Groundwater and Surface Water
Sampling & Analysis
East Northport Landfill
East Northport, New York
June, 2010

Prepared for:

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Groundwater and Surface Water Sampling & Analysis
East Northport Landfill
East Northport, New York
June, 2010

Introduction

Presented herein are the results of June, 2010 groundwater and surface water sampling and analyses performed as stipulated by the Record of Decision (ROD) for the East Northport Landfill Remedial Investigation/Feasibility Study. The ROD specifically requires the performance of "semi-annual sampling and analysis of eleven groundwater monitoring wells and seven surface water locations for leachate parameters." Figure 1 depicts the location of each groundwater and surface water sampling point. The scope-of-work performed each semi-annual event is presented below. A description of sampling methodology, quality assurance/quality control procedures, and a summary of analytical results follows.

Scope-of-Work

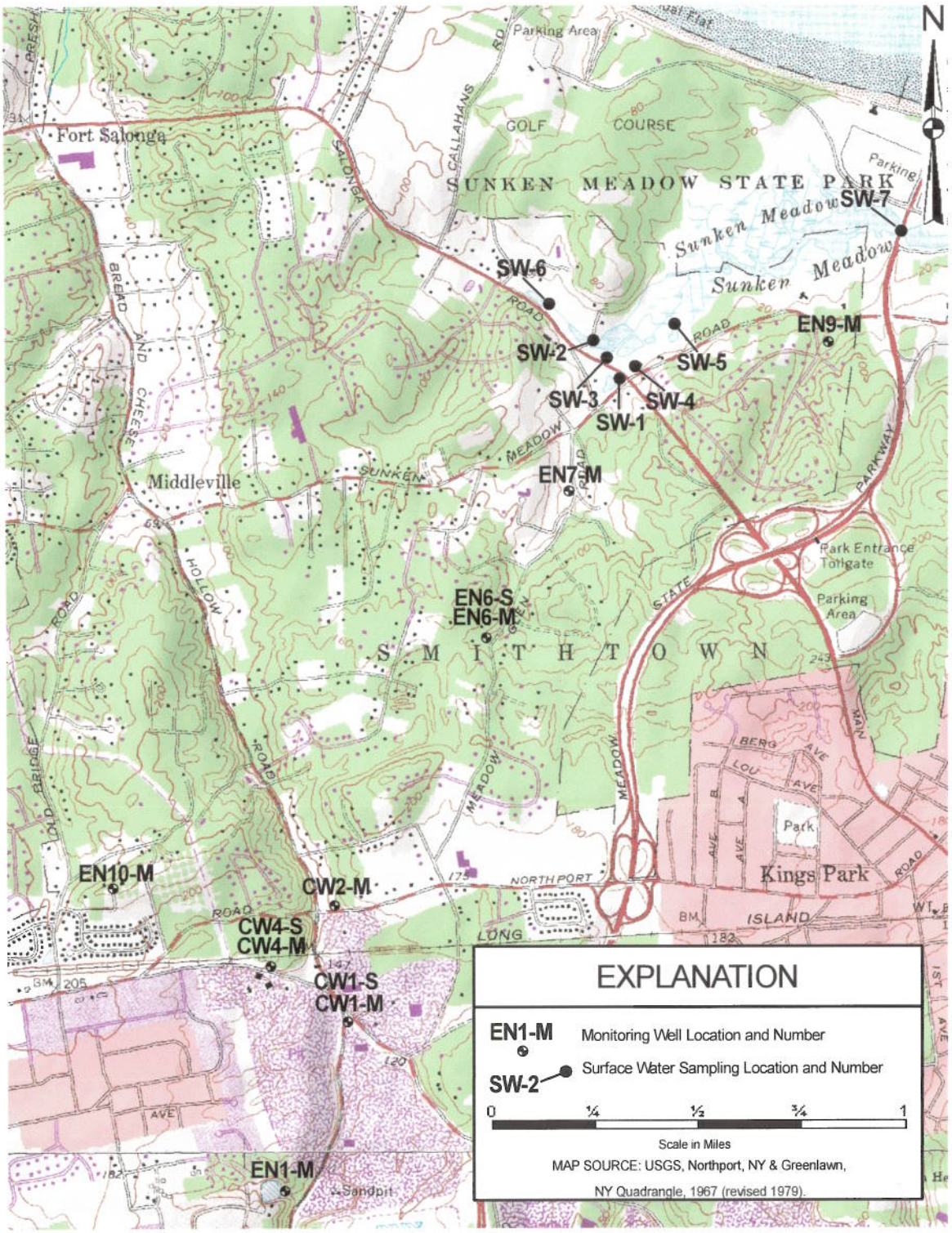
The scope-of-work includes performance of the following items:

