-	-	-	<0.0020	-	-	-	<0.0020	-	-	-	-	<0.001	-	-	<0.001	-	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001	-	<0.001	
Calcium	mg/l		30	29	29	32	30	31	31	31	32	31	29	36	31	29	28	30	33	32	33	30.7	32.5	30.3	31.2	36.2	31.9	33.3	34.6	33.2	34.9	35.7	34.7	30.3	33.0	35.8	38.5	36.8	23.6	39.8	40.8	42.9	36.7	32.4	40.7	31.9	34.2	40.1	42.4	41
Cadmium	mg/l	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.010	<0.010	<0.010	<0.0020	<0.010	<0.010	<0.010	<0.040	<0.010	<0.010	<0.010	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/l		<0.010	-	-	-	-	<0.020	-	-	<0.020	-	-	-	<0.020	-	-	-	0.046	-	-	-	-	0.042	-	-	0.081	-	-	-	-	0.024	0.027	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	0.005	-	<0.002	
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	0.018	-	-	-	-	<0.010	-	-	0.021	-	-	-	-	0.011	<0.010	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	<0.002	-	<0.002	
Copper	mg/l	0.2	0.0064	-	-	-	-	<0.050	-	-	<0.0050	-	-	-	<0.0050	-	-	-	<0.10	-	-	-	-	0.018	-	-	0.035	-	-	-	-	0.014	0.013	-	-	-	-	-	-	-	-	0.006	-	-	-	-	-	0.004	-	<0.002	
Iron	mg/l	0.3	0.75	0.76	6.7	3.6	3.5	0.32	5.9	4.8	3	4.7	5.7	25	0.96	4	1.4	16	36	39	20	4.26	20.3	18.8	0.337	61.5	44.7	37.8	27.4	20.6	27.5	16.7	14.8	4.61	17.4	13.5	4.38	7.11	0.096	15.7	6.67	43.7	4.66	9.31	28.4	14.1	5.87	1.69	35.2	1.1
Potassium	mg/l		<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	3	2.96	0.817	5.26	3.5	2.87	2.67	3.71	4.81	2.24	2.16	1.13	2.75	1.96	1.21	1.57	0.822	1.96	1.58	3.33	1.62	1.61	2.71	2.06	1.83	0.816	3.08	0.88
Magnesium	mg/l	35	7.8	7.5	8.5	8.3	8.1	8.1	8.5	8.7	8.6	8.5	8	12	7.6	7.9	7.5	9.6	12	11	11	8.07	10.6	10.2	8.13	16.1	13.8	13	12.1	11.3	12.2	11.5	10.6	9.31	10.9	10.8	10.4	10.5	4.09	11.6	12.1	16.4	11.8	9.85	14.2	12.0	10.6	11.3	15.3	11
Manganese	mg/l	0.3	0.046	0.692	0.26	0.52	0.35	0.049	0.32	0.54	0.25	0.35	0.77	5.8	0.24	0.74	0.21	1.6	4.8	7.6	2.4	0.473	11.2	6.16	0.307	6.56	5.35	3	3.79	1.89	5.39	1.96	2.04	1.11	3.16	3.47	1.47	1.88	0.189	3.48	0.534	10.3	0.224	0.755	2.37 L	4.25 L	4.03 L	0.468	2.55	0.14
Sodium	mg/l	20	5.9	5.7	6.9	6.6	6.4	5.6	6.9	6.7	7.3	6.5	<5.0	8.4	6	5.7	5.1	6.3	6.2	6	7.2	6.62	6.32	6.52	6.37	6.37	5.24	6.68	6.39	6.36	6.86	6.82	6.62	6.10	6.39	6.42	7.36	6.43	6.68	6.76	7.66	7.55	7.55	7.85	7.59	7.64	7.67	8.16	7.58	7.9
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.020	-	-	<0.020	-	-	-	<0.020	-	-	-	0.061	-	-	-	-	0.018	-	-	0.046	-	-	-	-	0.016	0.013	-	-	-	-	-	-	-	-	0.007	-	-	-	-	-	0.004	-	<0.003	
Lead	mg/l	0.025	0.001	0.002	0.01	0.03	0.007	0.001	0.006	<0.040	0.003	0.004	0.01	0.042	0.001	0.005	0.011	0.025	0.062	0.04	0.027	0.0064	0.026	0.026	<0.010	0.073	0.06	0.048	-	0.028	0.027	0.014	0.018	<0.010	0.020	0.013	<0.010	<0.010	<0.010	0.021	<0.010	0.006	0.01	<0.010	<0.010	0.013	0.011	0.0198	0.049	<0.003
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-	-	-	<0.040	-	-	-	0.04	-	-	-	-	<0.020	-	-	<0.020	-	-	-	-	<0.020	<0.020	-	-	-	-	-	-	-	-	<0.020	-	-	-	-	-	<0.020	-	<0.020	
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	0.066	<0.025	0.047	0.11	0.064	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vanadium	mg/l		<0.030	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.03	<0.020	<0.020	<0.020	<0.020	0.02	0.02	<0.020	<0.020	0.015	0.014	<0.010	0.046	0.027	0.023	0.017	0.021	0.028	0.012	0.013	<0.010	0.012	0.010	<0.005	0.007	<0.005	0.009	0.013	0.025	<0.005	0.006	0.019	0.011	0.012	<0.006	0.023	<0.003	
Zinc	mg/l	2	<0.010	<0.010	0.017	0.012	0.011	<0.010	0.014	0.043	0.011	<0.010	0.048	0.076	0.011	0.02	<0.010	0.055	0.12	0.081	0.076	0.016	0.055	0.047	0.008	0.145	0.123	0.065	0.062	0.051	0.072	0.045	0.035	0.022	0.044	0.044	0.012	0.022	<0.005	0.038	0.014	0.097	0.016	0.031	0.077	0.040	0.026	0.011	0.091	0.0056
Selenium	mg/l	0.01	<0.020	-	-	-	-	<0.005	-	-	<0.005	-	-	-	<0.005	-	-	-	<0.005	-	-	-	-	<0.040	-	-	<0.040	-	-	-	-	<0.040	<0.040	-	-	-	-	-	-	-	-	<0.040	-	-	-	-	-	0.04	-	<0.005	

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected.
Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride,
which has been detected above standards in one sampling event.
L = laboratory flag indicating a value above calibration range but within annual verified linear range

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.00

Monitoring Well 12

Analyte (Note 1)	Units	Guidance Value (Date Sampled:)	3/24/2003	6/2/2003	9/8/2003	11/3/2003	3/15/2004	6/14/2004	9/13/2004	11/1/2004	3/29/2005	6/29/2005	9/20/2005	11/16/2005	3/15/2006	6/20/2006	8/28/2006	11/13/2006	3/7/2007	5/7/2007	8/13/2007	11/5/2007	3/17/2008	6/24/2008		
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-		
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-		
Methylene chloride	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-		
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-		
m,p-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-		
																								-		
Alkalinity as CaCO3	mg/l		103	95	90	79	121	115	94	110	84	145	-	102	104	96	-	-	98	116	-	68	-	-		
Ammonia as N	mg/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	-	0.2	<0.1	<0.1	-	-	<0.1	<0.1	-	<0.1	-	-		
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	-	<6	<6	<6	-	-	<6	<6	-	<6	-	-		
Chloride	mg/l	250	12	10	12	11	10	9	5	7	8	15	-	3	7	12	-	-	9	10	-	1.15	-	-		
Chemical Oxygen Demand	mg/l		18	45	68	79	58	24	45	19	74	46	-	25	10	30	-	-	22	31	-	35	-	-		
Hexavalent Chromium	mg/l		<0.01	-	-	-	-	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-		
Nitrate as N	mg/l	10	0.33	<0.05	0.26	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	0.23	0.13	<0.05	-	-	<0.05	0.17	-	<0.05	-	-		
pH	pH Units	6.5-8.5	6.57	6.28	6.96	6.21	6.25	6.46	6.18	6.27	6.28	6.64	-	6.17	7.46	6.58	-	-	6.4	6.22	-	5.82	-	-		
Phenol	mg/l	0.001	<0.023	<0.023	<0.036	<0.036	0.0063	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.025	<0.025	<0.025	-	-	<0.025	<0.025	-	<0.025	-	-		
Total Dissolved Solids	mg/l	500	230	203	147	172	150	166	116	219	168	184	-	124	98	130	-	-	160	210	-	167	-	-		
Sulfate as SO4	mg/l	250	16	16	24	17	26	13	<11	15	16	32	-	14	18	35	-	-	18	26	-	11.7	-	-		
Total Kjeldahl Nitrogen	mg/l		5	1.1	9.8	1.4	4.6	2.2	1.4	<1.0	3.7	4.2	-	1.7	2	<1.0	-	-	<1.0	1.1	-	1	-	-		
Total Organic Carbon	mg/l		-	-	-	-	-	-	1.7	4.4	1.6	2.2	-	<1.0	<1.0	1.4	-	-	2.7	2.5	-	2.7	-	-		
Total Hardess as CaCO3	mg/l		156	100	128	138	200	168	200	150	100	174	-	112	80	88	-	-	136	124	-	152	-	-		
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	15	-	-	-	<5.00	-	-	-	23	-	-	-	-	-		
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	<0.025	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-		
Bromide	mg/l	2	<0.100	<0.100	<0.100	<1.0	3	<1.00	4	<1.00	<1.00	<1.00	-	<1.00	<1.00	0.1	-	-	<0.100	0.298	-	<0.250	-	-		
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	-		
Silver	mg/l	0.05	<0.0050	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-		
Aluminum	mg/l		2	-	-	-	-	3.4	-	-	38	-	-	-	2	-	-	-	0.69	-	-	-	-	-		
Arsenic	mg/l	0.025	<0.005	-	-	-	-	<0.005	-	-	0.022	-	-	-	<0.003	-	-	-	<0.003	-	-	-	-	-		
Boron	mg/l	1	<0.10	-	-	-	-	<0.10	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.10	-	-	-	-	-		
Barium	mg/l	1	0.3	-	-	-	-	0.31	-	-	0.2	-	-	-	0.077	-	-	-	<0.050	-	-	-	-	-		
Beryllium	mg/l	0.03	<0.0020	-	-	-	-	<0.0020	-	-	<0.0020	-	-	-	<0.0020	-	-	-	<0.0020	-	-	-	-	-		
Calcium	mg/l		31	31	32	28	40	43	29	<50	19	34	-	28	28	12	-	-	10	28	-	21.3	-	-		
Cadmium	mg/l	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.10	0.0088	<0.010	-	<0.010	<0.0080	<0.010	-	-	<0.0020	<0.010	-	<0.010	-	-		
Cobalt	mg/l		<0.010	-	-	-	-	<0.020	-	-	0.025	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	-		
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	0.043	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-		
Copper	mg/l	0.2	0.036	-	-	-	-	<0.050	-	-	0.068	-	-	-	<0.020	-	-	-	0.0052	-	-	-	-	-		
Iron	mg/l	0.3	2.7	3	4.2	2.7	22	2.9	130	98	78	68	-	34	6.1	8.2	-	-	1.7	17	-	37.1	-	-		
Potassium	mg/l		<1.0	<5.0	<5.0	<5.0	5.7	<5.0	6.4	<50	<5.0	<5.0	-	<5.0	<5.0	<5.0	-	-	<5.0	<5.0	-	<5.00	-	-		
Magnesium	mg/l	35	8.8	9.1	9.4	8.2	14	13	22	<50	14	16	-	11	8.7	<5.0	-	-	<5.0	11	-	11.1	-	-		
Manganese	mg/l	0.3	4.3	0.98	2.2	1.5	2.5	1.6	11	9.5	6.8	9.2	-	7.8	1.1	0.99	-	-	0.16	2.6	-	2.24	-	-		
Sodium	mg/l	20	12	11	13	11	12	10	10	<50	8.4	8.5	-	6.4	9.9	5.9	-	-	6.3	9.1	-	9.28	-	-		
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.020	-	-	0.064	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	-		
Lead	mg/l	0.025	0.007	0.006	0.019	0.006	0.016	0.006	0.057	0.87	0.036	0.025	-	0.013	0.004	0.004	-	-	0.001	0.011	-	0.0091	-	-		
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-	-	-	<0.040	-	-	-	<0.040	-	-	-	-	-		
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	-	-	<0.001	<0.001	-	<0.001	-	-		
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	0.023	<0.020	0.061	<0.20	0.042	0.037	-	0.028	<0.020	<0.020	-	-	<0.020	<0.020	-	0.027	-	-		
Zinc	mg/l	2	<0.010	0.025	0.029	0.033	0.098	0.03	0.28	0.88	0.23	0.13	-	0.08	0.026	0.038	-	-	0.012	0.051	-	0.115	-	-		
Selenium	mg/l	0.01	<0.010	-	-	-	-	<0.0050	-	-	<0.005	-	-	-	<0.005	-	-	-	<0.005	-	-	-	-	-		

Analyte (Note 1)	3/17/2009	6/3/2009	8/19/2009	6/21/2009	3/10/2010	6/2/2010	9/20/2010	12/28/2010	3/30/2011	6/29/2011	8/31/2011	11/28/2011
Chloroethane	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
1,2-Dichloropropane	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
Methylene chloride	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
o-Xylene	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
m,p-Xylene	-	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
Alkalinity as CaCO3	66	98	120	98	68	116	114	100	104	126	80	88
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Chloride	5.67	4.79	6.35	5.23	6.09	8.77	9.58	5.6	5.83	8.37	10.3	5.97
Chemical Oxygen Demand	32	<10	51	<10	<10	<10	65	43	23	34	45	29
Hexavalent Chromium	-	-	<0.01	-	-	-	-	<0.01	<0.01	-	-	-
Nitrate as N	<0.05	<0.05	0.08	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.06	<0.05
pH	6.51	6.25	6.53	6.66	5.88	6.33	6.25	6.34	6.38	6.50	-	6.11
Phenol	<0.025	<0.025	0.06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Total Dissolved Solids	25	52	553	276	128	169	160	553	178	100	152	134
Sulfate as SO4	14.6	13.4	15.7	13.9	11.2	12.3	11.1	190	14.1	14.2	13.1	14.0
Total Kjeldahl Nitrogen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Organic Carbon	1.4	1.3	3.2	2.2	0.9	1.2	1.7	1.1	1.3	1.5	1.2	1.1
Total Hardess as CaCO3	144	38.5	217	124	30.2	116	116	702	95.2	133	101	86.6
Color	-	-	<5	-	-	-	-	18	<5	-	-	-
Cyanide	-	-	<0.010	-	-	-	-	<0.010	<0.010	-	-	-
Bromide	0.22	0.19	0.27	0.25	<0.05	0.24	0.22	0.23	0.25	0.41	0.14	0.20
Mercury	-	-	0.0002	-	-	-	-	<0.0002	<0.0002	-	-	-
Silver	-	-	0.004	-	-	-	-	<0.002	<0.002	-	-	-
Aluminum	-	-	60.9	-	-	-	-	11.3	5.78	-	-	-
Arsenic	-	-	0.102	-	-	-	-	<0.025	<0.025	-	-	-
Boron	-	-	<0.100	-	-	-	-	<0.100	<0.100	-	-	-
Barium	-	-	0.449	-	-	-	-	0.1	0.055	-	-	-
Beryllium	-	-	0.003	-	-	-	-	<0.001	<0.001	-	-	-
Calcium	31.9	9.49	43.2	26	7.39	29.9	31.9	263	23.9	33	25.2	22.1
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Cobalt	-	-	0.048	-	-	-	-	<0.01	<0.010	-	-	-
Chromium	-	-	0.066	-	-	-	-	0.015	<0.010	-	-	-
Copper	-	-	0.151	-	-	-	-	<0.01	0.016	-	-	-
Iron	45.8	2.67	138	61.9	1.57	2.19	1.2	23.5	10.3	13.6	17.1	5.33
Potassium	3.19	0.847	5.53	3.17	0.747	0.713	0.948	2.06	1.28	1.32	1.85	0.977
Magnesium	15.5	3.6	26.5	14.4	2.85	10.1	9.43	10.8	8.64	12.1	9.17	7.63
Manganese	5.55	0.525	12.4	5.37	0.286	0.317	0.421	2.72	1.39	2.45	3.01	1.12
Sodium	10.5	6.58	10.2	9.5	5.67	9.73	9.39	10.3	9.47	11.0	8.22	9.97
Nickel	-	-	0.108	-	-	-	-	0.021	<0.010	-	-	-
Lead	0.02	<0.010	0.075	0.027	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010
Antimony	-	-	<0.020	-	-	-	-	<0.020	<0.020	-	-	-
Thallium	0.072	<0.025	<0.025	0.083	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vanadium	0.026	<0.010	0.065	0.031	<0.010	<0.010	<0.010	0.014	<0.010	0.007	0.011	<0.005
Zinc	0.099	0.008	0.3	0.136	0.006	0.011	<0.005	0.055	0.021	0.036	0.037	0.025
Selenium	-	-	<0.040	-	-	-	-	<0.040	<0.040	-	-	-

