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FOURTEENTH YEAR REPORT ON THE LEACHATE COLLECTION AND LANDFILL GAS EXTRACTION SYSTEMS

BLACKWELL FOREST PRESERVE LANDFILL SITE
DUPAGE COUNTY, ILLINOIS

MWH File No.: 1007333

Prepared For:

Forest Preserve District of
DuPage County, Illinois

Prepared By:

MWH

BUILDING A BETTER WORLD

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January 2013

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11

TABLE OF CONTENTS

Section **Page**

ACRONYMS AND ABBREVIATIONS v
1.0 INTRODUCTION 1
1.1 Background 2
1.1.1 Landfill Construction 2
1.1.2 Regulatory History 3
1.2 Report Presentation 4
2.0 GENERAL O&M 5
2.1 Description 5
2.2 Inspection and Maintenance Records 5
3.0 LANDFILL COVER O&M 6
3.1 Description 6
3.2 Inspection and Maintenance Records 6
3.3 Site Regrading Activities 7
3.4 Prairie Restoration Activities 7
3.5 Landfill Seep Investigation 8
4.0 LEACHATE COLLECTION SYSTEM O&M 9
4.1 Description 9
4.1.1 Extraction Wells 9
4.1.2 Lift Stations 9
4.1.3 Leachate Well Pumps 9
4.1.4 Leachate Holding Tank 10
4.1.5 Compressor/Control Building 10
4.1.6 Operation of the LCS 10
4.2 Inspection and Maintenance Records 10
4.3 Landfill Areas 11
4.4 Leachate Levels 11
4.5 Leachate Volume 12
4.5.1 Leachate Disposal 12
4.5.2 Extraction Wells 13
4.5.3 Lift Stations 14
4.6 Analytical Data 14
5.0 LANDFILL GAS O&M 15
5.1 Description 15
5.2 Inspection and Maintenance Records 15
5.3 Field and Analytical Data 15
5.4 LFG Emissions 16
5.5 LFG Trigger Levels 17
6.0 EVALUATIONS AND RECOMMENDATIONS FOR THE LEACHATE COLLECTION AND LANDFILL GAS SYSTEMS 19

6.1 Evaluation of LCS 19
6.1.1 Trendline Analysis 19
6.1.2 Augmentation Requirements - Record of Decision 19
6.1.3 Augmentation Requirements - O&M Plan 20
6.2 Evaluation of Landfill Gas System 21
6.2.1 LFG Augmentation 21
6.2.2 Thermal Treatment 22
6.2.3 Passive vs. Active Gas Extraction 22
7.0 REFERENCES 24

TABLES

Table 1	Leachate Elevations
Table 2	Average Leachate Elevations per Year of Operation
Table 3	Leachate Disposal - Daily Basis
Table 4	Leachate Disposal - Yearly Basis
Table 5	Cumulative Leachate Removal
Table 6	Leachate Analytical Results
Table 7	Inspection, Monitoring, and Maintenance Schedule
Table 8	Landfill Gas Analytical Results
Table 9	Cumulative Risk of Exposure to Landfill Gas – May 2011
Table 10	Cumulative Risk of Exposure to Landfill Gas – July 2011
Table 11	Cumulative Risk of Exposure to Landfill Gas – November 2011
Table 12	Cumulative Risk of Exposure to Landfill Gas – November 2011 (Duplicate)
Table 13	Cumulative Risk of Exposure to Landfill Gas – March 2012

FIGURES

Figure 1	Site Location Map
Figure 2	Site Features Map
Figure 3	Topographic Map
Figure 4	LCS and LFG System Layout
Figure 5	Cumulative Leachate Level Trends Through the Fourteenth Year of LCS Operations

DRAWINGS

Drawing 1	Leachate Elevations in Landfill Area 1
Drawing 2	Leachate Elevations in Landfill Area 2
Drawing 3	Leachate Elevations in Landfill Area 3
Drawing 4	Leachate Elevations in Landfill Area 4
Drawing 5	Leachate Elevations in Landfill Area 5
Drawing 6	Leachate Elevations in Landfill Area 6
Drawing 7	Leachate Elevations in Landfill Area 7
Drawing 8	Leachate Elevations in Landfill Area 8
Drawing 9	Leachate Elevations in Landfill Area 9
Drawing 10	Leachate Elevations in Landfill Area 10
Drawing 11	Leachate Elevations in Landfill Area 11
Drawing 12	Leachate Elevations in Landfill Area 12
Drawing 13	Leachate Elevations in Landfill Area 13
Drawing 14	Leachate Elevations in Landfill Area 14
Drawing 15	Leachate Elevations in Landfill Area 15
Drawing 16	Cumulative Leachate Pumping Volume
Drawing 17	LFG Flowrate

Drawing 18 Static LFG Pressures - Extraction Wells
Drawing 19 Static LFG Pressures - Shallow Gas Vents
Drawing 20 Static LFG Pressures - Deep Gas Vents
Drawing 21 Methane Content – Extraction Wells
Drawing 22 Methane Content – Shallow Gas Vents
Drawing 23 Methane Content – Deep Gas Vents
Drawing 24 Range of TNMOC Emissions per Year of Operation

APPENDICES

Appendix A Inspection, Maintenance, Monitoring and Disposal Logs
A-1: Site Visit Operating Logs
A-2: Inspection Report Forms
A-3: Maintenance and Repair Record Forms
A-4: Leachate Disposal Logs
A-5: Landfill Gas Vent Monitoring Forms
Appendix B Leachate Analytical Results and Waste Disposal Permit
Appendix C Landfill Gas
Table C-1: Landfill Gas Composition
Table C-2: Landfill Gas Temperature
Table C-3: Static Landfill Gas Pressure
Table C-4: Landfill Gas Velocity
Table C-5: Landfill Gas Flow Rate
Table C-6: TNMOC Emission Rate
Appendix D Landfill Gas Analytical Data
Appendix E Groundwater Concentration vs. Time Plots

ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order by Consent
Cis-1,2-DCE	Cis-1,2-Dichloroethene
District	Forest Preserve District of DuPage County
DV	Deep Vent
EW	Extraction Well
lb/hr	Pounds per hour
LCS	Leachate Collection System
LFG	Landfill Gas
LS	Lift Station
MWH	MWH Americas, Inc.
NPL	National Priorities List
O&M	Operations and Maintenance
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SV	Shallow Vent
SVOC	Semi-Volatile Organic Compound
TNMOC	Total Non-Methane Organic Compounds
U.S. EPA	United States Environmental Protection Agency
UAO	Unilateral Administrative Order
VOC	Volatile Organic Compound
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

This Fourteenth Year Report has been prepared by MWH Americas, Inc. (MWH) on behalf of the Forest Preserve District of DuPage County, Illinois (District). It presents a summary of the operations and maintenance (O&M) activities undertaken from May 2011 through April 2012 on various response actions previously constructed at the Blackwell Landfill. The response actions were constructed in 1997 and 1998, and were required by the Administrative Order by Consent (AOC), Docket No. V-W-'96-C-341, between the United States Environmental Protection Agency (U.S. EPA) and the District. The response actions included repair of the existing landfill cover, installation of a leachate collection system (LCS) and installation of a landfill gas (LFG) venting system. A summary of O&M activities from initial construction of the response action in 1997 and 1998 through April 2011 is provided in the following reports:

- *First Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (Montgomery Watson, 1999c);
- *Second Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (Montgomery Watson, 2000b);
- *Third Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (Montgomery Watson Harza, 2001e);
- *Fourth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2002d);
- *Fifth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2003c);
- *Sixth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2004e);
- *Seventh Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2005d);
- *Eighth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2006c);
- *Ninth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2007c);
- *Tenth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2008c);
- *Eleventh Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2009e);
- *Twelfth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2010d); and
- *Thirteenth Year Report on the Leachate Collection and Landfill Gas Extraction Systems* (MWH, 2011c).

This Fourteenth Year Report meets the reporting requirements outlined in the February 1999 Final O&M Plan (Montgomery Watson, 1999a), modifications provided in the First and Second Year Reports on the Leachate Collection and Landfill Gas Extractions Systems (Montgomery Watson, 1999c and 2000b), and the April 9, 1999 Unilateral Administrative Order (UAO), Docket No. V-W-'99-C-541. The UAO requires an evaluation of the effectiveness of the current leachate and LFG extraction systems in managing leachate and landfill gas throughout the Site.

1.1 BACKGROUND

The Blackwell Landfill is located within the Blackwell Forest Preserve approximately six miles southwest of downtown Wheaton, Illinois in Section 26, Township 39 North, Range 9 East, DuPage County, Illinois (Figure 1). The Blackwell Forest Preserve encompasses 1,200 acres of woodlands, grasslands, wetlands and lakes, with the landfill covering approximately 40 acres in the central part of the preserve.

1.1.1 Landfill Construction

The Blackwell Landfill was constructed adjacent to an abandoned gravel pit that was purchased by the District in 1960 with the intent to create a large hill that could be used by the public for recreational purposes. The District began construction of the landfill in 1965 and accepted the final load of refuse in 1973. The District used soil material from the abandoned gravel pit, and so constructed a lake (Silver Lake) while building the hill (Figure 2).

Plans for the landfill, as well as photographs taken during the landfill construction, provide an understanding of the landfill construction. The landfill was laid out over an approximate 35-acre area. It was constructed on top of the existing ground surface, rather than being excavated into the ground. The first step was to put down a 2-foot layer of clay to act as the base liner. A series of 8 to 9 foot high berms were laid out to define eight major disposal areas, each three to five acres in size. These initial cells were then filled with a multitude of small refuse cells. Five to ten scavenger trucks would come in each working day and deposit refuse. In general, the refuse would be covered with available soil from the Silver Lake area.

The daily cover was obtained from the area to the east of the landfill that is now Silver Lake. As the District excavated the lake, it would sell the sand and gravel for off-site construction to help defray the costs of landfill construction. Therefore, daily cover generally consisted of the low permeability, fine-grained material that lacked the commercial value of the sand and gravel. When completed, each major cell had been filled with approximately one-half refuse and one-half daily cover.

When each of the cells had been filled, it was capped off with a two-foot clay layer that formed the base liner for the next cell. After the first level of cells was completed, new berms were placed to construct another series of cells. To enhance the ultimate stability of the hill, the new berms were offset from the berms below. Although a photographic history of construction was kept, as-built drawings were not maintained, so there is no specific map available for the locations of the berms or the cells. However, District officials have described the result as a "honey-comb" structure of small refuse cells surrounded by soil, and the photographic record supports this description.

By the time final contouring and landscaping was completed in 1975, forty to sixty feet of clay had been placed on top of refuse on the southwest side of the landfill to create Mount Hoy. Mount Hoy was finished at the final target elevation of approximately 840 feet above mean sea level, approximately 140 feet above the surrounding natural topography. Other areas of the landfill were covered with 2 to 15 feet of predominantly clay cover. In some areas, a vegetative cover of varying sand, gravel and clay composition was placed. A final layer of clayey topsoil (minimum of 4 to 6 inches thick) was installed and vegetated. The 2004 topography of the Site is shown in Figure 3.

The Blackwell Landfill contains approximately 1.5 million cubic yards of refuse classified as general household refuse and light industrial waste, and includes an equal volume of natural fill.

1.1.2 Regulatory History

In March 1986, the U.S. EPA evaluated the Site using the Hazard Ranking System. A composite score of 35.57 was assigned, which was above the 28.5 threshold for National Priorities List (NPL). The following scores were assigned to each potential route: Surface Water 0.0; Air 0.0; and Groundwater 61.54. The Site was proposed for inclusion on the NPL in the Federal Register, Volume 53, Number 122, dated June 24, 1988. The Site received final listing on the NPL in the Federal Register, Volume 55, Number 35, dated February 21, 1990.

Subsequent to the final listing on the NPL, a Remedial Investigation/Feasibility Study (RI/FS) was performed at the landfill. The Final RI Report (Warzyn, 1994) was submitted to the U.S. EPA in 1994, and the Draft FS Report (Montgomery Watson, 1995) was submitted in 1995.

On March 7, 1996, the U.S. EPA and District agreed to an AOC (Docket No. V-W-'96-C-341), which specified response actions that the District would conduct at the Site. These response actions have been completed, or are part of ongoing O&M. They included:

- Delineation of the limits of waste at the landfill edges;
- Cap characterization to delineate areas which did not have two feet of low permeability soil over refuse;
- Repair of those portions of the landfill cover that had less than two feet of low permeability soil over refuse;
- Regrading to promote surface water drainage off the landfill;
- Installation of a leachate collection system;
- Installation of a passive landfill gas venting system;
- Treatment of landfill leachate;
- Collecting, analyzing, and evaluating groundwater samples annually; and
- Monitoring performance of the LCS and LFG venting system.

On September 30, 1998, the U.S. EPA issued the Record of Decision (ROD) for the Blackwell Landfill. The ROD requires long term O&M of the previously completed response actions, long-term monitoring, monitored natural attenuation of groundwater, and possible augmentation of the LCS and LFG venting system. On April 9, 1999, the U.S. EPA issued a UAO, Docket No. V-W-'99-C-541, to the District. This UAO directed the District to perform the selected remedial action described in the ROD and set forth the requirements for implementation of the remedial action.

1.2 REPORT PRESENTATION

The report is presented in the following seven sections:

- This Section 1.0 presents the purpose of the Fourteenth Year Report and describes the current conditions at the Blackwell Landfill;
- Section 2.0 describes general O&M activities conducted on the landfill;
- Section 3.0 describes O&M activities conducted on the landfill cover;
- Section 4.0 describes the operation of the LCS and summarizes O&M data;
- Section 5.0 describes the operation of the LFG venting system and summarizes O&M data;
- Section 6.0 evaluates the leachate collection and LFG systems; and
- Section 7.0 provides the references utilized in this Fourteenth Year Report.

2.0 GENERAL O&M

2.1 DESCRIPTION

O&M at the Blackwell Landfill from May 2011 through April 2012 was similar to the O&M conducted during previous years. Activities included inspection and maintenance of security measures around the LCS and LFG components (i.e., fencing, warning signs, vaults and vault covers), upkeep of access roads related to the LCS and LFG system, and control of vegetation around LCS and LFG components.

2.2 INSPECTION AND MAINTENANCE RECORDS

General inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan, and included the following:

- Verifying that Site security measures such as fencing, vaults and gates continue to restrict unauthorized access to system components, and repairing these security measures, as necessary;
- Maintaining Site access roads, as necessary;
- Maintaining vegetation and trimming excess vegetation that hide, inhibited access or potentially could damage system components; and
- Repairing erosion of areas adjacent to the landfill, as necessary.

The inspection, maintenance, monitoring and leachate disposal activities were documented on forms on an as-needed basis. Copies of the completed forms are provided in Appendices A-1 through A-5.

O&M of the landfill was routine during the fourteenth year with no significant problems to note. Site security measures remained intact with no vandalism or security breaches noted. Some ruts were observed on the access road to the top of Mt. Hoy and on the access road near the southern edge of the landfill in June 2011 following a heavy rainfall event. The access roads were re-graded and repaired shortly after the ruts were observed. Vegetation is in good condition and no erosion was noted in areas adjacent to the landfill. An annual burn was conducted on the Blackwell landfill in April 2011 as part of the task of establishing natural prairie cover on the landfill.

3.0 LANDFILL COVER O&M

3.1 DESCRIPTION

Routine O&M of the landfill cover system includes inspection of the landfill surface, vegetative conditions and surface water drainage features. In addition, O&M of the landfill cover includes conducting a controlled prairie burn each spring.

3.2 INSPECTION AND MAINTENANCE RECORDS

The landfill cover inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan, with modifications provided in the First Year Report. Inspections were undertaken to identify necessary maintenance issues in the landfill cover system, including:

- Ponding of surface water as a result of landfill settlement and vehicular rutting;
- Stressed or dead vegetation indicating potential LFG migration through the cover soils;
- Erosion of the landfill cover or surface water drainage features;
- Siltation of drainage ways;
- Excessive vegetation growth near LCS components and LFG vents;
- Bubbling of LFG through the landfill topsoil during the spring or summer following a one inch or greater rainfall event; and
- Tension cracks on the surface of the landfill cover caused by landfill settlement.

Inspections of the landfill cover were conducted during the bimonthly monitoring of leachate levels in LFG vents and extraction wells. The inspection activities are documented on forms provided in Appendix A-1 through A-3 and A-5.

The Final O&M Plan also required cover inspections following any 10-year, 24-hour rainfall event, defined as a rainfall event with a probable recurrence interval of once in 10 years as described by the National Weather Service in Technical Paper No. 40 – Rainfall Frequency Atlas of the United States, May 1961. For the DuPage County area, a rainfall of 4.5 inches within a 24-hour period meets this definition. There were no such rainfall events recorded at the nearby DuPage County Airport between May 2011 and April 2012.

The inspections of the landfill cover were routine during the fourteenth year, with no significant maintenance issues observed. Some surface water ponding was observed on the north side of the landfill near the base of the toboggan run. No areas of stressed or dead vegetation were noted. Minor erosional ruts were observed during site inspections made throughout the fourteenth year; however, these ruts were shallow and the clay cap was not exposed. The observed ruts were repaired.

3.3 SITE REGRADING ACTIVITIES

No site regrading activities were conducted during the period covered by this report (i.e., May 2011 through April 2012). However, additional gravel was added to repair ruts in the access road to the top of Mt. Hoy in June 2011 and again in August 2011. Ruts in the access road near the southern edge of the landfill were also repaired in June 2011.

3.4 PRAIRIE RESTORATION ACTIVITIES

In 2001, as part of the *Phase I Restoration Plan for the Revegetation of the Blackwell Forest Preserve Landfill* (Montgomery Watson and Conservation Design Forum, 2000), the District began the conversion of vegetation on the Blackwell Landfill from Eurasian grasses to native Illinois grasses. An herbicide was applied to kill or stunt the growth of existing vegetation, a prairie seed mixture was drilled into the landfill cover, and the vegetation was mowed in the fall of 2001. The prairie restoration activities are summarized in the *First Year Restoration Monitoring Report* (Conservation Design Forum, 2002a).

In order to continue the development of the Blackwell Landfill prairie, restoration activities are conducted on an annual basis. Targeted weed control using an herbicide is conducted between late spring and early fall. Woody sapling removal and re-seeding of any disturbed areas are also conducted on an as-needed basis. In early fall, native prairie grass seed is collected and dispersed across the Site and fire breaks are mowed around the LCS and LFG components in preparation for the annual prairie burn conducted in the spring.

Summaries of prairie restoration activities conducted over the past eleven years can be found in the corresponding standalone reports:

- *First-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2002* (Conservation Design Forum, 2002a);
- *Second-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2002* (Conservation Design Forum, 2002b);
- *Third-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2003* (Conservation Design Forum, 2003);
- *Fourth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2004* (Conservation Design Forum, 2004);
- *Fifth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2005* (Conservation Design Forum, 2005);
- *Sixth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, December 2006* (Conservation Design Forum, 2006b);
- *Seventh-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2008* (Conservation Design Forum, 2007); and
- *Eighth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2009* (Conservation Design Forum, 2009).

- *Ninth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2010* (Conservation Design Forum, 2010a).
- *Tenth-Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2011* (Conservation Design Forum, 2011).
- *Eleventh Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration, January 2012* (Conservation Design Forum, 2012).

Beginning in spring 2004, controlled burns were executed at the Blackwell Landfill. The following controlled burns have been conducted at the Blackwell Landfill:

- The 2004 prairie burn was conducted on April 20, 2004,
- The 2005 prairie burn was conducted on April 14, 2005,
- The 2006 prairie burn was scheduled for April 19, 2006, but was cancelled due to excessive rainfall earlier in the week,
- The 2007 prairie burn was conducted on April 9, 2007,
- The 2008 prairie burn was conducted on April 15, 2008,
- The 2009 prairie burn was conducted on April 23, 2009,
- The 2010 prairie burn was conducted on April 15, 2010, and
- The 2011 prairie burn was conducted on April 21, 2011.

The 2012 Blackwell Landfill prairie burn was conducted on April 5, 2012. Similar to previous prairie burns, procedures followed the U.S. EPA-approved Burn Plan (MWH, 2005b). In accordance with this plan, the LCS and LFG venting systems were shut down and local governmental agencies were notified of the pending burn. After the burn was completed, MWH personnel inspected the landfill's LFG and LCS components for damage in accordance with the U.S. EPA-approved Field Sampling Plan Addendum No. 8. No damage was noted to any of the landfill's remedial components. Therefore, modifications to the current Burn Plan are not recommended at this time. A complete summary of the 2012 Blackwell prairie burn activities is presented in the *Phase I Prairie Restoration Controlled Burn Activities Summary Report* (MWH, 2012b).

3.5 LANDFILL SEEP INVESTIGATION

On May 3, 2011, the District noticed a small seep on the southern portion of the landfill near the archery range. MWH went out to the Site on the same day and collected surface water samples at the location. One primary sample and one duplicate sample were analyzed for metals, water quality parameters, and organic toxic pollutants. One volatile organic compound (VOC), cis-1,2-dichloroethene (cis-1,2-DCE) was detected at a concentration of 9.5 micrograms per liter in the primary sample. However, cis-1,2-DCE was not detected in the duplicate sample collected at this location. The reported concentration is below Tiered Approach to Corrective Action Objectives Tier 1 groundwater standards for this compound and there are no surface water criteria for cis-1,2-DCE.

4.0 LEACHATE COLLECTION SYSTEM O&M

4.1 DESCRIPTION

The LCS was put into operation in December 1997. The system includes nine leachate extraction wells (EW) and three lift stations (LS) that pump leachate into a common underground conveyance pipe system. The conveyance system transports leachate to a holding tank which is regularly pumped out and transported offsite by tanker trailers for treatment and disposal.

The components of the LCS are summarized below. Full details of each component are provided in the February 1999 Final O&M Plan.

4.1.1 Extraction Wells

The LCS incorporates nine extraction wells (EW-1, EW-1A, and EW-2 through EW-8) located in the areas that previously had the highest indicated leachate head levels. The well pipes are installed within 3-foot diameter boreholes, and are constructed of 6-inch diameter Schedule 120 polyvinyl chloride pipe. Boreholes were targeted to extend to the bottom of the buried refuse, just above the basal clay liner. The lower two-thirds of each well pipe is perforated and each borehole was backfilled with coarse aggregate. The wells are used to extract leachate and to allow LFG to flow through the passive gas venting system. A wellhead assembly connects the LFG and leachate discharges from each well to its respective conveyance piping system. The extraction well locations are shown on Figure 4. A description of the LFG venting system is described in Section 5.0 of this report.

Leachate levels within each extraction well are measured with a water level meter during bimonthly O&M monitoring.

4.1.2 Lift Stations

LS-1 collects stormwater from the south stormwater trench at existing manhole MH-20 and it collects condensate that has formed in the gas conveyance pipe from dripleg DL01. The pump in LS-2 did not run during Year 14 because LS-2 was dry. The shallow collection trench, installed downslope and north of EW-3, supplies surface water infiltration to LS-3. LS-3 continued to pump the collected surface water to the leachate holding tank throughout Year 14.

4.1.3 Leachate Well Pumps

The nine extraction wells and three lift stations are fitted with pneumatic leachate extraction pumps that are capable of pumping a maximum 4 gallons per minute. Clean Environment® manufactured all 12 of the pneumatic pumps. A description of the Clean Environment® pumps is provided in the Second Year Report (Montgomery Watson, 2000b).

The volume of leachate pumped from each well is recorded remotely with a pump stroke (i.e. cycle) counter within the compressor station control building. Pump operation is confirmed by observing the cycle counters for each well. The pump cycle rate (gallons of leachate pumped per cycle) is calculated by dividing the total volume of leachate extracted by the total number of pump cycles recorded. The number of pump cycles recorded at each well is then multiplied by the pump cycle rate to determine the volume of leachate extracted from each well.

4.1.4 Leachate Holding Tank

A 10,000-gallon double-walled steel-reinforced STI-P3® holding tank is installed below grade near the compressor/control building north of the landfill to temporarily store extracted leachate and condensate. The tank provides monitoring of the interstice (space between the double walls) as a leak detection system. When the tank is full, the collected leachate is loaded into tanker trucks and hauled to the Wheaton Sanitary District Wastewater Treatment Plant (WWTP) in Wheaton, Illinois for treatment and disposal under permit. For the past 14 years, the leachate holding tank has generally been emptied one or two times per week.

4.1.5 Compressor/Control Building

The compressor/control building located north of the landfill contains the air compressor system and system controls. The compressor system includes a desiccant air dryer to maintain dry supply air to the leachate extraction pumps and to minimize freezing situations. The system controls include manual and automatic LCS system controls, holding tank liquid level alarms, leak detection indicators, and compressor and dryer status indicators.

4.1.6 Operation of the LCS

The LCS began operation in early December 1997. Following initial startup of the LCS, the system has been operated continuously with automatic shut down when the holding tank becomes full. Tanker trailers are scheduled in advance to collect and transport the leachate for disposal at the Wheaton WWTP for treatment. After the tank is emptied, the LCS is restarted.

4.2 INSPECTION AND MAINTENANCE RECORDS

The LCS inspection and maintenance requirements are outlined in the February 1999 Final O&M Plan with modifications provided in the First Year Report. The inspection and maintenance requirements include the following:

- Routinely verifying integrity and operation of system components;
- Recording system performance data, including pump-stroke counters;
- Scheduling leachate testing, load-out, and treatment;
- Responding to alarm conditions; and
- Performing maintenance and scheduling system repairs, or modifications.

The inspection, monitoring, and maintenance activities are documented on forms on an as-needed basis. Copies of the forms are provided in Appendices A-1 through A-5.

During the fourteenth year of operation, the components of the LCS were inspected on a bimonthly, quarterly, semi-annual, annual, and as-needed bases in accordance with the schedule provided in Table 7. The control station and leachate holding tank were routinely inspected and monitored by the O&M operators. The components of the leachate extraction wells and lift stations were inspected on a bimonthly basis. Components of the control station, leachate holding tank, leachate extraction wells and lift stations found to be functioning improperly were immediately fixed by the O&M operators. The work conducted on these components was logged using the appropriate O&M maintenance forms (Appendix A-3).

In addition, the following O&M activities were conducted:

- Leachate head levels were measured in the leachate extraction wells and LFG vents on a bimonthly basis;
- Filters and lubricants within the compressor and dryer systems were replaced on a quarterly, annual, or as-required basis; and
- Leachate samples were submitted for required analytical testing on a quarterly basis. The results of these analyses for this reporting period are attached in Appendix B.

The general maintenance activities conducted during the 14th year of operation consisted of maintaining pump operation and changing oil and filters and lubricating the air compressor and air dryer on a periodic basis. The non-routine maintenance of note, and maintenance that was not originally anticipated, included the following:

- Performed maintenance on pump float in LS-2 on June 14, 2011.
- Installed a clean, rebuilt pump in EW-1 on October 6, 2011.
- Installed a clean, rebuilt pump in EW-1A on October 10, 2011.
- Installed a clean, rebuilt pump in EW-2 on October 12, 2011.
- Installed a clean, rebuilt pump in EW-7 on October 17, 2011.
- Installed a clean, rebuilt pump in EW-6 on October 18, 2011.
- Installed a clean, rebuilt pump in EW-4 on October 20, 2011.

On September 26, 2011 the air compressor for the LCS malfunctioned and the system had to be shut down. The District ordered a rental compressor from Brabazon Pump, Compressor, and Vacuum (Brabazon) of Milwaukee, Wisconsin. Brabazon provided the rental compressor the next day, and the LCS system was back up on September 27, 2011. The District ordered a replacement air compressor that was installed on November 1, 2011.

4.3 LANDFILL AREAS

The Blackwell Landfill was arbitrarily sub-divided into 15 Landfill Areas for the purpose of presentation of data (Figure 5). The leachate elevation and extraction data for each of the 15 Landfill Areas are shown on Drawings 1 through 15.

4.4 LEACHATE LEVELS

The leachate levels within the extraction wells and LFG vents were measured on a bimonthly basis by inserting a water level meter into each well or LFG vent. The LCS pumps were shut down for a minimum of 48 hours prior to measuring the leachate levels so that the recorded data would represent equilibrium conditions and not pumping effects. A trendline has been maintained for each leachate extraction well and LFG vent to determine whether leachate levels have been increasing or decreasing (refer to Drawings 1 through 15).

The calculated leachate elevations in the twenty-five LFG vents and nine extraction wells are presented in Drawings 1 to 15 and in Table 1. In general, leachate elevations have increased from Year 13 to Year 14 (May 2011 through April 2012). Average leachate elevations increased in six of the eight extraction wells where leachate levels were measured (EW-1, EW-1A, EW-3, EW-6, EW-7, and EW-8) from Year 13 to Year 14. Conversely, the remaining two extraction wells where leachate levels were measured (EW-2 and EW-5) showed a decrease in average leachate elevations. In addition, 21 of the 24 LFG vents where leachate was recorded showed an increase in average leachate elevations. One LFG vent (SV-2) was dry throughout Year 14. Table 2 shows the average yearly leachate elevations at extraction wells and LFG vents since startup. Specific trends are discussed in Section 7.0 of this report.

4.5 LEACHATE VOLUME

The LCS conveys extracted leachate to the leachate holding tank which is regularly emptied into tanker trucks which transport the leachate to the Wheaton WWTP for treatment and disposal. The District's original leachate disposal permit with the Wheaton WWTP (Permit No. 1995 EE-4467) expired August 1, 2000. Permits are valid for five years and have been renewed each time they have expired. The current permit dated April 2, 2010 is valid through March 31, 2015. A copy of the permit is included in Appendix B. Upon expiration, the permit will be renewed.

4.5.1 Leachate Disposal

The volume of leachate disposed of at the Wheaton WWTP is documented on Leachate Disposal Logs included in Appendix A-4. The cumulative cycles on the pneumatic extraction pumps within each extraction well and lift station (recorded on the pump-stroke counter within the control building) are documented on Site Visit Operating Logs completed each day that leachate was disposed of at the Wheaton WWTP. Copies of the Site Visit Operating Logs are provided in Appendix A-1. The volume of leachate removed from the extraction wells and lift stations is calculated based upon the disposal history and number of recorded pump cycles. A daily summary of the disposed leachate volumes during Year 14 is provided in Table 3. The cumulative volume of leachate removed from the landfill from the extraction wells and lift stations is presented in Drawing 16. Table 3 and Drawing 16 indicate that approximately 8,263,600 gallons of leachate have been removed from the landfill and disposed of since 1997.

The volume of leachate transported to the Wheaton WWTP and the number of leachate shipments during the past 14 years are summarized below. This table indicates that an increased volume of leachate was disposed of in Year 14 as compared to Year 13.