1) sampling of groundwater from monitoring wells CW1-S, CW1-M, CW2-M, CW4-S, CW4-M, EN1-M, EN6-S, EN6-M, EN7-M, EN9-M, EN10-M and surface water from locations SW-1 through SW-7;

2) analyzing collected groundwater samples for *volatile organic compounds* by EPA method 624 with TCL parameter list and ASP category B reporting of data; *metals* (aluminum, arsenic, chromium, cadmium, calcium, iron, lead, magnesium, mercury, potassium, sodium); and *leachate indicators* (alkalinity/bicarbonate, ammonia, nitrate, chloride, TDS, hardness, sulfate);

3) analyzing collected surface water samples for *volatile organic compounds* and *leachate indicators* (as above); and

4) measuring and recording appropriate field data including temperature, pH, specific conductivity, dissolved oxygen, salinity and turbidity.



Groundwater and Surface Water Sampling Locations

East Northport Landfill Post Closure Water Sampling	Prepared By: RDH	Figure 1
	Reviewed By: RNC	August, 2006

Sampling Methodology

Groundwater sampling methodology includes evacuating a minimum of 3-5 casing-volumes of water from each monitoring well, via a submersible centrifugal pump (Grundfos Redi-Flo2) with per-well dedicated tubing, prior to sample collection. The field parameters dissolved oxygen, specific conductivity, temperature, pH, salinity and turbidity are measured and recorded on a per-casing-volume basis during well-purging activities. Following the stabilization of these values to within 10%, groundwater samples are collected. As a means to negate the potential for cross-well contamination, the Grundfos Redi-Flo2 is cleaned internally and externally with an Alconox and water solution, followed by two fresh water rinses, between each groundwater sampling location.

Surface water sampling methodology includes submerging laboratory-provided sample containers at each sampling point and establishing an even flow of water into them until filled. In addition, to minimize the influence of surface water runoff from adjacent land surfaces and roadways, surface water samples are collected following a minimum of 3 days without precipitation prior to sampling. Therefore collected surface water samples reflect stream base-flow and, for the most part, the quality of groundwater resources.

Groundwater samples from monitoring wells EN6-S, EN6-M, EN7-M, EN9-M and EN10-M, as well as all targeted surface water samples were collected June 29, 2010. Groundwater samples from the remaining monitoring wells, CW1-S, CW1-M, CW2-M, CW4-S, CW4-M and EN1-M were collected June 30, 2010. Upon the completion of sampling activities, collected samples were submitted under chain-of-custody control to New York State Department of Health certified Phoenix Environmental Laboratories, Inc. for chemical analysis. A copy of the original laboratory "Sample Data Summary Package" is presented in Appendix 1.

Table 1 presents field parameters measured and recorded in relation to groundwater and surface water sampling points. Note that data associated with groundwater samples reflects the last value measured during well-purging activities.