Analyte (Note 1)	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	11/26/2013	9/17/2013	11/26/2013	3/31/2014	6/23/2014	9/24/2013	12/8/2014	3/31/2015	2/1/2016
Chloroethane	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.002
1,2-Dichloropropane	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Methylene chloride	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
o-Xylene	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-
m,p-Xylene	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.002	-	-
Alkalinity as CaCO3	96	146	116	92	124	106	112	112	98	140	134	88	92	106
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<1.0	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.100	0.121
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<3	<3.00	<3.00
Chloride	5.21	<10.0	<10.0	<10	5	4.3	10.5	5.3	5.30	6.70	6.30	4.50	4.20	42.00
Chemical Oxygen Demand	<10	11	69	66	11	11	<10	<10	20	27.5	22.6	28.5	<10.0	20
Hexavalent Chromium	<0.01	-	-	-	-	-	<0.01	-	-	-	-	0.0163	-	<0.0100
Nitrate as N	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	0.09	<0.1	<0.05	<0.05	<0.05	<0.05	<0.0500	<0.0500
pH	5.99	6.29	6.12	5.99	5.93	5.89	6.23	5.84	6.27	5.90	6.23	6.41	6.26	6.13
Phenol	<0.025	<0.025	<0.025	<0.025	0.072	<0.025	< 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.0250	<0.0250
Total Dissolved Solids	172	160	147	93	149	152	185	137	220	170	108	106	79	179
Sulfate as SO4	13.7	14.3	13.6	1	11.3	11.8	11.7	12.1	10.3	11.9	12.0	12.7	11.4	11.2
Total Kjeldahl Nitrogen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.55	<1.0	<1.0	<1.00	1.03
Total Organic Carbon	0.8	1.2	1	0.8	1	1.3	2.2	0.9	0.3	2.28	1.21	1.79	1.50	1.53
Total Hardess as CaCO3	48	146	75	39.1	84.2	111	166	142	96.6	-	163	154	124	140
Color	<5	-	-	-	-	-	<5	-	-	-	-	<5	-	<5.00
Cyanide	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.0100
Bromide	0.33	0.29	0.31	<0.20	0.23	0.22	0.22	0.22	0.55	0.28	0.24	<0.20	<0.20	<0.200
Mercury	<0.0002	-	-	-	-	-	<0.0040	-	-	-	-	<0.0002	-	<0.0002
Silver	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Aluminum	0.177	-	-	-	-	-	-	-	-	-	-	6.17	-	9.6
Arsenic	<0.010	-	-	-	-	-	0.065	-	-	-	-	<0.010	-	<0.005
Boron	<0.025	-	-	-	-	-	-	-	-	-	-	<0.025	-	0.015
Barium	0.01	-	-	-	-	-	0.29	-	-	-	-	0.169	-	0.13
Beryllium	<0.001	-	-	-	-	-	0.002	-	-	-	-	0.001	-	<0.001
Calcium	12.1	37.5	19.2	9.79	21.4	27.4	33.9	34.4	22.4	39.5	41.3	46.0	25.8	38
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.003	<0.002
Cobalt	<0.002	-	-	-	-	-	0.027	-	-	-	-	0.006	-	0.0074
Chromium	<0.002	-	-	-	-	-	0.045	-	-	-	-	0.007	-	0.013
Copper	<0.002	-	-	-	-	-	0.102	-	-	-	-	0.037	-	0.056
Iron	0.216	12.4	0.15	0.877	3.84	12.3	85.5	32.9	22.3	73.6	19.4	12.9	56.5	19
Potassium	<0.500	1.48	<0.500	<0.500	0.98	1.41	4.65	2.42	1.97	3.52	2.07	0.785	3.97	2
Magnesium	4.34	12.6	6.57	3.56	7.46	10.3	19.7	13.7	9.87	20.6	14.5	9.36	14.4	14
Manganese	0.05	1.57	0.032	0.15	0.587	1.36	5.46	1.37	1.23 L	3.37 L	1.61 L	1.76 L	2.44	4.2
Sodium	7.6	11.2	8.95	7.32	9.97	10.4	13	12.1	9.95	11.4	12.0	9.84	9.64	20
Nickel	<0.002	-	-	-	-	-	0.06	-	-	-	-	0.014	-	0.035
Lead	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.047	0.014	<0.010	0.039	0.011	0.0168	0.028	0.012
Antimony	<0.020	-	-	-	-	-	<0.020	-	-	-	-	<0.020	-	<0.003
Thallium	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.005
Vanadium	<0.005	0.01	<0.005	<0.005	0.006	0.007	0.038	0.017	0.014	0.041	0.017	<0.005	0.034	0.012
Zinc	<0.005	0.028	<0.005	<0.005	0.01	0.029	0.216	0.071	0.062	0.165	0.049	0.041	0.128	0.058
Selenium	<0.040	-	-	-	-	-	<0.040	-	-	-	-	<0.040	-	<0.005

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.

L = laboratory flag indicating a value above calibration range but within annual verified linear range

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.00

Monitoring Well 37

Analyte (Note 1)	Units	Guidance Value	3/24/2003	6/2/2003	9/8/2003	11/3/2003	3/15/2004	6/14/2004	9/13/2004	11/1/2004	3/29/2005	6/29/2005
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.00	-
Methylene chloride	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-
m,p-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-
Alkalinity as CaCO3	mg/l		127	130	158	148	137	150	148	140	142	144
Ammonia as N	mg/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Chloride	mg/l	250	6	5	5	6	5	7	3	5	14	5
Chemical Oxygen Demand	mg/l		<10	28	75	<10	61	13	<10	26	19	<10
Hexavalent Chromium	mg/l		<0.01	-	-	-	-	<0.010	-	-	<0.01	-
Nitrate as N	mg/l	10	0.15	0.07	0.34	0.13	<0.05	0.09	0.19	0.07	<0.05	<0.05
pH	pH Units	6.5-8.5	7.53	7.52	7.5	7.52	7.76	7.62	7.6	7.56	7.73	7.59
Phenol	mg/l	0.001	<0.023	<0.023	<0.036	<0.036	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Total Dissolved Solids	mg/l	500	174	169	183	161	175	218	201	105	177	167
Sulfate as SO4	mg/l	250	40	12	29	15	16	16	19	13	35	16
Total Kjeldahl Nitrogen	mg/l		3.3	<1.0	3.1	<1.2	1.6	1.4	<1.0	<1.0	1.1	<1.0
Total Organic Carbon	mg/l		-	-	-	-	-	-	1.6	1.9	<1.0	<1.0
Total Hardness as CaCO3	mg/l		166	130	174	158	180	152	180	134	94	130
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	14	-
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	<0.025	-
Bromide	mg/l	2	<0.100	<0.100	<0.100	<1.00	2	<1.00	<1.00	<1.00	<1.00	<1.00
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-
Silver	mg/l	0.05	<0.0050	-	-	-	-	<0.010	-	-	<0.010	-
Aluminum	mg/l		1.9	-	-	-	-	0.32	-	-	1.1	-
Arsenic	mg/l	0.025	<0.005	-	-	-	-	<0.005	-	-	<0.010	-
Boron	mg/l	1	<0.10	-	-	-	-	<0.10	-	-	<0.10	-
Barium	mg/l	1	0.075	-	-	-	-	<0.050	-	-	<0.050	-
Beryllium	mg/l	0.03	<0.0020	-	-	-	-	<0.0030	-	-	<0.0020	-
Calcium	mg/l		47	44	49	49	47	49	48	48	49	45
Cadmium	mg/l	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.010
Cobalt	mg/l		<0.010	-	-	-	-	<0.020	-	-	<0.020	-
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	<0.010	-
Copper	mg/l	0.2	0.013	-	-	-	-	<0.050	-	-	<0.0050	-
Iron	mg/l	0.3	2.6	1.1	2.8	0.54	3.6	0.5	0.26	2.2	2.3	1.8
Potassium	mg/l		4.2	5.8	7.7	6.4	5.7	11	10	7.4	<5.0	5.4
Magnesium	mg/l	35	6.8	6.2	7.1	6.5	7.1	6.8	6.4	7	7.1	6.7
Manganese	mg/l	0.3	0.29	0.089	0.41	0.039	0.12	0.073	0.026	0.065	0.067	0.045
Sodium	mg/l	20	7.8	8.3	10	9.7	8.7	9.8	11	9.9	9.5	8.7
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.020	-	-	<0.020	-
Lead	mg/l	0.025	0.007	0.004	0.018	0.001	0.003	0.004	0.001	0.04	0.002	<0.001
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Zinc	mg/l	2	0.015	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	0.036	0.011	<0.010
Selenium	mg/l	0.01	<0.010	-	-	-	-	<0.005	-	-	<0.005	-

Analyte (Note 1)	9/20/2005	11/16/2005	3/15/2006	6/20/2006	8/28/2006	11/13/2006	3/7/2007	5/7/2007	8/13/2007	11/5/2007	3/17/2008	6/24/2008	3/17/2009
Chloroethane	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-
1,2-Dichloropropane	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-
Methylene chloride	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-
o-Xylene	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-
m,p-Xylene	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-
Alkalinity as CaCO3	146	150	142	140	151	138	124	126	164	134	130	132	146
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Chloride	4	4	5	9	4	6	7	13	8	6.14	5.88	6.29	6.04
Chemical Oxygen Demand	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	33	28	28
Hexavalent Chromium	-	-	<0.01	-	-	-	<0.01	-	-	-	-	<0.01	-
Nitrate as N	0.24	0.14	0.16	0.16	0.13	0.18	0.14	0.11	0.14	0.14	0.2	0.3	0.13
pH	7.79	7.59	8.55	7.72	7.97	7.84	7.83	7.9	7.57	7.19	8.01	7.79	8.14
Phenol	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Total Dissolved Solids	138	155	165	177	179	184	291	214	168	211	188	174	158
Sulfate as SO4	14	15	12	12	21	13	15	13	14	13.1	11.9	13.4	11.6
Total Kjeldahl Nitrogen	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Organic Carbon	<1.0	<1.0	<1.0	<0.5	<1.0	<0.5	<0.5	<0.5	1.1	1	0.6	0.7	<0.5
Total Hardness as CaCO3	142	136	124	128	132	124	144	120	140	134	143	137	151
Color	-	-	<5.00	-	-	-	<5.00	-	-	-	-	12	-
Cyanide	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-
Bromide	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.050	<0.050	<0.25	<0.05
Mercury	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	<0.0002	-
Silver	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.002	-
Aluminum	-	-	0.13	-	-	-	6.9	-	-	-	-	8	-
Arsenic	-	-	<0.003	-	-	-	0.005	-	-	-	-	<0.025	-
Boron	-	-	<0.10	-	-	-	<0.10	-	-	-	-	<0.100	-
Barium	-	-	<0.050	-	-	-	0.057	-	-	-	-	0.059	-
Beryllium	-	-	<0.0020	-	-	-		-	-	-	-	<0.001	-
Calcium	40	50	47	44	43	47		43	42	44.8	44.8	41.3	43.4
Cadmium	<0.010	<0.010	<0.0020	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.001	<0.001	<0.001
Cobalt	-	-	<0.020	-	-	-		-	-	-	-	<0.010	-
Chromium	-	-	<0.010	-	-	-		-	-	-	-	0.019	-
Copper	-	-	<0.0050	-	-	-		-	-	-	-	0.016	-
Iron	1.7	0.51	0.36	0.47	0.32	2.1		3.5	0.05	6.2	9.27	17.3	19.1
Potassium	8.6	7	<5.0	12	9.1	5.4		7	10	8.26	4.41	9.24	4.43
Magnesium	5.9	6.8	6.5	5.9	6	6.8		6.5	5.9	7.06	7.61	8.26	9.73
Manganese	0.021	0.081	0.083	0.12	0.034	0.076		0.11	<0.0050	0.153	0.373	0.367	0.4
Sodium	7.4	11	8.3	11	9.1	9.5		10	11	9.85	8.62	9.66	7.99
Nickel	-	-	<0.020	-	-	-		-	-	-	-	0.015	-
Lead	<0.001	<0.001	<0.001	<0.001	<0.0020	0.005		0.002	0.001	0.0034	<0.010	<0.010	<0.010
Antimony	-	-	<0.040	-	-	-		-	-	-	-	<0.020	-
Thallium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.001	<0.001	<0.001	<0.025	<0.025	<0.025
Vanadium	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020		<0.020	<0.020	<0.020	<0.010	0.012	0.013
Zinc	0.028	<0.010	0.016	0.017	0.012	0.067		0.019	<0.010	0.026	0.03	0.04	0.046
Selenium	-	-	<0.005	-	-	-		-	-	-	-	<0.040	-

Analyte (Note 1)	6/3/2009	8/19/2009	6/21/2009	3/10/2010	6/2/2010	9/20/2010	12/28/2010	3/30/2011	6/29/2011	8/31/2011	11/29/2011
Chloroethane	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
1,2-Dichloropropane	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
Methylene chloride	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
o-Xylene	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
m,p-Xylene	-	<0.001	-	-	-	-	<0.005	<0.0050	-	-	-
Alkalinity as CaCO3	106	133	132	126	136	134	132	120	142	-	144
Ammonia as N	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	<6	<6	<6	-	<6
Chloride	7.54	6.9	9.58	8.22	7.24	8.96	11	9.17	12.6	-	12.7
Chemical Oxygen Demand	<10	48	<10	<10	<10	<10	19	18	12	-	24
Hexavalent Chromium	-	<0.01	-	-	-	-	<0.01	<0.01	-	-	-
Nitrate as N	0.16	0.13	0.12	0.15	0.11	0.15	0.12	<0.05	0.17	-	<0.05
pH	7.74	7.55	7.53	7.32	7.9	7.69	7.76	7.8	7.76	-	7.53
Phenol	<0.025	0.028	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.025
Total Dissolved Solids	166	296	188	177	465	178	60	222	172	-	165
Sulfate as SO4	12.9	12.9	13.5	12.2	11.3	11.5	14.1	11.7	13.8	-	13.2
Total Kjeldahl Nitrogen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0
Total Organic Carbon	<0.05	0.7	<0.5	0.8	0.6	<0.5	<0.5	<0.5	4.8	-	<0.5
Total Hardness as CaCO3	128	173	136	142	802	274	148	136	130	-	149
Color	-	<5	-	-	-	-	15	<5	-	-	-
Cyanide	-	<0.010	-	-	-	-	<0.010	<0.010	-	-	-
Bromide	<0.05	<0.05	0.1	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
Mercury	-	<0.0002	-	-	-	-	<0.0002	<0.0002	-	-	-
Silver	-	<0.002	-	-	-	-	<0.002	<0.002	-	-	-
Aluminum	-	26.1	-	-	-	-	5	8.21	-	-	-
Arsenic	-	0.027	-	-	-	-	<0.025	<0.025	-	-	-
Boron	-	<0.100	-	-	-	-	<0.100	<0.100	-	-	-
Barium	-	0.158	-	-	-	-	0.045	0.053	-	-	-
Beryllium	-	<0.001	-	-	-	-	<0.001	<0.001	-	-	-
Calcium	40.7	44.6	42.6	43.7	93.9	57.8	45.8	41.3	42.0	-	48.6
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.005	0.003	<0.001	<0.001	<0.001	-	<0.001
Cobalt	-	0.025	-	-	-	-	<0.010	<0.010	-	-	-
Chromium	-	0.058	-	-	-	-	0.014	0.023	-	-	-
Copper	-	0.035	-	-	-	-	<0.010	0.012	-	-	-
Iron	0.556	56.2	5.25	11.9	841	176	10.1	16.4	0.521	-	0.397
Potassium	11	9.6	5.23	3.56	38	13.4	4.08	3.81	8.09	-	4.02
Magnesium	6.39	15.1	7.34	7.95	138	31.6	8.21	8.10	5.95	-	6.79
Manganese	0.025	1.18	0.14	0.255	20.5	4.6	0.272	0.429	0.017	-	0.073
Sodium	10.3	8.97	9.25	7.68	9.67	8.46	9.21	7.91	9.56	-	8.88
Nickel	-	0.053	-	-	-	-	0.011	0.015	-	-	-
Lead	-	0.026	<0.010	<0.010	0.402	0.071	<0.010	<0.010	<0.010	-	<0.010
Antimony	-	<0.020	-	-	-	-	<0.020	<0.020	-	-	-
Thallium	<0.025	<0.025	<0.025	<0.025	0.559	<0.025	<0.025	<0.025	<0.025	-	<0.025
Vanadium	<0.010	0.034	<0.010	<0.010	0.503	0.111	<0.010	0.013	<0.010	-	<0.005
Zinc	0.007	0.135	0.019	0.031	1.95	0.429	0.032	0.036	0.015	-	0.012
Selenium	-	<0.040	-	-	-	-	<0.040	<0.040	-	-	-

Analyte (Note 1)	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	6/4/2013	9/17/2013	11/26/2013	3/31/2014	6/23/2014	9/24/2014	12/8/2014	3/31/2015	2/1/2016
Chloroethane	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.002
1,2-Dichloropropane	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Methylene chloride	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
o-Xylene	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	-
m,p-Xylene	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	<0.002	-	-
Alkalinity as CaCO3	136	134	138	140	128	172	94	130	122	122	120	128	122	-
Ammonia as N	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	0.953	<0.100
Biochemical Oxygen Demand-5	<6	<6	<6	<6	<6	<6	11	<6	<6	<6	<6	<3	<3.00	-
Chloride	14.9	12.1	14.3	14.3	13.7	14.7	17.4	16	16.6	18.7	17.3	19.4	21.2	-
Chemical Oxygen Demand	41	<10	<10	25	16	<10	32	<10	<10	<10	<10	<10	<10.0	12.8
Hexavalent Chromium	<0.01	-	-	-	-		<0.01	-	-	-	-	<0.010	-	-
Nitrate as N	<0.05	0.07	<0.05	<0.05	<0.050	<0.05	<0.05	<0.05	0.1	0.0751	0.127	0.0688	<0.0500	-
pH	7.23	7.54	7.31	7.09	7.24	7.06	7.78	7.33	7.75	7.25	6.89	7.68	7.59	7.4
Phenol	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	<0.025	<0.025	<0.0250
Total Dissolved Solids	178	160	199	139	190	196	169	201	253	184	94.0	137	140	-
Sulfate as SO4	13.2	<10	<10.0	<10.00	10.7	8.26	22.3	12.3	12.3	13.1	12.5	12.9	13.6	-
Total Kjeldahl Nitrogen	1.5	<1.0	<1.0	<1.0	<1.0	1.2	2.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00
Total Organic Carbon	0.7	0.6	0.9	0.8	1.8	1	3.5	0.8	0.8	0.818	0.668	<0.50	0.583	<0.500
Total Hardness as CaCO3	145	152	138	146	145	139	128	141	142	-	142	148	148	150
Color	<5	-	-	-	-	-	<5	-	-	-	-	<5	-	-
Cyanide	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.0100
Bromide	0.07	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.05	0.39	<0.20	<0.20	<0.20	<0.200	-
Mercury	<0.0002	-	-	-	-	-	<0.0002	-	-	-	-	<0.0002	-	<0.0002
Silver	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Aluminum	0.322	-	-	-	-	-	-	-	-	-	-	0.186	-	0.95
Arsenic	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.005
Boron	<0.025	-	-	-	-	-	-	-	-	-	-	<0.025	-	0.012
Barium	0.02	-	-	-	-	-	0.014	-	-	-	-	0.017	-	0.03
Beryllium	<0.001	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	0.012
Calcium	46.2	50	43.9	47.3	46.7	44.1	40	44.7	45.3	47.3	45.3	47.4	47.6	48
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.002
Cobalt	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Chromium	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Copper	0.003	-	-	-	-	-	0.004	-	-	-	-	0.002	-	0.0023
Iron	0.805	0.562	0.257	0.233	0.394	0.474	0.489	0.462	1.23	0.246	0.595	0.424	0.546	2
Potassium	2.44	2.61	2.44	2.39	2.45	2.16	2.58	2.55	2.24	1.92	2.22	2.01	2.08	2.1
Magnesium	7.22	6.5	6.68	6.67	6.74	7.11	6.72	7.12	7.06	7.73	7.05	7.26	7.16	7.8
Manganese	0.204	0.026	0.373	0.325	0.213	0.196	0.207	0.066	0.104	0.036	0.066	0.034	0.034	0.13
Sodium	8.48	7.76	8.04	8.06	8.95	9.06	9.03	9.1	9.19	8.74	8.48	9.26	9.11	9
Nickel	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.005
Lead	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0006	<0.010	<0.003
Antimony	<0.020	-	-	-	-	-	<0.020	-	-	-	-	<0.020	-	<0.003
Thallium	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.005
Vanadium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002
Zinc	<0.005	0.009	<0.005	0.006	<0.005	0.008	0.006	0.011	0.017	0.009	0.007	0.008	0.020	0.011
Selenium	<0.040	-	-	-	-	-	<0.040	-	-	-	-	<0.040	-	<0.005

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.