Year	Volume Shipped (gallons)	Percent Change from Annual Average	Number of Leachate Shipments to WWTP
1 (12/97 to 4/99)	912,120	55%	108
2 (5/99 to 4/00)	460,050	-22%	58
3 (5/00 to 4/01)	640,958	9%	82
4 (5/01 to 4/02)	513,900	-13%	65
5 (5/02 to 4/03)	292,000	-51%	45

Year	Volume Shipped (gallons)	Percent Change from Annual Average	Number of Leachate Shipments to WWTP
6 (5/03 to 4/04)	373,300	-37%	58
7 (5/04 to 4/05)	502,700	-15%	63
8 (5/05 to 4/06)	427,400	-28%	56
9 (5/06 to 4/07)	705,800	20%	85
10 (5/07 to 4/08)	482,775	-18%	60
11 (5/08 to 4/09)	725,550	23%	81
12 (5/09 to 4/10)	677,700	15%	83
13 (5/10 to 4/11)	661,300	12%	88
14 (5/11 to 4/12)	888,000	50%	99
Annual Average	590,254	NA	74

4.5.2 Extraction Wells

The annual volumes of leachate removed from the nine extraction wells are summarized in Table 4. The cumulative volume of removed leachate, sorted by volume, is summarized in Table 5. The nine extraction wells have removed approximately 6,249,000 gallons of leachate since the LCS was put into operation. Table 5 indicates that 22.4 percent of the total leachate volume removed was removed by just one of the nine extraction wells (i.e., EW-8), extracting 1,849,058 gallons through April 2012. In comparison, the least productive extraction well (EW-6) has produced a total 87,184 gallons over 14 years and has accounted for just over one percent of the total leachate volume removed.

The performances of the extraction wells are summarized in Drawings 3, 4, 5, 9, 10, 11, 14, and 15. The table below identifies the nine extraction wells and the drawings that summarize the performance of each well.

Extraction Well	Drawing
EW-1	Drawing 3
EW-1A	Drawing 3
EW-2	Drawing 4
EW-3	Drawing 5
EW-4	Drawing 15
EW-5	Drawing 9
EW-6	Drawing 14
EW-7	Drawing 10
EW-8	Drawing 11

These drawings present the cumulative volume of leachate removed from the wells over time, as well as the leachate elevations within the wells. These figures indicate that rates of leachate removal are variable, with higher leachate removal rates typically observed in the spring and fall, and lower removal rates typically observed in the summer and winter.

4.5.3 Lift Stations

Approximately 2,014,000 gallons of stormwater and condensate have been recovered from LS-1 and LS-2 since the LCS began operation in December 1997 (see Table 4 and Drawing 13). This volume currently represents 24 percent of the total volume of liquid removed by the leachate collection system. However, LS-2 has been dry since April 1998.

4.6 ANALYTICAL DATA

Leachate samples are collected quarterly from the leachate holding tank and analyzed for metals, general water quality parameters, and organic toxic pollutants listed in the leachate disposal permits (Permit Nos. *1995-EE-4467, 2000-EE-0837, 2005-EE-3767,* and *2010-EE-0095*).

According to the permits, leachate samples must be collected and analyzed for partial scan parameters (metals and conventional water quality parameters) on a quarterly basis. In addition, leachate samples must be collected and analyzed for full scan parameters (metals, conventional water quality parameters, and organic toxic pollutants) semi-annually. During the fourteenth year of operation leachate samples were analyzed according to the following schedule:

Date	Analysis	Analytical Parameters
05/11/11	Full Scan	Metals, water quality parameters, and organic toxic pollutants
07/13/11	Partial Scan	Metals and water quality parameters
11/09/11	Full Scan	Metals, water quality parameters, and organic toxic pollutants
01/11/12	Partial Scan	Metals and water quality parameters

Metals include: Arsenic, Barium, Boron, Cadmium, Chromium (total), Copper, Iron (total), Lead, Manganese, Mercury, Nickel, Selenium, Silver, and Zinc.

Conventional Water Quality Parameters include: Ammonia (as Nitrate), Biological Oxygen Demand, Chemical Oxygen Demand, Chloride, Cyanide, Oil and Grease, pH, Phenols, Sulfate, Total Dissolved Solids, and Total Suspended Solids.

Organic Toxic Pollutants include: Volatile Organic Compounds, Acid Compounds, Base/Neutrals, and Pesticides as defined in 40 Code of Federal Regulations 122.

The leachate analytical results are summarized in Table 6, with the leachate analytical results during the fourteenth year of LCS operations provided in Appendix B. The data indicate some variation in analyte concentrations between the sampling events. Seven VOCs (i.e., acetone, benzene, 2-butanone, chlorobenzene, 4-methyl-2-pentanone, toluene, and xylene) and four semi-volatile organic compounds (SVOCs) (i.e., benzoic acid, 2,4-dimethylphenol, 3&4 methyl-phenol, and phenol) were detected in leachate samples collected during Year 14. This represents a decrease compared to the number of VOCs detected in Year 13 which had detections of 12 VOCs. In addition, the number of SVOCs detected in leachate during Year 14 was less than in Year 13 which had detections of five SVOCs. Results for conventional water quality parameters and metals during Year 14 were consistent with previous years.

5.0 LANDFILL GAS O&M

5.1 DESCRIPTION

Historically, LFG venting occurred through thirty LFG vents that were installed in the 1980s on the Blackwell Landfill. In 1997, nine gas extraction wells were installed that conveyed LFG via gas header pipes to a 15-foot high passive vent stack constructed on top of Mount Hoy. In 2000, the LCS and LFG systems were augmented so that 12 of the LFG vents were connected to the main vent stack by new gas header pipes. An additional 13 existing LFG vents were capped as part of the augmentation. Since augmentation was completed, the main vent stack has been the sole outlet for LFG emissions.

5.2 INSPECTION AND MAINTENANCE RECORDS

The LFG inspection and maintenance requirements for the Blackwell Site are outlined in the February 1999 Final O&M Plan, with modifications provided in the First and Second Year Reports.

The inspection and maintenance requirements include the following:

- Routinely verifying integrity and proper operation of system components;
- Recording system performance data;
- Scheduling LFG testing; and
- Performing maintenance and scheduling system repairs or modifications.

The inspection, monitoring and maintenance activities are documented on forms on an as needed basis. Copies of the applicable O&M forms are provided in Appendices A-2, A-3, and A-5.

During the fourteenth year, the components of the LFG extraction system were inspected on weekly, monthly, quarterly, semi-annual, annual, and as-needed bases in accordance with the schedule provided in Table 7. The main vent stack was inspected by the O&M operator on a weekly basis, while components of the LFG extraction wells were inspected on a monthly basis. All components of the main vent stack or LFG extraction wells were found to be functioning properly during each inspection.

5.3 FIELD AND ANALYTICAL DATA

Starting in January 1998, landfill gas was monitored monthly for gas composition, static pressure, velocity, flow rate and temperature. Since March 2001, the LFG has been monitored with field instruments bimonthly at the main vent stack and LFG vents. The data for the fourteenth year are provided in Tables C-1 through C-6 in Appendix C.

The following four sampling events were conducted during the fourteenth year of LFG venting system operation to monitor LFG quality:

Date	Sample Name
05/11/11	BW-LFGSTACK-58A
07/13/11	BW-LFGSTACK-59A
11/09/11	BW-LFGSTACK-60A and Duplicate BW-LFGSTACK-960A
03/13/12	BW-LFGSTACK-61A

MWH submitted the *Draft Final Addendum No.9, Quality Assurance Project Plan, Replacement of LFG Primary Analytical Laboratory Provider* (MWH, 2010a) to the U.S. EPA on March 30, 2010. This addendum was prepared for the purpose of changing the primary analytical laboratory from Air Toxics to STAT Analysis Corporation of Chicago, Illinois for the analysis of landfill gas samples at the Blackwell Site. The U.S. EPA approved the addendum in August 2010, and STAT Analysis Corporation has been analyzing the landfill gas samples since November 2010.

Landfill gas samples were collected from the main vent stack using 6-liter passivated summa canisters and submitted for laboratory analysis. One LFG sample was collected during each sampling event.

The summa canister samples were analyzed for fixed gases including methane, carbon dioxide, oxygen, and nitrogen, and for total non-methane organic compounds (TNMOC). In accordance with Addendum No. 9 to the Quality Assurance Project Plan, STAT Analysis analyzes landfill gas samples for fixed gases using U.S. EPA Method 3C. Landfill gas samples are analyzed for TNMOC in accordance with U.S. EPA Modified Method 25C. The analytical results for historic and recent LFG sampling events are summarized in Table 8. The analytical reports for the fourteenth year of LFG operations are provided in Appendix D.

In December 2005, MWH began collecting landfill gas samples in accordance with the July 7, 2005 *Revised Landfill Gas Trigger Level Report* (MWH, 2005e). This included analyzing the samples for VOCs (Method TO15) in addition to the parameters listed above.

5.4 LFG EMISSIONS

Gas emissions from the LFG vents were monitored on a monthly basis between January 1998 and March 2001 and on a bimonthly basis since then. The monitoring consists of using field instruments to measure LFG flow velocities at the main vent stack and to measure static gas pressure at the extraction wells and individual LFG vents. The individual LFG vents are connected to the main vent stack through a series of conveyance piping. The fourteenth year bimonthly static pressure data and velocity for the main vent stack and for the gas vents are summarized in Landfill Gas Vent Monitoring Forms (Appendices A-2 and A-5), and on Tables C-3 and C-4 in Appendix C.

The gas velocity at the main vent stack was converted to flow rate by multiplying the gas velocities by the cross-sectional area of the stack. A summary of the calculated flow rates is provided in Table C-5 in Appendix C. The variation in gas flow rate measured over time is presented in Drawing 17. Landfill gas emissions from the main vent stack increased following augmentation of the LFG system in August 2000 when 12 LFG vents were connected to the main venting system.

The variation in static LFG pressures in the extraction wells and LFG vents are presented in Table C-3 and in Drawings 18 through 20. The static pressures in the extraction wells exhibit low variability over time, with measured static pressures generally less than or equal to 1.0 inch of water. However, during Year 14, landfill gas pressures measured greater than 1.0 inch of water at EW-6 and EW-7 during four of the six O&M events. Gas pressure measurements were observed as high as 8.0 inches of water at EW-7 during the January 2012 O&M event.

The LFG vents show greater variation in static gas pressure than the extraction wells. During the fourteenth year monitoring period, static gas pressures in the LFG vents ranged from 0.0 to 5.0 inches of water. This static gas pressure range is similar to the pressure ranges in Year 13 (i.e., 0.0 to 3.4 inches of water), and is within the previous pressure ranges observed in years past (i.e., 0.0 to 8 inches of water).

The variation in methane content is shown in Drawings 21 through 23. In some of the vents, methane content showed little variability (e.g., SV-4, SV-5, SV-8, DV-8, DV-9, DV-10, DV-16, and DV-17). Total methane concentrations at these individual vents were within 15 percent for all measurements conducted during Year 14. In addition, little variation in methane content was observed at extraction wells EW-1, EW-2, EW-3, EW-4, EW-5, EW-6, and EW-7. Total methane concentrations at these individual extraction wells were within 16 percent for all measurements conducted during Year 14. However, other vents (e.g., SV-9, DV-5, DV-15, and DV-18) and extraction wells (e.g., EW-1A and EW-8) showed more variability during Year 14 with total methane concentrations varying by as much as 84 percent. During Year 14, the maximum methane concentrations remained between approximately 55 percent and 75 percent of the total LFG composition in most of the extraction wells, approximately one-third of the vents, and in the main vent stack. However, the remaining two-thirds of the vents had maximum methane concentrations between one and 41 percent during Year 14.

Methane content at the main vent stack showed little variability during Year 14. Total methane concentrations ranged from 57.4 percent to 72.7 percent of the total landfill gas composition. These measurements are consistent with previous years.

5.5 LFG TRIGGER LEVELS

At the request of the U.S. EPA, the District conducted a trigger level evaluation and LFG emission modeling to determine whether LFG emissions posed a risk to recreational users of the Blackwell Landfill. The information derived from the evaluation was used to prepare the *Final Landfill Gas Trigger Level Report* (MWH 2006a) which presents trigger levels for possible additional remedial actions should LFG concentrations or flow rates increase in the future at the Blackwell Site.

Five tables (Table 9 through Table 13) showing the cumulative risk of exposure to Blackwell landfill gas are provided with this report and show that no landfill gas trigger levels were exceeded in May 2011, July 2011, November 2011 or March 2012. The tables were prepared using a U.S. EPA approved method and indicate that the landfill gas is well below the levels for the Hazard Quotient of 1 and carcinogenic risk of 1×10^{-6}.

6.0 EVALUATIONS AND RECOMMENDATIONS FOR THE LEACHATE COLLECTION AND LANDFILL GAS SYSTEMS

6.1 EVALUATION OF LCS

6.1.1 Trendline Analysis

The LCS consists of nine extraction wells, three lift stations, and twenty-five LFG vents that are used to monitor leachate levels. Leachate levels were measured in the wells and vents on a monthly basis between January 1998 and March 2001, and on a bimonthly basis ever since. In addition, leachate levels were measured in several of the LFG vents during the RI.

In order to evaluate the overall effectiveness of the LCS, a trendline analysis was performed over the entire period of data collection. For evaluative purposes, this analysis consisted of fitting a linear trendline to leachate elevation data with a downward trend indicated by a negative slope and an upward trend indicated by a positive slope. The trendline analyses for each well and vent by landfill area are included as Drawings 1 through 15.

Over the past 14 years of LCS operation the leachate elevations in the Blackwell Landfill have generally remained stable. From year to year, there is some variation in leachate elevations with some vents and extraction wells showing an increasing trend, while others show a stable or decreasing trend. Cumulative leachate elevations through Year 14 show an increasing trend in five of eight extraction wells and 15 of the 25 LFG vents. The cumulative increase in leachate elevations at these locations throughout the past 14 years may be attributed to landfill settlement rather than increased leachate volume. As the landfill settles the pore spaces between soil grains are compressed which in turn causes the leachate levels to rise within the extraction wells. In May 2007, MWH had the extraction wells surveyed to check for settlement. There was significant settlement recorded at all of the extraction wells. Landfill compaction is a non-reversible process. As leachate is removed from the pore spaces in the landfill, some of the pore space collapses under the pressure from overlying soil and refuse. During the next infiltration event, there is less pore space in the landfill. Infiltrating water cannot "re-inflate" the collapsed pore space. Therefore, the same volume of infiltrating rainwater will result in higher levels in the wells that measure leachate levels. It is important to consider that increasing leachate levels are likely evidence of landfill compaction rather than an increased volume of leachate.

The LCS continues to remove the precipitation that infiltrates the cap and the landfill. A summary of the cumulative trends in leachate elevations is depicted in Figure 5. The LCS operation from the nine extraction wells and two lift stations has removed approximately 8,263,000 gallons of leachate.

6.1.2 Augmentation Requirements - Record of Decision

The previous year-end Reports on the LCS and LFG systems provided an evaluation of the criteria that would require augmentation of the LCS and LFG systems outlined in the September 30, 1998, ROD. This evaluation has been repeated below using the combined 14 years of data for LCS operations.

The September 30, 1998, ROD for the Blackwell Landfill describes the objectives of the LCS and provides guidelines for system augmentation. The LCS objectives and augmentation requirements are as follows:

- Section VI.C, page 31 of the ROD states that the objective of the LCS is to manage the threat of leachate migration and exposure through active leachate collection and off-site treatment and disposal.
- Section VII, page 37 of the ROD states that if data demonstrate that the leachate system is not effective in managing leachate, the system could be augmented with up to nine additional leachate extraction wells. Ineffective management of leachate was defined as leachate posing a direct exposure threat, or groundwater not being remediated in a reasonable amount of time. The groundwater cleanup goals are U.S. EPA Maximum Contaminant Levels and Illinois Class I Drinking Water Standards.
- Section VII, page 38 of the ROD provides the general criteria to be used to decide whether groundwater was being remediated in a reasonable amount of time. These criteria include existing contaminant levels, trends in contaminant concentrations, potential reduction in restoration time frames to less than 30 years, and potential for the contaminants in groundwater to meet regulatory standards and/or asymptotic levels throughout the plume.

An evaluation of the O&M data indicates that the LCS meets the objectives set out by the September 30, 1998, ROD. In addition, during groundwater monitoring events conducted over the past 14 years, analytical results have been consistent with past monitoring results and show a general trend of decreasing number of volatile organic compounds in groundwater outside the landfill. Graphs showing VOC concentrations at monitoring wells over the past 13 years are included in Appendix E. Analytical results presented in standalone groundwater sampling reports also indicate overall decreases in VOC concentrations in the groundwater.

The results of the groundwater monitoring events are summarized in the *Long Term Groundwater Monitoring Program Summary Report* (MWH, 2005a) and the First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth, Eleventh, Twelfth, Thirteenth, and Fourteenth Round Long-Term Groundwater Monitoring Reports (Montgomery Watson 2001b, MWH 2002a, MWH 2002e, MWH 2003b, MWH 2004c, MWH 2005c, MWH 2006b, MWH 2006d, MWH 2007b, MWH 2008a, MWH 2009d, MWH 2010c, MWH 2011b, and MWH 2012a). In summary, no ROD criteria have been exceeded that would require augmentation of the LCS system.

6.1.3 Augmentation Requirements - O&M Plan

The previous Year-End Reports on the LCS and LFG systems provided evaluations of the modification and augmentation requirements which were outlined in the February 1999 Final O&M Plan for the Blackwell Landfill. This evaluation has been repeated below using the combined 14 years of data for LCS operations.

The February 1999 O&M Plan provided guidelines for modification or augmentation of the LCS that may include: increasing extraction rates in some areas, decreasing extraction rates or shutting down extraction in other areas, converting some of the previously installed LFG vents to extraction wells, or constructing one or more new extraction wells. The specified criteria for system modification or augmentation are provided:

Criteria #1: Extraction wells that generate a small amount of leachate, in comparison to the total volume extracted from the landfill, would be proposed for removal or abandonment.

Two extraction wells (EW-4 and EW-6) have produced only 2.8 percent of the total volume of leachate removed from the landfill. EW-4 and EW-6 are candidates for possible removal. However, the District is voluntarily continuing leachate extraction from these two wells.

Criteria #2: Extraction wells which generate a large volume of leachate, and which demonstrate a decreasing trend in leachate levels in the well and surrounding monitoring wells and vents, would continue to be operated. However, if the drop in leachate levels are small in comparison to theoretical volume of extractable leachate (i.e., large volumes of leachate are extracted from an extraction well without a corresponding decrease in leachate levels in that same well), additional extraction wells may be installed in the general area.

Cumulative leachate levels show an increasing trend in five of the eight extraction wells where leachate is measured through the fourteenth year of operation. This cumulative trend is attributed to settlement of the landfill. In addition, the yearly volume of leachate extracted has increased in eight of the nine extraction wells (Table 4) compared to last year. The District is proposing to continue monitoring the apparent trend in leachate levels. No additional extraction wells are planned at this time.

Criteria #3: Extraction wells which initially generate a large volume of leachate and show a significant drop in leachate levels in the extraction well, but which are surrounded by monitoring wells and vents which do not show any appreciable drop in their leachate levels, will be considered to be in an area with non-extractable leachate. These extraction wells will be proposed for removal or abandonment.

No extraction wells meet this criterion. The Year Two Report recommended that LS-2 be removed because it did not pump during the second or third year of operations. The pump in LS-2 was subsequently removed during year three. However, during the eighth year of operation, a new pump was installed in LS-2. This pump was installed in case any water is ever collected in LS-2. However, the pump has not run because LS-2 continues to be dry.

In summary, no modifications to the LCS operations are recommended for the upcoming year. It is proposed that the LCS system will continue for a fifteenth year in the current configuration.

6.2 EVALUATION OF LANDFILL GAS SYSTEM

6.2.1 LFG Augmentation

The September 30, 1998 ROD provides for the possible augmentation of the LFG extraction system, with the installation of up to nine dual leachate and LFG extraction wells. The 1999 UAO also requires that the LFG extraction system manage the threat of LFG buildup, and potential LFG migration and exposure.

In August 2000, modifications were made to the LFG extraction system which included connecting selected LFG vents to the main LFG venting system, capping other selected LFG vents, and abandoning the remaining LFG vents. The U.S. EPA approved the work plan and proposed modifications in a March 24, 2000 letter.

No further augmentation of the LFG extraction system is recommended at this time.

6.2.2 Thermal Treatment

The February 1999 Final O&M Plan specified that a flare would be installed on the main vent stack if the quantity of TNMOC exceeds set limits. The TNMOC limits are eight pounds per hour (lb/hr) (35 Illinois Administrative Code 218.301), and 25 tons per year (5.71 lb/hr) of total VOCs in a severe ozone non-attainment area.

The calculated TNMOC emissions for the fourteenth year of O&M operations are summarized in Table C-6 in Appendix C, and indicate a range of 0.17 to 0.31 pounds of TNMOC per hour. In comparison, the emissions range during previous years of O&M operations are shown in Drawing 24 and summarized in the table below:

O&M Year	Calendar Year	TNMOC (lb/hr)
1	1998	0.29 to 1.21
2	1999	0.37 to 0.89
3	2000	0.22 to 0.64
4	2001	0.20 to 0.36
5	2002	0.25 to 0.42
6	2003	0.25 to 0.32
7	2004	0.27 to 0.38
8	2005	0.23 to 0.38
9	2006	0.28 to 0.52
10	2007	0.23 to 0.37
11	2008	0.05 to 0.20
12	2009	0.06 to 0.15
13	2010	0.14 to 0.21
14	2011	0.17 to 0.31

As shown in the table above, these results indicate that TNMOC emissions are below the limits set forth in the Final O&M Plan. Therefore, modifications to the LFG venting system are not required.

6.2.3 Passive vs. Active Gas Extraction

The February 1999 Final O&M Plan specified that an active LFG extraction system would be installed if there were evidence of uncontrolled LFG releases through or around the landfill cover. Evidence of uncontrolled LFG releases was defined as odors in areas with no gas vents, stressed vegetation, gas releases from monitoring wells located outside of the landfill perimeter, or gas bubbling through saturated topsoil following a rainfall event.

Landfill gas has been observed bubbling through the cap in a small isolated area at the toe of the north slope of the landfill over the past several years following rainfall events. Ambient air samples were collected at this location in the past and indicate that there is no unacceptable risk from the landfill gas. At this time, the District and MWH do not recommend conversion of the passive LFG venting system to an active system.

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TABLES

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
6/21/1996	735.02	720.05	728.71	725.71	719.15	736.29	731.14	710.71	710.86	738.03	761.77	NA	752.29	736.05	701.90	695.82	730.83	747.44	723.54	719.12
7/23/1996	735.07	717.90	725.26	722.86	718.71	735.37	730.74	710.06	710.26	737.03	761.07	NA	751.54	736.05	704.91	696.12	730.06	746.84	722.89	720.07
10/21/1996	734.25	719.40	722.50	NM	715.86	732.77	729.84	710.86	711.11	737.63	762.17	NA	747.59	735.27	700.81	696.55	724.76	NM	722.39	715.19
11/19/1997	734.12	719.92	723.16	723.08	717.21	734.17	732.32	710.94	711.25	739.08	762.12	NA	746.79	735.00	699.56	695.74	746.91	749.79	724.84	719.72
1/15/1998	734.97	719.54	727.71	722.36	719.16	735.97	733.69	711.01	711.21	739.88	762.06	NA	752.09	735.25	701.51	695.87	726.36	746.54	724.34	718.82
2/18/1998	735.27	719.35	729.06	724.36	720.66	737.27	734.19	711.96	711.46	739.18	762.02	NA	753.84	735.05	703.01	695.67	725.86	750.19	725.09	720.97
3/10/1998	735.07	719.00	728.76	723.41	719.66	736.27	733.48	711.46	710.86	738.63	762.07	NA	753.39	734.65	703.46	696.72	724.21	754.94	723.99	720.17
4/14/1998	735.49	719.13	728.43	723.15	720.77	736.32	734.38	712.08	711.57	739.16	762.05	NA	748.46	735.55	705.30	696.75	724.16	NM	724.74	722.08
5/13/1998	735.62	713.60	727.06	723.61	720.01	735.87	734.24	711.81	711.46	739.16	762.12	NA	745.94	735.70	706.31	696.52	724.01	753.14	724.09	720.22
6/17/1998	734.57	719.00	725.76	720.66	718.96	735.17	729.04	711.61	711.36	739.03	762.07	NA	743.59	735.30	703.86	695.47	722.11	747.84	723.89	719.52
7/15/1998	734.37	719.14	725.31	720.68	720.11	730.67	734.24	711.76	711.56	739.02	762.12	NA	742.69	735.29	703.16	695.67	722.15	NM	724.17	719.70
8/11/1998	734.07	719.00	722.96	720.66	718.01	729.72	727.89	711.61	711.56	739.08	762.07	NA	740.74	735.35	702.16	695.52	721.06	746.89	724.09	718.97
9/15/1998	733.92	718.95	721.31	720.81	717.11	729.57	727.39	711.56	711.46	739.18	762.07	NA	741.04	735.15	701.61	695.47	720.66	747.34	723.69	717.87
10/16/1998	733.97	719.10	721.26	720.71	716.51	728.97	727.34	711.66	711.56	739.08	762.10	NA	741.89	735.30	701.01	695.67	721.16	747.24	723.39	717.37
11/17/1998	734.07	719.05	722.31	721.91	716.76	729.97	726.59	711.66	711.41	739.28	762.12	NA	744.74	731.65	702.31	696.92	722.11	747.14	722.49	719.52
12/21/1998	734.26	719.18	723.16	720.84	716.80	730.03	726.19	711.79	711.88	738.42	760.87	NA	741.08	734.28	702.03	695.61	721.81	745.01	722.33	716.97
1/12/1999	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM
2/17/1999	734.51	719.25	726.08	720.92	717.95	731.76	730.99	712.39	711.88	738.68	760.91	NA	747.10	733.98	705.20	696.21	721.96	745.07	724.39	719.52
3/24/1999	734.31	719.18	726.01	720.97	718.00	731.86	730.59	712.44	711.78	738.52	760.91	NA	750.64	733.73	705.02	695.79	720.70	745.07	722.53	718.37
4/16/1999	734.66	719.30	727.46	720.77	718.55	732.81	730.79	712.94	712.23	739.26	760.93	NA	751.29	733.73	704.24	697.21	720.51	745.12	724.38	719.42
5/17/1999	734.56	719.15	727.48	721.37	718.80	731.71	730.74	713.09	712.13	738.93	760.98	NA	752.29	733.98	706.50	697.01	720.01	745.12	724.63	719.22
6/22/1999	734.41	719.25	725.68	720.97	718.40	731.86	733.39	712.89	712.08	738.53	760.96	NA	750.99	733.98	705.55	696.26	721.01	745.17	721.93	718.07
7/22/1999	734.11	719.35	727.43	720.92	717.38	NM	730.31	712.83	712.17	738.38	760.86	NA	751.14	731.98	705.60	695.73	721.49	747.27	723.56	717.19
8/25/1999	732.16	717.30	721.53	721.02	714.45	729.56	728.44	710.84	710.23	738.81	760.93	NA	743.74	731.78	701.25	693.91	719.51	745.47	720.78	714.37
9/29/1999	732.56	717.30	720.03	DRY	713.80	726.26	727.69	712.64	711.93	736.63	759.06	NA	737.64	731.63	699.05	696.63	721.21	745.77	720.55	713.32
10/27/1999	731.91	719.00	DRY	716.62	713.40	726.21	725.09	710.49	709.83	737.13	759.11	NA	737.34	731.38	698.90	694.01	717.56	745.62	719.48	713.12
12/1/1999	731.92	717.20	720.08	720.62	713.05	725.15	728.14	710.44	710.13	736.83	759.08	NA	736.16	731.20	699.50	693.78	718.41	745.75	717.63	712.49
12/29/1999	731.81	717.55	720.08	719.22	713.20	726.51	726.29	710.48	710.33	737.08	759.11	NA	736.14	731.18	699.07	694.15	717.76	745.10	719.18	713.22
1/25/2000	731.61	717.35	720.08	719.22	713.25	726.01	726.54	710.17	709.93	736.78	759.06	NA	736.54	730.98	699.05	694.11	719.26	745.22	718.73	713.02
2/29/2000	731.91	717.25	720.63	725.07	714.80	726.81	730.84	710.46	710.13	736.78	759.11	NA	739.84	731.38	DRY	695.16	719.61	745.77	720.33	718.17
3/24/2000	730.91	717.40	DRY	725.32	713.35	725.33	726.14	712.39	711.95	735.53	757.84	NA	740.51	729.81	DRY	696.26	714.13	DRY	719.69	716.97
4/28/2000	733.91	719.20	724.67	DRY	717.49	730.21	732.77	712.32	711.71	738.69	759.71	NA	DRY	732.72	702.90	697.90	717.31	DRY	723.51	719.65
5/29/2000	734.11	719.20	722.13	720.77	716.70	729.69	727.04	712.49	711.73	738.63	760.91	NA	744.94	732.88	701.65	697.11	717.35	NA	722.98	715.97
6/29/2000	734.26	719.60	722.41	725.88	717.38	731.76	729.59	712.63	711.83	738.68	760.91	NA	742.16	732.85	701.98	695.94	717.41	NA	724.03	717.57
7/27/2000	734.16	719.40	721.68	719.92	716.67	730.13	729.79	712.69	711.93	739.13	761.01	NA	740.09	732.92	701.31	696.29	717.58	NA	722.91	716.17
9/28/2000	NM	719.33	NA	727.31	715.84	727.86	729.28	712.28	711.72	738.36	760.92	NA	NA	732.92	700.38	NA	716.66	740.59	723.45	716.59

Notes:

1. NM = not measured for particular date
2. NA = not analyzed as a part of O&M activities
3. DRY = indicates no leachate measured inside well
4. Several leachate elevations not measured on 11-9-11 due to flooded vaults.
5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
10/26/2000	733.99	719.36	NA	725.80	715.79	729.11	729.21	711.58	711.97	738.73	760.97	NA	NA	733.17	700.03	702.02	717.01	NA	722.48	715.38
11/30/2000	734.07	719.74	NA	725.16	DRY	727.21	728.89	712.43	711.82	738.78	760.92	NA	NA	733.22	700.55	701.25	716.51	NA	723.68	718.71
12/20/2000	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
1/24/2001	NM	716.14	NA	NM	NM	NM	NM	712.73	NM	NM	760.97	NA	NA	733.62	699.73	702.10	DRY	NM	NM	717.41
2/20/2001	734.14	717.72	NA	720.46	717.29	729.56	728.21	713.03	712.02	NA	760.97	NA	NA	732.97	704.25	701.55	716.76	NA	726.93	718.86
3/21/2001	734.34	NM	NA	NM	NM	727.56	729.31	713.20	710.07	738.78	760.87	NA	NA	733.37	705.05	702.15	716.76	NA	727.63	722.46
5/31/2001	734.29	719.44	NA	726.16	718.34	728.96	729.11	713.13	713.02	738.68	760.92	NA	NA	732.92	703.4	701.75	716.76	NA	727.18	718.71
7/12/2001	734.34	719.24	NA	721.62	716.15	728.72	729.31	713.58	712.22	739.18	761.14	NA	NA	733.30	702.05	NM	716.98	NA	722.43	716.41
9/20/2001	735.23	719.84	NA	727.36	716.99	728.31	726.91	713.51	714.91	739.00	761.17	NA	NA	732.86	701.72	699.45	716.98	NA	727.12	718.93
11/7/2001	734.39	719.84	NA	727.73	717.50	730.11	727.86	713.83	712.28	739.63	756.20	NA	NA	733.49	703.66	699.10	717.01	NA	722.45	716.81
1/17/2002	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/28/2002	734.37	720.44	NA	724.46	718.24	729.26	733.43	714.38	712.59	740.13	761.22	NA	NA	733.25	703.55	698.65	717.31	NA	724.74	717.55
5/31/2002	734.24	721.34	NA	723.44	718.57	730.36	733.46	715.03	712.62	740.38	761.23	NA	NA	733.42	704.75	698.65	718.36	NA	726.11	717.56
7/11/2002	734.79	720.64	NA	724.96	717.49	729.96	728.31	714.25	712.37	739.18	761.22	NA	NA	733.41	703.5	NA	717.46	NA	726.38	718.31
9/26/2002	734.19	NM	NA	722.55	715.33	728.86	732.50	714.18	712.74	739.38	761.32	NA	NA	733.42	700.55	NA	717.91	NA	723.13	714.93
11/21/2002	733.86	721.24	NA	722.26	714.24	727.94	730.41	713.88	712.76	739.13	761.27	NA	NA	732.42	699.65	NA	718.06	NA	719.43	713.68
1/30/2003	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	718.06	NA	719.43	713.68
4/3/2003	733.64	720.99	NA	726.51	712.84	727.61	730.71	713.25	712.22	740.37	761.37	NA	NA	731.63	700.3	NA	NA	NA	721.23	717.01
6/5/2003	733.79	721.04	NA	724.46	715.39	729.16	730.71	713.53	712.27	741.38	761.32	NA	NA	733.07	703.55	NA	NA	NA	722.30	714.86
8/7/2003	NM	721.44	NA	722.36	714.39	727.26	730.71	714.73	712.17	739.28	761.82	NA	NA	732.62	700.55	NA	742.96	NA	718.93	713.71
9/25/2003	NM	721.39	NA	722.21	713.63	727.56	730.66	713.02	712.07	739.28	761.37	NA	NA	732.37	699.65	NA	742.26	NA	719.05	712.94
11/26/2003	NM	721.69	NA	729.11	714.04	727.51	730.46	713.58	712.12	739.13	761.32	NA	NA	742.62	699.55	NA	742.26	NA	727.43	718.31
1/28/2004	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/4/2004	NM	722.69	NA	731.26	715.56	728.46	731.61	714.63	712.27	739.18	761.32	NA	NA	732.92	701.25	707.85	DRY	NM	727.49	NM
5/6/2004	734.29	720.04	NA	725.86	717.94	728.66	731.21	714.78	712.57	739.58	761.42	NA	NA	733.62	704.00	708.35	DRY	NM	726.43	NM
7/22/2004	734.09	DRY	NA	724.95	716.67	727.84	730.25	715.33	NM	739.09	761.42	NA	NA	733.34	703.18	NM	DRY	NM	722.82	NM
9/2/2004	733.90	NM	NA	722.84	714.95	726.72	DRY	714.49	712.38	738.93	761.42	NA	NA	733.53	701.14	DRY	DRY	746.44	720.85	714.08
11/10/2004	733.68	NM	NA	722.74	713.96	727.33	DRY	716.14	712.55	738.78	DRY	NA	NA	732.77	699.53	DRY	DRY	DRY	719.05	712.83
1/19/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA	NM	NM	NM	NM	NM	NM	NM
3/10/2005	734.35	723.44	NA	NM	NM	NM	NM	NM	NM	739.13	761.48	NA	NA	733.95	704.90	NM	DRY	NM	NM	NM
5/11/2005	734.28	722.73	NA	724.37	718.15	727.62	729.97	715.83	712.55	739.39	761.49	NA	NA	733.95	703.41	707.76	DRY	DRY	724.60	NA
7/14/2005	733.98	723.56	NA	722.62	715.59	727.27	731.06	715.70	712.62	739.20	761.46	NA	NA	733.14	700.75	DRY	DRY	DRY	721.03	714.27
9/14/2005	733.85	723.74	NA	722.25	714.12	727.47	DRY	714.84	712.58	739.04	761.47	NA	NA	732.80	699.55	DRY	DRY	746.52	719.26	712.98
11/9/2005	733.56	723.69	NA	722.21	713.33	725.94	DRY	713.87	712.44	738.79	761.41	NA	NA	732.13	DRY	DRY	DRY	DRY	719.77	712.22
1/11/2006	733.57	723.92	NA	724.58	712.82	725.67	DRY	714.29	712.39	738.73	761.39	NA	NA	732.12	DRY	707.73	DRY	DRY	722.02	715.95
3/8/2006	733.55	724.19	NA	729.66	718.11	726.58	DRY	715.77	712.73	738.88	761.41	NA	NA	733.21	699.71	707.75	DRY	DRY	726.73	723.56

Notes:

1. NM = not measured for particular date
2. NA = not analyzed as a part of O&M activities
3. DRY = indicates no leachate measured inside well
4. Several leachate elevations not measured on 11-9-11 due to flooded vaults.
5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-11	SV-12	DV-1	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9
5/8/2006	734.24	723.99	NA	733.88	719.61	727.79	DRY	716.13	712.45	738.59	761.44	NA	NA	733.68	702.09	DRY	DRY	DRY	726.85	722.88
7/12/2006	734.17	722.02	NA	724.31	718.10	DRY	DRY	715.81	712.52	738.41	761.41	NA	NA	733.69	701.76	DRY	DRY	DRY	723.83	714.90
9/5/2006	733.94	722.10	NA	723.93	713.32	729.42	729.68	715.47	712.47	738.16	761.42	NA	NA	733.23	700.25	DRY	742.94	747.61	721.64	713.38
11/8/2006	734.21	DRY	NA	733.06	721.67	728.96	730.07	716.30	712.95	738.81	761.39	NA	NA	733.82	701.45	707.73	DRY	DRY	727.38	723.06
1/10/2007	734.60	DRY	NA	NM	NM	731.94	729.64	717.64	NM	738.17	NM	NA	NA	NM	706.16	NM	742.98	NM	NM	NM
3/12/2007	734.44	DRY	NA	NM	723.78	730.56	729.53	717.73	713.13	741.70	761.48	NA	NA	734.15	707.03	708.23	745.41	747.59	726.60	NM
5/9/2007	734.41	DRY	NA	733.05	720.66	729.33	DRY	717.52	713.38	739.63	761.47	NA	NA	734.52	706.48	DRY	DRY	DRY	727.10	720.96
7/11/2007	733.82	DRY	NA	725.11	713.46	730.00	DRY	716.92	713.12	739.23	761.42	NA	NA	733.50	702.30	DRY	DRY	DRY	722.99	714.92
9/12/2007	730.68	DRY	NA	726.56	713.42	729.08	DRY	716.73	712.95	738.68	761.41	NA	NA	733.66	700.86	DRY	DRY	DRY	721.36	714.09
11/14/2007	733.61	DRY	NA	724.96	712.58	729.33	730.36	716.35	713.32	739.14	761.48	NA	NA	733.14	699.53	707.58	742.94	747.59	720.15	712.71
1/9/2008	NM	DRY	NA	NM	724.15	729.22	730.54	719.17	725.87	738.65	761.46	NA	NA	732.85	NM	717.97	743.02	747.62	727.62	NM
3/10/2008	734.11	DRY	NA	NM	NM	730.84	729.67	NM	NM	738.55	761.48	NA	NA	733.52	NM	NM	743.22	747.63	NM	NM
5/14/2008	733.79	DRY	NA	NM	724.25	731.84	730.39	718.07	713.93	738.41	761.53	NA	NA	733.81	NM	715.20	742.93	746.62	727.61	NM
7/9/2008	734.16	DRY	NA	727.65	718.82	731.17	729.95	717.37	713.78	738.16	761.52	NA	NA	733.10	703.39	707.77	742.95	746.55	724.43	716.23
9/10/2008	734.07	DRY	NA	726.36	713.64	730.85	DRY	716.68	713.43	737.39	761.39	NA	NA	732.36	700.68	DRY	DRY	DRY	721.89	713.98
11/19/2008	734.27	DRY	NA	728.17	722.76	728.86	731.94	717.59	713.82	737.38	761.47	NA	NA	733.09	702.63	707.73	DRY	746.42	727.05	723.24
1/21/2009	NM	NM	NA	NM	NM	728.74	731.60	NM	NM	737.67	NM	NA	NA	NM	NM	707.76	NM	746.58	NM	NM
3/9/2009	NM	DRY	NA	NM	724.28	730.20	731.43	720.84	715.04	737.93	761.58	NA	NA	733.51	NM	709.05	NM	746.24	727.42	NM
5/13/2009	734.90	DRY	NA	NM	724.29	729.14	731.94	719.10	718.72	738.05	761.63	NA	NA	734.68	NM	707.81	748.07	DRY	727.72	NM
7/15/2009	734.19	DRY	NA	726.89	719.25	726.79	731.12	717.59	714.32	737.62	761.59	NA	NA	733.28	703.45	707.73	742.97	747.72	724.68	716.19
9/23/2009	733.83	741.36	NA	725.86	715.50	726.21	DRY	716.78	725.37	737.20	761.52	NA	NA	732.52	701.49	707.71	742.96	746.72	722.64	714.12
11/18/2009	734.30	DRY	NA	728.30	721.86	727.97	729.59	717.44	714.46	737.31	761.51	NA	NA	733.27	701.98	707.49	DRY	DRY	727.08	722.60
1/13/2010	734.22	DRY	NA	NM	NM	728.83	NM	NM	NM	739.47	NM	NA	NA	NM	NM	708.21	NM	NM	NM	NM
3/8/2010	736.07	DRY	NA	NM	724.24	727.52	DRY	719.11	721.80	737.20	761.62	NA	NA	733.27	703.63	709.20	DRY	746.59	727.58	NM
5/19/2010	734.12	DRY	NA	725.86	720.34	728.20	729.72	718.26	714.98	737.32	761.59	NA	NA	733.41	704.20	707.78	742.98	746.62	727.24	722.41
7/15/2010	734.12	DRY	NA	725.66	718.78	DRY	DRY	717.67	NM	737.27	747.92	NA	NA	733.19	702.66	707.67	DRY	DRY	725.20	716.08
9/8/2010	734.09	DRY	NA	729.24	718.18	726.44	DRY	717.90	NM	736.87	761.50	NA	NA	733.38	702.42	707.64	743.00	747.70	724.65	715.40
11/10/2010	733.79	DRY	NA	727.06	713.90	726.16	DRY	716.46	714.87	736.67	761.50	NA	NA	732.51	700.57	DRY	747.71	DRY	721.46	713.34
1/12/2011	733.67	NM	NA	NM	714.39	725.67	729.98	NM	NM	736.04	761.57	NA	NA	731.89	700.78	NM	DRY	NM	NM	NM
3/16/2011	734.82	DRY	NA	NM	NM	726.87	729.80	NM	NM	735.28	761.50	NA	NA	733.35	705.24	714.70	744.07	DRY	NM	NM
5/11/2011	734.31	DRY	NA	729.56	721.59	728.70	729.79	718.71	714.43	736.58	761.59	NA	NA	734.02	705.36	708.38	DRY	DRY	726.87	722.26
7/13/2011	734.32	DRY	NA	728.85	718.96	727.05	DRY	717.27	715.21	736.45	760.94	NA	NA	733.57	703.30	708.26	DRY	DRY	725.26	716.07
9/7/2011	734.29	DRY	NA	728.91	718.34	726.36	DRY	717.11	715.39	735.45	760.94	NA	NA	733.28	701.50	708.21	DRY	DRY	724.34	715.19
11/9/2011	NM	DRY	NA	NM	724.31	726.91	DRY	NM	724.77	736.62	761.32	NA	NA	733.00	NM	716.15	NM	747.93	NM	NM
1/11/2012	734.38	DRY	NA	NM	NM	728.11	DRY	720.17	715.86	735.70	761.04	NA	NA	733.39	702.49	713.37	745.34	DRY	NM	NM
3/13/2012	733.99	DRY	NA	730.08	724.29	727.17	729.56	721.14	725.67	735.70	770.53	NA	NA	732.66	702.65	712.26	748.88	751.09	727.44	NM

Notes:

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2. NA = not analyzed as a part of O&M activities
3. DRY = indicates no leachate measured inside well
4. Several leachate elevations not measured on 11-9-11 due to flooded vaults.
5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
6/21/1996	739.01	750.32	700.67	712.85	NM	NM	NM	NM	NM	714.45	709.73	714.84	724.63	713.48	755.91	712.99	720.01	750.71
7/23/1996	738.71	750.72	704.65	711.70	720.10	700.76	700.84	707.19	NM	714.25	709.73	716.24	727.53	713.28	756.31	714.29	719.21	750.31
10/21/1996	735.97	747.29	700.38	712.63	716.70	698.61	NM	708.16	727.94	719.85	715.18	721.54	731.43	NA	760.71	720.89	725.11	749.21
11/19/1997	734.73	746.75	NA	712.45	717.65	701.11	702.33	713.43	NM	716.55	713.10	720.94	730.21	NA	NA	719.38	723.98	746.23
1/15/1998	738.76	751.42	NA	712.67	717.50	699.06	702.04	706.46	728.54	NM	709.83	719.54	734.06	NA	749.91	719.39	723.81	751.21
2/18/1998	737.26	753.17	NA	713.60	717.75	700.31	702.09	706.59	729.14	715.08	713.78	722.49	733.73	NA	736.76	719.14	723.41	753.21
3/10/1998	735.76	751.77	NA	712.65	717.15	700.61	701.89	706.29	728.84	713.58	713.73	713.59	731.40	NA	738.61	717.69	721.21	NM
4/14/1998	737.04	750.96	NA	713.42	717.46	701.32	702.04	706.87	731.84	714.71	713.8	724.44	732.76	NA	752.84	719.54	722.01	749.82
5/13/1998	737.17	745.47	NA	713.20	717.30	701.91	701.89	706.94	732.89	716.48	711.83	719.44	725.80	NA	740.36	716.99	719.26	744.61
6/17/1998	736.56	748.42	NA	713.15	717.25	700.66	702.29	707.09	NM	714.58	712.73	720.94	726.93	NA	739.96	720.19	724.66	744.81
7/15/1998	738.70	742.57	NA	712.95	717.40	700.80	701.99	707.34	NM	714.68	712.08	720.62	727.28	NA	725.41	720.19	718.16	742.79
8/11/1998	735.41	740.32	NA	713.00	717.55	699.61	701.94	707.29	729.14	714.73	710.81	716.86	725.80	NA	732.81	719.79	717.71	741.14
9/15/1998	732.66	740.92	NA	712.90	718.05	699.11	701.94	707.14	727.74	714.53	710.78	717.74	725.48	NA	734.51	716.24	716.21	740.76
10/16/1998	733.51	741.87	NA	713.10	718.35	698.86	NM	705.29	728.99	714.58	710.38	716.54	724.38	NA	736.06	718.79	715.21	741.21
11/17/1998	734.86	744.62	NA	713.00	718.55	699.66	701.84	707.04	728.59	714.48	713.63	717.79	726.53	NA	734.26	719.19	717.21	744.66
12/21/1998	735.03	740.89	NA	713.03	718.76	699.50	702.07	706.96	736.99	714.42	711.68	717.02	726.27	NA	734.25	713.54	715.64	NA
1/12/1999	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NA	NM	NM	NM	NA
2/17/1999	734.88	747.12	NA	713.43	718.48	701.40	702.07	706.96	738.89	714.53	713.68	721.59	732.03	NA	736.86	716.24	717.81	NA
3/24/1999	735.78	749.82	NA	713.76	718.03	701.25	702.07	706.91	739.99	714.52	713.76	723.75	732.03	NA	730.52	715.23	717.41	NA
4/16/1999	739.48	750.50	NA	714.43	718.13	701.45	702.07	707.11	740.09	714.60	713.41	720.99	732.92	NA	736.54	716.84	716.86	NA
5/17/1999	737.03	751.42	NA	713.93	717.78	702.05	702.17	707.51	740.59	NA	711.58	716.34	732.53	NA	734.16	716.49	713.11	NA
6/22/1999	734.03	752.27	NA	713.73	717.63	701.55	702.07	707.51	739.99	714.51	713.68	725.04	731.98	NA	735.81	715.94	714.41	NA
7/22/1999	737.73	752.37	NA	NM	717.88	NM	702.13	707.56	740.78	714.73	NM	715.84	732.33	NA	735.01	716.74	720.11	NA
8/25/1999	729.18	743.27	NA	713.63	718.33	697.10	702.02	705.61	740.44	714.58	710.98	724.24	726.93	NA	731.56	713.87	713.41	NA
9/29/1999	731.98	737.20	NA	711.23	716.48	698.10	701.07	707.51	739.04	715.83	NM	719.70	732.08	NA	726.51	716.09	714.51	NA
10/27/1999	726.48	736.97	NA	711.18	716.68	696.50	702.07	705.61	740.19	714.51	710.48	721.84	733.83	NA	727.41	717.99	709.61	NA
12/1/1999	726.08	736.05	NA	710.68	716.49	696.50	702.07	705.66	741.59	714.36	709.43	717.13	727.82	713.01	716.21	712.28	NM	NA
12/29/1999	728.38	736.15	NA	711.40	716.93	696.58	702.05	705.68	740.89	714.33	710.98	713.89	729.88	NA	710.41	717.11	714.31	NA
1/25/2000	727.78	736.42	NA	710.78	716.63	696.50	702.07	705.21	741.94	714.83	713.03	723.14	731.63	NA	724.61	712.14	714.36	NA
2/29/2000	728.23	739.42	NA	711.28	716.33	DRY	DRY	705.21	741.24	714.93	713.83	723.04	728.13	DRY	726.61	713.19	713.21	NA
3/24/2000	726.41	740.92	NA	710.43	717.98	DRY	702.07	707.10	740.24	712.61	708.64	713.55	722.53	NA	720.02	714.44	710.99	NA
4/28/2000	725.26	743.67	NA	713.88	DRY	700.20	702.07	706.90	742.84	714.36	711.80	714.22	730.43	NA	722.68	710.31	712.89	NA
5/29/2000	721.63	743.92	NA	713.63	717.68	699.30	702.07	707.10	742.74	713.86	711.85	717.07	726.93	NA	723.02	711.99	712.69	NA
6/29/2000	721.11	741.56	NA	713.82	717.73	699.28	702.08	707.13	742.84	715.31	711.15	715.87	729.88	NA	730.07	711.19	712.59	NA
7/27/2000	722.73	739.84	NA	714.13	717.98	699.00	702.17	707.31	742.78	715.19	711.90	716.92	727.05	NA	722.50	712.95	712.63	NA
9/28/2000	723.25	738.25	NA	712.39	714.76	696.37	701.80	706.92	741.33	714.56	713.40	713.78	727.43	NA	717.52	717.09	713.69	NA

Notes:

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5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
10/26/2000	721.40	738.55	NA	713.09	714.27	697.92	702.05	707.22	741.78	714.71	711.20	720.84	728.30	NA	722.72	712.21	712.47	NA
11/30/2000	721.70	740.20	NA	712.69	714.57	698.47	702.05	706.97	741.43	714.76	712.05	717.82	722.38	NA	DRY	715.08	712.54	NA
12/20/2000	NM	NM	NA	NM	NM	NM	NM	NM	NM	715.81	713.35	722.82	722.93	NA	NM	713.58	712.39	NA
1/24/2001	NM	NM	NA	713.64	NM	698.22	714.95	706.97	741.53	715.61	713.03	720.62	725.18	NA	725.02	713.68	713.89	NA
2/20/2001	721.55	745.70	NA	713.84	713.72	701.02	719.95	707.07	741.73	714.81	713.35	720.02	NM	NA	723.47	715.58	711.69	NA
3/21/2001	723.75	745.00	NA	713.79	717.92	701.37	722.55	NM	741.58	NM	NM	720.02	727.33	NA	DRY	NM	DRY	NA
5/31/2001	723.25	744.50	NA	712.29	715.92	702.47	720.15	709.32	744.83	713.16	713.35	718.17	728.33	NA	723.32	717.28	712.39	NA
7/12/2001	722.90	738.97	NA	715.04	717.54	699.57	712.02	707.87	741.63	760.52	713.26	717.38	728.61	NA	723.32	718.43	712.45	NA
9/20/2001	724.60	737.88	NA	714.39	717.93	698.50	706.07	707.87	742.23	712.71	NA	716.20	723.93	NA	731.32	715.08	712.59	NA
11/7/2001	723.12	744.85	NA	715.72	718.37	700.97	708.15	708.22	742.99	712.56	713.45	717.98	726.92	NA	725.17	720.28	712.44	NA
1/17/2002	NM	NM	NA	NM	NM	NM	NM	NM	NM	714.78	713.20	716.17	724.33	NA	728.26	719.28	712.39	NA
3/28/2002	723.32	749.95	NA	718.52	719.32	700.82	716.16	708.57	743.22	713.26	713.55	717.95	726.23	NA	726.67	719.98	712.29	NA
5/31/2002	724.50	750.80	NA	717.24	718.52	701.53	717.30	708.82	743.38	713.61	713.71	715.97	730.11	NA	726.37	720.41	712.34	NA
7/11/2002	725.65	746.60	NA	715.90	717.87	700.82	712.55	708.62	742.78	715.01	713.82	716.42	728.48	NA	726.77	720.33	712.34	NA
9/26/2002	722.64	739.19	NA	715.99	718.32	698.63	708.13	709.02	742.83	715.91	713.46	716.9	724.38	NA	724.47	NM	712.39	NA
11/21/2002	721.15	748.25	NA	715.24	718.82	697.87	707.05	708.67	739.78	717.36	713.33	717.07	723.38	NA	726.77	721.48	712.37	NA
1/30/2003	721.15	748.25	NA	715.24	718.82	697.87	707.05	708.67	739.78	717.36	713.33	717.07	723.38	NA	726.77	721.48	712.37	NA
4/3/2003	724.60	737.65	NA	714.29	718.55	697.69	724.65	708.07	742.63	721.66	711.82	715.50	718.03	NA	725.93	720.93	712.19	NA
6/5/2003	722.85	748.10	NA	726.29	718.12	701.07	714.65	708.27	742.73	721.31	711.85	722.22	722.83	NA	726.42	724.48	712.79	NA
8/7/2003	721.10	748.10	NA	715.99	717.77	698.87	713.60	708.22	743.13	721.91	711.15	712.72	718.08	NA	728.82	721.88	713.19	NA
9/25/2003	717.30	739.80	NA	715.64	717.68	697.62	709.60	707.92	743.33	722.06	712.45	721.17	718.38	NA	728.47	721.53	712.94	NA
11/26/2003	NM	743.70	NA	714.69	718.45	700.77	723.50	706.30	NM	721.86	713.64	713.12	717.43	NA	728.49	721.98	712.69	NA
1/28/2004	NM	NM	NA	NM	NM	NM	NM	NM	NM	NM	NM	NM	718.13	NA	728.19	721.98	712.44	NA
3/4/2004	NM	751.50	NA	714.29	720.72	699.17	718.85	702.57	NM	721.81	713.84	710.32	724.80	NA	728.32	724.38	711.99	NA
5/6/2004	NM	NM	NA	719.39	718.22	701.47	716.65	708.47	NM	714.71	714.05	DRY	721.03	NA	727.62	720.68	712.64	NA
7/22/2004	NM	749.10	NA	NM	718.17	NM	716.75	707.17	NM	720.27	713.83	716.49	725.71	NA	DRY	DRY	712.50	NA
9/2/2004	727.57	746.68	NA	718.59	718.07	699.48	712.52	705.57	744.53	721.56	713.63	715.31	723.03	NA	727.62	719.82	712.67	NA
11/10/2004	720.53	745.63	NA	718.67	718.34	697.67	708.92	708.63	744.88	720.13	712.69	717.04	717.84	NA	DRY	721.53	712.59	NA
1/19/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	716.35	713.80	716.80	728.32	NA	723.17	722.09	712.73	NA
3/10/2005	NM	NM	NA	NM	NM	NM	NM	NM	NM	715.87	713.87	717.50	730.17	NA	722.82	722.50	712.82	NA
5/11/2005	NA	752.41	NA	719.89	720.17	701.03	712.80	705.85	NA	719.71	713.56	714.28	720.68	NA	721.78	722.02	712.68	NA
7/14/2005	721.14	739.19	NA	719.26	719.11	698.95	707.50	708.69	746.20	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/14/2005	721.04	738.58	NA	718.27	719.28	697.39	705.30	708.46	745.21	721.87	713.74	721.47	717.59	NA	721.59	NM	DRY	NA
11/9/2005	716.42	737.99	NA	719.54	719.29	696.95	703.74	708.06	745.62	721.85	713.14	718.38	717.23	NA	722.97	722.88	712.71	NA
1/11/2006	713.09	738.54	NA	718.90	719.33	696.81	702.59	707.86	745.12	718.06	714.12	717.94	NM	NA	721.40	722.90	712.36	NA
3/8/2006	721.05	744.02	NA	720.25	721.93	698.17	713.86	709.52	744.78	721.91	713.95	715.77	720.54	NA	724.42	723.23	715.80	NA

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5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 1
Leachate Elevations
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
5/8/2006	721.94	743.60	NA	718.19	719.18	700.37	712.90	713.83	744.24	720.78	713.74	723.26	725.60	NA	724.64	722.48	714.67	NA
7/12/2006	721.43	739.82	NA	717.87	718.52	697.09	707.82	708.59	740.40	720.72	713.76	722.50	719.46	NA	722.70	720.13	716.08	NA
9/5/2006	720.15	739.24	NA	719.38	718.25	698.59	705.79	708.78	738.75	718.70	713.77	730.07	726.98	NA	729.43	720.49	716.66	NA
11/8/2006	730.07	750.13	NA	720.95	719.69	700.51	708.17	712.57	740.89	720.44	714.17	735.56	721.50	NA	723.33	726.90	722.22	NA
1/10/2007	NM	748.80	NA	720.91	720.33	NM	NM	NM	NM	721.58	715.61	731.06	720.95	NA	729.72	729.84	720.63	NA
3/12/2007	726.71	743.94	NA	723.47	719.58	703.34	721.75	712.71	741.46	716.60	713.96	736.61	728.40	NA	723.08	721.74	714.01	NA
5/9/2007	721.42	748.85	NA	719.78	718.95	703.03	711.25	717.62	741.91	721.81	713.71	727.38	729.93	NA	724.02	720.94	716.16	NA
7/11/2007	721.16	738.89	NA	719.13	717.64	700.36	707.59	713.27	741.93	722.17	DRY	713.51	728.60	NA	DRY	713.62	714.17	NA
9/12/2007	721.45	742.60	NA	718.28	718.10	699.27	708.05	713.77	741.52	NM	712.74	716.47	729.11	NA	722.27	722.43	715.55	NA
11/14/2007	719.09	741.62	NA	719.55	718.70	698.17	706.07	708.53	744.25	722.81	713.86	737.09	729.57	NA	724.63	732.74	716.33	NA
1/9/2008	725.60	NM	NA	723.43	715.87	698.51	713.35	724.65	751.63	722.81	713.88	734.57	729.45	NA	732.61	716.86	715.43	NA
3/10/2008	NM	749.88	NA	721.51	718.61	NM	723.52	NM	NM	722.92	713.93	737.03	735.08	NA	730.95	718.03	716.29	NA
5/14/2008	723.44	752.17	NA	722.21	721.86	702.98	723.12	724.64	742.77	724.39	713.90	734.49	729.60	NA	723.82	722.63	715.82	NA
7/9/2008	722.84	744.08	NA	719.66	720.44	700.00	709.13	NM	742.92	724.75	715.24	737.83	733.02	NA	729.77	723.13	715.19	NA
9/10/2008	721.58	744.91	NA	718.98	720.26	699.05	706.54	NM	742.74	722.18	713.77	726.00	731.75	NA	728.82	723.45	715.07	NA
11/19/2008	723.56	746.45	NA	722.28	722.76	700.54	708.17	715.65	745.16	723.17	713.85	734.02	728.20	NA	731.44	723.93	716.87	NA
1/21/2009	721.45	NM	NA	NM	NM	NM	NM	716.32	NM	NM	713.85	736.88	724.97	NA	731.69	724.35	719.93	NA
3/9/2009	729.95	NM	NA	724.20	727.47	NM	724.17	727.93	749.43	723.36	NM	733.47	729.29	NA	743.08	724.48	718.81	NA
5/13/2009	721.65	750.31	NA	722.44	727.98	703.66	718.35	727.38	753.63	724.19	713.93	737.38	730.07	NA	724.82	724.77	720.33	NA
7/15/2009	721.43	742.55	NA	721.36	723.80	701.04	712.24	723.59	751.43	723.70	712.18	731.63	721.21	NA	729.11	724.79	719.62	NA
9/23/2009	721.42	738.63	NA	721.56	723.02	699.64	708.12	713.97	744.68	723.78	712.43	737.31	725.26	NA	743.04	730.68	721.13	736.06
11/18/2009	721.31	748.22	NA	722.03	727.55	699.72	716.16	726.19	DRY	723.40	713.78	730.79	726.95	NA	727.39	730.24	722.15	748.36
1/13/2010	722.14	NM	NA	722.33	NM	NM	717.32	726.65	NM	NM	713.88	737.52	728.86	NA	728.90	725.18	726.48	752.46
3/8/2010	722.14	751.51	NA	721.68	733.55	701.51	720.97	727.34	DRY	723.90	713.89	731.38	725.90	NA	741.76	725.18	724.10	750.95
5/19/2010	721.57	751.11	NA	723.25	726.93	701.46	713.11	724.38	DRY	726.26	714.10	730.75	724.94	NA	739.88	725.45	724.95	751.30
7/15/2010	721.48	744.25	NA	722.10	724.88	700.08	711.35	718.42	DRY	727.26	DRY	734.09	DRY	NA	DRY	725.37	725.29	DRY
9/8/2010	721.36	741.64	NA	721.10	725.27	699.97	713.23	714.91	DRY	728.35	713.91	737.14	724.80	NA	734.43	725.42	725.58	740.12
11/10/2010	722.36	739.20	NA	721.33	723.61	698.54	708.81	713.80	DRY	722.22	713.89	738.04	721.95	NA	727.58	725.52	723.76	738.39
1/12/2011	NM	NM	NA	721.19	NM	NM	NM	725.51	NM	722.43	713.97	737.40	716.98	NA	742.62	725.35	722.69	741.76
3/16/2011	NM	751.74	NA	724.49	726.87	702.32	NM	722.27	DRY	722.90	714.04	734.91	724.65	NA	729.72	725.75	725.50	752.58
5/11/2011	721.48	753.40	NA	723.12	727.51	702.93	717.02	726.46	758.36	723.66	713.88	732.96	729.12	NA	729.77	722.99	725.92	753.24
7/13/2011	721.34	749.69	NA	722.00	726.05	700.56	713.63	716.50	DRY	728.74	713.84	720.20	722.59	NA	737.77	723.22	725.65	749.03
9/7/2011	721.71	744.08	NA	724.20	725.44	699.36	709.28	709.60	DRY	730.25	713.81	719.49	722.55	NA	726.65	725.08	726.55	743.28
11/9/2011	NM	NM	NA	722.89	726.32	718.73	707.18	717.15	DRY	726.33	713.94	737.09	719.64	NA	732.17	739.07	728.68	741.96
1/11/2012	NM	750.52	NA	721.78	726.02	699.87	721.78	713.43	DRY	722.40	713.86	736.33	726.84	NA	728.82	721.98	731.38	750.16
3/13/2012	725.96	748.10	NA	720.14	725.12	700.12	721.32	715.98	DRY	726.00	715.12	738.99	725.76	NA	742.96	729.32	732.24	745.71

Notes:

1. NM = not measured for particular date
2. NA = not analyzed as a part of O&M activities
3. DRY = indicates no leachate measured inside well
4. Several leachate elevations not measured on 11-9-11 due to flooded vaults.
5. Several leachate elevations not measured on 1-11-12 due to frozen and flooded vaults.
6. Leachate elevation was not measured at DV-9 on 3-13-12 due to flooded vault.