Quality Assurance/Quality Control

A narrative (conformance/nonconformance summary) of QA/QC procedures practiced by Phoenix Environmental Laboratories, Inc. - including instrument calibrations, analysis of method blanks, matrix spike blanks, and the percent recovery of surrogates

Table 1

Summary of Field Data
Measured June 29-30, 2010
East Northport Landfill, East Northport, NY

Sampling Point	Dissolved Oxygen (mg/l)	Conductivity (umhos)	Temperature (°centigrade)	pH (units)	Salinity (‰)	Turbidity (ntu)
CW1-S	2.75	1,320	20.9	7.25	0.1	5.6
CW1-M	2.75	592	21.1	7.07	0.0	7.2
CW2-M	3.60	176	14.9	6.02	0.0	6.7
CW4-S	6.28	130	16.9	6.82	0.0	13.5
CW4-M	10.54	284	14.8	6.55	0.0	10.6
EN1-M	11.18	285	13.1	6.22	0.0	31.7
EN6-S	12.60	339	13.2	5.63	0.0	10.4
EN6-M	3.73	380	13.3	6.49	0.0	7.0
EN7-M	3.70	197	13.3	6.71	0.0	8.2
EN9-M	10.11	675	11.7	6.44	0.0	9.8
EN10-M	3.43	14	15.2	5.45	0.0	23.1
SW-1	13.20	329	15.7	7.41	0.0	12.9
SW-2	10.01	470	13.0	7.15	0.0	54.5
SW-3	13.20	283	11.7	7.26	0.0	20.2
SW-4	13.40	368	11.9	6.81	0.0	8.1
SW-5	11.70	763	17.3	6.77	0.0	7.6
SW-6	10.00	479	23.7	7.29	0.0	8.1
SW-7	13.20	329	15.7	7.41	0.0	12.9

(system monitoring compounds) - is presented in the aforementioned "Sample Data Summary Package." Matrix spike/matrix spike duplicates (MS/MSD's) were collected to supplement both groundwater (EN7-M) and surface water analyses (SW-2).

As a means to evaluate potential sources of contamination in sample container preparation, method blank water and sample transport, trip blanks representing groundwater (TB-GW) and surface water samples (TB-SW) were analyzed for volatile organic compounds. A field blank (FB6-30) representing groundwater sampling activities was also analyzed to assure the integrity of sample containers, sampling equipment and procedures.

"Blind duplicates," collected from groundwater monitoring well CW1-M (identified as GW-DUP) and surface water sampling location SW-3 (identified as SW-DUP), were collected to assess the accuracy of reported analytical results. "Blind duplicate" samples were analyzed for all groundwater and surface water parameters, respectively.

Summary of Analytical Results

QA/QC Samples

Targeted volatile organic compounds were not detected in any of the aforementioned groundwater and surface water QA/QC blanks. Furthermore, analytical results in relation to groundwater and surface water blind duplicates are comparable (see Tables 2, 2A, 3 and 3A). Subsequently, the results of groundwater and surface water analyses summarized below are considered valid.

Groundwater

Table 2 and Table 2A summarize analytical results in relation to volatile organic compounds and metals/leachate indicators, respectively; including comparisons with New York State Department of Environmental Conservation (NYSDEC) Class GA Drinking Water Standards.

As shown on Table 2, volatile organic compounds were not detected at or above NYSDEC Class GA Drinking Water Standards in any of the collected groundwater samples.

As shown on Table 2A, metals detected in excess of NYSDEC Class GA Drinking Water Standards include *arsenic* (CW1-S, CW1-M), *iron* (CW1-S, CW1-M, CW4-S, EN1-M, EN7-M and EN10-M) and *sodium* (CW1-S, CW1-M, EN1-M, EN6-S, EN6-M, EN9-M). Leachate indicators detected at or in excess of NYSDEC Class GA Drinking Water Standards include *ammonia* (CW1-S, CW1-M) and *nitrate* (EN1-M).

Surface Water

Table 3 and Table 3A summarize analytical results in relation to volatile organic compounds and metals/leachate indicators, respectively; including comparisons with New York State Department of Environmental Conservation (NYSDEC) Class GA Drinking Water Standards.

As shown on Table 3, *toluene* (SW-2) is the sole volatile organic compound detected in collected surface water samples at or above NYSDEC Class GA Drinking Water Standards.

As shown on Table 3A, the sole leachate indicator detected in excess of its associated NYSDEC Class GA Drinking Water Standard is *chloride* at surface water sampling point SW-7. As previously reported, elevated concentrations of "salts" at this sampling point are typical and attributable to the influence of saline surface water (sample SW-7 is collected from within the tidal portion of Sunken Meadow Creek).