L = laboratory flag indicating a value above calibration range but within annual verified linear range

Shumaker Consulting Engineering and Land Surveying, P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.00

Monitoring Well 38D		Date Sampled	3/5/2003	6/5/2003	9/8/2003	11/3/2003	3/3/2004	6/14/2004	9/13/2004	11/3/2004	3/2/2005	6/2/2005	9/20/2005	11/9/2005	3/1/2006	6/2/2006	8/28/2006	11/3/2006	3/7/2007	5/7/2007	8/13/2007	11/5/2007	3/17/2008	5/14/2008	3/17/2009	6/5/2009	9/18/2009	10/5/2009	3/10/2010	6/8/2010	9/20/2010	12/28/2010	3/3/2011	6/29/2011	8/19/2011	11/28/2011	2/22/2012	6/20/2012	9/20/2012	11/8/2012	3/20/2013	6/6/2013	11/15/2013	11/26/2013	3/19/2014	6/23/2014	9/24/2014	12/4/2014	3/13/2015	3/31/2015
Analyte (Note 1)	Units	Guidance Value																																													
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	<0.002
1,2-Dichloroethane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	<0.002
Methylene chloride	mg/l	0.005	13	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	<0.001
o- Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	-
m,p- Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	<0.005	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	-	-	-	-	<0.001	-	-	<0.001	-	<0.002
Alkalinity as CaCO3	mg/l		197	195	186	201	183	190	196	182	184	183	183	198	178	224	179	238	240	232	240	210	202	180	-	158	123	182	190	196	178	182	172	188	186	176	178	172	172	184	172	169	188	194	178	186	192	190	178	182
Ammonia as N	mg/l	2	<0.1	0.3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.8	0.1	<0.1	0.2	0.2	<0.1	<0.1	0.7	<0.1	0.1	<0.1	0.1	<0.1	0.2	<0.1	<0.1	1.2	0.2	<0.1	0.9	17.1	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	0.149	<0.1	<0.100	0.28
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	8	<6	<6	<6	13	<6	<6	6	<6	11	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<3	<3.00	<3.00			
Chloride	mg/l	250	14	12	13	13	15	11	6	14	15	12	12	12	12	14	9	10	15	13	10	9.42	11.1	8.78	10.1	9.59	7.76	10.8	10.1	10.6	11.5	9.87	11.1	11.4	10.5	10.6	11.5	<10.0	11.1	11.3	9.2	9.3	9.6	10.2	9.80	10.5	9.80	10.4	10.3	9.8
Chemical Oxygen Demand	mg/l		222	100	242	113	39	150	57	41	140	56	136	225	61	64	83	29	66	<10	243	26	139	151	23	<10	171	28	18	167	248	19	342	37	118	51	118	16	187	79	21	138	263	<10	<10	15.9	41.4	<10.0	109
Hexavalent Chromium	mg/l		<0.01	-	-	-	<0.010	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-	<0.01	-	-	<0.01	-	-	-	<0.01	0.01	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	<0.010	0.0209
Nitrate as N	mg/l	10	0.1	0.07	<0.05	0.19	0.06	<0.05	0.19	<0.05	0.18	<0.05	<0.05	<0.05	0.21	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	0.2	0.09	<0.05	0.13	0.2	<0.05	<0.05	0.12	0.1	0.17	0.16	0.11	0.09	0.11	0.07	0.06	0.2	0.22	<0.05	0.06	0.16	0.164	<0.05	0.0823	0.181	<0.0920
pH	pH Units	6.5-8.5	7.53	7.49	7.74	7.61	7.99	7.73	7.58	7.78	8.02	8.2	7.96	7.58	8.6	7.67	7.93	7.65	7.63	7.46	7.35	6.93	8.38	7.7	8.09	7.76	7.56	7.62	7.63	7.72	7.57	8	7.71	8.02	7.84	7.68	7.66	7.91	7.75	7.51	7.98	7.64	7.65	7.57	8.36	7.53	7.52	8.15	7.90	7.41
Phenol	mg/l	0.001	<0.023	<0.023	<0.036	<0.036	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.042	<0.025	<0.025	0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.07	0.327	0.046	<0.025	<0.025	<0.025	0.829	0.026	0.130	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0518	0.19
Total Dissolved Solids	mg/l	500	228	260	226	236	225	269	258	205	218	204	162	208	216	251	227	262	305	317	259	284	245	191	169	169	420	405	207	210	227	248	160	186	208	3	222	187	217	157	239	205	243	237	484	204	116	168	400	179.0
Sulfate as SO4	mg/l	250	11	14	<11	<11	14	<11	11	13	<11	<10	30	14	11	12	138	<11	44	12	46	7.1	9	5.4	7.39	5.76	5.72	7.29	8.62	9.29	7.5	8.4	8.83	7.87	7.50	8.28	9.22	<10	<10	<10	7.52	7.51	6.74	6.92	6.95	10.4	11.3	8.22	8.89	7.38
Total Kjeldahl Nitrogen	mg/l		5.3	1.2	4.2	1.5	2.7	1.6	1.3	<1.0	3.2	2.2	4	30.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1	<0.1	2.2	<1.0	<1.0	<1.0	<1.0	1.6	1.8	<1.0	<1.0	1.1	<1.0	4.95	<1.0	<1.0	1.02	5.66
Total Organic Carbon	mg/l		-	-	-	-	-	-	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.4	1.7	3.2	3.9	0.7	0.9	1.3	0.9	0.5	0.6	<0.5	1.4	0.7	0.8	0.5	1.6	0.6	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	0.9	<0.5	0.8	1.4	0.782	0.510	0.597	1.27
Total Hardness as CaCO3	mg/l		286	250	410	890	360	400	470	320	170	320	1000	4600	184	164	332	400	212	184	175	324	477	379	380	256	778	757	397	238	5750	518	2140	128	511	298	450	151	126	176	120	179	1840	144	147		618	535	485	130
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	12	-	-	-	15	-	-	-	20	-	-	-	-	12	-	-	17	-	-	-	-	5	30	-	-	-	-	-	-	-	-	5	-	-	-	-	-	<5	-	10
Cyanide	mg/l	0.2	<0.010	-	-	-	-	<0.025	-	-	<0.05	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	<0.010	-	-	-	-	<0.01	<0.010	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	<0.010	-	<0.010
Bromide	mg/l	2	<0.100	<0.100	<0.100	<1.00	<1.00	2	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.115	<0.25	<0.25	0.1	0.09	0.09	0.15	0.11	<0.05	0.1	0.14	0.13	0.13	0.11	0.12	0.14	<0.20	<0.20	<0.20	<0.20	<0.20	0.12	0.61	<0.20	<0.20	<0.20	0.25	<0.200
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	<0.0002	-	-	0.0004	-	-	-	-	<0.0002	<0.0006	-	-	-	-	-	-	-	<0.0040	-	-	-	-	-	<0.0002	-	<0.0002
Silver	mg/l	0.05	0.0055	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.002	-	-	0.013	-	-	-	-	0.027	<0.018	-	-	-	-	-	-	-	0.02	-	-	-	-	-	<0.002	-	<0.002
Aluminum	mg/l		5.2					3.2			100				5.2				9.9					118			276					159	221														140			80.3		83
Arsenic	mg/l	0.025	0.063	-	-	-	-	0.079	-	-	0.042	-	-	-	0.007	-	-	-	0.05	-	-	-	-	0.068	-	-	0.175	-	-	-	-	*	0.274	-	-	-	-	-	-	-	-	0.11	-	-	-	-	-	0.019	-	0.05
Boron	mg/l	1	<0.10	-	-	-	-	<0.10	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.10	-	-	-	-	<0.100	-	-	<0.500	-	-	-	-	*	<0.500	-	-	-	-	-	-	-	-	<0.125	-	-	-	-	-	<0.125	-	0.062
Barium	mg/l	1	5.3	-	-	-	-	4.7	-	-	0.56	-	-	-	0.7	-	-	-	0.12	-	-	-	-	0.84	-	-	2.27	-	-	-	-	0.849	9.69	-	-	-	-	-	-	-	-	3.89	-	-	-	-	-	1.64	-	3.2
Beryllium	mg/l	0.02	<0.0020					<0.0020			0.0039				<0.0020				<0.0020					0.005			0.013					0.005	0.017									0.01						0.006		0.0055
Calcium	mg/l		59	120	110	310	48	130	98	61	51	39	100	630	55	42	76	120	60	56	51	64	79.6	55.9	53.3	50.6	95.7	79	72.2	227	823	72.5	558	35.6	70.3	50.3	63.9	39.6	34	39.1	34.4	41.3	439	39.8	38.8	121	118	153	63.8	260
Cadmium	mg/l	0.005	0.013	<0.0050	<0.0050	0.0079	<0.010	0.011	0.026	<0.10	0.019	0.012	<0.50	<1.0	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.010	0.041	0.016	0.002	0.006	<0.001	0.005	<0.009	<0.005	<0.1	0.073	0.018	0.013	<0.001	<0.005	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	<0.001	0.013	0.003	<0.003	0.0039
Cobalt	mg/l		0.046	-	-	-	-	0.04	-	-	0.098	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	0.117	-	-	0.321	-	-	-	-	0.165	0.292	-	-	-	-	-	-	-	-	0.16	-	-	-	-	-	0.107	-	0.12
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	0.12	-	-	-	<0.010	-	-	-	0.012	-	-	-	-	0.142	-	-	0.36	-	-	-	-	0.197	0.240	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-	0.026	-	0.059
Copper	mg/l	0.2	0.0078	-	-	-	-	<0.050	-	-	0.085	-	-	-	<0.050	-	-	-	<0.075	-	-	-	-	0.181	-	-	0.482	-	-	-	-	0.23	0.294	-	-	-	-	-	-	-	-	0.269	-	-	-	-	-	0.3501	-	0.18
Iron	mg/l	0.3	50	7.8	11	36	5.7	49	400	450	230	77	1200	4700	13	13	12	670	23	5.9	12	197	324	269	278	123	651	871	250	1120	4510	383	696	12.8	395	183	356	28.6	5.27	59.4	<0.010	60.8	593	17.6	21.4	105	373	98.0	369	180
Potassium	mg/l		6.8	6.4	8.2	7.2	7	7	13	<50	11	8.8	25	9.6	<5.0	6.1	<5.0	17	<5.0	<5.0	<5.0	9.35	11.5	10.1	9.7	7.16	14.7	12.3	8.97	133	54.4	11.1	11.9	2.47	11.6	7.14	9.47	2.92	1.88	3.93	1.88	4.49	13.1	2.85	3.04	3.11	18.5	2.79	12.3	7.7
Magnesium	mg/l	35	98	17	18	50	11	67	87	86	52	23	170	1000	13	11	12	120	16	12	12	43.6	67.5	58.1	59.9	31.6	131	136	52.8	211	896	81.9	183	9.46	81.5	42.1	71.7	12.6	8.56	19.1	8.28	18.4	282	16.8	12.1	36.2	78.6	37.2	74.1	71
Manganese	mg/l	0.3	92	35	14	49	2.3	89	17	12	5.8	2.7	39	300	4.5	4.7	9.1	30	2.2	1.7	2.3	8.91	13.2	8.64	6.26	4.32	24.8	19.9	11.2	50.6	176	9.09	100	0.367	10.2	2.58	9.41	0.841	0.909	1.84	0.208	2.28	96.4	0.637	0.675	36.2 L	22.4 L	23.9 L	10.5	47
Sodium	mg/l		20	56	43	47	52	41	55	44	<50	46	40	43	75	40	41	31	43	39	35	36	40.8	40.6	38.3	37.3	34	27.5	34.8	36.2	59.2	46.2	46.1	44.8	32.7	43.1	39.3	36.3	28.7	34.6	33.8	37.4	36.9	39.5	35.3	35.5 L	35.9 L	34.1	35.4	38.4	37
Nickel	mg/l	0.1	<0.010	-	-	-	-	<0.020	-	-	0.2	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	0.253	-	-	0.594	-	-	-	-	0.038	0.492	-	-	-	-	-	-	-	-	0.575	-	-	-	-	-	0.118	-	0.14
Lead	mg/l	0.025	0.063	0.079	0.076	0.057	0.015	0.004	<0.001	<0.40	0.011	0.047	0.216	1.63	0.047	0.013	0.23	0.269	0.011	0.005	0.001	0.0465	0.195	0.142	0.118	0.052	0.35	0.338	0.132	<1.00	2.69	0.162	0.241	<0.010	0.145	0.061	0.135	<0.010	<0.010	0.026	<0.010	0.034	0.311	<0.010	<0.010	<0.010	0.118	0.234	0.132	0.176	
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-	-	-	<0.040	-	-	-	<0.040	-	-	-	-	<0.020	-	-	<0.100	-	-	-	-	*	<0.100	-	-	-	-	-	-	-	-	<0.100	-	-	-	-	-	<0.020	-	0.022
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.123	0.065	<0.125	0.258	0.273	<2.5	<0.125	*	<0.026	<0.025	<0.125	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.125	<0.0125	<0.001	0.053
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	<0.020	<0.005	0.16	0.24	0.11	0.043	<1.0	3.7	<0.020	<0.020	<0.020	0.44	<0.020	<0.020	<0.020	0.066	0.166	0.139	0.134	0.07	0.321	0.266	0.112	<1.00	1.36	0.174	0.271	<0.010	0.169	0.065	0.181	0.016	<0.005	0.021	<0.001	0.027	0.204	0.009	0.012	0.056	0.365	0.040	0.185	0.074
Zinc	mg/l	2	0.07	0.042	0.04	0.063	0.035	0.061	0.93	1.8	0.58	0.18	3.2	13	0.06	0.064	0.032	2	0.089	0.027	0.037	0.503	0.724	0.461	0.431	0.292	1.67	1.4	0.555	2.75	11.4	0.936	1.39	0.035	0.911	0.464	0.837	0.098	0.019	0.143	0.01	0.155	1.48	0.047	0.074	0.339	0.824	0.349	0.695	0.5
Selenium	mg/l	0.01	<0.010	-	-	-	-	0.0006	-	-	<0.005	-	-	-	-	-	-	-	<0.005	-	-	-	-	<0.040	-	-	<0.200	-	-	-	-	*	<0.360	-	-	-	-	-	-	-	-	<0.200	-	-	-	-	-	<0.040	-	0.031

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected.
   Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride,
1. = laboratory flag indicating a value above calibration range but within annual verified linear range
2. Highlighted cell indicates compound detected above applicable regulatory limit.
3. " Blank Cells on 12/28/10 Benchmark Analysis indicates no data received for this analyte.