Table 2
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7	SV-8	SV-9	SV-10	SV-11	SV-12	DV-1
STARTUP	734.78	719.36	726.07	723.67	718.46	735.31	731.99	710.92	711.03	693.55	738.47	761.87	NM
YEAR 1	734.53	718.68	725.07	721.47	718.40	732.23	730.24	711.91	711.58	694.53	738.96	761.72	NM
YEAR 2	732.65	718.11	722.77	721.04	715.11	727.78	728.87	711.59	711.05	692.80	737.51	759.65	NM
YEAR 3	734.15	718.81	722.07	723.61	716.61	729.11	728.92	712.56	711.64	694.07	738.73	760.94	NM
YEAR 4	734.52	719.76		725.47	717.44	729.07	729.32	713.69	713.00		739.32	760.13	
YEAR 5	734.14	721.05		723.94	715.69	728.95	731.08	714.12	712.54		739.69	761.28	
YEAR 6	733.79	721.65		725.88	714.60	727.99	730.83	713.90	712.18		739.65	761.43	
YEAR 7	734.06	721.74		724.10	715.88	727.64	730.73	715.19	712.50		739.10	761.44	
YEAR 8	733.80	723.64		724.28	715.35	726.76	730.52	715.05	712.55		739.01	761.44	
YEAR 9	734.27	722.70		728.80	719.30	729.73	729.73	716.51	712.70		738.97	761.43	
YEAR 10	733.33	DRY		727.42	716.85	729.63	730.19	717.34	715.73		738.98	761.45	
YEAR 11	734.07	DRY		727.39	720.75	730.28	731.06	718.11	714.00		737.82	761.50	
YEAR 12	734.59	741.36		727.02	721.03	727.74	730.88	718.00	718.93		737.81	761.57	
YEAR 13	734.10	DRY		726.96	717.12	726.67	729.83	717.57	714.93		736.58	759.26	
YEAR 14	734.26	DRY		729.35	721.50	727.38	729.68	718.88	718.56		736.08	762.73	

Notes:

1. All elevations are in feet above mean sea level.
2. Average elevations were calculated using all measurements collected at particular location during the given time period.
3. NM = not measured for particular date
4. DRY = indicates no leachate measured inside well
5. SV-3, SV-10, DV-1, DV-2, and DV-12 were abandoned in 2000 as part of the landfill gas system augmentation.

Table 2
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	DV-2	DV-3	DV-4	DV-5	DV-6	DV-7	DV-8	DV-9	DV-10	DV-11	DV-12	DV-13	DV-14
STARTUP	750.69	735.45	701.95	695.96	730.80	748.16	723.85	718.98	737.41	749.95	701.90	712.65	717.94
YEAR 1	745.58	734.59	703.51	696.12	722.05	747.71	723.71	719.21	735.91	745.79	NM	713.23	717.88
YEAR 2	742.03	731.83	701.74	695.41	718.94	745.63	720.83	715.73	729.88	742.18	NM	712.01	717.19
YEAR 3	742.40	733.10	701.66	699.80	717.01	740.59	724.26	717.68	722.14	741.63	NM	713.45	716.08
YEAR 4		733.16	702.88	699.74	717.01	DRY	724.78	717.68	723.44	743.23		715.19	717.82
YEAR 5		732.86	701.75	698.65	717.97	DRY	722.62	715.86	723.28	745.12		715.65	718.48
YEAR 6		734.72	700.91	707.85	742.49	DRY	723.04	714.96	720.42	746.24		717.38	718.55
YEAR 7		733.44	702.55	708.35	DRY	746.44	722.29	713.46	724.05	747.14		718.88	718.20
YEAR 8		732.89	700.86	707.75	DRY	746.52	722.24	715.80	718.55	741.79		719.35	719.85
YEAR 9		733.71	703.12	707.98	DRY	747.60	725.26	718.56	724.06	744.26		720.13	719.26
YEAR 10		733.53	702.29	712.78	743.06	747.61	723.84	715.67	721.74	744.37		720.28	717.98
YEAR 11		733.17	702.23	709.50	742.94	746.48	725.68	717.82	723.80	746.90		721.47	722.56
YEAR 12		733.40	702.64	708.03	744.67	747.01	725.94	717.64	721.68	746.24		721.90	727.18
YEAR 13		732.96	702.65	709.45	744.44	747.16	724.64	716.81	721.69	745.59		722.24	725.51
YEAR 14		733.32	703.06	711.11	747.11	749.51	725.98	717.84	722.62	749.16		722.36	726.08

Notes:

1. All elevations are in feet above mean sea level.
2. Average elevations were calculated using all measurements collected at particular location during the given time period.
3. NM = not measured for particular date
4. DRY = indicates no leachate measured inside well
5. SV-3, SV-10, DV-1, DV-2, and DV-12 were abandoned in 2000 as part of the landfill gas system augmentation.

Table 2
Average Leachate Elevations per Year of Operation
Blackwell Landfill NPL Site
DuPage County, Illinois

Period	DV-15	DV-16	DV-17	DV-18	EW-1	EW-1A	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8
STARTUP	699.97	701.83	708.37	728.54	716.04	711.89	719.27	730.27	713.38	751.92	717.68	722.59	750.15
YEAR 1	700.47	702.01	706.86	733.09	714.65	712.48	719.33	728.43	NM	736.38	717.73	718.41	743.73
YEAR 2	698.34	701.99	706.42	740.81	714.51	711.44	719.00	730.01	713.01	725.92	714.72	713.72	NM
YEAR 3	698.99	707.74	707.09	741.97	714.96	712.36	718.58	726.38	NM	723.47	713.71	712.73	NM
YEAR 4	700.47	712.51	708.37	742.98	721.17	713.36	717.31	726.39	NM	726.34	718.39	712.43	NM
YEAR 5	699.07	712.79	708.65	741.86	716.82	713.25	716.49	724.63	NM	726.18	720.93	712.33	NM
YEAR 6	699.50	716.04	706.66	743.06	721.79	712.59	715.91	719.94	NM	728.12	722.71	712.67	NM
YEAR 7	699.54	713.71	707.46	744.71	718.15	713.65	716.63	724.35	NM	725.31	721.32	712.66	NM
YEAR 8	698.22	707.63	708.07	745.39	720.68	713.70	717.57	719.01	NM	722.43	722.76	713.39	NM
YEAR 9	699.98	711.29	711.30	741.15	719.80	714.17	729.84	723.82	NM	725.48	723.60	717.38	NM
YEAR 10	699.87	711.64	715.57	744.25	722.50	713.62	727.68	730.29	NM	726.90	720.77	715.66	NM
YEAR 11	700.64	714.23	721.14	744.60	723.57	714.12	733.78	729.47	NM	731.44	723.66	716.95	NM
YEAR 12	701.11	715.53	724.19	749.91	723.79	713.35	734.34	726.38	NM	732.50	726.81	722.30	746.96
YEAR 13	700.47	711.63	719.88	DRY	724.90	713.98	735.39	722.66	NM	734.85	725.48	724.63	744.83
YEAR 14	703.60	715.04	716.52	758.36	726.23	714.08	730.84	724.42	NM	733.02	726.94	728.40	747.23

Notes:

1. All elevations are in feet above mean sea level.
2. Average elevations were calculated using all measurements collected at particular location during the given time period.
3. NM = not measured for particular date
4. DRY = indicates no leachate measured inside well
5. SV-3, SV-10, DV-1, DV-2, and DV-12 were abandoned in 2000 as part of the landfill gas system augmentation.

Table 3
Leachate Disposal - Daily Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	EW1 (gallons)	EW1A (gallons)	EW2 (gallons)	EW3 (gallons)	EW4 (gallons)	EW5 (gallons)	EW6 (gallons)	EW7 (gallons)	EW8 (gallons)	LS01 (gallons)	LS02 (gallons)	Extraction Wells (gallons)	Lift Station (gallons)	Cumulative Totals		
														Total EW (gallons)	Total LS (gallons)	Total LCS (gallons)
5/3/2011	19	549	2,123	6,129	152	726	0	147	155	0	0	10,000	0	5,397,327	1,988,226	7,385,553
5/5/2011	330	2,589	2,045	3,504	98	729	0	358	348	0	0	10,000	0	5,407,327	1,988,226	7,395,553
5/12/2011	6,422	112	213	1,562	37	174	0	515	965	0	0	10,000	0	5,417,327	1,988,226	7,405,553
5/17/2011	5,427	208	421	2,609	117	601	0	554	64	0	0	10,000	0	5,427,327	1,988,226	7,415,553
5/19/2011	3,923	278	995	2,565	134	840	0	706	559	0	0	10,000	0	5,437,327	1,988,226	7,425,553
5/24/2011	260	609	2,077	3,941	332	2,197	0	266	291	27	0	9,973	27	5,447,300	1,988,253	7,435,553
5/26/2011	277	766	1,751	4,584	209	1,698	0	316	378	20	0	9,980	20	5,457,280	1,988,274	7,445,553
5/31/2011	1,354	580	1,711	3,959	265	1,650	0	458	23	0	0	10,000	0	5,467,280	1,988,274	7,455,553
6/2/2011	654	1,182	2,100	2,346	340	2,192	6	636	517	29	0	9,971	29	5,477,251	1,988,302	7,465,553
6/7/2011	172	819	1,487	5,712	249	1,351	0	103	106	1	0	9,999	1	5,487,251	1,988,303	7,475,553
6/9/2011	61	149	314	909	41	352	0	8,155	19	0	0	10,000	0	5,497,250	1,988,303	7,485,553
6/14/2011	319	266	1,585	5,114	311	1,788	0	195	391	31	0	9,969	31	5,507,219	1,988,334	7,495,553
6/16/2011	585	837	1,225	4,934	239	1,875	0	15	245	44	0	9,956	44	5,517,175	1,988,379	7,505,553
6/21/2011	189	846	2,093	4,910	293	1,667	0	1	0	0	0	10,000	0	5,527,175	1,988,379	7,515,553
6/23/2011	381	717	1,428	4,576	216	1,690	0	466	526	0	0	10,000	0	5,537,175	1,988,379	7,525,553
6/28/2011	351	721	1,646	4,227	238	1,865	0	471	465	16	0	9,984	16	5,547,159	1,988,394	7,535,553
6/30/2011	548	500	2,600	3,677	390	343	0	571	1,304	68	0	9,932	68	5,557,092	1,988,462	7,545,553
7/7/2011	194	201	897	2,608	264	1,525	0	199	4,113	0	0	10,000	0	5,567,092	1,988,462	7,555,553
7/12/2011	112	190	642	1,364	66	854	0	212	1,544	18	0	4,982	18	5,572,074	1,988,479	7,560,553
7/14/2011	934	339	2,144	3,133	385	1,696	0	619	751	0	0	10,000	0	5,582,074	1,988,479	7,570,553
7/19/2011	275	534	2,056	3,179	363	2,077	0	370	1,146	0	0	10,000	0	5,592,074	1,988,479	7,580,553
7/21/2011	182	210	535	952	107	488	0	2,466	60	0	0	5,000	0	5,597,074	1,988,480	7,585,553
7/26/2011	361	1,041	1,995	3,452	356	1,900	0	471	423	0	0	10,000	0	5,607,074	1,988,480	7,595,553
7/28/2011	359	1,040	1,996	3,455	356	1,900	0	472	421	0	0	10,000	0	5,617,074	1,988,480	7,605,553
8/2/2011	3	3	4	7	1	3	0	9,980	0	0	0	10,000	0	5,627,074	1,988,480	7,615,553
8/4/2011	166	1,402	1,746	3,062	306	3,011	0	304	0	4	0	9,996	4	5,637,070	1,988,483	7,625,553
8/9/2011	88	751	660	1,806	218	1,355	0	65	56	0	0	5,000	0	5,642,070	1,988,483	7,630,553
8/16/2011	3	10	13	24	3	19	0	9,927	2	0	0	10,000	0	5,652,070	1,988,484	7,640,553
8/18/2011	282	786	1,719	3,153	372	2,604	0	619	416	48	0	9,952	48	5,662,022	1,988,531	7,650,553
8/23/2011	1	2	2	4	0	3	0	9,988	0	0	0	10,000	0	5,672,022	1,988,532	7,660,553
8/25/2011	40	99	219	375	44	262	3	8,876	59	21	0	9,979	21	5,682,000	1,988,553	7,670,553
8/30/2011	411	1,013	1,252	3,387	632	2,682	0	372	250	0	0	10,000	0	5,692,000	1,988,553	7,680,553
9/1/2011	363	531	2,550	3,758	256	2,221	0	220	22	79	0	9,921	79	5,701,921	1,988,632	7,690,553
9/6/2011	4	11	22	35	5	27	0	5,394	1	1	0	5,499	1	5,707,420	1,988,633	7,696,053
9/8/2011	304	541	2,185	3,351	389	2,815	0	210	204	0	0	10,000	0	5,717,420	1,988,633	7,706,053
9/13/2011	4	11	25	37	5	31	0	9,886	1	0	0	10,000	0	5,727,420	1,988,633	7,716,053
9/15/2011	3	11	19	30	3	25	0	4,905	2	0	0	5,000	0	5,732,420	1,988,633	7,721,053
9/20/2011	81	1,326	1,568	3,340	427	2,744	1	238	262	13	0	9,987	13	5,742,407	1,988,646	7,731,053
9/22/2011	298	413	1,728	3,123	355	3,101	25	564	394	0	0	10,000	0	5,752,407	1,988,646	7,741,053
9/29/2011	102	82	1,696	1,068	151	1,673	0	88	109	31	0	4,969	31	5,757,376	1,988,677	7,746,053
10/4/2011	127	115	737	2,184	298	1,383	0	13	104	40	0	4,960	40	5,762,336	1,988,718	7,751,053
10/6/2011	0	0	1,111	1,737	200	1,950	0	3	0	0	0	5,000	0	5,767,336	1,988,718	7,756,053
10/11/2011	42	44	570	1,082	158	975	0	2,119	2	7	0	4,993	7	5,772,329	1,988,725	7,761,053
10/13/2011	348	287	2,106	3,192	404	3,096	0	238	310	20	0	9,980	20	5,782,309	1,988,745	7,771,053
10/18/2011	410	241	1,932	3,187	441	2,889	0	462	438	0	0	10,000	0	5,792,309	1,988,745	7,781,053
10/20/2011	322	249	1,076	2,482	368	2,222	0	584	170	27	0	7,473	27	5,799,782	1,988,772	7,788,553
10/25/2011	382	397	537	3,794	1,086	3,153	0	576	0	75	0	9,925	75	5,809,707	1,988,847	7,798,553
10/27/2011	44	67	1,944	1,802	107	840	3	84	76	34	0	4,966	34	5,814,673	1,988,881	7,803,553
11/1/2011	43	67	1,945	1,804	106	841	2	83	75	34	0	4,966	34	5,819,639	1,988,915	7,808,553
11/3/2011	73	51	451	1,451	180	2,465	0	170	92	65	0	4,935	65	5,824,574	1,988,980	7,813,553
11/8/2011	129	68	1,195	1,711	223	1,460	0	140	51	23	0	4,977	23	5,829,550	1,989,003	7,818,553

Table 3
Leachate Disposal - Daily Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

Date	EW1 (gallons)	EW1A (gallons)	EW2 (gallons)	EW3 (gallons)	EW4 (gallons)	EW5 (gallons)	EW6 (gallons)	EW7 (gallons)	EW8 (gallons)	LS01 (gallons)	LS02 (gallons)	Extraction Wells (gallons)	Lift Station (gallons)	Cumulative Totals		
														Total EW (gallons)	Total LS (gallons)	Total LCS (gallons)
11/10/2011	37	208	980	2,023	146	1,170	0	184	194	58	0	4,942	58	5,834,492	1,989,061	7,823,553
11/15/2011	428	251	2,014	3,611	395	2,052	0	742	365	141	0	9,859	141	5,844,351	1,989,203	7,833,553
11/17/2011	178	138	1,709	4,797	270	2,545	31	129	202	0	0	10,000	0	5,854,351	1,989,203	7,843,553
11/23/2011	766	204	602	1,065	402	1,314	22	243	243	140	0	4,860	140	5,859,211	1,989,342	7,848,553
11/29/2011	214	177	2,253	4,805	120	1,884	11	439	96	0	0	10,000	0	5,869,211	1,989,342	7,858,553
12/1/2011	161	126	2,395	4,268	352	2,338	11	168	150	30	0	9,970	30	5,879,181	1,989,373	7,868,553
12/6/2011	206	212	2,536	3,898	289	2,571	3	161	124	0	0	10,000	0	5,889,181	1,989,373	7,878,553
12/8/2011	70	58	1,093	2,770	155	807	0	46	1	0	0	5,000	0	5,894,181	1,989,373	7,883,553
12/13/2011	973	324	294	612	21	1,802	0	520	453	0	0	5,000	0	5,899,181	1,989,373	7,888,553
12/15/2011	147	76	1,328	6,376	484	1,185	0	145	260	1	0	9,999	1	5,909,180	1,989,374	7,898,553
12/20/2011	162	276	2,967	3,657	50	2,624	0	157	96	10	0	9,990	10	5,919,169	1,989,384	7,908,553
12/22/2011	307	217	1,402	4,976	418	2,531	0	121	10	17	0	9,983	17	5,929,153	1,989,401	7,918,553
12/27/2011	287	338	2,644	4,856	104	1,095	10	298	367	1	0	9,999	1	5,939,151	1,989,402	7,928,553
12/29/2011	0	0	2,397	5,307	271	2,022	0	0	0	3	0	9,997	3	5,949,149	1,989,405	7,938,553
1/3/2012	0	0	2,090	5,281	252	2,377	0	0	0	0	0	10,000	0	5,959,149	1,989,405	7,948,553
1/5/2012	295	160	2,880	3,482	189	2,429	0	155	352	57	0	9,943	57	5,969,092	1,989,462	7,958,553
1/12/2012	142	99	2,374	4,774	359	2,126	0	86	31	7	0	9,993	7	5,979,085	1,989,469	7,968,553
1/18/2012	298	152	2462	3874	247	2469	0	295	159	43	0	9,957	43	5,989,042	1,989,511	7,978,553
1/19/2012	149	76	1,225	1,927	125	1,228	0	147	80	44	0	4,956	44	5,993,998	1,989,555	7,983,553
1/24/2012	381	460	2,342	3,589	216	2,614	0	194	0	205	0	9,795	205	6,003,793	1,989,760	7,993,553
1/26/2012	164	174	2,770	3,866	331	2,037	11	295	301	51	0	9,949	51	6,013,742	1,989,811	8,003,553
1/31/2012	241	318	2,210	3,654	252	2,532	6	449	325	12	0	9,988	12	6,023,730	1,989,823	8,013,553
2/2/2012	287	150	4,759	1,903	227	2,191	0	244	209	30	0	9,970	30	6,033,700	1,989,853	8,023,553
2/7/2012	214	259	693	6,168	384	1,775	2	237	264	3	0	9,997	3	6,043,697	1,989,856	8,033,553
2/9/2012	576	354	2,264	4,038	200	1,549	488	262	220	48	0	9,952	48	6,053,649	1,989,904	8,043,553
2/14/2012	176	183	2,477	3,672	178	2,955	17	195	144	2	0	9,998	2	6,063,647	1,989,906	8,053,553
2/16/2012	230	259	2,663	4,793	362	1,307	1	192	193	0	0	10,000	0	6,073,647	1,989,906	8,063,553
2/21/2012	380	340	2,429	3,694	285	2,226	0	322	265	59	0	9,941	59	6,083,588	1,989,966	8,073,553
2/23/2012	191	58	2,580	3,700	322	2,363	0	146	121	18	0	9,482	18	6,093,069	1,989,984	8,083,053
2/28/2012	392	395	1,944	3,216	247	2,596	2	655	552	2	0	9,998	2	6,103,068	1,989,986	8,093,053
3/1/2012	127	201	2,108	4,083	344	2,845	0	139	150	3	0	9,997	3	6,113,065	1,989,988	8,103,053
3/6/2012	194	122	2,858	3,496	261	2,163	35	182	188	1	0	9,499	1	6,122,564	1,989,989	8,112,553
3/8/2012	164	131	2,414	4,304	290	2,219	36	214	227	1	0	9,999	1	6,132,563	1,989,990	8,122,553
3/13/2012	509	229	2,357	4,401	242	1,403	31	24	302	1	0	9,499	1	6,142,062	1,989,991	8,132,053
3/15/2012	161	492	2,738	4,623	429	388	0	21	148	0	0	9,000	0	6,151,062	1,989,991	8,141,053
3/20/2012	82	808	2,169	4,107	250	2,411	1	96	55	21	0	9,979	21	6,161,041	1,990,012	8,151,053
3/22/2012	20	202	542	1,027	63	603	0	24	14	5	0	2,495	5	6,163,536	1,990,017	8,153,553
3/27/2012	90	367	883	1,659	115	602	0	102	97	6,085	0	3,915	6,085	6,167,451	1,996,102	8,163,553
3/29/2012	194	320	1,699	3,345	149	1,280	0	215	163	2,634	0	7,366	2,634	6,174,817	1,998,736	8,173,553
4/3/2012	162	125	2,140	4,736	171	876	1	84	75	1,632	0	8,368	1,632	6,183,185	2,000,368	8,183,553
4/5/2012	485	362	296	192	323	2,273	32	120	610	5,307	0	4,693	5,307	6,187,879	2,005,675	8,193,553
4/10/2012	144	495	2,074	3,653	205	1,094	0	214	38	2,085	0	7,915	2,085	6,195,794	2,007,759	8,203,553
4/12/2012	143	434	2,408	3,870	259	1,958	0	15	96	817	0	9,183	817	6,204,977	2,008,577	8,213,553
4/16/2012	155	672	2,001	3,303	193	1,642	4	792	192	1,045	0	8,955	1,045	6,213,932	2,009,622	8,223,553
4/17/2012	574	747	2,109	2,849	289	1,316	0	214	338	1,564	0	8,436	1,564	6,222,367	2,011,186	8,233,553
4/19/2012	472	561	1,588	3,211	188	2,212	0	50	312	1,407	0	8,593	1,407	6,230,960	2,012,593	8,243,553
4/24/2012	156	718	2,031	2,985	248	2,319	0	248	101	1,193	0	8,807	1,193	6,239,767	2,013,786	8,253,553
4/26/2012	156	348	2,341	3,644	316	2,428	1	116	188	463	0	9,537	463	6,249,305	2,014,249	8,263,553

Notes:
EW = Extraction Well
LCS = Leachate Collection System
LS = Lift Station

Table 4
Leachate Disposal - Yearly Basis
Blackwell Landfill NPL Site, DuPage County, Illinois

	Leachate Removal from Individual Extraction Wells (gallons)																
Extraction Well	Startup Dec. 1997 - Feb. 1998	Year 1 March 1998 - April 1999	Year 2 May 1999 - April 2000	Year 3 May 2000 - April 2001	Year 4 May 2001 - April 2002	Year 5 May 2002 - April 2003	Year 6 May 2003 - April 2004	Year 7 May 2004 - April 2005	Year 8 May 2005 - April 2006	Year 9 May 2006 - April 2007	Year 10 May 2007 - April 2008	Year 11 May 2008 - April 2009	Year 12 May 2009 - April 2010	Year 13 May 2010 - April 2011	Year 14 May 2011 - April 2012	Cumulative Total	Yearly Average
EW-1	833	46,087	25,471	17,143	45,274	15,792	6,669	5,237	9,439	24,687	3,784	21,681	5,479	12,016	39,802	279,391	19,897
EW-1A	547	8,712	4,584	11,029	13,188	4,026	6,016	3,283	19,847	37,715	7,802	6,715	8,682	33,629	37,239	203,014	14,462
EW-2	914	33,996	40,400	56,970	52,608	18,724	19,915	24,888	16,718	28,422	33,460	61,992	60,181	74,123	162,623	685,934	48,930
EW-3	3,589	96,472	72,175	144,770	72,347	26,795	18,062	15,188	33,827	147,336	21,994	130,131	166,669	215,250	308,526	1,473,131	104,967
EW-4	881	3,024	4,526	11,533	2,985	4,014	12,470	11,077	7,475	11,210	8,075	8,973	9,586	16,912	24,288	137,030	9,725
EW-5	1,841	32,345	41,765	32,441	22,578	13,805	9,245	10,473	40,402	77,344	53,310	80,697	69,278	85,336	166,775	737,634	52,557
EW-6	1,608	34,474	14,266	14,331	5,632	3,161	4,358	695	29	3,695	2,031	1,703	300	107	796	87,184	6,113
EW-7	2,694	182,798	41,832	31,046	19,308	16,454	11,321	12,159	24,660	87,732	64,204	102,451	18,444	86,881	94,946	796,929	56,731
EW-8	2,678	183,340	94,186	147,455	143,203	133,632	220,738	303,163	232,709	208,433	100,815	8,545	1,906	41,270	26,984	1,849,058	131,884
EW Subtotal	**15,585**	**621,248**	**339,205**	**466,718**	**377,122**	**236,403**	**308,793**	**386,164**	**385,105**	**626,574**	**295,475**	**422,887**	**340,524**	**565,523**	**861,977**	**6,249,304**	**445,266**
LS-01	10,082	227,965	120,844	174,240	136,778	55,597	64,507	116,536	42,295	79,226	187,300	302,663	337,176	95,777	26,023	1,977,009	140,495
LS-02	10,941	26,298	0	0	0	0	0	0	0	0	0	0	0	0	0	37,239	1,878
LS Subtotal	**21,023**	**254,264**	**120,844**	**174,240**	**136,778**	**55,597**	**64,507**	**116,536**	**42,295**	**79,226**	**187,300**	**302,663**	**337,176**	**95,777**	**26,023**	**2,014,248**	**142,373**
Total	**36,608**	**875,512**	**460,050**	**640,958**	**513,900**	**292,000**	**373,300**	**502,700**	**427,400**	**705,800**	**482,775**	**725,550**	**677,700**	**661,300**	**888,000**	**8,263,553**	**587,639**
Precipitation (in.)[1]	4.71	43.56	22.13	29.56	38.54	26.79	27.30	29.67	21.64	33.44	25.14	44.04	28.77	38.30	31.79	445.38	31.48
Total Gallons[2]	5,116,196	47,316,667	24,038,518	32,109,290	41,863,736	29,100,402	29,654,385	32,228,776	23,506,260	36,323,906	27,308,104	47,838,062	31,251,159	41,603,038	34,531,608	483,790,106	34,190,994

Notes:
1 = Total precipitation as recorded at the nearby DuPage County Airport
2 = Total gallons of precipitation calculated for the 40-acre Blackwell Landfill

Table 5
Cumulative Leachate Removal
(Sorted by Extracted Leachate Volume)
Blackwell Landfill NPL Site, DuPage County, Illinois

Extraction Wells/ Lift Stations	Total Volume Removed[1] (gallons)	Average Extraction Rate[2] (gallons/month)	Contribution to Total (%)	Cumulative Volume Extracted (gallons)	Cumulative Contribution to Total (%)
LS-01	1,977,009	11,570	23.9	1,977,009	23.9
EW-8	1,849,058	10,861	22.4	3,826,067	46.3
EW-3	1,473,131	8,644	17.8	5,299,198	64.1
EW-7	796,929	4,672	9.6	6,096,127	73.8
EW-5	737,634	4,328	8.9	6,833,761	82.7
EW-2	685,934	4,030	8.3	7,519,695	91.0
EW-1	279,391	1,639	3.4	7,799,086	94.4
EW-1A	203,014	1,191	2.5	8,002,100	96.8
EW-4	137,030	801	1.7	8,139,130	98.5
EW-6	87,184	503	1.1	8,226,314	99.5
LS-02	37,239	155	0.5	8,263,553	100.0
TOTAL	**8,263,553**	**48,394**	**100.0**	**8,263,553**	**100.0**

Notes:

1. Cumulative leachate volumes are from December 1, 1997 to April 30, 2012.
2. During routine pumping.

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Apr-00	Jul-00	Oct-00
Conventionals																
BOD_5	mg/L	NA	NA	NA	11,000	10,000	1,530	14,200	29,100	5,940	13,700	3,980	10,700	311	871	4,760
COD	mg/L	NA	NA	NA	15,000	13,300	1,990	19,900	22,900	7,920	22,600	4,440	16,000	969	1,450	5,900
Nitrogen Ammonia	mg/L	464	395	429.5	427	339	58.1	770	1,100	210	739	180	590	140	66.8	380
Oil & Grease	mg/L	NA	NA	NA	526	153	<1	486	<1	31	3	2	9	3	<1	226
pH @ 25 °C	units	NA	NA	NA	6.69	6.61	6.44	6.72	6.72	6.42	6.71	7.03	6.85	7.02	6.94	7.53
Phenol	mg/L	NA	NA	NA	0.44	1.76	0.43	3.09	5.7	1.46	3.2	0.7	2.5	0.28	0.18	0.83
Total Dissolved Solids	mg/L	12,700	5,690	9,195	13,200	11,400	2,550	18,260	21,000	6,850	23,300	4,920	16,900	3,290	3,490	6,780
Total Suspended Solids	mg/L	NA	NA	NA	417	476	224	2,040	215	264	1160	200	827	185	48	206
Cyanide	mg/L	ND	0.007	0.0035	NA	0.014	<0.005	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	1330	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	3.18	0.06	1.62	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	0.08	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	725	41	383	NA	NA	192	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics																
Arsenic	mg/L	0.045	0.045	0.045	0.008	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	NA	<0.04	<0.002	0.004	0.004
Barium	mg/L	0.612	0.32	0.466	0.273	0.304	0.178	2.02	0.918	0.192	0.578	NA	0.625	0.377	0.218	0.073
Boron	mg/L	NA	NA	NA	4.8	3.87	1.24	6.32	7.15	2.26	7.71	NA	6.29	1.65	1.07	3.15
Cadmium	mg/L	0.026	0.007	0.0165	0.082	0.051	0.008	0.18	0.049	0.037	0.062	NA	0.092	0.006	0.002	<0.001
Chromium	mg/L	0.022	0.144	0.083	0.008	0.01	0.871	0.07	0.022	0.005	0.018	NA	0.021	0.007	0.004	0.009
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.05
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	0.871	NA	NA	NA	NA	NA	NA	NA	NA	<0.05
Copper	mg/L	ND	0.069	0.0345	<0.01	<0.01	0.025	<0.001	<0.002	<0.01	<0.002	NA	0.297	<0.001	<0.001	0.076
Iron	mg/L	2,120	182	1,151	550	542	89.6	792	552	451	1,010	NA	1,300	68.7	3.3	49
Lead	mg/L	0.03	0.396	0.213	0.1	0.066	0.014	0.534	0.138	0.05	0.109	NA	NA	0.027	0.009	0.003
Manganese	mg/L	30.6	2.86	16.73	8.5	8.72	1.82	13.4	8.71	8.7	14.6	NA	13.8	1.45	2.13	2.15
Mercury	mg/L	ND	0.002	0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.001	NA	<0.001	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.233	0.186	0.2095	0.131	0.109	0.352	0.218	0.167	0.085	0.214	NA	0.167	0.036	0.023	0.062
Selenium	mg/L	NA	NA	NA	<0.02	<0.02	<0.02	<0.002	<0.004	<0.02	<0.004	NA	<0.04	<0.002	<0.002	<0.002
Silver	mg/L	0.03	ND	0.015	<0.001	<0.001	<0.01	<0.001	<0.002	<0.001	<0.002	NA	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	60.5	1.48	30.99	19.9	18.5	2.6	11.2	3.09	16.5	23.8	NA	28.8	2.93	0.5	0.454
Volatile Organic Compounds																
Acetone	ug/L	10,000	49	5,025	2,420	NA	442	NA	12,600	NA	7,710	NA	6,300	NA	NA	NA
Acrolein	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	<100	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	<100	NA
Benzene	ug/L	160	27	93.5	26.1 J	NA	25.5	NA	36.2	NA	32	NA	18.01	8.4	5.3	NA
Bromodichloromethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Bromoform	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Bromomethane	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA
2-Butanone	ug/L	NA	NA	NA	7,410	NA	854	NA	24,300	NA	17,000	NA	22,100	NA	NA	NA
Carbon disulfide	ug/L	ND	ND	ND	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Carbon tetrachloride	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chlorobenzene	ug/L	ND	ND	ND	10.6 J	NA	124	NA	20.4	NA	11	NA	<5	25.2	<5	NA
Chlorodibromomethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chloroethane	ug/L	NA	NA	NA	<100	NA	<10	NA	23.4	NA	12	NA	<10	<10	<10	NA
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	<10	NA
Chloroform	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Chloromethane	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Apr-00	Jul-00	Oct-00
Volatile Organic Compounds (Continued)																
1,1-Dichloroethane	ug/L	180	3	91.5	<50	NA	10.3	NA	9.2	NA	9	NA	<5	<5	<5	NA
1,2-Dichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,1-Dichloroethene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
cis-1,2-Dichloroethene	ug/L	NA	NA	NA	116	NA	99.2	NA	43	NA	88	NA	45.2	<5	<5	NA
trans-1,2-Dichloroethene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,2-Dichloroethene (total)	ug/L	280	7	143.5	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA
1,2-Dichloropropane	ug/L	ND	ND	ND	<50	NA	14.2	NA	<5	NA	<5	NA	<5	<5	<5	NA
cis-1,3-Dichloropropene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
trans-1,3-Dichloropropene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Ethyl Benzene	ug/L	84	130	107	38.4 J	NA	27.6	NA	38.5	NA	48	NA	42.8	7.2	<5	NA
2-Hexanone	ug/L	NA	NA	NA	<100	NA	<10	NA	29.6	NA	24	NA	<10	NA	NA	NA
4-Methyl-2-pentanone	ug/L	1,100	28	564	144	NA	61.4	NA	544	NA	472	NA	353	NA	NA	NA
Methylene chloride	ug/L	NA	NA	NA	<50	NA	41.5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Styrene	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Tetrachloroethene	ug/L	ND	ND	ND	<50	NA	<5	NA	<5	NA	5	NA	17.8	<5	<5	NA
Toluene	ug/L	1,800	49	924.5	197	NA	117	NA	119	NA	192	NA	113	30.2	11.7	NA
1,1,1-Trichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
1,1,2-Trichloroethane	ug/L	NA	NA	NA	<50	NA	<5	NA	<5	NA	<5	NA	<5	<5	<5	NA
Trichloroethene	ug/L	170	ND	85	23.7 J	NA	11.1	NA	6.2	NA	19	NA	15.4	<5	<5	NA
Vinyl Acetate	ug/L	NA	NA	NA	<100	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA
Vinyl Chloride	ug/L	ND	ND	ND	<100	NA	<10	NA	<10	NA	<10	NA	<10	<10	<10	NA
Xylenes (total)	ug/L	260	400	330	175	NA	95.8	NA	186	NA	<5	NA	228	NA	NA	NA
Semivolatile Organic Compounds																
Acenaphthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Acenaphthylene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Anthracene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzidine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[a]anthracene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[b]fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[k]fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[g,h,i]perylene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzo[a]pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Benzoic Acid	ug/L	NA	NA	NA	<250	NA	<50	NA	3,990	NA	15,400	NA	3,130	NA	NA	NA
Benzyl Alcohol	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200	NA	NA	NA
bis(2-chloroethoxy)methane	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-chloroethyl) ether	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-chloroisopropyl) ether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
bis(2-ethylhexyl) phthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Bromophenyl-phenylether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Butylbenzylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Chloroaniline	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	ND	34	17	<100	NA	<20	NA	<400	NA	<600	NA	<200	<20	<20	NA
2-Chloronaphthalene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2-Chlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Chlorophenyl-phenylether	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Chrysene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Apr-00	Jul-00	Oct-00
Semivolatile Organic Compounds (Continued)																
Dibenzofuran	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	NA	NA	NA
1,2-Dichlorobenzene	ug/L	ND	4	2	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
1,3-Dichlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
1,4-Dichlorobenzene	ug/L	ND	940	470	<50	NA	<10	NA	<200	NA	<300	NA	<100	27	12	NA
3,3-Dichlorobenzidine	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200	<20	<20	NA
2,4-Dichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Diethylphthalate	ug/L	ND	33	16.5	<50	NA	147	NA	<200	NA	<300	NA	<100	<10	12	NA
2,4-Dimethylphenol	ug/L	ND	10	5	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Dimethylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Di-n-butylphthalate	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4,6-Dinitro-2-methylphenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	<50	<50	NA
2,4-Dinitrophenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	<50	<50	NA
2,4-Dinitrotoluene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2,6-Dinitrotoluene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	<10	NA
Di-n-octylphthalate	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Fluoranthene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Fluorene	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Hexachlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Hexachlorobutadiene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Hexachlorocyclopentadiene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Hexachloroethane	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Indeno[1,2,3-cd]pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Isophorone	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2-Methylnaphthalene	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	NA	NA	NA
2-Methylphenol	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<50	<50	NA
3&4-Methylphenol	ug/L	17,000	5	8,503	229	NA	275	NA	10,100	NA	7,640	NA	6,870	157	380	NA
Naphthalene	ug/L	ND	960	480	<50	NA	<10	NA	866	NA	<300	NA	<100	15	<10	NA
2-Nitroaniline	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	NA	NA	NA
3-Nitroaniline	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	NA	NA	NA
4-Nitroaniline	ug/L	NA	NA	NA	<100	NA	<20	NA	<400	NA	<600	NA	<200	NA	NA	NA
Nitrobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2-Nitrophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
4-Nitrophenol	ug/L	NA	NA	NA	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	<50	<50	NA
N-Nitrosodimethylamine	ug/L	ND	ND	ND	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
N-Nitroso-di-n-propylamine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
n-Nitrosodiphenylamine	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Pentachlorophenol	ug/L	ND	ND	ND	<250	NA	<50	NA	<1,000	NA	<1,500	NA	<500	<50	<50	NA
Phenanthrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Phenol	ug/L	ND	ND	ND	124	NA	111	NA	1,620	NA	1,900	NA	1,280	23	32	NA
Pyrene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
Pyridine	ug/L	NA	NA	NA	<250	NA	NA	NA	NA	NA	NA	NA	<100	NA	NA	NA
1,2,4-Trichlorobenzene	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA
2,4,5-Trichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	NA	NA	NA	<50	NA	<10	NA	<200	NA	<300	NA	<100	<10	<10	NA

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	LLSV8-01	LLDV5-01	Average	BW-LCS-01	BW-LCS-02	BW-LCS-03	BW-LCS-04	BW-LCS-05	BW-LCS-06	BW-LCS-07	BW-LCS-08	BW-LCS-09	BW-LCS-10	BW-LCS-11	BW-LCS-12
		Sep-91	Sep-91	Sep-91	Dec-97	Jan-98	Feb-98	Jun-98	Sep-98	Dec-98	Mar-99	Jul-99	Dec-99	Apr-00	Jul-00	Oct-00
Pesticides																
Aldrin	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
alpha-BHC	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	NA	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
beta-BHC	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	NA	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
delta-BHC	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	NA	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
Lindane (gamma-BHC)	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
alpha-Chlordane	ug/L	NA	NA	NA	<0.50	NA	<0.5	NA	<0.5	NA	<0.5	NA	<0.50	<0.5	<0.5	NA
gamma-Chlordane	ug/L	NA	NA	NA	<0.50	NA	<0.5	NA	<0.5	NA	<0.5	NA	<0.50	<0.5	<0.5	NA
4,4'-DDD	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
4,4'-DDE	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
4,4'-DDT	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Dieldrin	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Endosulfan I	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
Endosulfan II	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Endosulfan sulfate	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Endrin	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Endrin aldehyde	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Endrin ketone	ug/L	NA	NA	NA	<0.10	NA	<0.1	NA	<0.1	NA	<1	NA	<0.10	<0.10	<0.10	NA
Heptachlor	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
Heptachlor epoxide	ug/L	NA	NA	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.5	NA	<0.05	<0.05	<0.05	NA
Methoxychlor	ug/L	NA	NA	NA	<0.5	NA	<0.5	NA	<0.5	NA	<5	NA	<0.50	<0.50	<0.50	NA
Toxaphene	ug/L	NA	NA	NA	<1	NA	<1	NA	<1	NA	<10	NA	<1.0	<1.0	<1.0	NA

Notes:

[1] The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.

NA = No analysis.

ND = Not detected.

J = Data flag indicates an estimated value.

P = Data flag indicates chemical preservation pH adjusted in lab.

B = Data flag indicates analyte detected in associated method blank.

W = Data flag indicates reporting limit elevated due to sample matrix.

M- = Data flag indicates MS recovery outside control limits low bias; LCS acceptable.

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Conventionals																		
BOD_5	mg/L	502	448	888	1,460	303	3,040	1,050	595	38	6,880	204	244	270	4,110	354	204	185
COD	mg/L	1,080	730	1,590	1,900	1,060	4,080	3,800	1,030	865	7,360	415	559	2,350	5,500	603	384	776
Nitrogen Ammonia	mg/L	88	61	190	140	480	280	190	260	570	220	89	210	420	210	120	98	360
Oil & Grease	mg/L	6	4	<1	3	<1	20	3	38	<5	125	2	3	11	23	3	<1	8
pH @ 25 °C	units	6.87	7.61	7.72	6.92	7.4	7.01	7.31	7.5	7.95	6.85	7	7.56	7.28	6.65	7.36	7.19	7.42
Phenol	mg/L	0.13	0.13	0.37	0.54	0.18	0.96	1.25	0.35	0.05	1.61	0.18	0.1	0.6	1.04	0.12	0.11	0.32
Total Dissolved Solids	mg/L	2,440	2,460	4,101	3,970	6,130	6,820	6,000	4,770	7,580	7,330	2,410	3,380	6,680	5,440	2,630	2,210	5,700
Total Suspended Solids	mg/L	102	35	145	548	22	843	103	54	16	243	29	46	258	158	39	57	45
Cyanide	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	0.006	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics																		
Arsenic	mg/L	<0.002	<0.02	<0.002	<0.002	0.003	0.003	0.011	0.006	0.009	0.008	<0.002	<0.002	0.008	<0.002	<0.002	0.005	0.003
Barium	mg/L	0.262	0.069	0.045	0.144	0.161	0.306	0.547	0.265	0.056	0.338	0.396	0.127	0.256	0.104	0.272	0.335	0.219
Boron	mg/L	1.06	0.52	0.06	1.34	2.9	1.4	2.91	2.88	3.86	2.4	1.38	1.53	3.25	0.76	1.09	1.54	3.21
Cadmium	mg/L	<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
Chromium	mg/L	0.004	0.003	0.008	0.006	0.016	0.012	0.015	0.017	0.016	0.008	0.003	0.007	0.016	0.005	0.005	0.005	0.012
Chromium, Hexavalent	mg/L	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.047	0.004	0.004	0.008	0.036
Iron	mg/L	45.5	11.3	4.59	82.4	20.5	121	172	49.2	5.11	290	7.98	9.2	82.5	83.1	16.3	34.6	16.6
Lead	mg/L	0.004	<0.002	0.003	<0.002	0.008	0.008	0.012	0.006	0.006	0.01	0.002	<0.002	0.018	0.003	<0.002	<0.002	0.003
Manganese	mg/L	1.66	0.594	0.062	2.18	0.0131	1.18	3.57	0.371	0.018	6.12	0.441	0.215	0.654	2.54	0.624	0.622	0.17
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.013	0.012	0.004	0.029	0.063	0.03	0.04	0.054	0.088	0.038	0.017	0.034	0.068	0.016	0.022	0.017	0.062
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.001
Zinc	mg/L	0.364	0.19	0.035	0.144	0.248	0.812	1.32	0.65	0.086	1.52	0.048	0.087	0.444	0.458	0.183	0.143	0.196
Volatile Organic Compounds																		
Acetone	ug/L	NA	NA	428	NA	177	NA	903	NA	78	NA	106	NA	870	NA	NA	NA	NA
Acrolein	ug/L	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	NA	<100
Acrylonitrile	ug/L	<100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	NA	<100
Benzene	ug/L	8.6	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	5.5	NA	<5.0	NA	<5.0
Bromodichloromethane	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Bromoform	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Bromomethane	ug/L	<10	NA	<10	NA	<10	NA	<5	NA	<5	NA	<1.0	NA	<5.0	NA	<10.0	NA	<10.0
2-Butanone	ug/L	NA	NA	815	NA	180	NA	1,910	NA	<10	NA	216	NA	2,020	NA	NA	NA	NA
Carbon disulfide	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Carbon tetrachloride	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Chlorobenzene	ug/L	25.8	NA	<5	NA	9.3	NA	<5	NA	<5	NA	5.7	NA	43.0	NA	16.8	NA	<5.0
Chlorodibromomethane	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Chloroethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	13.4	NA	12.1	NA	<10.0
2-Chloroethylvinyl ether	ug/L	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10.0	NA	<10.0
Chloroform	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Chloromethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Volatile Organic Compounds (Continued)																		
1,1-Dichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1-Dichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,2-Dichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
trans-1,2-Dichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,3-Dichloropropene	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
trans-1,3-Dichloropropene	ug/L	<5	NA	<5	NA	<5	NA	<1	NA	<1	NA	<1.0	NA	<1.0	NA	<5.0	NA	<5.0
Ethyl Benzene	ug/L	7.6	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
2-Hexanone	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	NA	NA	NA
4-Methyl-2-pentanone	ug/L	NA	NA	26.4	NA	13.5	NA	50	NA	<10	NA	10.0	NA	80.8	NA	NA	NA	NA
Methylene chloride	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Styrene	ug/L	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Tetrachloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Toluene	ug/L	24.6	NA	<5	NA	<5	NA	8.1	NA	<5	NA	<5.0	NA	16.9	NA	6.3	NA	<5.0
1,1,1-Trichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1,2-Trichloroethane	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Trichloroethene	ug/L	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Vinyl Acetate	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10.0	NA	<10.0	NA	NA	NA	NA
Vinyl Chloride	ug/L	<10	NA	<2	NA	<2	NA	<2	NA	<2	NA	<2.0	NA	<2.0	NA	<10.0	NA	<10.0
Xylenes (total)	ug/L	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5.0	NA	30.4	NA	NA	NA	NA
Semivolatile Organic Compounds																		
Acenaphthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Acenaphthylene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Anthracene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzidine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[a]anthracene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[b]fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[k]fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[g,h,i]perylene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzo[a]pyrene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Benzoic Acid	ug/L	NA	NA	<50	NA	346	NA	730	NA	<50	NA	93	NA	1,410	NA	NA	NA	NA
Benzyl Alcohol	ug/L	NA	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	NA	NA	NA
bis(2-chloroethoxy)methane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-chloroethyl) ether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-chloroisopropyl) ether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
bis(2-ethylhexyl) phthalate	ug/L	<10	NA	<6	NA	<10	NA	<10	NA	<5	NA	<5	NA	<5	NA	<10	NA	<10
4-Bromophenyl-phenylether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Butylbenzylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Chloroaniline	ug/L	NA	NA	<20	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	<20	NA	<10	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20
2-Chloronaphthalene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Chlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Chlorophenyl-phenylether	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Chrysene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10

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Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Semivolatile Organic Compounds (Continued)																		
Dibenzofuran	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
1,2-Dichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,3-Dichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,4-Dichlorobenzene	ug/L	17	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
3,3-Dichlorobenzidine	ug/L	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20
2,4-Dichlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Diethylphthalate	ug/L	<10	NA	55	NA	17	NA	<10	NA	<10	NA	<10	NA	31	NA	14	NA	16
2,4-Dimethylphenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Dimethylphthalate	ug/L	<10	NA	55	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Di-n-butylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4,6-Dinitro-2-methylphenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
2,4-Dinitrophenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
2,4-Dinitrotoluene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2,6-Dinitrotoluene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
1,2-Diphenylhydrazine	ug/L	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	NA	<10
Di-n-octylphthalate	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Fluoranthene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Fluorene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorobenzene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorobutadiene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachlorocyclopentadiene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Hexachloroethane	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<5	NA	<5	NA	<5	NA	<10	NA	<10
Indeno[1,2,3-cd]pyrene	ug/L	<10	NA	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Isophorone	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Methylnaphthalene	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
2-Methylphenol	ug/L	<50	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<50	NA	<50
3&4-Methylphenol	ug/L	168	NA	101	NA	224	NA	410	NA	<10	NA	89	NA	1,100	NA	226	NA	429
Naphthalene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Nitroaniline	ug/L	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	NA	NA	NA
3-Nitroaniline	ug/L	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<51	NA	<50	NA	NA	NA	NA
4-Nitroaniline	ug/L	NA	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	NA	NA	NA
Nitrobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2-Nitrophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
4-Nitrophenol	ug/L	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
N-Nitrosodimethylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
N-Nitroso-di-n-propylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
n-Nitrosodiphenylamine	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Pentachlorophenol	ug/L	<50	NA	NA	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50
Phenanthrene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Phenol	ug/L	25	NA	100	NA	23	NA	118	NA	<10	NA	<10	NA	202	NA	33	NA	75
Pyrene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
Pyridine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10
2,4,5-Trichlorophenol	ug/L	NA	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10	NA	<10

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-13	BW-LCS-14	BW-LCS-15	BW-LCS-16	BW-LCS-17	BW-LCS-18	BW-LCS-19	BW-LCS-20	BW-LCS-21	BW-LCS-22	BW-LCS-23	BW-LCS-24	BW-LCS-25	BW-LCS-26	BW-LCS-27	BW-LCS-28	BW-LCS-29
		Jan-01	Apr-01	Jul-01	Oct-01	Jan-02	Apr-02	Jul-02	Oct-02	Jan-03	Apr-03	Aug-03	Nov-03	Jan-04	Mar-04	Jun-04	Sep-04	Dec-04
Pesticides																		
Aldrin	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
beta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
delta-BHC	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Lindane (gamma-BHC)	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-Chlordane	ug/L	<0.5	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
gamma-Chlordane	ug/L	<0.5	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
4,4'-DDD	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDE	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDT	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
Dieldrin	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<1.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan I	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Endosulfan II	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan sulfate	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin aldehyde	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin ketone	ug/L	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Heptachlor	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Heptachlor epoxide	ug/L	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Methoxychlor	ug/L	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
Toxaphene	ug/L	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0

Notes:

[1] The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.

NA = No analysis.

ND = Not detected.

J = Data flag indicates an estimated value.

P = Data flag indicates chemical preservation pH adjusted in lab.

B = Data flag indicates analyte detected in associated method blank.

W = Data flag indicates reporting limit elevated due to sample matrix.

M- = Data flag indicates MS recovery outside control limits low bias; LCS acceptable.

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42	BW-LCS-43	BW-LCS-44	BW-LCS-45
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08	May-08	Aug-08	Nov-08
Conventionals																	
BOD_5	mg/L	274	246	23	89	186	1,860	4,000	5,800	858	4	51	2,220	352	29	70	708
COD	mg/L	485	570	542	910	272	2,990	22,300	8,520	1,480	39	316	1,210	1,020	110	744	1,180
Nitrogen Ammonia	mg/L	69.2	96.4	160	449	98	140	256	310	240	23	140	250	360	510	334	117
Oil & Grease	mg/L	3	12	<1	3	<1	28	290	125	5	<1	3	3 P	4	14	6 P	3
pH @ 25 °C	units	7.57	7.25	7.31	8.34	7.37	7.11	7.28	7.28	7.52	6.86	7.98	7.38	7.61	7.04	7.34	7.10
Phenol	mg/L	0.14	0.16	0.06	0.05	<0.05	0.68	<0.5 W	2.01	0.38	0.01	0.05	0.23	0.28	0.07	0.09	0.23
Total Dissolved Solids	mg/L	1,940	2,490	2,670	6,660	2,090	4,180	2,500	8,610	4,320	1,230	1,230	5,510	5,220	1,210	5,020	3,150
Total Suspended Solids	mg/L	21	74	64	171	106	106	14,000	39	74	48	192	133	45	87	30	99
Cyanide	mg/L	<0.005	<0.005	0.013	<0.005	<0.005	<0.005	<0.05 W	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.006	<0.005
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics																	
Arsenic	mg/L	<0.002	0.004	<0.002	0.008	<0.002	0.006	0.020	<0.002	0.006	<0.002	<0.002	0.006	0.012	0.006	0.008	<0.002
Barium	mg/L	0.076	0.398	0.288	0.107	0.132	0.318	0.160	0.189	0.202	0.093	0.098	0.198	0.171	0.228	0.401	0.545
Boron	mg/L	0.95	1.11	1.32	3.81	0.74	1.37	0.08	2.23	2.28	0.26	1.6	2.54	2.55	0.44	2.31	1.45
Cadmium	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Chromium	mg/L	0.002	0.006	0.003	0.015	<0.001	0.005	0.001	0.005	0.009	<0.001	0.004	0.006	0.013	0.001	0.011	0.004
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.007	0.031	0.026	0.089	0.004	0.007	0.018	0.006	0.008	<0.001	<0.001	0.012	0.003	0.002	0.001	<0.001
Iron	mg/L	11.1	25.5	18.3	8.0	32.3	42.0	294	25.7	27.3	13.1	4.19	84.6	17.8	19.1	6.89	71.1
Lead	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.028	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	0.002	<0.002	<0.002
Manganese	mg/L	0.55	0.674	0.248	0.047	0.548	2.20	1.10	4.03	0.873	0.343	0.041	1.940	0.250	0.301	0.185	1.04
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 M-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.014	0.020	0.018	0.086	0.012	0.020	0.034	0.038	0.045	0.002	0.019	0.040	0.063	0.006	0.052	0.019
Selenium	mg/L	<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
Silver	mg/L	<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
Zinc	mg/L	0.054	0.234	0.109	0.235	0.087	0.451	7.63	0.149	0.162	0.013	0.018	0.228	0.111	0.516	0.127	0.186
Volatile Organic Compounds																	
Acetone	ug/L	NA	346	NA	<100	NA	1,100	NA	2,970	NA	<100	NA	1,180	NA	<100	NA	590
Acrolein	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	8.5
Bromodichloromethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
Bromoform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
Bromomethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
2-Butanone	ug/L	NA	586	NA	19.3	NA	2,410	NA	6,390	NA	<10.0	NA	2,540	NA	<10.0	NA	936
Carbon disulfide	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Carbon tetrachloride	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Chlorobenzene	ug/L	NA	<5.0	NA	<5.0	NA	9.9	NA	10.5	NA	<5.0	NA	<5.0	NA	8.4	NA	21.2
Chlorodibromomethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
Chloroethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
Chloromethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42	BW-LCS-43	BW-LCS-44	BW-LCS-45
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08	May-08	Aug-08	Nov-08
Volatile Organic Compounds (Continued)																	
1,1-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
trans-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
cis-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
trans-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0
Ethyl Benzene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	6.8
2-Hexanone	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	30.6	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
4-Methyl-2-pentanone	ug/L	NA	16.6	NA	<10.0	NA	40.9	NA	111	NA	<10.0	NA	89.1	NA	<10.0	NA	29.6
Methylene chloride	ug/L	NA	<5.0	NA	<5.0	NA	5.6	NA	8.0	NA	<5.0	NA	7.0	NA	<5.0	NA	<5.0
Styrene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1,2,2-Tetrachloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Tetrachloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Toluene	ug/L	NA	<5.0	NA	<5.0	NA	5.1	NA	10.1	NA	<5.0	NA	11.0	NA	<5.0	NA	9.8
1,1,1-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
1,1,2-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Trichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0
Vinyl Acetate	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
Vinyl Chloride	ug/L	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0
Xylenes (total)	ug/L	NA	<5.0	NA	<5.0	NA	19.9	NA	9.4	NA	<5.0	NA	8.4	NA	8.1	NA	21.1
Semivolatile Organic Compounds																	
Acenaphthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Acenaphthylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzidine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzo[a]anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzo[b]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzo[k]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzo[g,h,i]perylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzo[a]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Benzoic Acid	ug/L	NA	221	NA	<50	NA	1,580	NA	3,580	NA	<50	NA	<50	NA	<50	NA	266
Benzyl Alcohol	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA	<20	NA	<200
bis(2-chloroethoxy)methane	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
bis(2-chloroethyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
bis(2-chloroisopropyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
bis(2-ethylhexyl) phthalate	ug/L	NA	<5	NA	<5	NA	<5	NA	<10	NA	<5	NA	59 B	NA	<5	NA	<50
4-Bromophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Butylbenzylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
4-Chloroaniline	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
4-Chloro-3-methylphenol	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA	<20	NA	<200
2-Chloronaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2-Chlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
4-Chlorophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Chrysene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42	BW-LCS-43	BW-LCS-44	BW-LCS-45
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08	May-08	Aug-08	Nov-08
Semivolatile Organic Compounds (Continued)																	
Dibenzofuran	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
1,2-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
1,3-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
1,4-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	115
3,3-Dichlorobenzidine	ug/L	NA	<20	NA	<20	NA	<20	NA	<40	NA	<20	NA	<20	NA	<20	NA	<200
2,4-Dichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Diethylphthalate	ug/L	NA	15	NA	<10	NA	37	NA	79	NA	<10	NA	28	NA	<10	NA	238
2,4-Dimethylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Dimethylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Di-n-butylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
4,6-Dinitro-2-methylphenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA	<50	NA	<500
2,4-Dinitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2,4-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2,6-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Fluorene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Hexachlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Hexachlorobutadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Hexachlorocyclopentadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Hexachloroethane	ug/L	NA	<5	NA	<5	NA	<5	NA	<10	NA	<5	NA	<5	NA	<5	NA	<50
Indeno[1,2,3-cd]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Isophorone	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2-Methylnaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2-Methylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	13	NA	<10	NA	<100
3&4-Methylphenol	ug/L	NA	86	NA	<10	NA	1,250	NA	1,780	NA	<10	NA	1,070	NA	<10	NA	386
Naphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	226	NA	<10	NA	<10	NA	<10	NA	<100
2-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA	<50	NA	<500
3-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA	<50	NA	<500
4-Nitroaniline	ug/L	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<20	NA	<200
Nitrobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2-Nitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
4-Nitrophenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<100	NA	<50	NA	<50	NA	<50	NA	<500
N-Nitrosodimethylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
N-Nitroso-di-n-propylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
n-Nitrosodiphenylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Pentachlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Phenanthrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Phenol	ug/L	NA	26	NA	<10	NA	160	NA	305	NA	<10	NA	172	NA	<10	NA	<100
Pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
Pyridine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2,4,5-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100
2,4,6-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<20	NA	<10	NA	<10	NA	<10	NA	<100

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-30	BW-LCS-31	BW-LCS-32	BW-LCS-33	BW-LCS-34	BW-LCS-35	BW-LCS-36	BW-LCS-37	BW-LCS-38	BW-LCS-39	BW-LCS-40	BW-LCS-41	BW-LCS-42	BW-LCS-43	BW-LCS-44	BW-LCS-45
		Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Aug-06	Nov-06	Feb-07	May-07	Aug-07	Nov-07	Feb-08	May-08	Aug-08	Nov-08
Pesticides																	
Aldrin	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
beta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
delta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Lindane (gamma-BHC)	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
alpha-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
gamma-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
4,4'-DDD	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDE	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
4,4'-DDT	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Dieldrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan I	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Endosulfan II	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endosulfan sulfate	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin aldehyde	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Endrin ketone	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10
Heptachlor	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Heptachlor epoxide	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05
Methoxychlor	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50
Toxaphene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0

Notes:

[1] The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.

NA = No analysis.

ND = Not detected.

J = Data flag indicates an estimated value.

P = Data flag indicates chemical preservation pH adjusted in lab.

B = Data flag indicates analyte detected in associated method blank.

W = Data flag indicates reporting limit elevated due to sample matrix.

M- = Data flag indicates MS recovery outside control limits low bias; LCS acceptable.