Historical Analysis

Section HA-1A presents a tabulated comparison of historical analytical results for the period-of-record dating from June, 1996 to June, 2010. A summary of inconsistencies with the most recent analyses, completed September, 2009, is presented below. With the exception of these inconsistencies, analytical results in relation to June, 2010 monitoring activities continue to be consistent with past events (i.e., June, 1996, April & September, 1997, April & September, 1998, April & September, 1999, April & September, 2000, April & September, 2001, April & September, 2002, April & October, 2003, June & October, 2004, April & September, 2005, August & November, 2006, July & November, 2007, April & September, 2008, April & September, 2009).

<u>Groundwater</u>

* The concentration of *trichloroethene* decreased in groundwater sampled from monitoring well EN7-M from 6.0 micrograms per liter (μg/l), a concentration above NYSDEC's drinking water standard of 5.0 μg/l, to non-detect (ND).

* The concentration of *cadmium* decreased in groundwater sampled from monitoring well CW4-S from 6.9 μg/l, a concentration above NYSDEC's Class GA Drinking Water Standard of 5.0 μg/l, to 4.0 μg/l.

* The concentration of *iron* increased in groundwater sampled from monitoring well EN1-M from 151.0 μg/l, a concentration below NYSDEC's Class GA Drinking Water Standard of 300.0 μg/l, to 3,510.0 μg/l.

* The concentration of *magnesium* decreased in groundwater sampled from monitoring well EN7-M from 49,100.0 μg/l, a concentration above NYSDEC's Class GA Drinking Water Guidance Value of 35,000.0 μg/l, to 5,070.0 mg/l.

* The concentration of *sodium* decreased in groundwater sampled from monitoring well EN7-M from 187,100.0 μg/l, a concentration above NYSDEC's Class GA Drinking Water Standard of 20,000.0 μg/l, to 15,900.0 mg/l.

Surface Water

* The concentration of *toluene* increased at surface water sampling point SW-2 from non-detect to 6.8 μg/l, a concentration above NYSDEC's Class GA Drinking Water Standard of 5.0 μg/l.

Table 2

Summary of Analytical Results-Groundwater
East Northport Landfill, East Northport, NY
Sampled June 30, 2010

Volatile Organic Compounds

Reported in Micrograms per Liter

Parameter	CW1-S	CW1-M	CW2-M	CW4-S	CW4-M	EN1-M	EN6-S	EN6-M	EN7-M	EN9-M	EN10-M	GW-DUP	TB-GW	FB6-30	NYSDEC Class GA Standard
Chloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	NS/GV
Bromomethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Vinyl Chloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	2.0
Chloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Methylene Chloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Trichloroflouromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,1-Dichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,1-Dichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.40 J	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
trans-1,2-Dichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Chloroform	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	7.0
1,2-Dichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.6
1,1,1-Trichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.50 J	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Carbon Tetrachloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Bromodichloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
1,2-Dichloropropane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
cis-1,3-Dichloropropene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.4*
Trichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Benzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
Dibromochloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
trans-1,3-Dichloropropene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.4*
1,1,2-Trichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
2-Chloroethyl vinyl Ether	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	NS/GV
Bromoform	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
1,1,2,2-Tetrachloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Tetrachloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.93 J	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Toluene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Chlorobenzene	2.60 J	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0

Table 2 continued

Parameter	CW1-S	CW1-M	CW2-M	CW4-S	CW4-M	EN1-M	EN6-S	EN6-M	EN7-M	EN9-M	EN10-M	GW-DUP	TB-GW	FB6-30	NYSDEC Class GA Standard
Ethylbenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,2-Dichlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0
1,3-Dichlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0
1,4-Dichlorobenzene	0.99 J	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0