Shumaker Consulting Engineering and Land Surveying. P.C.
Analytical History for the Conklin Landfill
SCE Project 08126.00

Carlin Creek		Date Sampled:	3/24/2003	6/22/2003	9/8/2003	11/5/2003	3/15/2004	6/14/2004	9/13/2004	11/1/2004	3/29/2005	6/29/2005	9/20/2005	########	3/15/2006	6/20/2006	8/28/2006	########	3/7/2007	5/7/2007	8/13/2007	11/5/2007	3/17/2009	6/3/2009	9/14/2009	########	3/30/2010	6/2/2010*	########	3/30/2011	6/29/2011	8/31/2011	########	3/22/2012	6/20/2012	9/20/2012	11/8/2012	3/25/2013	6/4/2013	9/17/2013	########	3/31/2014	6/23/2014	9/24/2014	12/8/2014	3/31/2015	2/1/2016
Analyte (Note 1)	Units	Guidance Value																																												
Chloroethane	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	-	<0.002
1,2-Dichloropropane	mg/l	0.001	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001
Methylene chloride	mg/l	0.005	13	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001
o-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	-	-
m,p-Xylene	mg/l	0.005	<5.0	-	-	-	-	<5.0	-	-	<5.00	-	-	-	<5.00	-	-	-	<5.00	-	-	-	-	-	<0.001	-	-	-	<0.005	<0.0050	-	-	-	<0.0050	-	-	-	-	-	<0.001	-	-	-	-	-	<0.002
Alkalinity as CaCO3	mg/l		197	195	186	201	183	190	196	182	184	183	183	198	178	224	179	238	240	232	240	210	18	48	57	50	30	50	28	22	66	36	30	34	46	52	36	26	50	50	42	18	52	60	32	20.0	28.0
Ammonia as N	mg/l	2	<0.1	0.3	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.8	0.1	<0.1	0.2	0.2	<0.1	<0.1	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.100	<0.1
Biochemical Oxygen Demand-5	mg/l		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	13	<6	<6	6	<6	11	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<3	<3.00	<3.0
Chloride	mg/l	250	14	12	13	13	15	11	6	14	15	12	12	12	12	14	9	10	15	13	10	9.42	41.3	28.6	48	44.9	80.4	34.9	27.5	56.1	31.4	23.3	15.8	42.2	30.3	38.2	22.5	71	52.7	39.5	47.9	48.7	48.7	56.2	53.7	67.0	40.2
Chemical Oxygen Demand	mg/l		222	100	242	113	39	150	57	41	140	56	136	225	61	64	83	29	66	<10	243	28	37	11	8	<10	<10	<10	<10	18	<10	16	17	<10	23	16	35	14	<10	<10	<10	<10	15	48.5	13.3	<10	<10.0	<10.0
Hexavalent Chromium	mg/l		<0.01	-	-	-	-	<0.010	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	<0.01	-	-	-	<0.01	<0.01	-	-	-	<0.01	-	-	-	-	-	<0.01	-	-	-	-	<0.010	-	<0.0100
Nitrate as N	mg/l	10	0.1	0.07	<0.05	0.19	0.06	<0.05	0.19	<0.05	0.18	<0.05	<0.05	<0.05	0.21	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	0.36	0.08	<0.05	0.16	0.53	<0.05	<0.05	<0.05	<0.05	<0.05	0.38	0.11	0.18	<0.05	0.1	0.06	0.31	0.11	0.2	0.14	0.50	0.23	0.0688	0.383	0.422	0.376
pH	pH Units	6.5-8.5	7.53	7.49	7.74	7.61	7.99	7.73	7.58	7.78	8.02	8.2	7.96	7.58	8.8	7.67	7.93	7.65	7.63	7.46	7.35	6.93	7.31	7	6.88	7.23	7.26	7.77	0.37	7.34	6.79	6.9	7.41	7.07	6.39	7.35	7.31	7.09	6.6	7.03	6.82	7.84	6.27	6.74	7.74	7.21	7.34
Phenol	mg/l	0.001	<0.023	<0.023	<0.036	<0.036	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.043	<0.025	<0.025	0.031	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.138	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.0250
Total Dissolved Solids	mg/l	500	229	250	225	236	225	269	258	205	218	204	162	208	216	251	227	262	305	317	259	284	92	11	240	160	203	130	170	135	90	85	56	130	79	158	85	202	152	174	150	170	144	107	119	60.0	96.0
Sulfate as SO4	mg/l	250	11	14	<11	<11	14	<11	11	13	<11	<10	30	14	11	12	138	<11	44	12	44	7.1	10.3	8.86	10.4	10.9	8.24	8.86	9.09	8.75	8.24	8.98	7.66	8.77	<10.0	<10.0	<10.0	6.96	6.67	7.31	8.38	5.95	7.78	8.00	8.66	7.37	9.66
Total Kjeldahl Nitrogen	mg/l		5.3	1.2	4.2	1.5	2.7	1.6	1.3	<1.0	3.2	2.2	4	30.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.10	<1.0	<1.00
Total Organic Carbon	mg/l		-	-	-	-	-	-	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.4	1.7	3.2	3.9	0.7	0.9	1.3	1.6	2.2	1.6	18	2.8	1.9	2	1.2	3.3	2.7	2.0	1.8	1.9	4.2	2.2	1.6	2.3	1.5	2.1	2.7	1.67	1.51	2.72	2.44	1.7
Total Hardess as CaCO3	mg/l		280	250	410	890	300	400	470	320	170	320	1000	4600	184	164	332	400	212	184	175	324	36.2	48	57	50	62.1	48.7	38	37.8	48.4	37.4	-	44.1	50.3	49.9	37.4	53.1	61.7	59	56.4	37.3	-	73.7	55.6	45.8	44
Color	Color Units	5	<5.00	-	-	-	-	<5.00	-	-	12	-	-	-	15	-	-	-	20	-	-	-	-	-	<5	-	-	-	<5	<5	-	-	-	<5	-	-	-	-	-	<5	-	-	-	-	<5	-	<5.00
Cyanide	mg/l	0.2	<0.015	-	-	-	-	<0.025	-	-	<0.025	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	<0.010	<0.010	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.0100
Bromide	mg/l	2	<0.100	<0.100	<0.100	<0.100	<1.00	<0.05	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.05	<0.20	<0.20	<0.20	<0.200	<0.200
Mercury	mg/l	0.0007	<0.0002	-	-	-	-	<0.0002	-	-	<0.0002	-	-	-	<0.0002	-	-	-	<0.0002	-	-	-	-	-	<0.0002	-	-	-	<0.0002	<0.0002	-	-	-	<0.0002	-	-	-	-	-	<0.0002	-	-	-	-	<0.0002	-	<0.0002
Silver	mg/l	0.05	0.0055	-	-	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	<0.002	-	-	-	<0.002	<0.002	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Aluminum	mg/l		5.2	-	-	-	-	3.2	-	-	100	-	-	-	5.2	-	-	-	9.9	-	-	-	-	-	0.625	-	-	-	0.053	0.098	-	-	-	0.096	-	-	-	-	-	-	-	-	-	-	0.035	-	<0.05
Arsenic	mg/l	0.025	0.063	-	-	-	-	0.079	-	-	0.042	-	-	-	0.007	-	-	-	0.05	-	-	-	-	-	<0.025	-	-	-	<0.025	<0.025	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-	-	-	<0.010	-	<0.005
Boron	mg/l	1	<0.10	-	-	-	-	<0.10	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.10	-	-	-	-	-	<0.100	-	-	-	<0.100	<0.100	-	-	-	<0.025	-	-	-	-	-	<0.025	-	-	-	-	<0.025	-	0.012
Barium	mg/l	1	5.3	-	-	-	-	4.7	-	-	0.56	-	-	-	0.7	-	-	-	0.12	-	-	-	-	-	0.05	-	-	-	0.01	0.011	-	-	-	0.01	-	-	-	-	-	0.017	-	-	-	-	0.013	-	0.011
Beryllium	mg/l	0.03	<0.0020	-	-	-	-	<0.0020	-	-	0.0039	-	-	-	<0.0020	-	-	-	<0.0020	-	-	-	-	-	<0.001	-	-	-	<0.001	<0.001	-	-	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	<0.001	-	<0.001
Calcium	mg/l		550	120	110	310	48	630	98	61	51	39	100	630	55	42	76	120	60	55	51	64	10.6	11.9	16	18.2	17.8	13.9	10.8	10.8	13.6	10.7	9.64	12.6	14.1	14.1	10.6	15.2	18.1	16.7	16	10.4	16.6	21.1	15.9	13.1	12
Cadmium	mg/l	0.005	0.012	<0.0050	<0.0050	0.0079	<0.010	0.011	0.028	<0.10	0.019	0.012	<0.50	<1.0	<0.020	<0.010	<0.010	<0.10	<0.030	<0.010	<0.010	0.041	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.002
Cobalt	mg/l		0.046	-	-	-	-	0.04	-	-	0.098	-	-	-	<0.020	-	-	-	<0.020	-	-	-	<0.010	-	<0.010	-	-	-	<0.010	<0.010	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Chromium	mg/l	0.05	<0.010	-	-	-	-	<0.010	-	-	0.12	-	-	-	<0.010	-	-	-	0.012	-	-	-	<0.010	-	<0.010	-	-	-	<0.010	<0.010	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.002
Copper	mg/l	0.2	0.0078	-	-	-	-	<0.050	-	-	0.085	-	-	-	<0.050	-	-	-	<0.075	-	-	-	<0.010	-	<0.010	-	-	-	<0.010	<0.010	-	-	-	<0.002	-	-	-	-	-	0.004	-	-	-	-	<0.002	-	<0.002
Iron	mg/l	0.3	50	7.8	11	36	5.7	49	400	450	230	77	1200	4700	13	13	12	670	23	5.9	12	197	0.11	0.024	3.19	<0.020	<0.020	<0.020	0.079	0.1	0.715	0.200	0.138	0.198	0.022	0.204	0.094	0.203	0.226	0.069	0.124	1.88	0.035	0.010	0.065	0.199	<0.05
Potassium	mg/l		6.8	6.4	6.2	7.2	7	7	13	<50	11	6.8	25	9.6	<5.0	6.1	<5.0	17	<5.0	<5.0	<5.0	9.35	1.16	1.4	3.99	1.72	1.69	1.68	1.36	1.06	2.72	1.87	1.08	1.34	1.31	1.6	0.956	1.34	1.57	2.07	1.37	1.53	1.76	2.12	1.41	1.22	1
Magnesium	mg/l	35	96	17	18	50	11	87	87	86	52	23	170	1000	13	11	12	120	16	12	12	43.4	2.24	2.75	3.01	2.67	3.49	2.59	2.25	3.05	3.64	3.55	2.63	3.66	4.04	4.24	3.99	2.76	4.22	5.11	3.90	3.17	3
Manganese	mg/l	0.3	92	16	14	49	2.3	89	17	12	5.8	2.7	39	160	4.6	4.7	9.1	30	2.2	1.7	2.2	8.91	0.003	0.653	0.064	0.006	0.02	0.018	0.01	0.004	0.085	0.018	0.044	0.06	0.177	0.021	0.027	0.02	0.444	0.035	0.091	0.039	0.027	0.011	0.006	0.006	0.0032
Sodium	mg/l	20	56	43	47	52	41	55	44	<50	46	40	43	75	40	41	31	43	39	35	36	40.4	22.1	21	26.6	25	43.8	24.5	17.6	30.1	20.2	16.7	11.8	24.7	20.7	24.5	15.9	37.5	43	26.8	27.1	29.6	29.6	33.7	34.9	37.6	26
Nickel	mg/l	0.1	<0.020	-	-	-	-	<0.020	-	-	0.2	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	-	<0.010	-	-	-	<0.010	<0.010	-	-	-	<0.002	-	-	-	-	-	<0.002	-	-	-	-	<0.002	-	<0.005
Lead	mg/l	0.025	0.003	0.078	0.076	0.057	0.015	0.004	<0.001	<0.40	0.011	0.047	0.216	1.63	0.047	0.013	0.23	0.289	0.011	0.005	0.007	0.0465	<0.010	<0.010	<0.010	0.328	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0006	<0.010	<0.003
Antimony	mg/l	0.03	<0.0050	-	-	-	-	<0.0050	-	-	<0.040	-	-	-	<0.040	-	-	-	<0.040	-	-	-	-	-	<0.020	-	-	-	<0.020	<0.020	-	-	-	<0.020	-	-	-	-	-	<0.020	-	-	-	-	<0.020	-	<0.003
Thallium	mg/l	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.001	<0.005
Vanadium	mg/l		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.16	0.24	0.11	0.043	<1.0	3.7	<0.020	<0.020	<0.020	0.44	<0.020	<0.020	<0.020	0.098	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	mg/l	2	0.07	0.042	0.04	0.093	0.035	0.061	0.93	1.8	0.58	0.18	3.2	13	0.06	0.064	0.032	2	0.089	0.027	0.037	0.503	<0.005	<0.005	0.012	1.6	0.041	<0.005	0.006	<0.005	0.007	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	0.006	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005
Selenium	mg/l	0.01	<0.010	-	-	-	-	0.0006	-	-	<0.005	-	-	-	<0.040	-	-	-	<0.005	-	-	-	<0.040	-	<0.040	-	-	-	<0.040	<0.040	-	-	-	<0.040	-	-	-	-	-	<0.040	-	-	-	-	<0.040	-	<0.005

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected.
Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride,
L = laboratory flag indicating a value above calibration range but within annual verified linear range
*. Third Quarter Analysis, 2010 not conducted.

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Monitoring Well 1		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		<0.025	<0.025	-	-	17	0.083
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	<0.0002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	0.0021
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	0.011	0.005
Barium	mg/l	1	0.029	0.024	-	-	0.3	0.024
Beryllium	mg/l	0.03	<0.001	<0.001	-	-	<0.001	<0.001
Boron	mg/l	1	<0.125	<0.058	-	-	0.015	0.012
Calcium	mg/l		60.5	56.4	61.3	62.8	110	96
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	<0.002
Cobalt	mg/l		0.006	<0.002	-	-	0.02	<0.002
Chromium	mg/l	0.05	<0.002	<0.002	-	-	0.053	<0.002
Copper	mg/l	0.2	0.003	<0.002	-	-	0.038	<0.002
Iron	mg/l	0.3	0.076	<0.005	0.114	<0.050	34	0.062
Potassium	mg/l		1.48	1.54	1.60	1.66	3.90	1.2
Magnesium	mg/l	35	19.7	18.4	18.5	18.8	27	22
Manganese	mg/l	0.3	0.160	<0.002	0.072	<0.003	1.4	0.36
Sodium	mg/l	20	23.6	22.1	22.6	25.2	10	8.7
Nickel	mg/l	0.1	<0.002	<0.002	-	-	0.042	<0.0051
Lead	mg/l	0.025	0.0010	<0.0006	<0.010	<0.0100	0.036	<0.0031
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	<0.0031
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	<0.0051
Vanadium	mg/l		<0.005	<0.005	<0.005	<0.005	0.026	<0.002
Zinc	mg/l	2	0.007	<0.005	<0.010	<0.010	0.12	0.011
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	<0.0051

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Monitoring Well 3		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2106
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		15.1	<0.025	-	-	1.8	0.078
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	<0.0002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	<0.005	<0.0051
Barium	mg/l	1	0.448	0.018	-	-	0.035	0.022
Beryllium	mg/l	0.03	0.002	<0.001	-	-	<0.001	<0.001
Boron	mg/l	1	0.026	<0.025	-	-	0.022	0.021
Calcium	mg/l		59.6	35.6	49.2	38.3	45.0	45
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	<0.002
Cobalt	mg/l		0.026	<0.002	-	-	0.0032	<0.002
Chromium	mg/l	0.05	0.010	<0.002	-	-	<0.002	<0.002
Copper	mg/l	0.2	0.070	<0.002	-	-	0.0038	<0.002
Iron	mg/l	0.3	13.6	0.101	214	<0.050	3.2	0.053
Potassium	mg/l		0.796	0.57		<1.00	0.91	0.41
Magnesium	mg/l	35	14.0	9.03	41.8	9.32	11	11
Manganese	mg/l	0.3	0.786	0.239	2.27	0.142	0.51	0.380
Sodium	mg/l	20	8.58	9.58	9.68	9.01	11	11
Nickel	mg/l	0.1	0.028	<0.002	-	-	0.0052	<0.0051
Lead	mg/l	0.025	0.0409	<0.0006	0.098	<0.0100	0.0036	<0.0031
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	<0.0031
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	<0.0051
Vanadium	mg/l		0.017	<0.005	0.107	<0.005	<0.002	<0.002
Zinc	mg/l	2	0.115	<0.005	0.513	<0.010	0.015	0.014
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	<0.0051

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Monitoring Well 4		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		1.47	<0.025	-	-	0.75	0.061
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	<0.0002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	<0.005	<0.0051
Barium	mg/l	1	0.073	0.014	-	-	0.027	0.018
Beryllium	mg/l	0.03	<0.001	<0.001	-	-	<0.001	<0.001
Boron	mg/l	1	<0.025	<0.025	-	-	0.0098	0.013
Calcium	mg/l		40.1	35.3	42.4	40.0	41	41.0
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	<0.002
Cobalt	mg/l		0.005	<0.002	-	-	<0.002	<0.002
Chromium	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Copper	mg/l	0.2	0.004	<0.002	-	-	<0.002	<0.002
Iron	mg/l	0.3	1.63	0.007	35.2	<0.050	1.1	>0.051
Potassium	mg/l		0.816	0.912	3.08	<1.00	0.88	0.78
Magnesium	mg/l	35	11.3	9.91	15.3	10.8	11	11.0
Manganese	mg/l	0.3	0.448	0.025	2.55	<0.003	0.14	0.053
Sodium	mg/l	20	8.16	7.05	7.58	7.59	7.9	7.9
Nickel	mg/l	0.1	0.004	<0.002	-	-	<0.005	<0.0051
Lead	mg/l	0.025	0.0166	<0.0006	0.047	<0.0100	<0.003	<0.0031
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	<0.0031
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	<0.0051
Vanadium	mg/l		<0.005	<0.005	0.023	<0.005	<0.002	<0.002
Zinc	mg/l	2	0.011	<0.005	0.091	<0.010	0.0056	0.0084
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	<0.0051

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Monitoring Well 12		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		6.17	<0.025	-	-	9.6	<0.051
Mercury	mg/l	0.0007	<0.0002	-	-	-	<0.0002	<0.002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	<0.005	<0.0051
Barium	mg/l	1	0.169	0.014	-	-	0.13	0.026
Beryllium	mg/l	0.03	0.001	<0.001	-	-	<0.001	<0.001
Boron	mg/l	1	<0.025	<0.025	-	-	0.015	0.011
Calcium	mg/l		46.00	25.7	25.8	22.9	38	35
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	<0.002
Cobalt	mg/l		0.006	<0.002	-	-	0.0074	<0.002
Chromium	mg/l	0.05	0.007	<0.002	-	-	0.013	<0.002
Copper	mg/l	0.2	0.037	<0.002	-	-	0.056	0.0022
Iron	mg/l	0.3	12.9	<0.005	56.5	<0.050	19	<0.051
Potassium	mg/l		0.785	2.13	3.97	<1.00	2	0.7
Magnesium	mg/l	35	9.4	6.78	14.4	7.4	14	11.0
Manganese	mg/l	0.3	1.76	<0.002	2.44	<0.003	4.2	2.2
Sodium	mg/l	20	9.84	8.82	9.64	9.73	20.00	21
Nickel	mg/l	0.1	0.014	<0.002	-	-	0.035	0.011
Lead	mg/l	0.025	0.0168	<0.0006	0.028	<0.0100	0.012	<0.0031
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	<0.0031
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	<00.51
Vanadium	mg/l		<0.005	<0.005	0.034	<0.005	0.012	<0.002
Zinc	mg/l	2	0.041	<0.005	0.128	<0.010	0.058	0.024
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	<0.0051