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-46 Jan-09	BW-LCS-47 May-09	BW-LCS-48 Jul-09	BW-LCS-49 Nov-09	BW-LCS-50 Jan-10	BW-LCS-51 May-10	BW-LCS-52 Jul-10	BW-LCS-53 Nov-10	BW-LCS-54 Jan-11	BW-LCS-55 May-11	BW-LCS-56 Jul-11	BW-LCS-57 Nov-11	BW-LCS-58 Jan-12	Minimum[1]	Maximum[1]
Conventionals																
BOD_5	mg/L	1,960	16	412	5	90	101	5	8,080	2,180	625	359	104	1,600	4	29,100
COD	mg/L	2,320	69	571	49	71	43	65	5,750	8,020	947	672	241	1,520 P	39	22,900
Nitrogen Ammonia	mg/L	211	15.7	34	16.4	41.2	21	27.1	566	585	89.8	55.3	48.3	148	15.7	1100
Oil & Grease	mg/L	9 P	<1	5	<1	<1	<1	<1	42	26	31	<1	<1	3	<1 P	526
pH @ 25 °C	units	7.10	6.92	7.01	6.53	6.92	7.17	7.18	7.14	7.28	7.42	7.02	7.53	7.35	6.42	8.34
Phenol	mg/L	2.21	0.014	0.11	<0.05	<0.010	<0.05	<0.05	1.29	1.6	0.350	0.170	<0.05	0.30 P	<0.01	5.7
Total Dissolved Solids	mg/L	4,950	1,320	1,780	1,180	1,400	1,160	1,420	10,700	10,100	2,280	1,800	1,500	2,780	1,160	23,300
Total Suspended Solids	mg/L	158	79	18	22	50	21	31	152	2,230	4,450	70	49	88	16	14,000
Cyanide	mg/L	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	0.005	<0.005	0.008	0.006	<0.005	<0.005	<0.005	<0.005	0.014
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1330	1330
Nitrate+Nitrite	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08	0.08
Sulfate	mg/L	NA	NA	NA	NA	NA	115	154	<75	142	<75	<75	<75	167	<75	192
Chloride	mg/L	NA	NA	NA	NA	NA	100	140	2,840	2,290	430	280	230	530	100	2,840
Inorganics																
Arsenic	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.011	0.009	0.041	0.009	<0.002	<0.002	<0.002	<0.002	0.041
Barium	mg/L	0.357	0.271	0.360	0.212	0.274	0.294	0.649	0.446	1.02	0.400	0.404	0.324	0.366	0.045	2.02
Boron	mg/L	2.12	0.54	0.61	0.43	0.53	0.40	0.53	2.97	4.01	0.69	0.68	0.69	1.24	0.06	7.71
Cadmium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.004	<0.001	<0.001	0.003	<0.001	0.18
Chromium	mg/L	0.008	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.010	0.004	<0.001	0.001	<0.001	0.003	<0.001	0.871
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Trivalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.871	0.871
Copper	mg/L	<0.001	<0.001	<0.001	0.003	0.004	0.003	0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.297
Iron	mg/L	93.6	19.0	28.0	2.88	19.9	12.4	79.2	119	710	120	42.1	20.9	52.9	2.88	1300
Lead	mg/L	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	0.010	0.052	0.012	<0.002	<0.002	0.016	<0.002	0.534
Manganese	mg/L	1.52	0.373	0.833	0.504	0.271	0.290	0.312	1.53	4.39	0.629	0.601	0.399	0.723	0.0131	14.6
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Nickel	mg/L	0.038	0.004	0.005	0.003	0.008	0.003	0.004	0.087	0.097	0.013	0.015	0.006	0.020	0.002	0.352
Selenium	mg/L	<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	0.004
Silver	mg/L	<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
Zinc	mg/L	0.662	0.022	0.126	0.021	0.017	0.036	0.306	0.344	11.1	1.84	0.457	0.054	0.575	0.013	28.8
Volatile Organic Compounds																
Acetone	ug/L	NA	<100	NA	<100	NA	<100	NA	1,610	NA	220	NA	122	NA	78	12,600
Acrolein	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	NA	8.1	NA	<5.0	NA	<5.0	NA	23.3	NA	6.4	NA	<5.0	NA	<5.0	36.2
Bromodichloromethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
Bromoform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
Bromomethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<1.0	<100
2-Butanone	ug/L	NA	10.8	NA	<10.0	NA	<10.0	NA	3,770	NA	768	NA	127	NA	<10.0	24,300
Carbon disulfide	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
Carbon tetrachloride	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
Chlorobenzene	ug/L	NA	44.4	NA	<5.0	NA	24.7	NA	45.2	NA	33.6	NA	13.4	NA	<5.0	124
Chlorodibromomethane	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
Chloroethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	33.2	NA	<10.0	NA	<10.0	NA	<10	33.2
2-Chloroethylvinyl ether	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	<10
Chloroform	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
Chloromethane	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10	<100

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-46	BW-LCS-47	BW-LCS-48	BW-LCS-49	BW-LCS-50	BW-LCS-51	BW-LCS-52	BW-LCS-53	BW-LCS-54	BW-LCS-55	BW-LCS-56	BW-LCS-57	BW-LCS-58	Minimum[1]	Maximum[1]
		Jan-09	May-09	Jul-09	Nov-09	Jan-10	May-10	Jul-10	Nov-10	Jan-11	May-11	Jul-11	Nov-11	Jan-12		
Volatile Organic Compounds (Continued)																
1,1-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	5.7	NA	<5.0	NA	<5.0	NA	<5.0	10.3
1,2-Dichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
1,1-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
cis-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	20.3	NA	<5.0	NA	<5.0	NA	<5.0	116
trans-1,2-Dichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
1,2-Dichloroethene (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0
1,2-Dichloropropane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	14.2
cis-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
trans-1,3-Dichloropropene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<50
Ethyl Benzene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	36.9	NA	<5.0	NA	<5.0	NA	<5.0	48
2-Hexanone	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10	30.6
4-Methyl-2-pentanone	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	82.4	NA	20.0	NA	13.2	NA	<10	544
Methylene chloride	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	41.5
Styrene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
1,1,2,2-Tetrachloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
Tetrachloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	17.8
Toluene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	68.7	NA	12.2	NA	<5.0	NA	<5.0	197
1,1,1-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
1,1,2-Trichloroethane	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	<50
Trichloroethene	ug/L	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	19
Vinyl Acetate	ug/L	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10	<100
Vinyl Chloride	ug/L	NA	<2.0	NA	<2.0	NA	<2.0	NA	4.4	NA	<2.0	NA	<2.0	NA	<2.0	4.4
Xylenes (total)	ug/L	NA	8.6	NA	<5.0	NA	<5.0	NA	146	NA	13.0	NA	<5.0	NA	<5.0	228
Semivolatile Organic Compounds																
Acenaphthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Acenaphthylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzidine	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzo[a]anthracene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzo[b]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzo[k]fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzo[g,h,i]perylene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzo[a]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Benzoic Acid	ug/L	NA	<50	NA	<50	NA	<50	NA	978	NA	260	NA	<50	NA	<50	15,400
Benzyl Alcohol	ug/L	NA	<20	NA	<20	NA	<20	NA	<100	NA	<20	NA	<20	NA	<20	<600
bis(2-chloroethoxy)methane	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
bis(2-chloroethyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
bis(2-chloroisopropyl) ether	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
bis(2-ethylhexyl) phthalate	ug/L	NA	<5	NA	7	NA	<5	NA	<25	NA	<5	NA	<5	NA	<5.0	7
4-Bromophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Butylbenzylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
4-Chloroaniline	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
4-Chloro-3-methylphenol	ug/L	NA	<20	NA	<20	NA	<20	NA	<100	NA	<20	NA	<20	NA	<10	<600
2-Chloronaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2-Chlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
4-Chlorophenyl-phenylether	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Chrysene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-46 Jan-09	BW-LCS-47 May-09	BW-LCS-48 Jul-09	BW-LCS-49 Nov-09	BW-LCS-50 Jan-10	BW-LCS-51 May-10	BW-LCS-52 Jul-10	BW-LCS-53 Nov-10	BW-LCS-54 Jan-11	BW-LCS-55 May-11	BW-LCS-56 Jul-11	BW-LCS-57 Nov-11	BW-LCS-58 Jan-12	Minimum[1]	Maximum[1]
Semivolatile Organic Compounds (Continued)																
Dibenzofuran	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
1,2-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
1,3-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
1,4-Dichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	98	NA	<10	NA	<10	NA	<10	115
3,3-Dichlorobenzidine	ug/L	NA	<20	NA	<20	NA	<20	NA	<100	NA	<20	NA	<20	NA	<20	<600
2,4-Dichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Diethylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	97	NA	<10	NA	<10	NA	<10	238
2,4-Dimethylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	15	NA	<10	NA	<10	15
Dimethylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	55
Di-n-butylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
4,6-Dinitro-2-methylphenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<520	NA	<50	NA	<50	NA	<50	<1500
2,4-Dinitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<50	<1500
2,4-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2,6-Dinitrotoluene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
1,2-Diphenylhydrazine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	<10
Di-n-octylphthalate	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Fluoranthene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Fluorene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Hexachlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Hexachlorobutadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Hexachlorocyclopentadiene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Hexachloroethane	ug/L	NA	<5	NA	<5	NA	<5	NA	<25	NA	<5	NA	<5	NA	<5	<300
Indeno[1,2,3-cd]pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Isophorone	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2-Methylnaphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2-Methylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	13
3&4-Methylphenol	ug/L	NA	<10	NA	<10	NA	<10	NA	898	NA	188	NA	37	NA	<10	10,100
Naphthalene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	866
2-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<250	NA	<50	NA	<50	NA	<50	<1500
3-Nitroaniline	ug/L	NA	<50	NA	<50	NA	<50	NA	<250	NA	<50	NA	<50	NA	<50	<1500
4-Nitroaniline	ug/L	NA	<20	NA	<20	NA	<20	NA	<100	NA	<20	NA	<20	NA	<20	<600
Nitrobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2-Nitrophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
4-Nitrophenol	ug/L	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	NA	<50	<1500
N-Nitrosodimethylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
N-Nitroso-di-n-propylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
n-Nitrosodiphenylamine	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Pentachlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<50	<1500
Phenanthrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Phenol	ug/L	NA	<10	NA	<10	NA	<10	NA	316	NA	24	NA	<10	NA	<10	1,900
Pyrene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
Pyridine	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<100	<250
1,2,4-Trichlorobenzene	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2,4,5-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300
2,4,6-Trichlorophenol	ug/L	NA	<10	NA	<10	NA	<10	NA	<50	NA	<10	NA	<10	NA	<10	<300

Table 6
Leachate Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Parameter	Units	BW-LCS-46	BW-LCS-47	BW-LCS-48	BW-LCS-49	BW-LCS-50	BW-LCS-51	BW-LCS-52	BW-LCS-53	BW-LCS-54	BW-LCS-55	BW-LCS-56	BW-LCS-57	BW-LCS-58	Minimum[1]	Maximum[1]
		Jan-09	May-09	Jul-09	Nov-09	Jan-10	May-10	Jul-10	Nov-10	Jan-11	May-11	Jul-11	Nov-11	Jan-12		
Pesticides																
Aldrin	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
alpha-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
beta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
delta-BHC	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
Lindane (gamma-BHC)	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
alpha-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	<0.5
gamma-Chlordane	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	<0.5
4,4'-DDD	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1.10
4,4'-DDE	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1.10
4,4'-DDT	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1.10
Dieldrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1.10
Endosulfan I	ug/L	NA	<0.05	NA	<0.05	NA	<0.	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
Endosulfan II	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1
Endosulfan sulfate	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1
Endrin	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1
Endrin aldehyde	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1
Endrin ketone	ug/L	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	<1
Heptachlor	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
Heptachlor epoxide	ug/L	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	NA	<0.05	<0.5
Methoxychlor	ug/L	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	NA	<0.50	<5
Toxaphene	ug/L	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	<10

Notes:

[1] The maximum and minimum values do not account for the two samples collected in 1991, prior to augmentation of the leachate collection system.

NA = No analysis.

ND = Not detected.

J = Data flag indicates an estimated value.

P = Data flag indicates chemical preservation pH adjusted in lab.

B = Data flag indicates analyte detected in associated method blank.

W = Data flag indicates reporting limit elevated due to sample matrix.

M- = Data flag indicates MS recovery outside control limits low bias; LCS acceptable.

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

The frequencies will be modified as experience with the systems dictate. The following forms are available for use during inspection, monitoring, and maintenance activities:

- Site Visit Operating Log
- Leachate Disposal Log
- Leachate and LFG Monitoring Form
- Maintenance and Repair Record Form
- Inspection Reporting Form
- Gas Vent Monitoring Form
- Replacement Equipment and Parts Log

AS-NEEDED BASIS

• Landfill Cover (following 10 yr., 24 hr rainfall event)	– Inspect for erosion, cracks – Inspect for water ponding – Inspect for siltation of drainage ways – Inspect for gas bubbling through landfill topsoil
• Control Building (following disposal of leachate)	– Record pump counter readings – Record depth of leachate in holding tank (before and after disposal)
• Site Conditions	– Document date and time – Document weather conditions – Conduct general inspection (fence, locks, sign, etc.)
• Main Vent Stack	– Inspect valve settings – Conduct general inspection (fence, locks, signs, etc.)

WEEKLY BASIS

• Control Building	– Visually check building exterior alarm lights – Visually check panel indicator lights – Check heater thermostat setting and status – Visually check building vents and fans – Inspect compressor and dryer operation – Drain water traps on compressor and dryer
• Leachate Holding Tank	– Inspect valve settings – Check volume in tank – General inspection – Visually check tank, leak detection, and dripleg riser condition

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

BI-MONTHLY

• Leachate Extraction Wells (wellheads)	– Measure leachate level during period of high atmospheric pressure – Document pump cycle counts – Conduct general inspection – Adjust needle valve if the extraction rate is to be modified. Check air supply pressure – Check air pump pressure – Check level sensor air pressure – Inspect flow meter operation – Check air supply and pump discharge valve settings
• Leachate Lift Stations	– Document pump cycle counts – Conduct general inspection – Verify pump operation – Check position of manual isolation valve
• LFG Vents	– Measure leachate level during period of high atmospheric pressure – Conduct general inspection
• Main Vent Stack	– Conduct general inspection – Check manual valve position

SEMI-ANNUALLY

• Leachate Extraction Wells (wellheads)	– Measure percent methane (CH_4) – Measure percent oxygen (O_2) – Measure percent carbon dioxide (CO_2) – Measure static pressure
• Leachate Lift Stations	– Measure percent methane (CH_4) – Measure percent oxygen (O_2) – Measure percent carbon dioxide (CO_2) – Measure static pressure
• LFG Vents	– Measure percent methane (CH_4) – Measure percent oxygen (O_2) – Measure percent carbon dioxide (CO_2) – Measure static pressure – Measure gas flow rate – Measure gas temperature
• Main Vent Stack	– Measure percent methane (CH_4) – Measure percent oxygen (O_2) – Measure percent carbon dioxide (CO_2) – Measure gas flow rate – Measure gas temperature

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

Monitoring Location	Bi-Monthly O&M Activities		Semi-Annual O&M Activities	Connected to LCS and LFG extraction system[1]
	Abandoned[1]	Monitor Leachate Levels[1]	Monitor LFG[1, 2]	
SV-1		X		
SV-2		X		
SV-3	X			
SV-4		X	X	X
SV-5		X	X	X
SV-6		X		
SV-7		X		
SV-8		X	X	X
SV-9		X	X	X
SV-10	X			
SV-11		X		
SV-12		X		
DV-1	X			
DV-2	X			
DV-3		X		
DV-4		X		
DV-5[3]		X	X	X
DV-6		X		
DV-7		X		
DV-8		X	X	X
DV-9		X	X	X
DV-10		X	X	X
DV-11		X		
DV-12	X			
DV-13		X		
DV-14		X		
DV-15[3]		X	X	X
DV-16[3]		X	X	X
DV-17		X	X	X
DV-18		X	X	X
EW-1[4]		X	X	X
EW-1A[4]		X	X	X
EW-2[4]		X	X	X
EW-3[4]		X	X	X
EW-4[4,5]			X	X
EW-5[4]		X	X	X
EW-6[4]		X	X	X
EW-7[4]		X	X	X
EW-8[4]		X	X	X
LS01[4]			X	X
LS02[6]				X
Main Vent[7]			X	X

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

Notes:

1. "X" indicates data collection or action taken.
2. LFG monitoring includes static pressure, flow velocity, temperature, and composition (i.e., % CH4, CO2, and O2).
3. Leachate level not measured. LFG vents DV-5, DV-15 and DV-16 measure groundwater levels.
4. LFG flow velocity and temperature are not measured at extraction wells or lift stations. Pump cycle counts documented.
5. Due to the configuration of EW-4, leachate levels are difficult or impossible to collect.
6. The pneumatic pump from LS02 was removed. No O&M data collected.
7. Static pressure is not measured at the main vent stack. The main vent stack is open to the atmosphere.

QUARTERLY

• Compressor/Dryer Systems	– Inspect and clean filters. Lubricate, if necessary
• Leachate Holding Tank	– Conduct required analytical testing
• Control Station	– Remove water from condensate trap on supply air line
• Site Inspection	– Inspect fenced areas (main vent stack, tank and compressor station) – Inspect posted signs and notices – Inspect access, including roads, to LCS and LFG system components – Inspect flush-mount vaults – Inspect for excessive or improper vegetation in, or around, LCS or LFG system components
• Landfill Gas Sampling (at main vent stack)	– Conduct required LFG analytical testing – Measure gas flow rate
• Landfill Cover	– Inspect for erosion, cracks – Inspect for water ponding – Inspect for siltation of drainage ways – Inspect for stressed or dead vegetation

SEMI-ANNUALLY

• Leachate Holding Tank	– Conduct required analytical testing
• Driplegs DL01 and DL02	– Check liquid levels in "u" traps if an active LFG extraction system is installed.

Table 7
Inspection, Monitoring, and Maintenance Schedule
Blackwell Landfill Site

ANNUALLY	
• Compressor/Dryer Systems	– Perform annual maintenance as necessary
• All Valves	– Confirm valve operation by operating throughout entire range of motion several times
• Leachate Holding Tank	– Inspect liquid level floats, interlocked controls and warning lights operation – Inspect moisture probes (leak detection riser and tank interstice)
• Padlocks, Gates, Doors, etc.	– Lubricate with grease and verify working condition
• Lift Station LS01 (if system is made inoperable by shutting off air supply valve)	– Bleed out condensate in air supply line

Table 8
Landfill Gas Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Sample Identification	Sample Collection Date	Atmospheric Pressure (in. Hg)	ASTM D1945/EPA 3C			U.S. EPA Modified Method 25C	
			% of CO_2 (%-v/v)	% of O_2 (%-v/v)	% of N_2 (%-v/v)	Methane ppm-c	Total Non-Methane Organic Compounds, as Methane ppm-c
FPD-LFGSTACK-01	September 15, 1998	29.97	33	0.51	1.90	550,000	1,400
BW-LFGSTACK-02	September 23, 1998	30.23	36	0.51	2.00	570,000	400
BW-LFGSTACK-03	October 27, 1998	30.14	35	0.53	2.00	570,000	900
BW-LFGSTACK-04	October 28, 1998	29.99	35	0.53	2.00	570,000	710
BW-LFGSTACK-05	November 24, 1998	30.14	39	0.47	2.30	570,000	39
BW-LFGSTACK-06	November 25, 1998	29.76	38	0.96	3.40	560,000	22
BW-LFGSTACK-07	March 24, 1999	30.20	34	0.93	5.00	580,000	1,200
BW-LFGSTACK-08	March 31, 1999	29.43	34	1.10	4.60	580,000	1,200
BW-LFGSTACK-09A	August 13, 1999	29.70	34	0.98	2.70	650,000	1,100
BW-LFGSTACK-10A	August 18, 1999	30.08	33	0.76	2.30	650,000	1,200
BW-LFGSTACK-11A	January 4, 2000	29.92	37	0.71	ND	690,000	1,700
BW-LFGSTACK-12A	January 14, 2000	30.72	35	2.80	8.30	630,000	1,500
BW-LFGSTACK-13A	June 19, 2000	30.11	34	0.20	8.30	640,000	1,900
BW-LFGSTACK-14A	June 28, 2000	30.02	31	0.60	12.00	590,000	830
BW-LFGSTACK-15A	October 16, 2000	30.18	34	0.73	7.20	640,000	1,900
BW-LFGSTACK-16A	January 4, 2001	29.97	33	0.60	7.20	600,000	1,300
BW-LFGSTACK-17A	April 2, 2001	30.17	33	0.21	8.10	590,000	1,300
BW-LFGSTACK-18A	June 29, 2001	30.06	32	0.19	5.90	620,000	1,000
BW-LFGSTACK-19A	October 4, 2001	30.02	34	0.22	3.80	620,000	1,700
BW-LFGSTACK-20A	December 12, 2001	30.02	33	0.35	6.20	600,000	1,700
BW-LFGSTACK-21A	April 3, 2002	30.29	32	ND	12.00	570,000	1,400
BW-LFGSTACK-22A	June 27, 2002	29.83	33	0.18	12.00	590,000	1,500
BW-LFGSTACK-23A	September 26, 2002	29.86	30	ND	9.00	570,000	1,400
BW-LFGSTACK-24A	January 7, 2003	29.98	30	1.80	18.00	510,000	960
BW-LFGSTACK-25A	April 11, 2003	29.95	31	2.50	13.00	520,000	1,000
BW-LFGSTACK-26A	June 26, 2003	29.88	30	1.50	12.00	550,000	960
BW-LFGSTACK-27A	September 26, 2003	29.74	24	5.70	26.00	510,000	1,200
BW-LFGSTACK-28A	December 29, 2003	29.90	29	14.00	2.50	520,000	990
BW-LFGSTACK-29A	March 5, 2004	29.40	29	2.00	10.00	570,000	1,100
BW-LFGSTACK-30A	June 23, 2004	29.94	28	3.30	14.00	530,000	1,200
BW-LFGSTACK-31A	September 1, 2004	30.22	31	1.00	8.40	600,000	2,100
BW-LFGSTACK-32A	December 10, 2004	29.59	28	3.30	17.00	510,000	1,600
BW-LFGSTACK-33A	March 9, 2005	30.04	20	8.00	33.00	390,000	790
BW-LFGSTACK-34A	June 30, 2005	29.82	27	3.50	20.00	500,000	1,000
BW-LFGSTACK-35A	September 14, 2005	29.92	23	6.80	25.00	450,000	670
BW-LFGSTACK-36A	December 15, 2005	29.75	28	3.70	21.00	540,000	1,100
BW-LFGSTACK-37A	March 8, 2006	29.56	33	0.92	12.00	570,000	1,200
BW-LFGSTACK-38A	June 29, 2006	30.13	0.046	22.00	78.00	2.1	< 1.0
BW-LFGSTACK-39A	August 18, 2006	29.89	1.2	21.00	74.00	22,000	< 1.0
BW-LFGSTACK-940A	November 8, 2006	29.70	33	0.74	8.20	580,000	244
BW-LFGSTACK-41A	February 22, 2007	30.11	0.76	22.00	77.00	14,000	< 1.0

Table 8
Landfill Gas Analytical Results
Blackwell Landfill NPL Site
DuPage County, Illinois

Sample Identification	Sample Collection Date	Atmospheric Pressure (in. Hg)	ASTM D1945/EPA 3C			U.S. EPA Modified Method 25C	
			% of CO_2 (%-v/v)	% of O_2 (%-v/v)	% of N_2 (%-v/v)	Methane ppm-c	Total Non-Methane Organic Compounds, as Methane ppm-c
BW-LFGSTACK-42A	May 30, 2007	30.06	31	1.00	11.00	570,000	16.3
BW-LFGSTACK-43A	August 14, 2007	30.02	32	0.30	11.00	570,000	235.1
BW-LFGSTACK-44A	November 14, 2007	29.75	34	0.42	8.60	570,000	392.2
BW-LFGSTACK-45A	February 13, 2008	30.01	33	0.32	6.70	600,000	229.6
BW-LFGSTACK-46A	May 14, 2008	29.84	1.6	20.00	75.00	31,000	60.0
BW-LFGSTACK-47A	September 10, 2008	30.23	30	1.50	12.00	560,000	666.9
BW-LFGSTACK-48A	November 19, 2008	30.05	32	0.71	10.00	570,000	236.9
BW-LFGSTACK-49A	January 21, 2009	29.99	30	1.60	12.00	560,000	793.9
BW-LFGSTACK-50A	May 13, 2009	29.77	29	1.50	15.00	540,000	694.3
BW-LFGSTACK-51A	July 15, 2009	29.94	30	1.80	12.00	560,000	690.1
BW-LFGSTACK-52A	November 18, 2009	30.03	29	3.50	16.00	510,000	467.3
BW-LFGSTACK-53A	January 13, 2010	30.14	28	2.90	18.00	510,000	242.5
BW-LFGSTACK-54A	May 19, 2010	30.02	28	3.90	19.00	490,000	334.1
BW-LFGSTACK-55A	July 16, 2010	29.91	28	3.50	14.00	540,000	276.4
BW-LFGSTACK-56A	November 10, 2010	30.07	32	0.73	7.90	554,000	< 1700
BW-LFGSTACK-57A	January 12, 2011	30.38	23.6	4.71	23.40	402,000	920
BW-LFGSTACK-58A	May 11, 2011	29.79	29.3	<0.753	5.92	530,000	1,400
BW-LFGSTACK-59A	July 13, 2011	30.06	25.8	2.94	14.40	468,000	1,100
BW-LFGSTACK-60A	November 9, 2011	29.69	29.7	<0.673	6.72	531,000	1,300
BW-LFGSTACK-960A	November 9, 2011	29.69	28.8	<0.685	6.53	516,000	1,300
BW-LFGSTACK-61A	March 13, 2012	30.03	29.7	<0.782	6.47	535,000	1,300
Averages	-	**29.96**	**29.1**	**3.38**	**14.90**	**522,629**	**967**

Notes:
in. Hg: Inches mercury.
%-v/v: Percent by volume.
ppm-c: Parts per million - carbon
ND: Not detected

Table 9
Cumulative Risk of Exposure to Landfill Gas - May 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	1,200	1,200	3.07E-06	1.27E-04	18.414	0.00233	NA	NA	3.8E-09	8.8E-09			
Benzene	1,500	1,500	5.16E-06	2.13E-04	18.414	0.00392	2.73E-02	8.57E-03	6.3E-09	1.5E-08	1.7E-10	1.7E-06	I, I
Benzyl Chloride	<24	12	6.69E-08	2.76E-06	18.414	0.00005	NA	NA	8.2E-11	1.9E-10			
Bromodichloromethane	<9.4	4.7	3.39E-08	1.40E-06	18.414	0.00003	NA	NA	4.2E-11	9.7E-11			
Bromoform	<24	12	1.34E-07	5.51E-06	18.414	0.00010	3.85E-03	NA	1.6E-10	3.8E-10	6.3E-13		I
Bromomethane	<24	12	5.02E-08	2.07E-06	18.414	0.00004	NA	1.43E-03	6.1E-11	1.4E-10		1.0E-07	I
2-Butanone (MEK)	1,900	1,900	6.03E-06	2.49E-04	18.414	0.00458	NA	1.43E+00	7.4E-09	1.7E-08		1.2E-08	I
Carbon Disulfide	<9.4	4.7	1.58E-08	6.50E-07	18.414	0.00001	NA	2.00E-01	1.9E-11	4.5E-11		2.3E-10	I
Carbon Tetrachloride	<9.4	4.7	3.18E-08	1.31E-06	18.414	0.00002	5.25E-02	NA	3.9E-11	9.1E-11	2.0E-12		I
Chlorobenzene	700	700	3.47E-06	1.43E-04	18.414	0.00263	NA	5.71E-03	4.2E-09	9.9E-09		1.7E-06	H
Chloroethane	430	430	1.22E-06	5.04E-05	18.414	0.00093	NA	2.86E+00	1.5E-09	3.5E-09		1.2E-09	I
Chloroform	<9.4	4.7	2.47E-08	1.02E-06	18.414	0.00002	8.05E-02	NA	3.0E-11	7.1E-11	2.4E-12		I
Chloromethane	<24	12	2.67E-08	1.10E-06	18.414	0.00002	6.30E-03	2.57E-02	3.3E-11	7.6E-11	2.1E-13	3.0E-09	H, I
Dibromochloromethane	<9.4	4.7	4.31E-08	1.78E-06	18.414	0.00003	NA	NA	5.3E-11	1.2E-10			
1,2-Dichlorobenzene	29	29	1.88E-07	7.74E-06	18.414	0.00014	NA	5.71E-02	2.3E-10	5.4E-10		9.4E-09	H
1,3-Dichlorobenzene	<9.4	4.7	3.04E-08	1.25E-06	18.414	0.00002	NA	NA	3.7E-11	8.7E-11			
1,4-Dichlorobenzene	800	800	5.18E-06	2.14E-04	18.414	0.00393	NA	2.29E-01	6.3E-09	1.5E-08		6.5E-08	I
1,1-Dichloroethane	120	120	5.23E-07	2.16E-05	18.414	0.00040	NA	1.43E-01	6.4E-10	1.5E-09		1.0E-08	H
1,2-Dichloroethane	15	15	6.54E-08	2.70E-06	18.414	0.00005	9.10E-02	NA	8.0E-11	1.9E-10	7.3E-12		I
1,1-Dichloroethene	15	15	6.40E-08	2.64E-06	18.414	0.00005	NA	5.71E-02	7.8E-11	1.8E-10		3.2E-09	I
cis-1,2-Dichloroethene	1,900	1,900	8.11E-06	3.34E-04	18.414	0.00616	NA	NA	9.9E-09	2.3E-08			
trans-1,2-Dichloroethene	190	190	8.11E-07	3.34E-05	18.414	0.00062	NA	NA	9.9E-10	2.3E-09			
1,2-Dichloropropane	130	130	6.47E-07	2.67E-05	18.414	0.00049	NA	1.14E-03	7.9E-10	1.8E-09		1.6E-06	I
cis-1,3-Dichloropropene	<9.4	4.7	2.30E-08	9.47E-07	18.414	0.00002	1.40E-02	5.71E-03	2.8E-11	6.6E-11	3.9E-13	1.1E-08	I, I
trans-1,3-Dichloropropene	<9.4	4.7	2.30E-08	9.47E-07	18.414	0.00002	1.40E-02	5.71E-03	2.8E-11	6.6E-11	3.9E-13	1.1E-08	I, I
Ethyl Benzene	5,700	5,700	2.66E-05	1.10E-03	18.414	0.02023	NA	2.86E-01	3.3E-08	7.6E-08		2.7E-07	I
Ethylene Dibromide[4]	<9.4	4.7	3.89E-08	1.60E-06	18.414	0.00003	2.10E+00	2.60E-03	4.8E-11	1.1E-10	1.0E-10	4.3E-08	I, I
4-Ethyltoluene	780	780	4.13E-06	1.70E-04	18.414	0.00313	NA	NA	5.1E-09	1.2E-08			
Freon 11 (C13FMe)[5]	14	14	8.47E-08	3.49E-06	18.414	0.00006	NA	2.00E-01	1.0E-10	2.4E-10		1.2E-09	H
Freon 113	<9.4	4.7	3.88E-08	1.60E-06	18.414	0.00003	NA	8.57E+00	4.75E-11	1.11E-10		1.29E-11	H
Freon 114 (C12F4Et)	500	500	3.76E-06	1.55E-04	18.414	0.00286	NA	NA	4.6E-09	1.1E-08			
Freon 12 (C12F2Me)[6]	2,000	2,000	1.06E-05	4.39E-04	18.414	0.00809	NA	5.71E-02	1.3E-08	3.0E-08		5.3E-07	H
Hexachlorobutadiene	<9.4	4.7	5.40E-08	2.23E-06	18.414	0.00004	7.70E-02	NA	6.6E-11	1.5E-10	5.1E-12		I
2-Hexanone	<47	23.5	1.04E-07	4.27E-06	18.414	0.00008	NA	NA	1.3E-10	3.0E-10			