Note:
ND( ): Compound not detected at the method detection limit
NYSDEC Class GA Standards: New York State Department of Environmental Conservation Ambient Water Quality Standards for Source of Drinking Water Title 6 Part 703 (per June 1998 revision)
GV: NYSDEC Guidance Value for Source of Drinking Water
NS/GV: No NYSDEC Standard or Guidance Value Established
J: Indicates an estimated value; compound is present at a concentration less than specified detection limit
*Standard of 0.4 applies to sum of cis and trans 1,3-Dichloropropene
B: The analyte was found in an associated blank, as well as in the sample

Table 2A

Summary of Analytical Results-Groundwater
East Northport Landfill, East Northport, NY
Sampled June 30, 2010

Metals and Leachate Indicators

Reported in Micrograms per Liter (µg/l) and Milligrams per Liter (mg/l)

Metals (µg/l)	CW1-S	CW1-M	CW2-M	CW4-S	CW4-M	EN1-M	EN6-S	EN6-M	EN7-M	EN9-M	EN10-M	GW-DUP	NYSDEC Class GA Standard
Aluminum	ND(10.0)	42.0	9.3 B	100.0	55.0	41.0	13.0	ND(10.0)	129.0	22.0	467.0	13.0	NS/GV
Arsenic	**49.0**	**33.0**	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	16.0	ND(4.0)	ND(4.0)	**35.0**	25.0
Cadmium	0.3 B	ND(1.0)	0.6 B	4.0	0.7 B	3.0	0.3 B	0.4 B	0.4 B	0.3 B	0.2 B	ND(1.0)	5.0
Calcium	27,000.0	17,100.0	11,700.0	13,200.0	32,300.0	24,200.0	17,700.0	36,700.0	31,300.0	37,100.0	1,600.0	17,200.0	NS/GV
Chromium	2.0	ND(1.0)	ND(1.0)	2.0	5.0	2.0	16.0	0.5 B	10.0	2.0	4.0	ND(1.0)	50.0
Iron	**10,400.0**	**21,800.0**	212.0	**397.0**	192.0	**3,510.0**	116.0	41.0	**397.0**	68.0	**2,080.0**	**22,000.0**	300.0
Lead	ND(2.0)	ND(2.0)	ND(2.0)	4.0	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	8.0	ND(2.0)	25.0
Magnesium	20,700.0	8,450.0	3,980.0	4,200.0	10,800.0	8,640.0	7,710.0	8,860.0	5,070.0	16,400.0	510.0	8,540.0	35,000.0 GV
Mercury	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	0.7
Potassium	55,900.0	24,000.0	3,700.0	4,800.0	1,400.0	1,300.0	1,900.0	2,300.0	9,000.0	2,400.0	2,900.0	24,300.0	NS/GV
Sodium	**87,100.0**	**31,200.0**	15,000.0	8,100.0	14,300.0	**20,800.0**	**34,800.0**	**31,500.0**	15,900.0	**63,100.0**	1,200.0	**31,200.0**	20,000.0
Leachate Indicators (mg/l)													
Ammonia	**79.00**	**22.00**	0.11	0.05	ND(0.02)	0.03	0.03	0.03	0.88	ND(0.02)	0.26	**24.00**	2.0
Bicarbonate	538.00	200.00	28.00	37.00	41.00	29.00	ND(20.00)	61.00	94.00	36.00	ND(20.00)	197.00	NS/GV
Chloride	71.00	26.00	20.00	13.00	23.00	25.00	60.00	48.00	14.00	160.00	ND(3.00)	25.00	250.0
Nitrate	0.25	0.12	1.90	1.40	7.80	**10.00**	6.70	8.70	0.07	0.79	0.09	0.11	10.0
Sulfate	5.00	35.00	17.00	9.60	39.00	35.00	28.00	24.00	10.00	16.00	ND(3.00)	34.00	250.0
Alkalinity	538.00	200.00	28.00	37.00	41.00	29.00	ND(20.00)	61.00	94.00	36.00	ND(20.00)	197.00	NS/GV
TDS	500.00	230.00	110.00	83.00	200.00	200.00	200.00	240.00	180.00	380.00	20.00	220.00	NS/GV
Hardness	153.00	77.50	45.60	50.30	125.00	96.00	75.90	128.00	99.00	160.00	6.10	78.10	NS/GV