Notes

1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Monitoring Well 37		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		0.186	<0.025	-	-	0.95	-
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	-
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	-
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	<0.005	-
Barium	mg/l	1	0.017	0.014	-	-	0.03	-
Beryllium	mg/l	0.03	<0.001	<0.001	-	-	<0.001	-
Boron	mg/l	1	<0.025	<0.025	-	-	0.012	-
Calcium	mg/l		47.4	45.6	47.6	48.5	48	-
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	-
Cobalt	mg/l		<0.002	<0.002	-	-	<0.002	-
Chromium	mg/l	0.05	<0.002	<0.002	-	-	<0.002	-
Copper	mg/l	0.2	0.002	<0.002	-	-	0.0023	-
Iron	mg/l	0.3	0.424	<0.005	0.546	<0.050	2	-
Potassium	mg/l		2.01	2.7	2.08	2.30	2.1	-
Magnesium	mg/l	35	7.26	6.79	7.16	7.3	7.8	-
Manganese	mg/l	0.3	0.034	<0.002	0.034	<0.003	0.13	-
Sodium	mg/l	20	9.26	9.27	9.11	9.61	9	-
Nickel	mg/l	0.1	<0.002	<0.002	-	-	<0.005	-
Lead	mg/l	0.025	<0.0006	0.0008	<0.010	<0.010	<0.003	-
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	-
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	-
Vanadium	mg/l		<0.005	<0.005	<0.005	<0.005	<0.002	-
Zinc	mg/l	2	0.008	<0.005	0.020	<0.010	0.011	-
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	-

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Monitoring Well 38D		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		39.3	0.028	-	-	82	0.066
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	<0.0002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Arsenic	mg/l	0.025	0.019	<0.010	-	-	0.05	<0.0051
Barium	mg/l	1	2.84	0.059	-	-	3.2	0.057
Beryllium	mg/l	0.03	0.006	<0.001	-	-	0.0055	<0.001
Boron	mg/l	1	<0.125	0.060	-	-	0.062	0.053
Calcium	mg/l		153	38.5	63.8	37.7	260	37
Cadmium	mg/l	0.005	0.003	<0.001	<0.003	<0.003	0.0038	<0.002
Cobalt	mg/l		0.107	<0.002	-	-	0.12	<0.002
Chromium	mg/l	0.05	0.026	<0.002	-	-	0.096	<0.002
Copper	mg/l	0.2	0.350	<0.002	-	-	0.18	<0.002
Iron	mg/l	0.3	98.0	0.040	369	<0.050	190	0.052
Potassium	mg/l		2.79	1.27	12.3	1.52	7.7	1.2
Magnesium	mg/l	35	37.2	8.31	74.1	8.36	71	8.3
Manganese	mg/l	0.3	23.0	0.202	10.5	<0.003	47	0.4
Sodium	mg/l	20	36.4	35.6	38.4	34.5	37	34
Nickel	mg/l	0.1	0.118	<0.002	-	-	0.22	<0.0051
Lead	mg/l	0.025	0.110	<0.0006	0.179	<0.010	0.14	0.0033
Antimony	mg/l	0.03	<0.020	<0.020	-	-	0.022	<0.0031
Thallium	mg/l	0.0005	<0.125	<0.125	<0.001	<0.001	0.053	<0.0051
Vanadium	mg/l		0.04	<0.005	0.185	<0.005	0.074	<0.002
Zinc	mg/l	2	0.349	<0.005	0.895	<0.010	0.5	0.018
Selenium	mg/l	0.01	<0.040	<0.040	-	-	0.031	0.0086

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

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Carlin Creek		Date Sampled:	12/8/2014	12/8/2014	3/31/2015	3/31/2015	2/1/2016	2/1/2016
Analyte (Note 1)	Units	Guidance Value						
Filtered/Unfiltered.			**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**	**Unfiltered**	**Filtered**
Aluminum	mg/l		0.035	<0.025	-	-	<0.05	<0.051
Mercury	mg/l	0.0007	<0.0002	<0.0002	-	-	<0.0002	<0.0002
Silver	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Arsenic	mg/l	0.025	<0.010	<0.010	-	-	<0.005	<0.0051
Barium	mg/l	1	0.013	0.011	-	-	0.011	0.011
Beryllium	mg/l	0.03	<0.001	<0.001	-	-	<0.001	<0.001
Boron	mg/l	1	<0.025	<0.025	-	-	0.012	0.01
Calcium	mg/l		15.9	14.0	13.1	13.4	12	12
Cadmium	mg/l	0.005	<0.001	<0.001	<0.003	<0.003	<0.002	<0.002
Cobalt	mg/l		<0.002	<0.002	-	-	<0.002	<0.002
Chromium	mg/l	0.05	<0.002	<0.002	-	-	<0.002	<0.002
Copper	mg/l	0.2	<0.002	<0.002	-	-	<0.002	<0.002
Iron	mg/l	0.3	0.065	0.023	0.199	<0.050	<0.05	<0.051
Potassium	mg/l		1.41	1.37	1.22	1.30	1	1.00
Magnesium	mg/l	35	3.9	3.42	3.17	3.23	3	3
Manganese	mg/l	0.3	0.006	0.003	0.006	<0.003	0.0032	<0.002
Sodium	mg/l	20	34.9	29.5	37.6	39.1	26	25
Nickel	mg/l	0.1	<0.002	<0.002	-	-	<0.005	<0.0051
Lead	mg/l	0.025	<0.0006	<0.0006	<0.010	<0.010	<0.003	<0.0031
Antimony	mg/l	0.03	<0.020	<0.020	-	-	<0.003	<0.0031
Thallium	mg/l	0.0005	<0.025	<0.025	<0.001	<0.001	<0.005	<0.0051
Vanadium	mg/l		<0.005	<0.005	<0.005	<0.005	<0.002	<0.002
Zinc	mg/l	2	<0.005	<0.005	<0.010	<0.010	<0.005	0.0057
Selenium	mg/l	0.01	<0.040	<0.040	-	-	<0.005	<0.0051

Notes
1. Full analytical reports for the Target Compound List were analyzed but were not detected. Contaminants of concern plus Organic compounds listed herein are for the Methylene Chloride, which has been detected above standards in one sampling event.
2. Highlighted cell indicates compound detected above applicable regulatory limit.

APPENDIX D

Binghamton-Johnson City
JOINT SEWAGE BOARD

February 29, 2016

Mr. Thomas Delamarter
Water Department, Town of Conklin
P.O. Box 182
Conklin, NY 13748

Re: Binghamton-Johnson City Joint Sewage Board
Industrial Wastewater Pretreatment Program
Annual Inspection

Dear Mr. Delamarter:

The Annual Industrial Wastewater Pretreatment Program inspection and sampling completed on December 3, 2015 at the Town of Conklin Landfill indicates that your facility is satisfactorily meeting the conditions established in your Industrial Wastewater Discharge Permit (Permit No. 031). A copy of the laboratory report is attached for your review.

The Joint Sewage Board appreciates your cooperation in the pretreatment program. If you have any questions or concerns, please feel free to contact me.

Sincerely,

Catherine P. Young
Superintendent

Enclosure

cc: Jason Greene, P.E., GHD (w/o enc.)

Catherine P. Young, Superintendent
Binghamton-Johnson City Joint Sewage Treatment Facilities
4480 Vestal Road, Vestal, New York 13850
Phone: 607-729-2975 Fax: 607-729-3041
Email: bjcwwtp@stny.rr.com

Date Issued: December 18, 2015

Pace Analytical®

Pace Analytical e-Report

Reports prepared for:
BINGHAMTON-JOHNSON CITY JOINT WWTP
4480 VESTAL ROAD
VESTAL, NY 13850
CONTACT: JOSHUA TINGUE

Project ID: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET. PROG.
Address: 143 COURT STREET
BINGHAMTON
NY
Sampling Date(s): December 03, 2015
Lab Report ID: 15120132
Client Service Contact: Nicole Johnson (518) 346-4592

Analysis Included:
624 - Sub Pace PA
625 - Sub Pace PA
PCB Analysis
Metals Analysis Sub - Pace PA
Metals Analysis Sub - Pace
BOD
Ammonia (NH3) by EPA 350.1
pH - Field Test
Total Suspended Solids
Cyanide - Sub - Pace
Flashpoint - Sub
OG 1664 - Silica Gel Pace PA

Date Issued: December 18, 2015

Pace Analytical e-Report

Reports prepared for:
BINGHAMTON-JOHNSON CITY JOINT WWTP
4480 VESTAL ROAD
VESTAL, NY 13850
CONTACT: JOSHUA TINGUE

Project ID: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET. PROG.
Address: 143 COURT STREET
BINGHAMTON
NY
Sampling Date(s): December 03, 2015
Lab Report ID: 15120132
Client Service Contact: Nicole Johnson (518) 346-4592

Analysis Included:

Roy Smith
Technical Director

Certifications: New York (EPA: NY00906, ELAP: 11078), New Jersey (NY026), Connecticut (PH-0337), Massachusetts (M-NY906), Virginia (18

Pace Analytical Services, Inc | 2190 Technology Drive | Schenectady, NY 12308
Phone: 518.346.4592 | internet: www.pacelabs.com

December 18, 2015

CASE NARRATIVE

This data package (SDG ID: 15120132) consists of 1 water sample received on 12/04/2015. The sample is from Project Name: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET. PROG..

This sample delivery group consists of the following samples:

Lab Sample ID	Client ID	Collection Date
AS38282	CONKLIN LANDFILL	12/03/2015 11:00

Sample Delivery and Receipt Conditions

(1.) All samples were delivered to the laboratory via FEDEX delivery service on 12/04/2015.

(2.) All samples were received at the laboratory intact and within holding times.

(3.) All samples were received at the laboratory properly preserved, if applicable.

PCB Aroclor Analysis

Analysis for PCB Aroclors was performed by method SW-846 8082A. Samples were extracted by USEPA SW-846 Method 3535A Solid Phase Extraction. The following technical and administrative items were noted for the analysis:

(1.) All quality assurance parameters were met for this analysis, unless otherwise noted.

Biological Oxygen Demand

Biological Oxygen Demand was performed by SM 5210B. The following technical and administrative items were noted for the analysis:

(1.) The percent recovery for the Laboratory Control Spike was below laboratory established acceptance limits for the associated sample (LAB ID: AS38282). A low analytical bias may be indicated for this analyte.

Ammonia Analysis

Analysis for ammonia was performed by method EPA 350.1. The following technical and administrative items were noted for the analysis:

(1.) All quality assurance parameters were met for this analysis, unless otherwise noted.

Field Parameters Analysis

Analysis for pH was performed in the field. The following technical and administrative items were noted for the analysis:

(1.) Field parameter was not performed by PACE-Schenectady.

Total Suspended Solids

Analysis for Total Suspended Solids (TSS) was performed by SM 2540D. The following technical and administrative items were noted for the analysis:

(1.) All quality assurance parameters were met for this analysis, unless otherwise noted.

Subcontract Analysis

(1.) Please see the PACE-PA Laboratory report for quality assurance details related to the Cyanide, Flashpoint, 624, 625, Metals and Oil and Grease analyses.

Respectfully submitted,

Nicole D. Johnson
Project Manager

SAMPLE RECEIPT REPORT
15120132

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

CLIENT: BINGHAMTON-JOHNSON CITY JOINT WWTP
PROJECT: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRE
LRF: 15120132
REPORT: ANALYTICAL REPORT ABBREV.
EDD: YES
LRF TAT: 2 WEEK

RECEIVED DATE: 12/04/2015 10:05
SHIPPED VIA: FEDEX
SHIPPING ID: 8067 7049 2453
NUMBER OF COOLERS: 1
CUSTODY SEAL INTACT: YES
COOLER STATUS: CHILLED
TEMPERATURE(S): [5] 3.7 °C

SAMPLE SEALS INTACT: NA
[1,2] SAMPLES PRESERVED PER METHOD GUIDANCE: YES
[3] SAMPLES REC'D IN HOLDTIME: YES
DISPOSAL: BY LAB (45 DAYS)
COC DISCREPANCY: NO

COMMENTS:
NUMBER OF CONTAINERS ON COC (2) DIFFERS FROM NUMBER RECEIVED (11) SPECIFIC TTO LISTS NOT SPECIFIED, LOGGED FOR BOTH VOC & SVOC.

CLIENT ID (LAB ID)	TAT-DUE Date[4]	DATE-TIME SAMPLED	MATRIX	METHOD	TEST DESCRIPTION	QC REQUEST
CONKLIN LANDFILL (AS38282)	2 WEEK 12-18-15	12/03/2015 11:00	Water		Cyanide - Sub - Pace	
	2 WEEK 12-18-15	12/03/2015 11:00	Water		Flashpoint - Sub	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	E200.7	Metals Analysis Sub - Pace PA	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 350.1	Ammonia (NH3) by EPA 350.1	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 624	624 - Sub Pace PA	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 625	625 - Sub Pace PA	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 7470	Metals Analysis Sub - Pace	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 8082A	PCB Analysis	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	EPA 9040C	pH - Field Test	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	O&G	OG 1664 - Silica Gel Pace PA	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	SM 2540 D-97,-11	Total Suspended Solids	
	2 WEEK 12-18-15	12/03/2015 11:00	Water	SM 5210B-01,-11	BOD	

[1]The pH preservatiou check of Oil and Grease (Method 1664) and Total Organic Carbon (Method 5310B) are performed as soon as possible after sample receipt and may not be included in this report.
[2]The pH preservation check of aqueous volatile samples is not performed until after the analysis of the sample to maintain zero headspace and is not included in this report.
[3]Samples received for pH analysis are uot marked as a hold time exceedance here. SW-846 methods suggests analysis to be done within 15 minutes of sample collection. Because of transportation time it is not possible for the laboratory to perform the test in that time. Sample Certificates of Analysis reports are noted as such.
[4]Samples arriving at the laboratory after 4:00 pm are assigned a due date as if they arrived the following business day unless other arrangements have been made.
The due date represents the date the lab report is expected to be completed on or before 5:00 pm (EST) for the date specified.
[5]All samples which require thermal preservation shall be considered acceptable when received greater than 6 degrees Celsius if they are collected on the same day as received and there is evidence that the chilling process has begun, such as arrival on ice.Control limits are between 0-6 Degrees Celsius. Control limits do not apply for metals analysis.
[6]Samples requesting analysis for Orthophosphate (SM 4500-P E-99,-11) require the samples to be filtered in the field within 15 minutes of the sampling event. Samples that are received unfiltered will be noted us not method compliant on the Certificates of Analysis.

Reporting Parameters and Lists

EPA 350.1 - Ammonia (NH3) by EPA 350.1 - (mg/L)
- Ammonia

EPA 8082A - PCB Analysis - (ug/L)
- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260
- Total PCB Amount

EPA 9040C - pH - Field Test - ()
- pH ($)

SM 2540 D-97,-11 - Total Suspended Solids - (mg/L)
- Total Suspended Solids

SM 5210B-01,-11 - BOD - (mg/L)
- Biochemical Oxygen Demand

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

Client: BINGHAMTON-JOHNSON CITY JOINT WWTP
Project: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET
Client Sample ID: CONKLIN LANDFILL
Lab Sample ID: 15120132-01 (AS38282)

Collection Date: 12/03/2015 11:00
Sample Matrix: WATER
Received Date: 12/04/2015 10:05
Percent Solid: N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	GC28F-1818-19	SW-846 Method 8082A	12/15/2015 15:31	RF	NA	NA	Phenomenex, Zebron ZB-1MS, 20 m, 0.18 mm ID, 0.18 µm
Prep 1:	33024	EPA 3535A	12/14/2015 13:00	ER	1060 mL	10.0 mL	NA

Analyte	CAS No.	Result (ug/L)	PQL	Dilution Factor	Flags	File ID
Aroclor 1016	12674-11-2	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1221	11104-28-2	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1232	11141-16-5	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1242	53469-21-9	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1248	12672-29-6	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1254	11097-69-1	ND	0.0500	1.00	U	GC28F-1818-19
Aroclor 1260	11096-82-5	ND	0.0500	1.00	U	GC28F-1818-19
Total PCB Amount	1336-36-3	ND		1.00	U	GC28F-1818-19

Surrogate	CAS No.	% Recovery	Limits (%)	Q[1]	File ID
Tetrachloro-meta-xylene	877-09-8	97.4	47.0-123		GC28F-1818-19
Decachlorobiphenyl	2051-24-3	115	35.0-153		GC28F-1818-19

[1]Qualifier column where '*' denotes value outside the control limits or 'D' denotes value was diluted.

ND: Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

Pace Analytical®

Analytical Sample Results

Job Number: 15120132

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

Client: BINGHAMTON-JOHNSON CITY JOINT WWTP
Project: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET
Client Sample ID: CONKLIN LANDFILL
Lab Sample ID: 15120132-01 (AS38282)

Collection Date: 12/03/2015 11:00
Sample Matrix: WATER
Received Date: 12/04/2015 10:05
Percent Solid: N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	2328	SM 2540D	12/09/2015 10:30	QKM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Total Suspended Solids	WQ001	1.90	1.00	1.00		2328

ND: Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

Pace Analytical®

Analytical Sample Results

Job Number: 15120132

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

Client: BINGHAMTON-JOHNSON CITY JOINT WWTP
Project: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET
Client Sample ID: CONKLIN LANDFILL
Lab Sample ID: 15120132-01 (AS38282)

Collection Date: 12/03/2015 11:00
Sample Matrix: WATER
Received Date: 12/04/2015 10:05
Percent Solid: N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	542	BOD - SM 5210B	12/04/2015 17:30	QKM	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Biochemical Oxygen Demand	NA	7.8	2.0	1.00		542

ND: Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
The percent recovery for the Laboratory Control Spike was below laboratory established acceptance limits for the associated sample (LAB ID: AS38282). A low analytical bias may be indicated for this analyte.

Pace Analytical®

Analytical Sample Results

Job Number: 15120132

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

Client: BINGHAMTON-JOHNSON CITY JOINT WWTP
Project: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET
Client Sample ID: CONKLIN LANDFILL
Lab Sample ID: 15120132-01 (AS38282)

Collection Date: 12/03/2015 11:00
Sample Matrix: WATER
Received Date: 12/04/2015 10:05
Percent Solid: N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:	216	EPA 350.1 - Ammonia (NH3)	12/16/2015 08:08	MGK	NA	NA	NA

Analyte	CAS No.	Result (mg/L)	PQL	Dilution Factor	Flags	File ID
Ammonia	7664-41-7	1.78	0.100	1.00		216

ND: Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.