Table 9
Cumulative Risk of Exposure to Landfill Gas - May 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration(1) $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration(2) g/L	Emission Rate(2) E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell(3) R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane(7)	530,000,000	530,000,000	3.74E-01	1.54E+01	18.414	284	NA	NA	4.6E-04	1.1E-03			
4-Methyl-2-pentanone	840	840	3.70E-06	1.53E-04	18.414	0.00281	NA	8.57E-01	4.5E-09	1.1E-08		1.2E-08	I
Methylene chloride	<94	47	1.76E-07	7.25E-06	18.414	0.00013	NA	2.60E-02	2.2E-10	5.0E-10		1.9E-08	
Styrene	130	130	5.96E-07	2.46E-05	18.414	0.00045	NA	2.86E-01	7.3E-10	1.7E-09		6.0E-09	I
1,1,2,2-Tetrachloroethane	<9.4	4.7	3.47E-08	1.43E-06	18.414	0.00003	2.03E-01	NA	4.3E-11	9.9E-11	8.6E-12		I
Tetrachloroethene	420	420	3.07E-06	1.26E-04	18.414	0.00233	2.03E-03	1.71E-01	3.8E-09	8.8E-09	7.6E-12	5.1E-08	prov, prov
TNMOC(8)	1,400,000	1,400,000	7.40E-04	3.05E-02	18.414	0.56221	NA	NA	9.1E-07	2.1E-06			prov
Toluene	21,000	21,000	8.52E-05	3.51E-03	18.414	0.06470	NA	1.14E-01	1.0E-07	2.4E-07		2.1E-06	I
1,2,4-Trichlorobenzene	<9.4	4.7	3.76E-08	1.55E-06	18.414	0.00003	NA	1.14E-03	4.6E-11	1.1E-10		9.4E-08	prov
1,1,1-Trichloroethane	11	11	6.46E-08	2.66E-06	18.414	0.00005	NA	6.29E-01	7.9E-11	1.8E-10		2.9E-10	prov
1,1,2-Trichloroethane	<9.4	4.7	2.76E-08	1.14E-06	18.414	0.00002	5.60E-02	NA	3.4E-11	7.9E-11	1.9E-12		I
Trichloroethene	540	540	3.14E-06	1.29E-04	18.414	0.00238	4.00E-01	1.14E-02	3.8E-09	9.0E-09	1.5E-09	7.9E-07	prov, prov
1,2,4-Trimethylbenzene	2,300	2,300	1.22E-05	5.02E-04	18.414	0.00924	NA	1.71E-03	1.5E-08	3.5E-08		2.0E-05	prov
1,3,5-Trimethylbenzene	1,000	1,000	5.29E-06	2.18E-04	18.414	0.00402	NA	1.71E-03	6.5E-09	1.5E-08		8.8E-06	prov
Vinyl chloride	4,800	4,800	1.32E-05	5.45E-04	18.414	0.01003	3.08E-02	2.86E-02	1.6E-08	3.8E-08	5.0E-10	1.3E-06	I, I
m,p-Xylene	12,000	12,000	5.61E-05	2.31E-03	18.414	0.04260	NA	2.86E-02	6.9E-08	1.6E-07		5.6E-06	I
o-Xylene	3,100	3,100	1.45E-05	5.98E-04	18.414	0.01100	NA	2.86E-02	1.8E-08	4.1E-08		1.4E-06	I
									Cumulative Risk -->		**2.3E-09**	**4.7E-05**	

Notes:

(1) = Maximum concentration of BW-LFGSTACK-58A
(2) = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation
(3) = Maximum modeled concentration on the Blackwell Landfill
(4) = Ethylene Dibromide is reported as 1,2-Dibromoethane in the TO-15 Method
(5) = Freon 11 is reported as Trichlorofluoromethane in the TO-15 Method
(6) = Freon 12 is reported as Dichlorodifluoromethane in the TO-15 Method
(7) = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
(8) = Expressed on a carbon basis
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
$C_{ppb,i}$, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 10
Cumulative Risk of Exposure to Landfill Gas - July 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	730	730	1.87E-06	7.70E-05	18.414	0.00142	NA	NA	2.3E-09	5.3E-09			
Benzene	1,200	1,200	4.13E-06	1.70E-04	18.414	0.00313	2.73E-02	8.57E-03	5.1E-09	1.2E-08	1.4E-10	1.4E-06	I, I
Benzyl Chloride	<22	11	6.13E-08	2.53E-06	18.414	0.00005	NA	NA	7.5E-11	1.8E-10			
Bromodichloromethane	<8.6	4.3	3.10E-08	1.28E-06	18.414	0.00002	NA	NA	3.8E-11	8.9E-11			
Bromoform	<22	11	1.22E-07	5.05E-06	18.414	0.00009	3.85E-03	NA	1.5E-10	3.5E-10	5.8E-13		I
Bromomethane	<22	11	4.60E-08	1.90E-06	18.414	0.00003	NA	1.43E-03	5.6E-11	1.3E-10		9.2E-08	I
2-Butanone (MEK)	1,100	1,100	3.49E-06	1.44E-04	18.414	0.00265	NA	1.43E+00	4.3E-09	1.0E-08		7.0E-09	I
Carbon Disulfide	<8.6	4.3	1.44E-08	5.94E-07	18.414	0.00001	NA	2.00E-01	1.8E-11	4.1E-11		2.1E-10	I
Carbon Tetrachloride	<8.6	4.3	2.91E-08	1.20E-06	18.414	0.00002	5.25E-02	NA	3.6E-11	8.3E-11	1.9E-12		I
Chlorobenzene	840	840	4.16E-06	1.72E-04	18.414	0.00316	NA	5.71E-03	5.1E-09	1.2E-08		2.1E-06	H
Chloroethane	380	380	1.08E-06	4.45E-05	18.414	0.00082	NA	2.86E+00	1.3E-09	3.1E-09		1.1E-09	I
Chloroform	<8.6	4.3	2.26E-08	9.32E-07	18.414	0.00002	8.05E-02	NA	2.8E-11	6.5E-11	2.2E-12		I
Chloromethane	<22	11	2.45E-08	1.01E-06	18.414	0.00002	6.30E-03	2.57E-02	3.0E-11	7.0E-11	1.9E-13	2.7E-09	H, I
Dibromochloromethane	<8.6	4.3	3.94E-08	1.63E-06	18.414	0.00003	NA	NA	4.8E-11	1.1E-10			
1,2-Dichlorobenzene	<8.6	4.3	2.78E-08	1.15E-06	18.414	0.00002	NA	5.71E-02	3.4E-11	7.9E-11		1.4E-09	H
1,3-Dichlorobenzene	<8.6	4.3	2.78E-08	1.15E-06	18.414	0.00002	NA	NA	3.4E-11	7.9E-11			
1,4-Dichlorobenzene	800	800	5.18E-06	2.14E-04	18.414	0.00393	NA	2.29E-01	6.3E-09	1.5E-08		6.5E-08	I
1,1-Dichloroethane	100	100	4.36E-07	1.80E-05	18.414	0.00033	NA	1.43E-01	5.3E-10	1.2E-09		8.7E-09	H
1,2-Dichloroethane	12	12	5.23E-08	2.16E-06	18.414	0.00004	9.10E-02	NA	6.4E-11	1.5E-10	5.8E-12		I
1,1-Dichloroethene	12	12	5.12E-08	2.11E-06	18.414	0.00004	NA	5.71E-02	6.3E-11	1.5E-10		2.6E-09	I
cis-1,2-Dichloroethene	1,400	1,400	5.98E-06	2.46E-04	18.414	0.00454	NA	NA	7.3E-09	1.7E-08			
trans-1,2-Dichloroethene	160	160	6.83E-07	2.82E-05	18.414	0.00052	NA	NA	8.4E-10	2.0E-09			
1,2-Dichloropropane	93	93	4.63E-07	1.91E-05	18.414	0.00035	NA	1.14E-03	5.7E-10	1.3E-09		1.2E-06	I
cis-1,3-Dichloropropene	<8.6	4.3	2.10E-08	8.66E-07	18.414	0.00002	1.40E-02	5.71E-03	2.6E-11	6.0E-11	3.6E-13	1.1E-08	I, I
trans-1,3-Dichloropropene	<8.6	4.3	2.10E-08	8.66E-07	18.414	0.00002	1.40E-02	5.71E-03	2.6E-11	6.0E-11	3.6E-13	1.1E-08	I, I
Ethyl Benzene	3,200	3,200	1.50E-05	6.17E-04	18.414	0.01136	NA	2.86E-01	1.8E-08	4.3E-08		1.5E-07	I
Ethylene Dibromide[4]	<8.6	4.3	3.56E-08	1.47E-06	18.414	0.00003	2.10E+00	2.60E-03	4.4E-11	1.0E-10	9.1E-11	3.9E-08	I, I
4-Ethyltoluene	750	750	3.97E-06	1.64E-04	18.414	0.00301	NA	NA	4.9E-09	1.1E-08			
Freon 11 (C13FMe)[5]	15	15	9.07E-08	3.74E-06	18.414	0.00007	NA	2.00E-01	1.1E-10	2.6E-10		1.3E-09	H
Freon 113	<8.6	4.3	3.55E-08	1.46E-06	18.414	0.00003	NA	8.57E+00	4.34E-11	1.01E-10		1.18E-11	H
Freon 114 (C12F4Et)	490	490	3.69E-06	1.52E-04	18.414	0.00280	NA	NA	4.5E-09	1.1E-08			
Freon 12 (C12F2Me)[6]	2,000	2,000	1.06E-05	4.39E-04	18.414	0.00809	NA	5.71E-02	1.3E-08	3.0E-08		5.3E-07	H
Hexachlorobutadiene	<8.6	4.3	4.94E-08	2.04E-06	18.414	0.00004	7.70E-02	NA	6.0E-11	1.4E-10	4.7E-12		I
2-Hexanone	<43	21.5	9.48E-08	3.91E-06	18.414	0.00007	NA	NA	1.2E-10	2.7E-10			

Table 10
Cumulative Risk of Exposure to Landfill Gas - July 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration(1) $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration(2) g/L	Emission Rate(2) E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell(3) R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane(7)	468,000,000	468,000,000	3.31E-01	1.36E+01	18.414	251	NA	NA	4.0E-04	9.4E-04			
4-Methyl-2-pentanone	650	650	2.87E-06	1.18E-04	18.414	0.00218	NA	8.57E-01	3.5E-09	8.2E-09		9.6E-09	I
Methylene chloride	<86	43	1.61E-07	6.63E-06	18.414	0.00012	NA	2.60E-02	2.0E-10	4.6E-10		1.8E-08	
Styrene	110	110	5.04E-07	2.08E-05	18.414	0.00038	NA	2.86E-01	6.2E-10	1.4E-09		5.0E-09	I
1,1,2,2-Tetrachloroethane	<8.6	4.3	3.18E-08	1.31E-06	18.414	0.00002	2.03E-01	NA	3.9E-11	9.1E-11	7.9E-12		I
Tetrachloroethene	300	300	2.19E-06	9.03E-05	18.414	0.00166	2.03E-03	1.71E-01	2.7E-09	6.3E-09	5.4E-12	3.7E-08	prov, prov
TNMOC(8)	1,100,000	1,100,000	5.82E-04	2.40E-02	18.414	0.44173	NA	NA	7.1E-07	1.7E-06			prov
Toluene	12,000	12,000	4.87E-05	2.01E-03	18.414	0.03697	NA	1.14E-01	6.0E-08	1.4E-07		1.2E-06	I
1,2,4-Trichlorobenzene	<8.6	4.3	3.44E-08	1.42E-06	18.414	0.00003	NA	1.14E-03	4.2E-11	9.8E-11		8.6E-08	prov
1,1,1-Trichloroethane	<8.6	4.3	2.53E-08	1.04E-06	18.414	0.00002	NA	6.29E-01	3.1E-11	7.2E-11		1.1E-10	prov
1,1,2-Trichloroethane	<8.6	4.3	2.53E-08	1.04E-06	18.414	0.00002	5.60E-02	NA	3.1E-11	7.2E-11	1.7E-12		I
Trichloroethene	340	340	1.97E-06	8.14E-05	18.414	0.00150	4.00E-01	1.14E-02	2.4E-09	5.6E-09	9.7E-10	4.9E-07	prov, prov
1,2,4-Trimethylbenzene	1,500	1,500	7.94E-06	3.27E-04	18.414	0.00603	NA	1.71E-03	9.7E-09	2.3E-08		1.3E-05	prov
1,3,5-Trimethylbenzene	1,000	1,000	5.29E-06	2.18E-04	18.414	0.00402	NA	1.71E-03	6.5E-09	1.5E-08		8.8E-06	prov
Vinyl chloride	3,100	3,100	8.53E-06	3.52E-04	18.414	0.00648	3.08E-02	2.86E-02	1.0E-08	2.4E-08	3.2E-10	8.5E-07	I, I
m,p-Xylene	6,500	6,500	3.04E-05	1.25E-03	18.414	0.02307	NA	2.86E-02	3.7E-08	8.7E-08		3.0E-06	I
o-Xylene	1,700	1,700	7.95E-06	3.28E-04	18.414	0.00603	NA	2.86E-02	9.7E-09	2.3E-08		7.9E-07	I
									Cumulative Risk -->		**1.5E-09**	**3.4E-05**	

Notes:

(1) = Maximum concentration of BW-LFGSTACK-59A
(2) = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation
(3) = Maximum modeled concentration on the Blackwell Landfill
(4) = Ethylene Dibromide is reported as 1,2-Dibromoethane in the TO-15 Method
(5) = Freon 11 is reported as Trichlorofluoromethane in the TO-15 Method
(6) = Freon 12 is reported as Dichlorodifluoromethane in the TO-15 Method
(7) = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
(8) = Expressed on a carbon basis
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
$C_{ppb,i}$, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 11
Cumulative Risk of Exposure to Landfill Gas - November 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	1,100	1,100	2.81E-06	1.16E-04	18.414	0.00214	NA	NA	3.4E-09	8.0E-09			
Benzene	1,300	1,300	4.47E-06	1.84E-04	18.414	0.00340	2.73E-02	8.57E-03	5.5E-09	1.3E-08	1.5E-10	1.5E-06	I, I
Benzyl Chloride	<21	10.5	5.85E-08	2.41E-06	18.414	0.00004	NA	NA	7.2E-11	1.7E-10			
Bromodichloromethane	<8.4	4.2	3.03E-08	1.25E-06	18.414	0.00002	NA	NA	3.7E-11	8.7E-11			
Bromoform	<21	10.5	1.17E-07	4.82E-06	18.414	0.00009	3.85E-03	NA	1.4E-10	3.3E-10	5.5E-13		I
Bromomethane	<21	10.5	4.39E-08	1.81E-06	18.414	0.00003	NA	1.43E-03	5.4E-11	1.3E-10		8.8E-08	I
2-Butanone (MEK)	1,100	1,100	3.49E-06	1.44E-04	18.414	0.00265	NA	1.43E+00	4.3E-09	1.0E-08		7.0E-09	I
Carbon Disulfide	<8.4	4.2	1.41E-08	5.81E-07	18.414	0.00001	NA	2.00E-01	1.7E-11	4.0E-11		2.0E-10	I
Carbon Tetrachloride	<8.4	4.2	2.84E-08	1.17E-06	18.414	0.00002	5.25E-02	NA	3.5E-11	8.1E-11	1.8E-12		I
Chlorobenzene	870	870	4.31E-06	1.78E-04	18.414	0.00327	NA	5.71E-03	5.3E-09	1.2E-08		2.2E-06	H
Chloroethane	420	420	1.19E-06	4.92E-05	18.414	0.00091	NA	2.86E+00	1.5E-09	3.4E-09		1.2E-09	I
Chloroform	<8.4	4.2	2.21E-08	9.10E-07	18.414	0.00002	8.05E-02	NA	2.7E-11	6.3E-11	2.2E-12		I
Chloromethane	<21	10.5	2.33E-08	9.63E-07	18.414	0.00002	6.30E-03	2.57E-02	2.9E-11	6.7E-11	1.8E-13	2.6E-09	H, I
Dibromochloromethane	<8.4	4.2	3.85E-08	1.59E-06	18.414	0.00003	NA	NA	4.7E-11	1.1E-10			
1,2-Dichlorobenzene	29	29	1.88E-07	7.74E-06	18.414	0.00014	NA	5.71E-02	2.3E-10	5.4E-10		9.4E-09	H
1,3-Dichlorobenzene	<8.4	4.2	2.72E-08	1.12E-06	18.414	0.00002	NA	NA	3.3E-11	7.8E-11			
1,4-Dichlorobenzene	730	730	4.72E-06	1.95E-04	18.414	0.00359	NA	2.29E-01	5.8E-09	1.3E-08		5.9E-08	I
1,1-Dichloroethane	100	100	4.36E-07	1.80E-05	18.414	0.00033	NA	1.43E-01	5.3E-10	1.2E-09		8.7E-09	H
1,2-Dichloroethane	13	13	5.66E-08	2.34E-06	18.414	0.00004	9.10E-02	NA	6.9E-11	1.6E-10	6.3E-12		I
1,1-Dichloroethene	19	19	8.11E-08	3.34E-06	18.414	0.00006	NA	5.71E-02	9.9E-11	2.3E-10		4.1E-09	I
cis-1,2-Dichloroethene	1,600	1,600	6.83E-06	2.82E-04	18.414	0.00519	NA	NA	8.4E-09	2.0E-08			
trans-1,2-Dichloroethene	180	180	7.68E-07	3.17E-05	18.414	0.00058	NA	NA	9.4E-10	2.2E-09			
1,2-Dichloropropane	100	100	4.98E-07	2.05E-05	18.414	0.00038	NA	1.14E-03	6.1E-10	1.4E-09		1.2E-06	I
cis-1,3-Dichloropropene	<8.4	4.2	2.05E-08	8.46E-07	18.414	0.00002	1.40E-02	5.71E-03	2.5E-11	5.9E-11	3.5E-13	1.0E-08	I, I
trans-1,3-Dichloropropene	<8.4	4.2	2.05E-08	8.46E-07	18.414	0.00002	1.40E-02	5.71E-03	2.5E-11	5.9E-11	3.5E-13	1.0E-08	I, I
Ethyl Benzene	5,000	5,000	2.34E-05	9.64E-04	18.414	0.01775	NA	2.86E-01	2.9E-08	6.7E-08		2.3E-07	I
Ethylene Dibromide[4]	<8.4	4.2	3.48E-08	1.43E-06	18.414	0.00003	2.10E+00	2.60E-03	4.3E-11	9.9E-11	8.9E-11	3.8E-08	I, I
4-Ethyltoluene	640	640	3.39E-06	1.40E-04	18.414	0.00257	NA	NA	4.1E-09	9.7E-09			
Freon 11 (C13FMe)[5]	78	78	4.72E-07	1.95E-05	18.414	0.00036	NA	2.00E-01	5.8E-10	1.3E-09		6.7E-09	H
Freon 113	8.8	8.8	7.26E-08	2.99E-06	18.414	0.00006	NA	8.57E+00	8.89E-11	2.07E-10		2.42E-11	H
Freon 114 (C12F4Et)	390	390	2.94E-06	1.21E-04	18.414	0.00223	NA	NA	3.6E-09	8.4E-09			
Freon 12 (C12F2Me)[6]	1,900	1,900	1.01E-05	4.17E-04	18.414	0.00768	NA	5.71E-02	1.2E-08	2.9E-08		5.1E-07	H
Hexachlorobutadiene	<8.4	4.2	4.82E-08	1.99E-06	18.414	0.00004	7.70E-02	NA	5.9E-11	1.4E-10	4.5E-12		I
2-Hexanone	<42	21	9.26E-08	3.82E-06	18.414	0.00007	NA	NA	1.1E-10	2.6E-10			

Table 11
Cumulative Risk of Exposure to Landfill Gas - November 2011
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane[7]	531,000,000	531,000,000	3.75E-01	1.55E+01	18.414	285	NA	NA	4.6E-04	1.1E-03			
4-Methyl-2-pentanone	570	570	2.51E-06	1.04E-04	18.414	0.00191	NA	8.57E-01	3.1E-09	7.2E-09		8.4E-09	I
Methylene chloride	<84	42	1.57E-07	6.48E-06	18.414	0.00012	NA	2.60E-02	1.9E-10	4.5E-10		1.7E-08	
Styrene	150	150	6.88E-07	2.84E-05	18.414	0.00052	NA	2.86E-01	8.4E-10	2.0E-09		6.9E-09	I
1,1,2,2-Tetrachloroethane	<8.4	4.2	3.10E-08	1.28E-06	18.414	0.00002	2.03E-01	NA	3.8E-11	8.9E-11	7.7E-12		I
Tetrachloroethene	380	380	2.77E-06	1.14E-04	18.414	0.00211	2.03E-03	1.71E-01	3.4E-09	7.9E-09	6.9E-12	4.6E-08	prov, prov
TNMOC[8]	1,300,000	1,300,000	6.87E-04	2.84E-02	18.414	0.52205	NA	NA	8.4E-07	2.0E-06			prov
Toluene	15,000	15,000	6.09E-05	2.51E-03	18.414	0.04621	NA	1.14E-01	7.4E-08	1.7E-07		1.5E-06	I
1,2,4-Trichlorobenzene	<8.4	4.2	3.36E-08	1.38E-06	18.414	0.00003	NA	1.14E-03	4.1E-11	9.6E-11		8.4E-08	prov
1,1,1-Trichloroethane	<8.4	4.2	2.47E-08	1.02E-06	18.414	0.00002	NA	6.29E-01	3.0E-11	7.0E-11		1.1E-10	prov
1,1,2-Trichloroethane	<8.4	4.2	2.47E-08	1.02E-06	18.414	0.00002	5.60E-02	NA	3.0E-11	7.0E-11	1.7E-12		I
Trichloroethene	570	570	3.31E-06	1.37E-04	18.414	0.00251	4.00E-01	1.14E-02	4.1E-09	9.5E-09	1.6E-09	8.3E-07	prov, prov
1,2,4-Trimethylbenzene	1,800	1,800	9.53E-06	3.93E-04	18.414	0.00723	NA	1.71E-03	1.2E-08	2.7E-08		1.6E-05	prov
1,3,5-Trimethylbenzene	860	860	4.55E-06	1.88E-04	18.414	0.00346	NA	1.71E-03	5.6E-09	1.3E-08		7.6E-06	prov
Vinyl chloride	4,200	4,200	1.16E-05	4.77E-04	18.414	0.00878	3.08E-02	2.86E-02	1.4E-08	3.3E-08	4.4E-10	1.2E-06	I, I
m,p-Xylene	4,100	4,100	1.92E-05	7.90E-04	18.414	0.01455	NA	2.86E-02	2.3E-08	5.5E-08		1.9E-06	I
o-Xylene	2,000	2,000	9.35E-06	3.86E-04	18.414	0.00710	NA	2.86E-02	1.1E-08	2.7E-08		9.3E-07	I
									Cumulative Risk -->		**2.3E-09**	**3.6E-05**	

Notes:

(1) = Maximum concentration of BW-LFGSTACK-60A
(2) = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation
(3) = Maximum modeled concentration on the Blackwell Landfill
(4) = Ethylene Dibromide is reported as 1,2-Dibromoethane in the TO-15 Method
(5) = Freon 11 is reported as Trichlorofluoromethane in the TO-15 Method
(6) = Freon 12 is reported as Dichlorodifluoromethane in the TO-15 Method
(7) = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
(8) = Expressed on a carbon basis
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
$C_{ppb,i}$, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 12
Cumulative Risk of Exposure to Landfill Gas - November 2011 (Duplicate)
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	1,100	1,100	2.81E-06	1.16E-04	18.414	0.00214	NA	NA	3.4E-09	8.0E-09			
Benzene	1,300	1,300	4.47E-06	1.84E-04	18.414	0.00340	2.73E-02	8.57E-03	5.5E-09	1.3E-08	1.5E-10	1.5E-06	I, I
Benzyl Chloride	<21	10.5	5.85E-08	2.41E-06	18.414	0.00004	NA	NA	7.2E-11	1.7E-10			
Bromodichloromethane	<8.6	4.3	3.10E-08	1.28E-06	18.414	0.00002	NA	NA	3.8E-11	8.9E-11			
Bromoform	<21	10.5	1.17E-07	4.82E-06	18.414	0.00009	3.85E-03	NA	1.4E-10	3.3E-10	5.5E-13		I
Bromomethane	<21	10.5	4.39E-08	1.81E-06	18.414	0.00003	NA	1.43E-03	5.4E-11	1.3E-10		8.8E-08	I
2-Butanone (MEK)	1,200	1,200	3.81E-06	1.57E-04	18.414	0.00289	NA	1.43E+00	4.7E-09	1.1E-08		7.6E-09	I
Carbon Disulfide	<8.6	4.3	1.44E-08	5.94E-07	18.414	0.00001	NA	2.00E-01	1.8E-11	4.1E-11		2.1E-10	I
Carbon Tetrachloride	<8.6	4.3	2.91E-08	1.20E-06	18.414	0.00002	5.25E-02	NA	3.6E-11	8.3E-11	1.9E-12		I
Chlorobenzene	860	860	4.26E-06	1.76E-04	18.414	0.00324	NA	5.71E-03	5.2E-09	1.2E-08		2.1E-06	H
Chloroethane	420	420	1.19E-06	4.92E-05	18.414	0.00091	NA	2.86E+00	1.5E-09	3.4E-09		1.2E-09	I
Chloroform	<8.6	4.3	2.26E-08	9.32E-07	18.414	0.00002	8.05E-02	NA	2.8E-11	6.5E-11	2.2E-12		I
Chloromethane	<21	10.5	2.33E-08	9.63E-07	18.414	0.00002	6.30E-03	2.57E-02	2.9E-11	6.7E-11	1.8E-13	2.6E-09	H, I
Dibromochloromethane	<8.6	4.3	3.94E-08	1.63E-06	18.414	0.00003	NA	NA	4.8E-11	1.1E-10			
1,2-Dichlorobenzene	29	29	1.88E-07	7.74E-06	18.414	0.00014	NA	5.71E-02	2.3E-10	5.4E-10		9.4E-09	H
1,3-Dichlorobenzene	<8.6	4.3	2.78E-08	1.15E-06	18.414	0.00002	NA	NA	3.4E-11	7.9E-11			
1,4-Dichlorobenzene	730	730	4.72E-06	1.95E-04	18.414	0.00359	NA	2.29E-01	5.8E-09	1.3E-08		5.9E-08	I
1,1-Dichloroethane	100	100	4.36E-07	1.80E-05	18.414	0.00033	NA	1.43E-01	5.3E-10	1.2E-09		8.7E-09	H
1,2-Dichloroethane	14	14	6.10E-08	2.52E-06	18.414	0.00005	9.10E-02	NA	7.5E-11	1.7E-10	6.8E-12		I
1,1-Dichloroethene	20	20	8.54E-08	3.52E-06	18.414	0.00006	NA	5.71E-02	1.0E-10	2.4E-10		4.3E-09	I
cis-1,2-Dichloroethene	1,600	1,600	6.83E-06	2.82E-04	18.414	0.00519	NA	NA	8.4E-09	2.0E-08			
trans-1,2-Dichloroethene	180	180	7.68E-07	3.17E-05	18.414	0.00058	NA	NA	9.4E-10	2.2E-09			
1,2-Dichloropropane	100	100	4.98E-07	2.05E-05	18.414	0.00038	NA	1.14E-03	6.1E-10	1.4E-09		1.2E-06	I
cis-1,3-Dichloropropene	<8.6	4.3	2.10E-08	8.66E-07	18.414	0.00002	1.40E-02	5.71E-03	2.6E-11	6.0E-11	3.6E-13	1.1E-08	I, I
trans-1,3-Dichloropropene	<8.6	4.3	2.10E-08	8.66E-07	18.414	0.00002	1.40E-02	5.71E-03	2.6E-11	6.0E-11	3.6E-13	1.1E-08	I, I
Ethyl Benzene	5,100	5,100	2.38E-05	9.83E-04	18.414	0.01810	NA	2.86E-01	2.9E-08	6.8E-08		2.4E-07	I
Ethylene Dibromide[4]	<8.6	4.3	3.56E-08	1.47E-06	18.414	0.00003	2.10E+00	2.60E-03	4.4E-11	1.0E-10	9.1E-11	3.9E-08	I, I
4-Ethyltoluene	620	620	3.28E-06	1.35E-04	18.414	0.00249	NA	NA	4.0E-09	9.4E-09			
Freon 11 (C13FMe)[5]	76	76	4.60E-07	1.90E-05	18.414	0.00035	NA	2.00E-01	5.6E-10	1.3E-09		6.6E-09	H
Freon 113	9	9	7.43E-08	3.06E-06	18.414	0.00006	NA	8.57E+00	9.09E-11	2.12E-10		2.47E-11	H
Freon 114 (C12F4Et)	380	380	2.86E-06	1.18E-04	18.414	0.00217	NA	NA	3.5E-09	8.2E-09			
Freon 12 (C12F2Me)[6]	1,800	1,800	9.58E-06	3.95E-04	18.414	0.00728	NA	5.71E-02	1.2E-08	2.7E-08		4.8E-07	H
Hexachlorobutadiene	<8.6	4.3	4.94E-08	2.04E-06	18.414	0.00004	7.70E-02	NA	6.0E-11	1.4E-10	4.7E-12		I
2-Hexanone	<43	21.5	9.48E-08	3.91E-06	18.414	0.00007	NA	NA	1.2E-10	2.7E-10			

Table 12
Cumulative Risk of Exposure to Landfill Gas - November 2011 (Duplicate)
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration(1) $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration(2) g/L	Emission Rate(2) E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell(3) R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane(7)	516,000,000	516,000,000	3.64E-01	1.50E+01	18.414	277	NA	NA	4.5E-04	1.0E-03			
4-Methyl-2-pentanone	590	590	2.60E-06	1.07E-04	18.414	0.00198	NA	8.57E-01	3.2E-09	7.4E-09		8.7E-09	I
Methylene chloride	<86	43	1.61E-07	6.63E-06	18.414	0.00012	NA	2.60E-02	2.0E-10	4.6E-10		1.8E-08	
Styrene	150	150	6.88E-07	2.84E-05	18.414	0.00052	NA	2.86E-01	8.4E-10	2.0E-09		6.9E-09	I
1,1,2,2-Tetrachloroethane	<8.6	4.3	3.18E-08	1.31E-06	18.414	0.00002	2.03E-01	NA	3.9E-11	9.1E-11	7.9E-12		I
Tetrachloroethene	380	380	2.77E-06	1.14E-04	18.414	0.00211	2.03E-03	1.71E-01	3.4E-09	7.9E-09	6.9E-12	4.6E-08	prov, prov
TNMOC(8)	1,300,000	1,300,000	6.87E-04	2.84E-02	18.414	0.52205	NA	NA	8.4E-07	2.0E-06			prov
Toluene	15,000	15,000	6.09E-05	2.51E-03	18.414	0.04621	NA	1.14E-01	7.4E-08	1.7E-07		1.5E-06	I
1,2,4-Trichlorobenzene	<8.6	4.3	3.44E-08	1.42E-06	18.414	0.00003	NA	1.14E-03	4.2E-11	9.8E-11		8.6E-08	prov
1,1,1-Trichloroethane	<8.6	4.3	2.53E-08	1.04E-06	18.414	0.00002	NA	6.29E-01	3.1E-11	7.2E-11		1.1E-10	prov
1,1,2-Trichloroethane	<8.6	4.3	2.53E-08	1.04E-06	18.414	0.00002	5.60E-02	NA	3.1E-11	7.2E-11	1.7E-12		I
Trichloroethene	560	560	3.25E-06	1.34E-04	18.414	0.00247	4.00E-01	1.14E-02	4.0E-09	9.3E-09	1.6E-09	8.1E-07	prov, prov
1,2,4-Trimethylbenzene	1,800	1,800	9.53E-06	3.93E-04	18.414	0.00723	NA	1.71E-03	1.2E-08	2.7E-08		1.6E-05	prov
1,3,5-Trimethylbenzene	870	870	4.60E-06	1.90E-04	18.414	0.00350	NA	1.71E-03	5.6E-09	1.3E-08		7.7E-06	prov
Vinyl chloride	4,200	4,200	1.16E-05	4.77E-04	18.414	0.00878	3.08E-02	2.86E-02	1.4E-08	3.3E-08	4.4E-10	1.2E-06	I, I
m,p-Xylene	4,100	4,100	1.92E-05	7.90E-04	18.414	0.01455	NA	2.86E-02	2.3E-08	5.5E-08		1.9E-06	I
o-Xylene	2,000	2,000	9.35E-06	3.86E-04	18.414	0.00710	NA	2.86E-02	1.1E-08	2.7E-08		9.3E-07	I
									Cumulative Risk -->		**2.3E-09**	**3.6E-05**	