Note:
ND( ): Compound not detected at the method detection limit
NYSDEC Class GA Standards: New York State Department of Environmental Conservation Ambient Water Quality Standards for Source of Drinking Water Title 6 Part 703 (per June 1998 revision)
GV: NYSDEC Guidance Value for Source of Drinking Water
NS/GV: No NYSDEC Standard or Guidance Value Established
B: Reported value less than contract required detection limit but greater than or equal to instrument detection limit
J: Indicates an estimated value; compound is present at a concentration less than specified detection limit
na: Not available

Table 3

Summary of Analytical Results-Surface Water
East Northport Landfill, East Northport, NY
Sampled June 29, 2010

Volatile Organic Compounds

Reported in Micrograms per liter

Parameter	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-DUP	TB-SW	NYSDEC Class GA Standard
Chloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	NS/GV
Bromomethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Vinyl Chloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	2.0
Chloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Methylene Chloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Trichloroflouromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,1-Dichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,1-Dichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
trans-1,2-Dichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Chloroform	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	7.0
1,2-Dichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.6
1,1,1-Trichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Carbon Tetrachloride	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Bromodichloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
1,2-Dichloropropane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
cis-1,3-Dichloropropene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.4*
Trichloroethene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Benzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
Dibromochloromethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
trans-1,3-Dichloropropene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	0.4*
1,1,2-Trichloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	1.0
2-Chloroethyl vinyl Ether	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	NS/GV
Bromoform	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	50.0 GV
1,1,2,2-Tetrachloroethane	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Tetrachloroethene	1.90 J	ND(5.00)	2.60 J	3.40 J	0.81 J	ND(5.00)	ND(5.00)	2.40 J	ND(5.00)	5.0

Table 3 continued

Parameter	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-DUP	TB-SW	NYSDEC Class GA Standard
Toluene	0.82 J	**6.80**	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Chlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
Ethylbenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	5.0
1,2-Dichlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0
1,3-Dichlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0
1,4-Dichlorobenzene	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	ND(5.00)	3.0

Note:

ND( ): Compound not detected at the method detection limit

NYSDEC Class GA Standards: New York State Department of Environmental Conservation Ambient Water Quality Standards for Source of Drinking Water Title 6 Part 703 (per June 1998 revision)

GV: NYSDEC Class GA Guidance Value for Source of Drinking Water

NS/GV: No NYSDEC Standard or Guidance Value Established

*Standard of 0.4 applies to sum of cis and trans 1,3-Dichloropropene

J: Indicates an estimated value; compound is present at a concentration less than specified detection limit

B:The analyte was found in an associated blank, as well as in the sample

Table 3A

Summary of Analytical Results-Surface Water
East Northport Landfill, East Northport, NY
Sampled June 29, 2030

Leachate Indicators

Reported in Milligrams per Liter

Parameter	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-DUP	NYSDEC Class GA Standard
Ammonia	0.24	1.80	0.27	0.11	0.18	0.44	0.07	ND(0.02)	2.0
Bicarbonate	36.00	62.00	29.00	39.00	99.00	59.00	41.00	29.00	NS/GV
Chloride	58.00	82.00	44.00	63.00	110.00	97.00	**500.00**	46.00	250.0
Nitrate	3.00	0.17	4.40	3.80	1.30	0.60	2.30	4.50	10.0
Sulfate	21.00	48.00	23.00	28.00	39.00	21.00	77.00	23.00	250.0
Alkalinity	36.00	62.00	29.00	39.00	99.00	59.00	41.00	29.00	NS/GV
TDS	190.00	260.00	180.00	220.00	340.00	250.00	940.00	170.00	NS/GV
Hardness	84.40	137.00	87.60	119.00	194.00	95.00	210.00	88.80	NS/GV

Note:

ND( ): Compound not detected at the method detection limit

NYSDEC Class GA Standards: New York State Department of Environmental Conservation Ambient Water Quality Standards for Source of Drinking Water Title 6 Part 703 (per June 1998 revision)

NS/GV: No NYSDEC Standard or Guidance Value Established