Pace Analytical®

Analytical Sample Results

Job Number: 15120132

Pace Analytical Services, Inc.
2190 Technology Drive
Schenectady, NY 12308
Phone: 518.346.4592
Fax: 518.381.6055

Client: BINGHAMTON-JOHNSON CITY JOINT WWTP
Project: BINGHAMTON-JOHNSON CITY INDUSTRIAL WW PRET
Client Sample ID: CONKLIN LANDFILL
Lab Sample ID: 15120132-01 (AS38282)

Collection Date: 12/03/2015 11:00
Sample Matrix: WATER
Received Date: 12/04/2015 10:05
Percent Solid: N/A

	Batch ID	Method	Date	Analyst	Init Wt./Vol.	Final Vol.	Column
Analysis 1:		EPA 9040C	12/03/2015 11:00	JT	NA	NA	NA

Analyte	CAS No.	Result	Dilution Factor	Flags	File ID
pH ($)	NA	**8.00**	0.00		

($) NYSDOH-ELAP does not currently offer NELAC certification for this parameter.
Field parameter not performed by PACE-Schenectady.

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be complet <15120132P1>

1512013211

Page: 1 of 1

Section A Required Client Information:

Company: Binghamton-Johnson City WWTP
Address: 4480 Vestal Road
Vestal, NY 13850
Email To: joshua.tingue@ghd.com
Phone: 607-729-2975 Fax: 607-729-0110
Requested Due Date/TAT: 2 WEEK

Section B Required Project Information:

Report To: JOSHUA TINGUE
Copy To: jason.green@ghd.com
Project Name: INDUSTRIAL WASTEWATER PRETREATMENT PROGRAM
Project Number: BINGHAMTON WTP

Section C Invoice Information:

Attention: Accounting Department
Company Name: Binghampton-Johnson City
Address: 4480 Vestal Rd, Vestal, NY 13850
Pace Quote Reference:
Pace Project Manager: Nicole Johnson
EDD Preference: Excel Standard

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER
SITE LOCATION ☐ GA ☐ IL ☐ IN ☐ WI ☐ VC ☐ OH ☐ SC ☐ MI ☐ OTHER NY

Filtered (Y/N): N N N

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE	MATRIX CODE (Valid Matrix Codes: MATRIX / CODE)	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	CONTAINER SIZE	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: METALS*	TSS	Ammonia	BOD	Cyanide	Oil and Grease	PCBs	Residual Chlorine (Y/N)	Pace Project No / Lab I.D.
1	Conklin Land Fill	WW	G	12/4/15		12/4/15	11:00		2	1		1					X	X	X	X	X	X	X	X	15138282
2	Conklin Land	WW	G	12/4/15		12/4/15	11:00		2	1		1						X	X	X					
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
METALS*: CADMIUM, CHROMIUM, COPPER, IRON, LEAD, NICKEL, ZINC & MERCURY, Arsenic pH & tested in field				VIA FED EX →				Y/N	Y/N	Y/N	Y/N
	VIA FED EX →			T. Buckley (PACE)	12/4/15	10:05	3.7	Y/N	Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N	Y/N
								Y/N	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on ice	Custody Sealed Cooler	Samples Intact
PRINT Name of SAMPLER: Josh Tingue						
SIGNATURE of SAMPLER:	DATE Signed (MM / DD / YY): 12/3/15					

<15120132PZ>

Sample Condition Upon Receipt

CLIENT NAME: BJC

PROJECT: Binghamton WEP

COURIER: FedEx ☒ UPS ☐ Client ☐ Pace ☐ Other ☐

TRACKING # 8067 7049 2453

CUSTODY SEAL PRESENT: Yes ☒ No ☐ INTACT: Yes ☒ No ☐ N/A ☐

PACKING MATERIAL: Bubble Wrap ☒ Bubble Bags ☒ None ☐ Other ☐

ICE USED: Wet ☒ Blue ☐ None ☐

THERMOMETER USED: #164 ☒ IR Gun 03 ☐ #122087967 ☐

COOLER TEMPERATURE (°C): 3.7

BIOLOGICAL TISSUE IS FROZEN: Yes ☐ No ☐ N/A ☒

Temp should be above freezing to 6°C

COMMENTS:

Temperature Is Acceptable? ☒ Yes ☐ No

Chain of Custody Present:	☒ Yes	☐ No		1.
Chain of Custody Filled Out:	☒ Yes	☐ No		2.
Chain of Custody Relinquished:	☐ Yes	☒ No		3.
Sampler Name / Signature on COC:	☒ Yes	☐ No		4.
Samples Arrived within Hold Time:	☒ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☒ Yes	☐ No		6. BOD
Rush Turn Around Time Requested:	☐ Yes	☒ No		7.
Sufficient Volume:	☒ Yes	☐ No		8.
Correct Containers Used:	☒ Yes	☐ No		9.
- Pace Containers Used:	☒ Yes	☐ No		
Containers Intact:	☒ Yes	☐ No		10.
Filtered volume received for Dissolved tests:	☐ Yes	☐ No	☐ N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis	☐ Yes	☒ No		12. # of containers on CoC (2) does not match # of containers received.
All containers needing preservation have been checked:	☒ Yes	☐ No	☐ N/A	13. some preservative appears to have leaked onto the labels of the containers.
All containers needing preservation are in compliance with EPA recommendation: - Exceptions that are not checked: TOC, VOA, Subcontract Analyses	☒ Yes	☐ No	☐ N/A	Initial when completed: PAW Lot # of added preservative: N/A
Headspace in VOA Vials (>6mm):	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present:	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present:	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot #: N/A				

Sample Receipt form filled in: PAW 12/5/15

Line-Out (includes Copying Shipping Documents and verifying sample pH): PAW 12/5/15

Log In (includes notifying PM of any discrepacies and documenting in LIMS): AJB 12/4/15

Labeling (includes Scanning Bottles and entering LAB IDs into pH logbook): PAW 12/7/15

Definitions

B - Denotes analyte observed in associated method blank or extraction blank. Analyte concentration should be considered as estimated.

D - Surrogate was diluted. The analysis of the sample required a dilution such that the surrogate concentration was diluted outside the laboratory acceptance criteria.

E - Denotes analyte concentration exceeded calibration range of instrument. Sample could not be reanalyzed at secondary dilution due to insufficient sample amount, quick turn-around request, sample matrix interference or hold time excursion. Concentration result should be considered as estimated.

J - Denotes an estimated concentration. The concentration result is greater than or equal to the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

MDL – Adjusted Method Detection Limit.

P - Indicates relative percent difference (RPD) between primary and secondary gas chromatograph (GC) column analysis exceeds 40 % or indicates percent difference (PD) between primary and secondary gas chromatograph (GC) column analysis exceeds 25 %.

PQL – Practical Quantitation Limit. PQLs are adjusted for sample weight/volume and dilution factors.

RL - Reporting Limit Denotes lowest analyte concentration reportable for the sample based on regulatory or project specific limits.

U - Denotes analyte not detected at concentration greater than the Practical Quantitation Limit (PQL) or the Reporting Limit (RL) or the Method Detection Limit (MDL) as applicable.

Z - Chromatographic interference due to polychlorinated biphenyl (PCB) co-elution.

* - Value not within control limits.

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 18, 2015

Nicole Johnson
Pace Analytical New York
2190 Technology Drive
Schenectady, NY 12308

RE: Project: 15120132
Pace Project No.: 30167327

Dear Nicole Johnson:
Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

Samantha Bayura
samantha.bayura@pacelabs.com
Project Manager

Enclosures

cc: Jill Grygas, Pace Analytical New York

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 15120132
Pace Project No.: 30167327

Pennsylvania Certification IDs
Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 200.7
Description: 200.7 Metals, Total
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 7470A
Description: 7470 Mercury
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: **EPA 625 Low Level**
Description: 625 MSSV Low Level
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 625 Low Level. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H2: Extraction or preparation conducted outside EPA method holding time.
- CONKLIN LANDFILL (Lab ID: 30167327001)

Sample Preparation:
The samples were prepared in accordance with EPA 625 Low Level with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

QC Batch: OEXT/26432

IS: The internal standard response is below criteria. Results may be biased high.
- BLANK (Lab ID: 995758)
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene
- CONKLIN LANDFILL (Lab ID: 30167327001)
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene
- LCS (Lab ID: 995759)
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Dibenz(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: **EPA 625 Low Level**
Description: 625 MSSV Low Level
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: OEXT/26432

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 995759)
  - Benzidine

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/26432

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/26432

1c: A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
- CONKLIN LANDFILL (Lab ID: 30167327001)
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - 1,2-Diphenylhydrazine
  - 1,3-Dichlorobenzene
  - 1,4-Dichlorobenzene
  - 2,4,6-Trichlorophenol
  - 2,4-Dichlorophenol
  - 2,4-Dimethylphenol
  - 2,4-Dinitrophenol
  - 2,4-Dinitrotoluene
  - 2,6-Dinitrotoluene
  - 2-Chloronaphthalene
  - 2-Chlorophenol
  - 2-Nitrophenol
  - 3,3'-Dichlorobenzidine
  - 4,6-Dinitro-2-methylphenol
  - 4-Bromophenylphenyl ether
  - 4-Chloro-3-methylphenol
  - 4-Chlorophenylphenyl ether

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: **EPA 625 Low Level**
Description: 625 MSSV Low Level
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

Analyte Comments:

QC Batch: OEXT/26432

1c: A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

- CONKLIN LANDFILL (Lab ID: 30167327001)
  - 4-Nitrophenol
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Butylbenzylphthalate
  - Benzo(k)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(a)anthracene
  - Benzidine
  - Benzo(b)fluoranthene
  - Benzo(a)pyrene
  - bis(2-Chloroethoxy)methane
  - bis(2-Chloroethyl) ether
  - bis(2-Chloroisopropyl) ether
  - bis(2-Ethylhexyl)phthalate
  - Chrysene
  - Dibenz(a,h)anthracene
  - Dimethylphthalate
  - Di-n-butylphthalate
  - Di-n-octylphthalate
  - Diethylphthalate
  - Fluorene
  - Fluoranthene
  - Hexachloro-1,3-butadiene
  - Hexachlorobenzene
  - Hexachlorocyclopentadiene
  - Hexachloroethane
  - Indeno(1,2,3-cd)pyrene
  - Isophorone
  - Naphthalene
  - N-Nitroso-di-n-propylamine
  - Nitrobenzene
  - N-Nitrosodimethylamine
  - N-Nitrosodiphenylamine
  - Phenol
  - Phenanthrene
  - Pentachlorophenol
  - Pyrene

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 624
Description: 624 Volatile Organics
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 624. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/26129

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30167489001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 996932)
  - 2-Chloroethylvinyl ether
- MSD (Lab ID: 996933)
  - 2-Chloroethylvinyl ether
  - Chlorobenzene

Additional Comments:

Analyte Comments:

QC Batch: MSV/26129

N2: The lab does not hold TNI accreditation for this parameter.

- BLANK (Lab ID: 996921)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 624
Description: 624 Volatile Organics
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

Analyte Comments:

QC Batch: MSV/26129

N2: The lab does not hold TNI accreditation for this parameter.
- CONKLIN LANDFILL (Lab ID: 30167327001)
  - Dichlorofluoromethane
- LCS (Lab ID: 996922)
  - Dichlorofluoromethane
- MS (Lab ID: 996932)
  - Dichlorofluoromethane
- MSD (Lab ID: 996933)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 1010
Description: 1010 Flashpoint,Closed Cup
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 1010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: EPA 1664A
Description: HEM, Oil and Grease
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for EPA 1664A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WET/31377

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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PROJECT NARRATIVE

Project: 15120132
Pace Project No.: 30167327

Method: **SM 4500-CN-E**
Description: 4500CNE Cyanide, Total
Client: Pace Analytical Services, Inc.
Date: December 18, 2015

General Information:
1 sample was analyzed for SM 4500-CN-E. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: WETA/22116

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30167543001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 997176)
  - Cyanide

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 15120132
Pace Project No.: 30167327

Sample: CONKLIN LANDFILL Lab ID: **30167327001** Collected: 12/03/15 11:00 Received: 12/09/15 09:30 Matrix: Water

Comments: • Sample presrvation not verified at Pace Schenectady

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Arsenic	ND	ug/L	5.0	1	12/10/15 15:15	12/11/15 11:50	7440-38-2	
Cadmium	ND	ug/L	3.0	1	12/10/15 15:15	12/11/15 11:50	7440-43-9	
Chromium	ND	ug/L	5.0	1	12/10/15 15:15	12/11/15 11:50	7440-47-3	
Copper	**57.2**	ug/L	5.0	1	12/10/15 15:15	12/11/15 11:50	7440-50-8	
Iron	**384**	ug/L	70.0	1	12/10/15 15:15	12/11/15 11:50	7439-89-6	
Lead	**5.8**	ug/L	5.0	1	12/10/15 15:15	12/11/15 11:50	7439-92-1	
Nickel	ND	ug/L	10.0	1	12/10/15 15:15	12/11/15 11:50	7440-02-0	
Zinc	**173**	ug/L	10.0	1	12/10/15 15:15	12/11/15 11:50	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	ND	ug/L	0.20	1	12/11/15 12:38	12/14/15 14:24	7439-97-6	
625 MSSV Low Level	Analytical Method: EPA 625 Low Level Preparation Method: EPA 625 Low Level							
Acenaphthene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	83-32-9	1c,H2, M5
Acenaphthylene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	208-96-8	1c,H2, M5
Anthracene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	120-12-7	1c,H2, M5
Benzidine	ND	ug/L	95.2	1	12/11/15 09:05	12/14/15 12:34	92-87-5	1c,H2, L2,M5
Benzo(a)anthracene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	56-55-3	1c,H2, M5
Benzo(a)pyrene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	50-32-8	1c,H2, IS,M5
Benzo(b)fluoranthene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	205-99-2	1c,H2, IS,M5
Benzo(g,h,i)perylene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	191-24-2	1c,H2, IS,M5
Benzo(k)fluoranthene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	207-08-9	1c,H2, IS,M5
4-Bromophenylphenyl ether	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	101-55-3	1c,H2, M5
Butylbenzylphthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	85-68-7	1c,H2, M5
4-Chloro-3-methylphenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	59-50-7	1c,H2, M5
bis(2-Chloroethoxy)methane	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	111-91-1	1c,H2, M5
bis(2-Chloroethyl) ether	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	111-44-4	1c,H2, M5
bis(2-Chloroisopropyl) ether	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	108-60-1	1c,H2, M5
2-Chloronaphthalene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	91-58-7	1c,H2, M5
2-Chlorophenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	95-57-8	1c,H2, M5
4-Chlorophenylphenyl ether	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	7005-72-3	1c,H2, M5
Chrysene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	218-01-9	1c,H2, M5

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 15120132
Pace Project No.: 30167327

Sample: CONKLIN LANDFILL **Lab ID: 30167327001** Collected: 12/03/15 11:00 Received: 12/09/15 09:30 Matrix: Water

Comments: • Sample presrvation not verified at Pace Schenectady

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV Low Level	Analytical Method: EPA 625 Low Level Preparation Method: EPA 625 Low Level							
Dibenz(a,h)anthracene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	53-70-3	1c,H2, IS,M5
1,2-Dichlorobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	95-50-1	1c,H2, M5
1,3-Dichlorobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	541-73-1	1c,H2, M5
1,4-Dichlorobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	106-46-7	1c,H2, M5
3,3'-Dichlorobenzidine	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	91-94-1	1c,H2, M5
2,4-Dichlorophenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	120-83-2	1c,H2, M5
Diethylphthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	84-66-2	1c,H2, M5
2,4-Dimethylphenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	105-67-9	1c,H2, M5
Dimethylphthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	131-11-3	1c,H2, M5
Di-n-butylphthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	84-74-2	1c,H2, M5
4,6-Dinitro-2-methylphenol	ND	ug/L	2.4	1	12/11/15 09:05	12/14/15 16:44	534-52-1	1c,H2, M5
2,4-Dinitrophenol	ND	ug/L	2.4	1	12/11/15 09:05	12/14/15 16:44	51-28-5	1c,H2, M5
2,4-Dinitrotoluene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	121-14-2	1c,H2, M5
2,6-Dinitrotoluene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	606-20-2	1c,H2, M5
Di-n-octylphthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	117-84-0	1c,H2, M5
1,2-Diphenylhydrazine	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	122-66-7	1c,H2, M5
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	117-81-7	1c,H2, M5
Fluoranthene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	206-44-0	1c,H2, M5
Fluorene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	86-73-7	1c,H2, M5
Hexachloro-1,3-butadiene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	87-68-3	1c,H2, M5
Hexachlorobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	118-74-1	1c,H2, M5
Hexachlorocyclopentadiene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	77-47-4	1c,H2, M5
Hexachloroethane	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	67-72-1	1c,H2, M5
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	193-39-5	1c,H2, IS,M5
Isophorone	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	78-59-1	1c,H2, M5
Naphthalene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	91-20-3	1c,H2, M5
Nitrobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	98-95-3	1c,H2, M5

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ANALYTICAL RESULTS

Project: 15120132
Pace Project No.: 30167327

Sample: CONKLIN LANDFILL **Lab ID: 30167327001** Collected: 12/03/15 11:00 Received: 12/09/15 09:30 Matrix: Water

Comments: • Sample preservation not verified at Pace Schenectady

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV Low Level	Analytical Method: EPA 625 Low Level Preparation Method: EPA 625 Low Level							
2-Nitrophenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	88-75-5	1c,H2, M5
4-Nitrophenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	100-02-7	1c,H2, M5
N-Nitrosodimethylamine	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	62-75-9	1c,H2, M5
N-Nitroso-di-n-propylamine	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	621-64-7	1c,H2, M5
N-Nitrosodiphenylamine	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	86-30-6	1c,H2, M5
Pentachlorophenol	ND	ug/L	2.4	1	12/11/15 09:05	12/14/15 16:44	87-86-5	1c,H2, M5
Phenanthrene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	85-01-8	1c,H2, M5
Phenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	108-95-2	1c,H2, M5
Pyrene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	129-00-0	1c,H2, M5
1,2,4-Trichlorobenzene	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	120-82-1	1c,H2, M5
2,4,6-Trichlorophenol	ND	ug/L	0.95	1	12/11/15 09:05	12/14/15 16:44	88-06-2	1c,H2, M5
Surrogates								
Nitrobenzene-d5 (S)	62	%	17-113	1	12/11/15 09:05	12/14/15 16:44	4165-60-0	M5
2-Fluorobiphenyl (S)	67	%	18-118	1	12/11/15 09:05	12/14/15 16:44	321-60-8	M5
Terphenyl-d14 (S)	90	%	37-140	1	12/11/15 09:05	12/14/15 16:44	1718-51-0	M5
Phenol-d6 (S)	23	%	10-47	1	12/11/15 09:05	12/14/15 16:44	13127-88-3	M5
2-Fluorophenol (S)	36	%	10-69	1	12/11/15 09:05	12/14/15 16:44	367-12-4	M5
2,4,6-Tribromophenol (S)	69	%	35-124	1	12/11/15 09:05	12/14/15 16:44	118-79-6	M5
624 Volatile Organics	Analytical Method: EPA 624							
Acrolein	ND	ug/L	2.0	1		12/14/15 17:19	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		12/14/15 17:19	107-13-1	
Benzene	ND	ug/L	1.0	1		12/14/15 17:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		12/14/15 17:19	75-27-4	
Bromoform	ND	ug/L	1.0	1		12/14/15 17:19	75-25-2	
Bromomethane	ND	ug/L	1.0	1		12/14/15 17:19	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		12/14/15 17:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		12/14/15 17:19	108-90-7	
Chloroethane	ND	ug/L	1.0	1		12/14/15 17:19	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	2.0	1		12/14/15 17:19	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		12/14/15 17:19	67-66-3	
Chloromethane	ND	ug/L	1.0	1		12/14/15 17:19	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		12/14/15 17:19	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		12/14/15 17:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		12/14/15 17:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		12/14/15 17:19	75-35-4	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		12/14/15 17:19	156-60-5	
Dichlorofluoromethane	0.0	ug/L		1		12/14/15 17:19	75-43-4	N2

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 15120132
Pace Project No.: 30167327

Sample: CONKLIN LANDFILL **Lab ID: 30167327001** Collected: 12/03/15 11:00 Received: 12/09/15 09:30 Matrix: Water

Comments: • Sample presrvation not verified at Pace Schenectady

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624							
1,2-Dichloropropane	ND	ug/L	1.0	1		12/14/15 17:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		12/14/15 17:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		12/14/15 17:19	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		12/14/15 17:19	100-41-4	
Methylene Chloride	ND	ug/L	1.0	1		12/14/15 17:19	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/14/15 17:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		12/14/15 17:19	127-18-4	
Toluene	ND	ug/L	1.0	1		12/14/15 17:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		12/14/15 17:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		12/14/15 17:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		12/14/15 17:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		12/14/15 17:19	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		12/14/15 17:19	75-01-4	
Surrogates								
4-Bromofluorobenzene (S)	101	%	81-119	1		12/14/15 17:19	460-00-4	
Toluene-d8 (S)	98	%	84-115	1		12/14/15 17:19	2037-26-5	
1,2-Dichloroethane-d4 (S)	121	%	77-126	1		12/14/15 17:19	17060-07-0	
Dibromofluoromethane (S)	107	%	70-130	1		12/14/15 17:19	1868-53-7	
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010							
Flashpoint	**>200**	deg F	60.0	1		12/16/15 15:54		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	ND	mg/L	4.8	1		12/18/15 08:00		M5
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.010	1		12/15/15 21:48	57-12-5	

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: MERP/7176
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Associated Lab Samples: 30167327001

METHOD BLANK: 996067 Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	12/14/15 13:50	

LABORATORY CONTROL SAMPLE: 996068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	1.0	104	85-115	

MATRIX SPIKE SAMPLE: 996070

Parameter	Units	30167466001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	2.5	2.6	101	80-120	

SAMPLE DUPLICATE: 996069

Parameter	Units	30167466001 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	ND	.09J		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: MPRP/17104
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 30167327001

METHOD BLANK: 995609
Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	5.0	12/11/15 11:14	
Cadmium	ug/L	ND	3.0	12/11/15 11:14	
Chromium	ug/L	ND	5.0	12/11/15 11:14	
Copper	ug/L	ND	5.0	12/11/15 11:14	
Iron	ug/L	ND	70.0	12/11/15 11:14	
Lead	ug/L	ND	5.0	12/11/15 11:14	
Nickel	ug/L	ND	10.0	12/11/15 11:14	
Zinc	ug/L	ND	10.0	12/11/15 11:14	

LABORATORY CONTROL SAMPLE: 995610

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	471	94	85-115	
Cadmium	ug/L	500	485	97	85-115	
Chromium	ug/L	500	475	95	85-115	
Copper	ug/L	500	481	96	85-115	
Iron	ug/L	5000	4880	98	85-115	
Lead	ug/L	500	464	93	85-115	
Nickel	ug/L	500	491	98	85-115	
Zinc	ug/L	500	473	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 995612 995613

Parameter	Units	30167312001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Arsenic	ug/L	0.0084 mg/L	500	500	486	483	96	95	70-130	1	
Cadmium	ug/L	ND	500	500	488	485	98	97	70-130	1	
Chromium	ug/L	ND	500	500	476	475	95	95	70-130	0	
Copper	ug/L	ND	500	500	484	485	96	96	70-130	0	
Iron	ug/L	0.28 mg/L	5000	5000	5070	5070	96	96	70-130	0	
Lead	ug/L	ND	500	500	469	469	94	94	70-130	0	
Nickel	ug/L	ND	500	500	480	479	96	96	70-130	0	
Zinc	ug/L	ND	500	500	478	477	94	94	70-130	0	

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

MATRIX SPIKE SAMPLE: 995615

Parameter	Units	30167374001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	ND	500	483	97	70-130	
Cadmium	ug/L	ND	500	495	99	70-130	
Chromium	ug/L	ND	500	482	95	70-130	
Copper	ug/L	ND	500	493	98	70-130	
Iron	ug/L	332	5000	5160	97	70-130	
Lead	ug/L	ND	500	481	96	70-130	
Nickel	ug/L	ND	500	482	96	70-130	
Zinc	ug/L	13.1	500	488	95	70-130	

SAMPLE DUPLICATE: 995611

Parameter	Units	30167312001 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	0.0084 mg/L	7.6	10	
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	.76J		
Copper	ug/L	ND	ND		
Iron	ug/L	0.28 mg/L	269	2	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Zinc	ug/L	ND	5J		

SAMPLE DUPLICATE: 995614

Parameter	Units	30167374001 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	ND	ND		
Cadmium	ug/L	ND	ND		
Chromium	ug/L	ND	4.7J		
Copper	ug/L	ND	ND		
Iron	ug/L	332	341	3	
Lead	ug/L	ND	ND		
Nickel	ug/L	ND	ND		
Zinc	ug/L	13.1	12.9	2	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: MSV/26129
QC Batch Method: EPA 624
Analysis Method: EPA 624
Analysis Description: 624 MSV
Associated Lab Samples: 30167327001

METHOD BLANK: 996921
Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	12/14/15 11:21	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/14/15 11:21	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/14/15 11:21	
1,1-Dichloroethane	ug/L	ND	1.0	12/14/15 11:21	
1,1-Dichloroethene	ug/L	ND	1.0	12/14/15 11:21	
1,2-Dichloroethane	ug/L	ND	1.0	12/14/15 11:21	
1,2-Dichloropropane	ug/L	ND	1.0	12/14/15 11:21	
2-Chloroethylvinyl ether	ug/L	ND	2.0	12/14/15 11:21	
Acrolein	ug/L	ND	2.0	12/14/15 11:21	
Acrylonitrile	ug/L	ND	4.0	12/14/15 11:21	
Benzene	ug/L	ND	1.0	12/14/15 11:21	
Bromodichloromethane	ug/L	ND	1.0	12/14/15 11:21	
Bromoform	ug/L	ND	1.0	12/14/15 11:21	
Bromomethane	ug/L	ND	1.0	12/14/15 11:21	
Carbon tetrachloride	ug/L	ND	1.0	12/14/15 11:21	
Chlorobenzene	ug/L	ND	1.0	12/14/15 11:21	
Chloroethane	ug/L	ND	1.0	12/14/15 11:21	
Chloroform	ug/L	ND	1.0	12/14/15 11:21	
Chloromethane	ug/L	ND	1.0	12/14/15 11:21	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/14/15 11:21	
Dibromochloromethane	ug/L	ND	1.0	12/14/15 11:21	
Dichlorofluoromethane	ug/L	0.0		12/14/15 11:21	N2
Ethylbenzene	ug/L	ND	1.0	12/14/15 11:21	
Methylene Chloride	ug/L	ND	1.0	12/14/15 11:21	
Tetrachloroethene	ug/L	ND	1.0	12/14/15 11:21	
Toluene	ug/L	ND	1.0	12/14/15 11:21	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/14/15 11:21	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/14/15 11:21	
Trichloroethene	ug/L	ND	1.0	12/14/15 11:21	
Trichlorofluoromethane	ug/L	ND	1.0	12/14/15 11:21	
Vinyl chloride	ug/L	ND	1.0	12/14/15 11:21	
1,2-Dichloroethane-d4 (S)	%	112	77-126	12/14/15 11:21	
4-Bromofluorobenzene (S)	%	107	81-119	12/14/15 11:21	
Dibromofluoromethane (S)	%	101	70-130	12/14/15 11:21	
Toluene-d8 (S)	%	105	84-115	12/14/15 11:21	

LABORATORY CONTROL SAMPLE: 996922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

LABORATORY CONTROL SAMPLE: 996922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	16.9	84	58-128	
1,1,2-Trichloroethane	ug/L	20	19.7	98	69-120	
1,1-Dichloroethane	ug/L	20	17.0	85	66-129	
1,1-Dichloroethene	ug/L	20	17.3	86	59-133	
1,2-Dichloroethane	ug/L	20	18.0	90	66-123	
1,2-Dichloropropane	ug/L	20	19.0	95	69-121	
2-Chloroethylvinyl ether	ug/L	20	9.5	48	10-160	
Acrolein	ug/L	20	28.4	142		
Acrylonitrile	ug/L	20	16.1	80	35-187	
Benzene	ug/L	20	20.2	101	69-115	
Bromodichloromethane	ug/L	20	20.5	102	69-132	
Bromoform	ug/L	20	21.7	109	52-142	
Bromomethane	ug/L	20	16.5	82	14-151	
Carbon tetrachloride	ug/L	20	18.7	94	65-138	
Chlorobenzene	ug/L	20	19.9	99	69-120	
Chloroethane	ug/L	20	18.2	91	62-134	
Chloroform	ug/L	20	17.8	89	67-123	
Chloromethane	ug/L	20	17.7	88	54-143	
cis-1,3-Dichloropropene	ug/L	20	21.5	108	64-125	
Dibromochloromethane	ug/L	20	21.3	107	61-135	
Dichlorofluoromethane	ug/L		18.1			N2
Ethylbenzene	ug/L	20	21.4	107	71-116	
Methylene Chloride	ug/L	20	18.8	94	56-130	
Tetrachloroethene	ug/L	20	21.8	109	62-122	
Toluene	ug/L	20	20.3	102	70-115	
trans-1,2-Dichloroethene	ug/L	20	17.1	86	63-130	
trans-1,3-Dichloropropene	ug/L	20	19.0	95	62-122	
Trichloroethene	ug/L	20	19.4	97	61-126	
Trichlorofluoromethane	ug/L	20	16.2	81	64-133	
Vinyl chloride	ug/L	20	18.2	91	58-127	
1,2-Dichloroethane-d4 (S)	%			104	77-126	
4-Bromofluorobenzene (S)	%			107	81-119	
Dibromofluoromethane (S)	%			102	70-130	
Toluene-d8 (S)	%			106	84-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 996932 996933

Parameter	Units	30167489001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	18.5	17.6	93	88	54-140	5	
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	15.5	15.8	77	79	54-124	2	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	18.3	17.7	91	88	58-120	3	
1,1-Dichloroethane	ug/L	1.0 U	20	20	17.4	16.4	87	82	55-133	6	
1,1-Dichloroethene	ug/L	1.0 U	20	20	18.5	17.3	93	87	48-141	7	
1,2-Dichloroethane	ug/L	1.0 U	20	20	18.4	18.2	92	91	58-123	2	

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 996932 996933

Parameter	Units	30167489001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dichloropropane	ug/L	1.0 U	20	20	18.1	17.3	91	86	55-125	5	
2-Chloroethylvinyl ether	ug/L	2.0 U	20	20	ND	ND	0	0	10-175		M1
Acrolein	ug/L	2.0 U	20	20	35.3	31.7	176	158		11	
Acrylonitrile	ug/L	4.0 U	20	20	14.2	15.6	71	78	31-182	9	
Benzene	ug/L	4.8	20	20	24.2	23.7	97	95	63-123	2	
Bromodichloromethane	ug/L	1.0 U	20	20	20.0	19.5	100	98	55-127	2	
Bromoform	ug/L	1.0 U	20	20	19.4	19.7	97	98	44-131	1	
Bromomethane	ug/L	1.0 U	20	20	14.3	18.1	71	91	10-149	24	
Carbon tetrachloride	ug/L	1.0 U	20	20	19.1	18.1	95	90	44-155	5	
Chlorobenzene	ug/L	110	20	20	134	138	120	139	57-121	3	M1
Chloroethane	ug/L	1.0 U	20	20	20.1	19.1	101	95	57-156	5	
Chloroform	ug/L	1.0 U	20	20	17.4	16.8	87	84	56-132	4	
Chloromethane	ug/L	1.0 U	20	20	18.8	17.1	94	85	42-163	9	
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	19.8	18.8	99	94	55-119	5	
Dibromochloromethane	ug/L	1.0 U	20	20	19.5	19.0	98	95	52-129	3	
Dichlorofluoromethane	ug/L	0.0			22.0	20.0				9	N2
Ethylbenzene	ug/L	1.0 U	20	20	19.9	19.6	100	98	70-120	2	
Methylene Chloride	ug/L	1.0 U	20	20	17.6	16.5	88	82	38-134	7	
Tetrachloroethene	ug/L	1.0 U	20	20	19.5	20.4	98	102	53-125	4	
Toluene	ug/L	1.0 U	20	20	19.1	18.3	95	92	66-124	4	
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	16.9	16.1	84	80	52-136	5	
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	17.3	18.1	86	90	54-118	5	
Trichloroethene	ug/L	1.0 U	20	20	19.6	18.8	98	94	50-127	4	
Trichlorofluoromethane	ug/L	1.0 U	20	20	23.1	18.2	115	91	63-167	23	
Vinyl chloride	ug/L	1.0 U	20	20	19.7	17.8	99	89	54-149	10	
1,2-Dichloroethane-d4 (S)	%						105	111	77-126		
4-Bromofluorobenzene (S)	%						102	105	81-119		
Dibromofluoromethane (S)	%						106	103	70-130		
Toluene-d8 (S)	%						104	108	84-115		

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REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: OEXT/26432
QC Batch Method: EPA 625 Low Level
Associated Lab Samples: 30167327001

Analysis Method: EPA 625 Low Level
Analysis Description: 625 MSS Low Level

METHOD BLANK: 995758
Associated Lab Samples: 30167327001

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
1,2-Dichlorobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
1,2-Diphenylhydrazine	ug/L	ND	1.0	12/14/15 16:05	M5
1,3-Dichlorobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
1,4-Dichlorobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
2,4,6-Trichlorophenol	ug/L	ND	1.0	12/14/15 16:05	M5
2,4-Dichlorophenol	ug/L	ND	1.0	12/14/15 16:05	M5
2,4-Dimethylphenol	ug/L	ND	1.0	12/14/15 16:05	M5
2,4-Dinitrophenol	ug/L	ND	2.5	12/14/15 16:05	M5
2,4-Dinitrotoluene	ug/L	ND	1.0	12/14/15 16:05	M5
2,6-Dinitrotoluene	ug/L	ND	1.0	12/14/15 16:05	M5
2-Chloronaphthalene	ug/L	ND	1.0	12/14/15 16:05	M5
2-Chlorophenol	ug/L	ND	1.0	12/14/15 16:05	M5
2-Nitrophenol	ug/L	ND	1.0	12/14/15 16:05	M5
3,3'-Dichlorobenzidine	ug/L	ND	1.0	12/14/15 16:05	M5
4,6-Dinitro-2-methylphenol	ug/L	ND	2.5	12/14/15 16:05	M5
4-Bromophenylphenyl ether	ug/L	ND	1.0	12/14/15 16:05	M5
4-Chloro-3-methylphenol	ug/L	ND	1.0	12/14/15 16:05	M5
4-Chlorophenylphenyl ether	ug/L	ND	1.0	12/14/15 16:05	M5
4-Nitrophenol	ug/L	ND	1.0	12/14/15 16:05	M5
Acenaphthene	ug/L	ND	1.0	12/14/15 16:05	M5
Acenaphthylene	ug/L	ND	1.0	12/14/15 16:05	M5
Anthracene	ug/L	ND	1.0	12/14/15 16:05	M5
Benzidine	ug/L	ND	100	12/14/15 12:14	M5
Benzo(a)anthracene	ug/L	ND	1.0	12/14/15 16:05	M5
Benzo(a)pyrene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
Benzo(b)fluoranthene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
Benzo(g,h,i)perylene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
Benzo(k)fluoranthene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
bis(2-Chloroethoxy)methane	ug/L	ND	1.0	12/14/15 16:05	M5
bis(2-Chloroethyl) ether	ug/L	ND	1.0	12/14/15 16:05	M5
bis(2-Chloroisopropyl) ether	ug/L	ND	1.0	12/14/15 16:05	M5
bis(2-Ethylhexyl)phthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Butylbenzylphthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Chrysene	ug/L	ND	1.0	12/14/15 16:05	M5
Di-n-butylphthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Di-n-octylphthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Dibenz(a,h)anthracene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
Diethylphthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Dimethylphthalate	ug/L	ND	1.0	12/14/15 16:05	M5
Fluoranthene	ug/L	ND	1.0	12/14/15 16:05	M5

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

METHOD BLANK: 995758 Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluorene	ug/L	ND	1.0	12/14/15 16:05	M5
Hexachloro-1,3-butadiene	ug/L	ND	1.0	12/14/15 16:05	M5
Hexachlorobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
Hexachlorocyclopentadiene	ug/L	ND	1.0	12/14/15 16:05	M5
Hexachloroethane	ug/L	ND	1.0	12/14/15 16:05	M5
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.0	12/14/15 16:05	IS,M5
Isophorone	ug/L	ND	1.0	12/14/15 16:05	M5
N-Nitroso-di-n-propylamine	ug/L	ND	1.0	12/14/15 16:05	M5
N-Nitrosodimethylamine	ug/L	ND	1.0	12/14/15 16:05	M5
N-Nitrosodiphenylamine	ug/L	ND	1.0	12/14/15 16:05	M5
Naphthalene	ug/L	ND	1.0	12/14/15 16:05	M5
Nitrobenzene	ug/L	ND	1.0	12/14/15 16:05	M5
Pentachlorophenol	ug/L	ND	2.5	12/14/15 16:05	M5
Phenanthrene	ug/L	ND	1.0	12/14/15 16:05	M5
Phenol	ug/L	ND	1.0	12/14/15 16:05	M5
Pyrene	ug/L	ND	1.0	12/14/15 16:05	M5
2,4,6-Tribromophenol (S)	%	71	35-124	12/14/15 16:05	M5
2-Fluorobiphenyl (S)	%	71	18-118	12/14/15 16:05	M5
2-Fluorophenol (S)	%	43	10-69	12/14/15 16:05	M5
Nitrobenzene-d5 (S)	%	64	17-113	12/14/15 16:05	M5
Phenol-d6 (S)	%	33	10-47	12/14/15 16:05	M5
Terphenyl-d14 (S)	%	94	37-140	12/14/15 16:05	M5

LABORATORY CONTROL SAMPLE: 995759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	10	5.0	50	28-98	M5
1,2-Dichlorobenzene	ug/L	10	6.2	62	38-91	M5
1,2-Diphenylhydrazine	ug/L		ND			M5
1,3-Dichlorobenzene	ug/L	10	6.0	60	32-88	M5
1,4-Dichlorobenzene	ug/L	10	6.5	65	35-91	M5
2,4,6-Trichlorophenol	ug/L	10	7.6	76	37-138	M5
2,4-Dichlorophenol	ug/L	10	5.8	58	38-113	M5
2,4-Dimethylphenol	ug/L	10	5.7	57	13-108	M5
2,4-Dinitrophenol	ug/L	10	5.6	56	10-171	M5
2,4-Dinitrotoluene	ug/L	10	7.6	76	58-126	M5
2,6-Dinitrotoluene	ug/L	10	7.7	77	57-120	M5
2-Chloronaphthalene	ug/L	10	7.0	70	48-110	M5
2-Chlorophenol	ug/L	10	7.0	70	37-104	M5
2-Nitrophenol	ug/L	10	5.4	54	36-110	M5
3,3'-Dichlorobenzidine	ug/L	10	8.3	83	10-149	M5
4,6-Dinitro-2-methylphenol	ug/L	10	6.2	62	10-155	M5
4-Bromophenylphenyl ether	ug/L	10	6.6	66	49-104	M5
4-Chloro-3-methylphenol	ug/L	10	6.1	61	42-114	M5

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REPORT OF LABORATORY ANALYSIS

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(724)850-5600

QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

LABORATORY CONTROL SAMPLE: 995759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Chlorophenylphenyl ether	ug/L	10	7.4	74	53-115	M5
4-Nitrophenol	ug/L	10	4.0	40	10-67	M5
Acenaphthene	ug/L	10	7.7	77	45-120	M5
Acenaphthylene	ug/L	10	7.5	75	44-120	M5
Anthracene	ug/L	10	7.9	79	39-129	M5
Benzidine	ug/L	200	ND	0	10-175	L0,M5
Benzo(a)anthracene	ug/L	10	8.1	81	52-130	M5
Benzo(a)pyrene	ug/L	10	8.3	83	43-138	IS,M5
Benzo(b)fluoranthene	ug/L	10	10.4	104	43-159	IS,M5
Benzo(g,h,i)perylene	ug/L	10	3.6	36	10-153	IS,M5
Benzo(k)fluoranthene	ug/L	10	10.3	103	50-167	IS,M5
bis(2-Chloroethoxy)methane	ug/L	10	6.0	60	39-116	M5
bis(2-Chloroethyl) ether	ug/L	10	6.9	69	38-106	M5
bis(2-Chloroisopropyl) ether	ug/L	10	7.0	70	38-112	M5
bis(2-Ethylhexyl)phthalate	ug/L	10	8.3	83	30-169	M5
Butylbenzylphthalate	ug/L	10	9.7	97	54-149	M5
Chrysene	ug/L	10	8.3	83	57-140	M5
Di-n-butylphthalate	ug/L	10	8.7	87	55-130	M5
Di-n-octylphthalate	ug/L	10	6.8	68	47-138	M5
Dibenz(a,h)anthracene	ug/L	10	4.5	45	10-161	IS,M5
Diethylphthalate	ug/L	10	8.0	80	58-127	M5
Dimethylphthalate	ug/L	10	7.9	79	60-122	M5
Fluoranthene	ug/L	10	8.2	82	43-134	M5
Fluorene	ug/L	10	7.8	78	49-123	M5
Hexachloro-1,3-butadiene	ug/L	10	5.4	54	29-109	M5
Hexachlorobenzene	ug/L	10	6.9	69	52-115	M5
Hexachlorocyclopentadiene	ug/L	10	3.5	35	10-92	M5
Hexachloroethane	ug/L	10	6.1	61	33-90	M5
Indeno(1,2,3-cd)pyrene	ug/L	10	4.0	40	10-159	IS,M5
Isophorone	ug/L	10	4.9	49	34-104	M5
N-Nitroso-di-n-propylamine	ug/L	10	8.0	80	47-118	M5
N-Nitrosodimethylamine	ug/L	10	5.1	51	17-82	M5
N-Nitrosodiphenylamine	ug/L	10	6.6	66	44-106	M5
Naphthalene	ug/L	10	5.6	56	43-109	M5
Nitrobenzene	ug/L	10	5.7	57	22-113	M5
Pentachlorophenol	ug/L	10	6.9	69	43-133	M5
Phenanthrene	ug/L	10	8.0	80	55-127	M5
Phenol	ug/L	10	3.5	35	11-50	M5
Pyrene	ug/L	10	9.2	92	45-159	M5
2,4,6-Tribromophenol (S)	%			66	35-124	M5
2-Fluorobiphenyl (S)	%			70	18-118	M5
2-Fluorophenol (S)	%			43	10-69	M5
Nitrobenzene-d5 (S)	%			52	17-113	M5
Phenol-d6 (S)	%			29	10-47	M5
Terphenyl-d14 (S)	%			89	37-140	M5

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: WET/31365
QC Batch Method: EPA 1010
Analysis Method: EPA 1010
Analysis Description: 1010 Flash Point, Closed Cup
Associated Lab Samples: 30167327001

METHOD BLANK: 998397
Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Flashpoint	deg F	>200	60.0	12/16/15 16:25	

SAMPLE DUPLICATE: 998398

Parameter	Units	30166975001 Result	Dup Result	RPD	Qualifiers
Flashpoint	deg F	>200	>200		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: WET/31377
QC Batch Method: EPA 1664A
Analysis Method: EPA 1664A
Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 30167327001

METHOD BLANK: 998985
Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	12/18/15 08:00	M5

LABORATORY CONTROL SAMPLE: 998986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	42.1	40.0	95	78-114	M5

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REPORT OF LABORATORY ANALYSIS

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(724)850-5600

QUALITY CONTROL DATA

Project: 15120132
Pace Project No.: 30167327

QC Batch: WETA/22116
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 30167327001

METHOD BLANK: 997172 Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.010	12/15/15 21:33	

METHOD BLANK: 997173 Matrix: Water
Associated Lab Samples: 30167327001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.010	12/15/15 21:33	

LABORATORY CONTROL SAMPLE: 997174

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.2	0.19	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 997175 997176

Parameter	Units	30167543001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Cyanide	mg/L	ND	.1	.1	0.099	0.092	95	88	90-110	7	M1

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REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 15120132
Pace Project No.: 30167327

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: OEXT/26432

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSSV/8615

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: WET/31377

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
H2	Extraction or preparation conducted outside EPA method holding time.
IS	The internal standard response is below criteria. Results may be biased high.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M5	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
N2	The lab does not hold TNI accreditation for this parameter.
c2	Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 15120132
Pace Project No.: 30167327

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30167327001	CONKLIN LANDFILL	EPA 200.7	MPRP/17104	EPA 200.7	ICP/16242
30167327001	CONKLIN LANDFILL	EPA 7470A	MERP/7176	EPA 7470A	MERC/6860
30167327001	CONKLIN LANDFILL	EPA 625 Low Level	OEXT/26432	EPA 625 Low Level	MSSV/8615
30167327001	CONKLIN LANDFILL	EPA 624	MSV/26129		
30167327001	CONKLIN LANDFILL	EPA 1010	WET/31365		
30167327001	CONKLIN LANDFILL	EPA 1664A	WET/31377		
30167327001	CONKLIN LANDFILL	SM 4500-CN-E	WETA/22116		

PACE-PA

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Pace Analytical Services, Inc.
2190 Technology Drive, Schenectady, NY 12308
Telephone (518) 346-4592 Fax (518) 381-6055
www.pacelabs.com

LRF # 15120132
(LAB USE ONLY)

DISPOSAL REQUIREMENTS: (To be filled in by Client)

- ○ RETURN TO CLIENT
- ● DISPOSAL BY RECEIVING LAB
- ○ ARCHIVAL BY RECEIVING LAB

Additional charges incurred for disposal (if hazardous) or archival. Call for details.

CLIENT (REPORTS TO BE SENT TO):	PACE
PROJECT#/PROJECT NAME:	15120132
PROJECT MANAGER:	Nicole Johnson
LOCATION (CITY/STATE) ADDRESS:	NY
Project:	BJC IWPP
REQUIRED TURN AROUND TIME:	12/18/2015
Notes:	SAMPLE PRESERVATION NOT VERIFIED AT SCHENECTADY LAB. METALS: AS,CD,CR,CU,FE,PB,NI,ZN.
NAME OF COURIER (IF USED):	
ELECTRONIC RESULTS	Nicole.Johnson@pacelabs.com; Jill.Grygas@pacelabs.com

ENTER ANALYSIS AND METHOD NUMBER REQUESTED

30167327

SAMPLE ID	DATE	TIME	MATRIX	GRAB/ COMP	LAB SAMPLE ID (LAB USE ONLY)	NUMBER OF CONTAINERS	VOC (624) TTO	Cyanide	Flashpoint	SELECT METALS (200.7)	MERCURY (7470)	OIL & GREASE (1664)		REMARKS:
PRESERVATIVE CODE:														
BOTTLE TYPE:														
BOTTLE SIZE:														
CONKLIN LANDFILL	12/3/15	11:00	L	GRAB	AS38282	7	X	X	X	X	X	X		001

PRESERVATIVE KEY
0 - ICE
1 - HCL
2 - HNO3
3 - H2SO4
4 - NaOH
5 - Zn. Acetate
6 - MeOH
7 - NaHSO4
8 - Other (Na2SO3)

AMBIENT OR CHILLED: (CHILLED circled) TEMP: 3.2
RECEIVED BROKEN OR LEAKING: Y (N)
COC TAPE: (Y) N
COC DISCREPANCIES: Y (N)
PROPERLY PRESERVED: (Y) N
RECVD W/I HOLDING TIMES: (Y) N

OTHER NOTES: Analytical Report (Abbrev.) [LEVEL-1] EDD: Excel

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE	[signature]	VIA FED EX →	→	[signature]		
PRINTED NAME	A. Bittle			Ryan Bing		
COMPANY	PACE			Pace		
DATE/TIME	12/4/15 16:00			12/9/15 0930		

S:\LOGIN\MDLCOCS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed. <15120132P1>

30167327

15120132l

Page: 1 of 1

Section A Required Client Information:

Company:	Binghamton-Johnson City WWTP
Address:	4480 Vestal Road, Vestal, NY 13850
Email To:	joshua.tingue@ghd.com
Phone:	607-729-2975
Fax:	607-729-0110
Requested Due Date/TAT:	2 WEEK

Section B Required Project Information:

Report To:	JOSHUA TINGUE
Copy To:	jason.green@ghd.com
Project Name:	INDUSTRIAL WASTEWATER PRETREATMENT PROGRAM
Project Number:	BINGHAMTON WFP

Section C Invoice Information:

Attention:	Accounting Department
Company Name:	Binghampton-Johnson City
Address:	4480 Vestal Rd, Vestal, NY 13850
Pace Quote Reference:	
Pace Project Manager:	Nicole Johnson
EDD Preference:	Excel Standard

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☐ OTHER NY

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

Filtered (Y/N): N N N

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	CONTAINER SIZE	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	METALS*	TSS	~~FIELD pH~~ TTO	Ammonia	BOD	Flashpoint	Cyanide	Oil and Grease	PCBs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Conklin Land Fill	WW	~~C~~ G	~~[illegible]~~		12/3/15	11:00		2	1		1						X	X	X	X	X	X	X	X	X		A538282
2	~~Conklin Land~~	~~WW~~	~~G~~			~~12/3/15~~	~~11:00~~		~~2~~	~~1~~		~~1~~						~~X~~	~~X~~	~~X~~								
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS

METALS*: CADMIUM, CHROMIUM, COPPER, IRON, LEAD, NICKEL, ZINC & MERCURY, Arsenic

pH & tested in field

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
			VIA FED EX →				~~Y/N~~	~~Y/N~~	~~Y/N~~
VIA FED EX →			[illegible] (PACE)	12/4/15	10:05	3.7	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLE CONDITIONS [illegible] 12/4/15

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh Tingue

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/3/15

e-File(ALLQ020rev.4,29Mar06)22Jun2005

<15120132P2>

Sample Condition Upon Receipt

30167327

CLIENT NAME: BJC

PROJECT: binghamton WEP

COURIER: FedEx ☒ UPS ☐ Client ☐ Pace ☐ Other ☐

TRACKING # 5067 7049 2453

CUSTODY SEAL PRESENT: Yes ☒ No ☐ INTACT: Yes ☒ No ☐ N/A ☐

PACKING MATERIAL: Bubble Wrap ☒ Bubble Bags ☒ None ☐ Other ☐ ICE USED: Wet ☒ Blue ☐ None ☐

THERMOMETER USED: #164 ☒ IR Gun 03 ☐ #122087967 ☐ COOLER TEMPERATURE (°C): 3.7

BIOLOGICAL TISSUE IS FROZEN: Yes ☐ No ☐ N/A ☒ Temp should be above freezing to 6°C

COMMENTS: Temperature is Acceptable? ☒ Yes ☐ No

Chain of Custody Present:	☒ Yes	☐ No		1.
Chain of Custody Filled Out:	☒ Yes	☐ No		2.
Chain of Custody Relinquished:	☐ Yes	☒ No		3.
Sampler Name / Signature on COC:	☒ Yes	☐ No		4.
Samples Arrived within Hold Time:	☒ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☒ Yes	☐ No		6. BOD
Rush Turn Around Time Requested:	☐ Yes	☒ No		7.
Sufficient Volume:	☒ Yes	☐ No		8.
Correct Containers Used:	☒ Yes	☐ No		9.
- Pace Containers Used:	☒ Yes	☐ No		
Containers Intact:	☒ Yes	☐ No		10.
Filtered volume received for Dissolved tests:	☐ Yes	☐ No	☐ N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis	☐ Yes	☒ No		12. # of containers on CoC (2) does not match # of containers received.
All containers needing preservation have been checked:	☒ Yes	☐ No	☐ N/A	13. Some preservative appears to have leaked onto the labels of the containers.
All containers needing preservation are in compliance with EPA recommendation: - Exceptions that are not checked: TOC, VOA, Subcontract Analyses	☒ Yes	☐ No	☐ N/A	Initial when completed: PAW Lot # of added preservative: ~A
Headspace in VOA Vials (>6mm):	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present:	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present:	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot #: N A				

Sample Receipt form filled in: PAW 12/5/15

Line-Out (Includes Copying Shipping Documents and verifying sample pH): PAW 12/5/15

Log In (Includes notifying PM of any discrepacies and documenting in LIMS): AJB 12/4/15

Labeling (Includes Scanning Bottles and entering LAB IDs into pH logbook): PAW 12/4/15

Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace NY · Project # 30167327

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 6516 5013 6610

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap X Bubble Bags X None ___ Other 2 ziplocs

Thermometer Used 6 Type of Ice: (Wet) Blue None ☒ Samples on Ice, cooling process has begun

Cooler Temp.: Observed Temp.: 3.1 °C Correction Factor: +0.1 °C Final Temp: 3.2 °C

Date and Initials of person examining contents: 12/9/15 RTB

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☒No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☒Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, Phenols	☒Yes ☐No	Initial when completed 12/9/15 RTB; Lot # of added preservative
Samples checked for dechlorination:	☒Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☒No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☒N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Samantha Bing Date: 12/10/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Face Analytical

page 2

Project Number: 30167327

Client Name: Pace NY

Item No.	100												
Matrix Code	WT												
Glass Jar (120 / 250 / 500 / 1L)													
Soil kit (2 SB, 1M, soil jar)													
Chemistry (250 / 500 / 1L)	1												
Organics (1L)	1												
Nutrient (250 / 500)													
Phenolics (250 ml)													
TOC (40 ml / 250 ml)													
TOX (250 ml)													
Total Metals	1												
Dissolved Metals preserved Y N													
O & G (1L)	1												
TPH (1L)													
VOA (40 ml 30 ml)													
Cyanide (250 ml)	---												
Sulfide (500 ml)													
Bacteria (120 ml)													
Wipes / swipe/ smear/ filter													
Radchem Nelgene (125 / 250 / 500 / 1L)													
Radchem Nelgene (1/2 gal. / 1 gal.L)													
Cubitainer (500 ml / 4L)													
Ziploc													
Other Unpreserved VOAs	3												
Other													

SCURF Back (C016-4 15May2012).xls