Notes:

(1) = Maximum concentration of BW-LFGSTACK-960A
(2) = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation
(3) = Maximum modeled concentration on the Blackwell Landfill
(4) = Ethylene Dibromide is reported as 1,2-Dibromoethane in the TO-15 Method
(5) = Freon 11 is reported as Trichlorofluoromethane in the TO-15 Method
(6) = Freon 12 is reported as Dichlorodifluoromethane in the TO-15 Method
(7) = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
(8) = Expressed on a carbon basis
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
$C_{ppb,i}$, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

Table 13
Cumulative Risk of Exposure to Landfill Gas - March 2012
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration[1] $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration[2] g/L	Emission Rate[2] E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell[3] R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Acetone	820	820	2.10E-06	8.65E-05	18.414	0.00159	NA	NA	2.6E-09	6.0E-09			
Benzene	1,000	1,000	3.44E-06	1.42E-04	18.414	0.00261	2.73E-02	8.57E-03	4.2E-09	9.8E-09	1.1E-10	1.1E-06	I, I
Benzyl Chloride	<49	24.5	1.37E-07	5.63E-06	18.414	0.00010	NA	NA	1.7E-10	3.9E-10			
Bromodichloromethane	<20	10	7.21E-08	2.97E-06	18.414	0.00005	NA	NA	8.8E-11	2.1E-10			
Bromoform	<49	24.5	2.73E-07	1.12E-05	18.414	0.00021	3.85E-03	NA	3.3E-10	7.8E-10	1.3E-12		I
Bromomethane	<49	24.5	1.02E-07	4.22E-06	18.414	0.00008	NA	1.43E-03	1.3E-10	2.9E-10		2.0E-07	I
2-Butanone (MEK)	820	820	2.60E-06	1.07E-04	18.414	0.00198	NA	1.43E+00	3.2E-09	7.4E-09		5.2E-09	I
Carbon Disulfide	<20	10	3.35E-08	1.38E-06	18.414	0.00003	NA	2.00E-01	4.1E-11	9.6E-11		4.8E-10	I
Carbon Tetrachloride	<20	10	6.77E-08	2.79E-06	18.414	0.00005	5.25E-02	NA	8.3E-11	1.9E-10	4.4E-12		I
Chlorobenzene	590	590	2.92E-06	1.21E-04	18.414	0.00222	NA	5.71E-03	3.6E-09	8.4E-09		1.5E-06	H
Chloroethane	240	240	6.82E-07	2.81E-05	18.414	0.00052	NA	2.86E+00	8.3E-10	1.9E-09		6.8E-10	I
Chloroform	<20	10	5.26E-08	2.17E-06	18.414	0.00004	8.05E-02	NA	6.4E-11	1.5E-10	5.2E-12		I
Chloromethane	<49	24.5	5.45E-08	2.25E-06	18.414	0.00004	6.30E-03	2.57E-02	6.7E-11	1.6E-10	4.2E-13	6.1E-09	H, I
Dibromochloromethane	<20	10	9.17E-08	3.78E-06	18.414	0.00007	NA	NA	1.1E-10	2.6E-10			
1,2-Dichlorobenzene	<20	10	6.47E-08	2.67E-06	18.414	0.00005	NA	5.71E-02	7.9E-11	1.8E-10		3.2E-09	H
1,3-Dichlorobenzene	<20	10	6.47E-08	2.67E-06	18.414	0.00005	NA	NA	7.9E-11	1.8E-10			
1,4-Dichlorobenzene	480	480	3.11E-06	1.28E-04	18.414	0.00236	NA	2.29E-01	3.8E-09	8.9E-09		3.9E-08	I
1,1-Dichloroethane	62	62	2.70E-07	1.11E-05	18.414	0.00021	NA	1.43E-01	3.3E-10	7.7E-10		5.4E-09	H
1,2-Dichloroethane	<20	10	4.36E-08	1.80E-06	18.414	0.00003	9.10E-02	NA	5.3E-11	1.2E-10	4.9E-12		I
1,1-Dichloroethene	<20	10	4.27E-08	1.76E-06	18.414	0.00003	NA	5.71E-02	5.2E-11	1.2E-10		2.1E-09	I
cis-1,2-Dichloroethene	1,100	1,100	4.70E-06	1.94E-04	18.414	0.00357	NA	NA	5.7E-09	1.3E-08			
trans-1,2-Dichloroethene	120	120	5.12E-07	2.11E-05	18.414	0.00039	NA	NA	6.3E-10	1.5E-09			
1,2-Dichloropropane	71	71	3.53E-07	1.46E-05	18.414	0.00027	NA	1.14E-03	4.3E-10	1.0E-09		8.9E-07	I
cis-1,3-Dichloropropene	<20	10	4.89E-08	2.02E-06	18.414	0.00004	1.40E-02	5.71E-03	6.0E-11	1.4E-10	8.4E-13	2.4E-08	I, I
trans-1,3-Dichloropropene	<20	10	4.89E-08	2.02E-06	18.414	0.00004	1.40E-02	5.71E-03	6.0E-11	1.4E-10	8.4E-13	2.4E-08	I, I
Ethyl Benzene	4,100	4,100	1.92E-05	7.90E-04	18.414	0.01455	NA	2.86E-01	2.3E-08	5.5E-08		1.9E-07	I
Ethylene Dibromide[4]	<20	10	8.28E-08	3.41E-06	18.414	0.00006	2.10E+00	2.60E-03	1.0E-10	2.4E-10	2.1E-10	9.1E-08	I, I
4-Ethyltoluene	660	660	3.49E-06	1.44E-04	18.414	0.00265	NA	NA	4.3E-09	1.0E-08			
Freon 11 (C13FMe)[5]	55	55	3.33E-07	1.37E-05	18.414	0.00025	NA	2.00E-01	4.1E-10	9.5E-10		4.8E-09	H
Freon 113	<20	10	8.25E-08	3.40E-06	18.414	0.00006	NA	8.57E+00	1.01E-10	2.36E-10		2.75E-11	H
Freon 114 (C12F4Et)	310	310	2.33E-06	9.62E-05	18.414	0.00177	NA	NA	2.9E-09	6.7E-09			
Freon 12 (C12F2Me)[6]	2,000	2,000	1.06E-05	4.39E-04	18.414	0.00809	NA	5.71E-02	1.3E-08	3.0E-08		5.3E-07	H
Hexachlorobutadiene	<20	10	1.15E-07	4.73E-06	18.414	0.00009	7.70E-02	NA	1.4E-10	3.3E-10	1.1E-11		I
2-Hexanone	<98	49	2.16E-07	8.91E-06	18.414	0.00016	NA	NA	2.6E-10	6.2E-10			

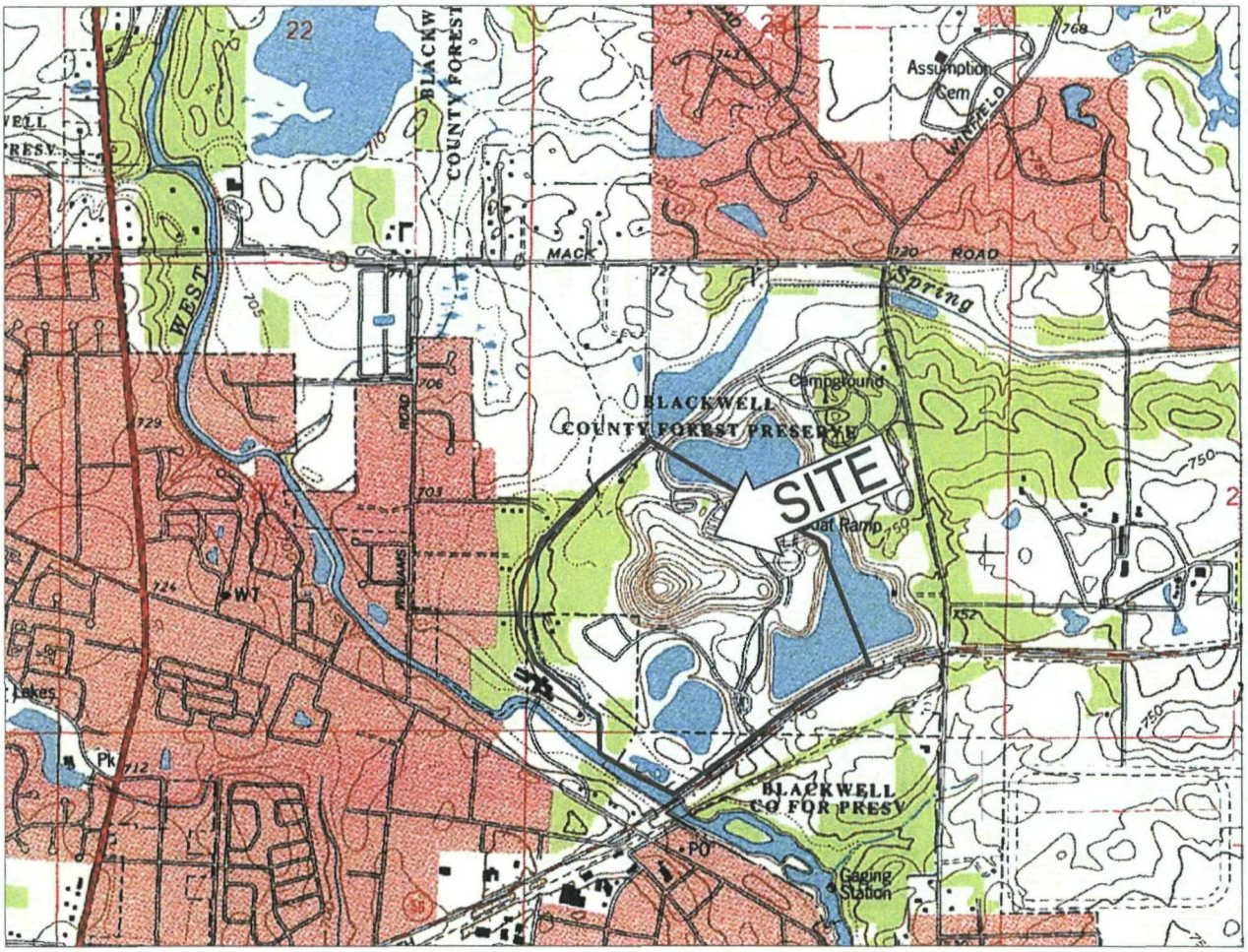
Table 13
Cumulative Risk of Exposure to Landfill Gas - March 2012
Recreational Portions of Landfill
Blackwell Landfill NPL Site, DuPage County, Illinois

Potential Chemical of Concern	Maximum Concentration(1) $C_{ppb,i}$ (ppbv)	Maximum Concentration (ppbv)	Maximum Concentration(2) g/L	Emission Rate(2) E_i (g/s)	Maximum Unit Concentration (ug/m3)	Maximum Concentration on Blackwell(3) R_i (ug/m3)	Slope Factor (mg/kg-day)-1	RfDi (mg/kg-day)	Cancer Dose (mg/kg-day)	Noncancer Dose (mg/kg-day)	Cancer Risk	Hazard Quotient	References
Methane(7)	535,000,000	535,000,000	3.78E-01	1.56E+01	18.414	287	NA	NA	4.6E-04	1.1E-03			
4-Methyl-2-pentanone	850	850	3.75E-06	1.55E-04	18.414	0.00285	NA	8.57E-01	4.6E-09	1.1E-08		1.2E-08	I
Methylene chloride	<200	100	3.74E-07	1.54E-05	18.414	0.00028	NA	2.60E-02	4.6E-10	1.1E-09		4.1E-08	
Styrene	100	100	4.59E-07	1.89E-05	18.414	0.00035	NA	2.86E-01	5.6E-10	1.3E-09		4.6E-09	I
1,1,2,2-Tetrachloroethane	<20	10	7.39E-08	3.05E-06	18.414	0.00006	2.03E-01	NA	9.0E-11	2.1E-10	1.8E-11		I
Tetrachloroethene	230	230	1.68E-06	6.93E-05	18.414	0.00128	2.03E-03	1.71E-01	2.1E-09	4.8E-09	4.2E-12	2.8E-08	prov, prov
TNMOC(8)	1,300,000	1,300,000	6.87E-04	2.84E-02	18.414	0.52205	NA	NA	8.4E-07	2.0E-06			prov
Toluene	24,000	24,000	9.74E-05	4.02E-03	18.414	0.07394	NA	1.14E-01	1.2E-07	2.8E-07		2.4E-06	I
1,2,4-Trichlorobenzene	<20	10	7.99E-08	3.29E-06	18.414	0.00006	NA	1.14E-03	9.8E-11	2.3E-10		2.0E-07	prov
1,1,1-Trichloroethane	<20	10	5.87E-08	2.42E-06	18.414	0.00004	NA	6.29E-01	7.2E-11	1.7E-10		2.7E-10	prov
1,1,2-Trichloroethane	<20	10	5.87E-08	2.42E-06	18.414	0.00004	5.60E-02	NA	7.2E-11	1.7E-10	4.0E-12		I
Trichloroethene	260	260	1.51E-06	6.23E-05	18.414	0.00115	4.00E-01	1.14E-02	1.8E-09	4.3E-09	7.4E-10	3.8E-07	prov, prov
1,2,4-Trimethylbenzene	2,600	2,600	1.38E-05	5.67E-04	18.414	0.01045	NA	1.71E-03	1.7E-08	3.9E-08		2.3E-05	prov
1,3,5-Trimethylbenzene	1,000	1,000	5.29E-06	2.18E-04	18.414	0.00402	NA	1.71E-03	6.5E-09	1.5E-08		8.8E-06	prov
Vinyl chloride	2,400	2,400	6.60E-06	2.72E-04	18.414	0.00502	3.08E-02	2.86E-02	8.1E-09	1.9E-08	2.5E-10	6.6E-07	I, I
m,p-Xylene	7,700	7,700	3.60E-05	1.48E-03	18.414	0.02733	NA	2.86E-02	4.4E-08	1.0E-07		3.6E-06	I
o-Xylene	2,400	2,400	1.12E-05	4.63E-04	18.414	0.00852	NA	2.86E-02	1.4E-08	3.2E-08		1.1E-06	I
									Cumulative Risk -->		**1.4E-09**	**4.5E-05**	

Notes:

(1) = Maximum concentration of BW-LFGSTACK-61A
(2) = Sample calculations are provided in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation
(3) = Maximum modeled concentration on the Blackwell Landfill
(4) = Ethylene Dibromide is reported as 1,2-Dibromoethane in the TO-15 Method
(5) = Freon 11 is reported as Trichlorofluoromethane in the TO-15 Method
(6) = Freon 12 is reported as Dichlorodifluoromethane in the TO-15 Method
(7) = Methane is reported by percent in the Modified ASTM D-1945 Method (1% = 10,000,000 ppbv)
(8) = Expressed on a carbon basis
H = HEAST Databasse (EPA's Health Effects Summary Table)
I = IRIS (EPA's Inategrated Risk Information System)
ppbv = Parts per billion by volume
prov = provisional value
$C_{ppb,i}$, M, C_{poll}, CF, E_i, and R_i are defined in Appendix C of the August 2001 Landfill Gas Recreational Use Evaluation.

FIGURES



BASE MAP DEVELOPED FROM THE
NAPERVILLE, ILLINOIS 7.5 MINUTE
U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP
DATED: 1993

N

2000

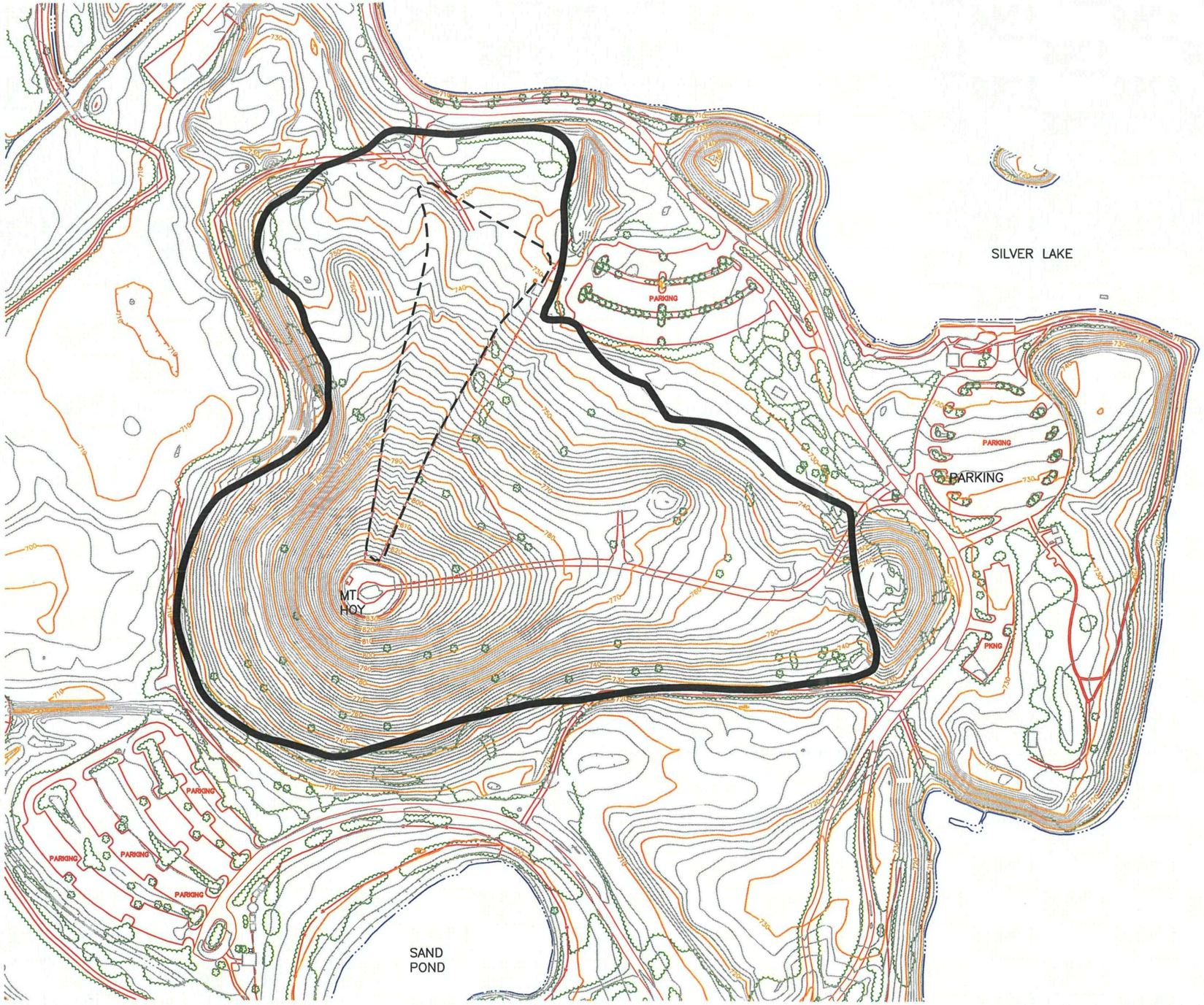
SCALE IN FEET

MWH	BLACKWELL LANDFILL NPL SITE DUPAGE COUNTY, ILLINOIS	SITE LOCATION MAP	FIGURE 1

J:\209\0045 Blackwell\Drawings\2090045_site_loc_map.dwg Jun 01, 2005 – 9:50am

MWH	BLACKWELL LANDFILL NPL SITE DU PAGE COUNTY, ILLINOIS	SITE FEATURES MAP	FIGURE 2

J:\jobs\100\7333 Blackwell\4.0 Execution (Project Deliverables)\4.1 Drawings\Master Drawings\Site Features Map.dwg Jun 01, 2011 – 12:56pm



0 250
SCALE IN FEET

LEGEND

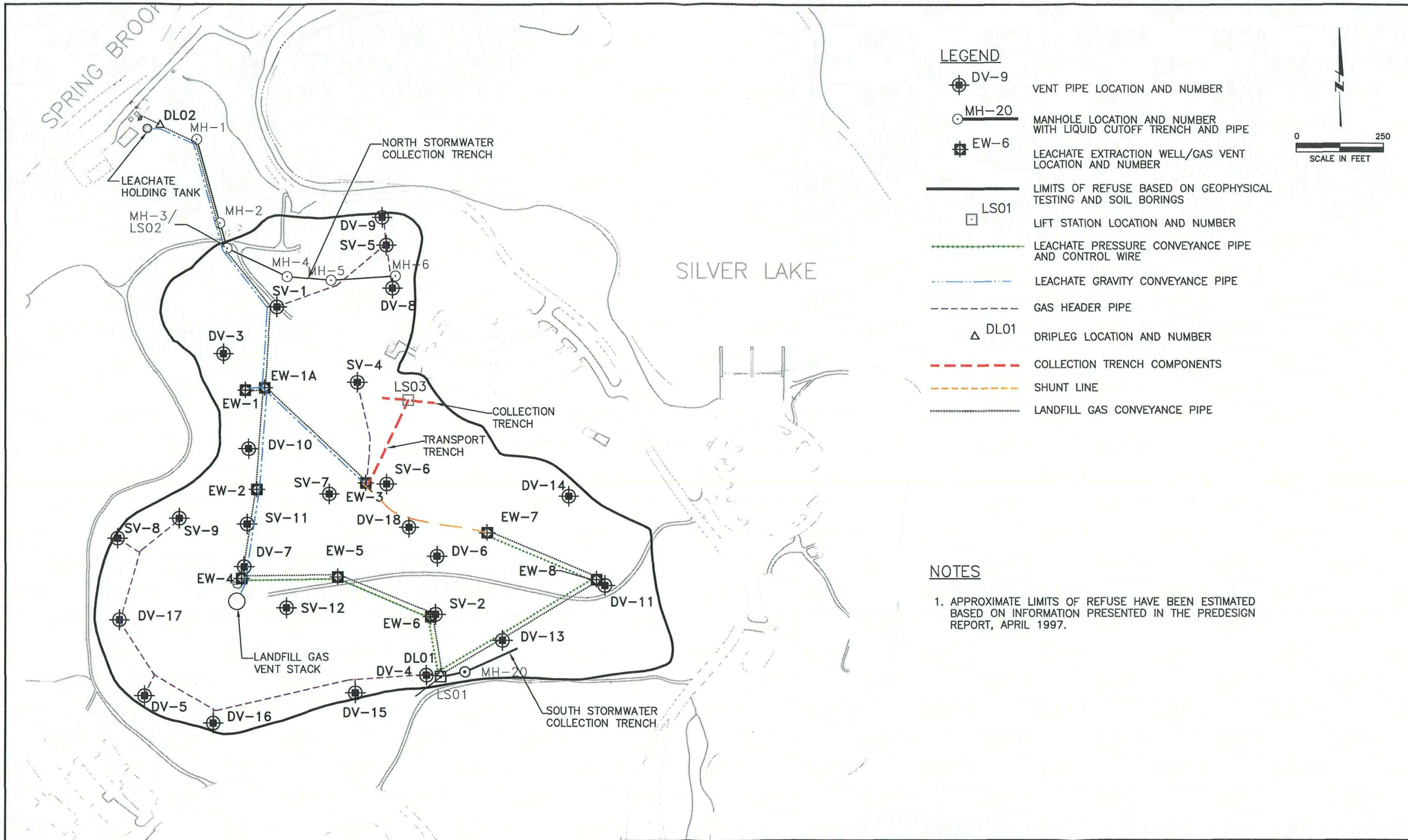
- BUILDING
- PAVED ROAD
- TREE
- BRUSHLINE
- WATER OUTLINE
- FENCE
- INDEX CONTOUR
- LIMITS OF REFUSE
- APPROXIMATE AREA OF REGRADED TUBE RUN (COMPLETED FALL 2002)

NOTES:

1. TOPOGRAPHIC CONTOURS AND LIMITS OF TREES GENERATED BY AERO-METRIC, INC. SHEBOYGAN, WISCONSIN, BASED ON MAY 2004 PHOTOGRAPHY.

MWH	BLACKWELL LANDFILL NPL SITE DUPAGE COUNTY, ILLINOIS	TOPOGRAPHIC MAP	FIGURE 3

J:\jobs\100\7333 Blackwell\4.0 Execution (Project Deliverables)\4.1 Drawings\13th Year O&M Report\13th Year_Fig 3_Topographic Map 04.dwg Jun 01, 2011 - 12:42pm

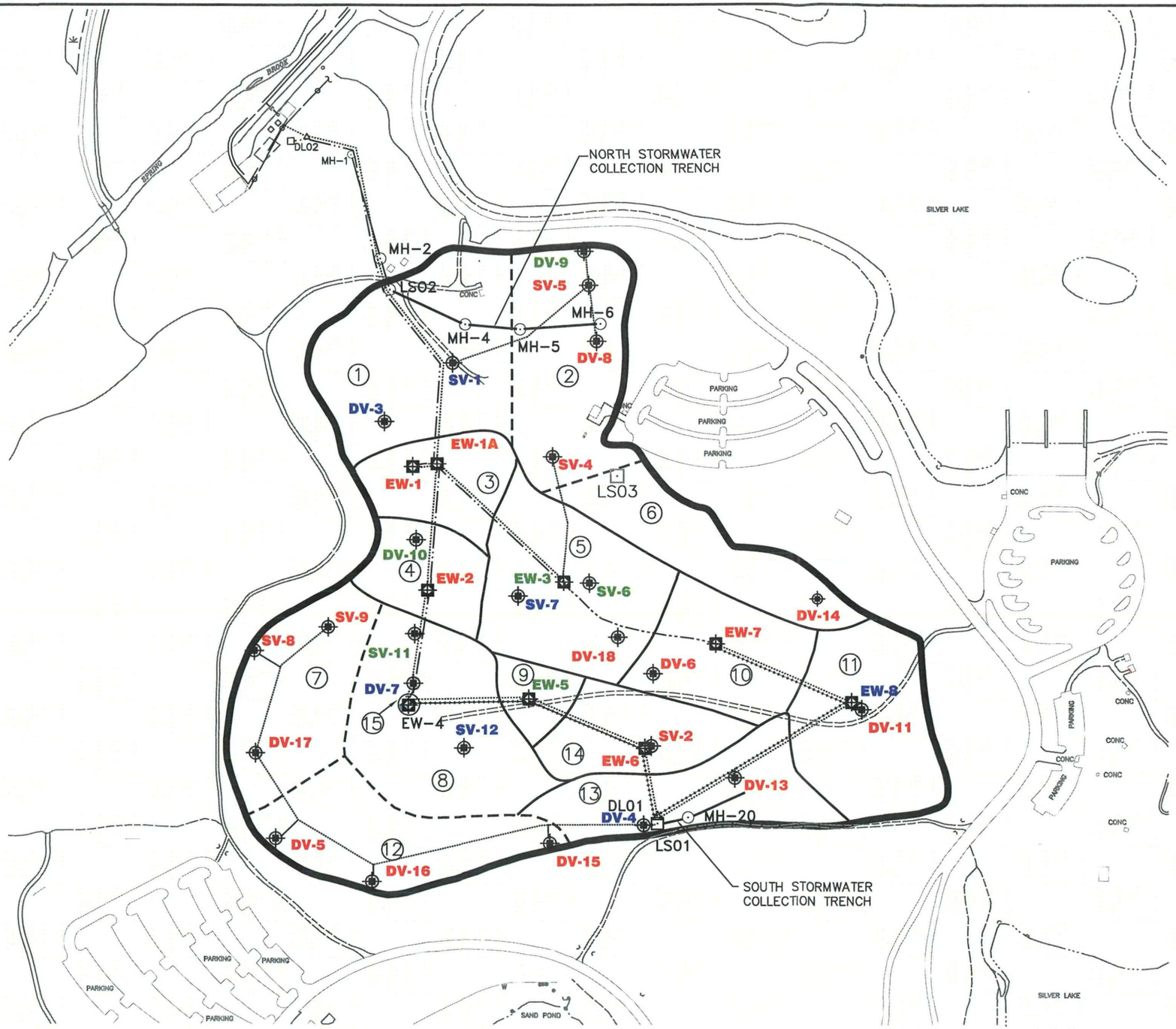


NOTES

1. APPROXIMATE LIMITS OF REFUSE HAVE BEEN ESTIMATED BASED ON INFORMATION PRESENTED IN THE PREDESIGN REPORT, APRIL 1997.

MWH	BLACKWELL LANDFILL NPL SITE DUPAGE COUNTY, ILLINOIS	LCS AND LFG SYSTEM LAYOUT	FIGURE 4

J:\jobs\100\7333 Blackwell\4.0 Execution (Project Deliverables)\4.1 Drawings\13th Year O&M Report\13th Year_Fig 4_LCS LFG Systems.dwg Apr 04, 2011 - 10:05am



LEGEND

- DV-8 — MONITORING WELL LOCATION AND NUMBER VENT PIPE LOCATION AND NUMBER
- MH-6 — MANHOLE LOCATION AND NUMBER WITH LIQUID CUTOFF TRENCH AND PIPE
- EW-1 — LEACHATE EXTRACTION WELL/GAS VENT LOCATION AND NUMBER
- LS01 — LIFT STATION LOCATION AND NUMBER
- LIMITS OF REFUSE TESTING AND SOIL BORINGS
- LEACHATE PRESSURE CONVEYANCE PIPE
- LEACHATE GRAVITY CONVEYANCE PIPE
- APPROXIMATE GAS HEADER PIPE
- DV-13 — EXTRACTION WELL OR VENT WITH INCREASING LEACHATE LEVEL TREND
- SV-1 — EXTRACTION WELL OR VENT WITH FLAT LEACHATE LEVEL TREND
- EW-3 — EXTRACTION WELL OR VENT WITH DECREASING LEACHATE LEVEL TREND
- EW-4 — EXTRACTION WELL OR VENT WHERE LEACHATE LEVELS ARE NO LONGER MEASURED
- (1) — LANDFILL AREA NUMBER

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY TOPOGRAPHIC MAP BY AERO-METRIC ENGINEERING PROJECT NO. 109222, APRIL 3 AND 5, 1992.
2. FLAT LEACHATE LEVEL TRENDS ARE DEFINED AS HAVING LEACHATE LEVEL TRENDLINE SLOPES = -0.1 FT/YR $\leq X \leq$ 0.1 FT/YR.

N

0 250

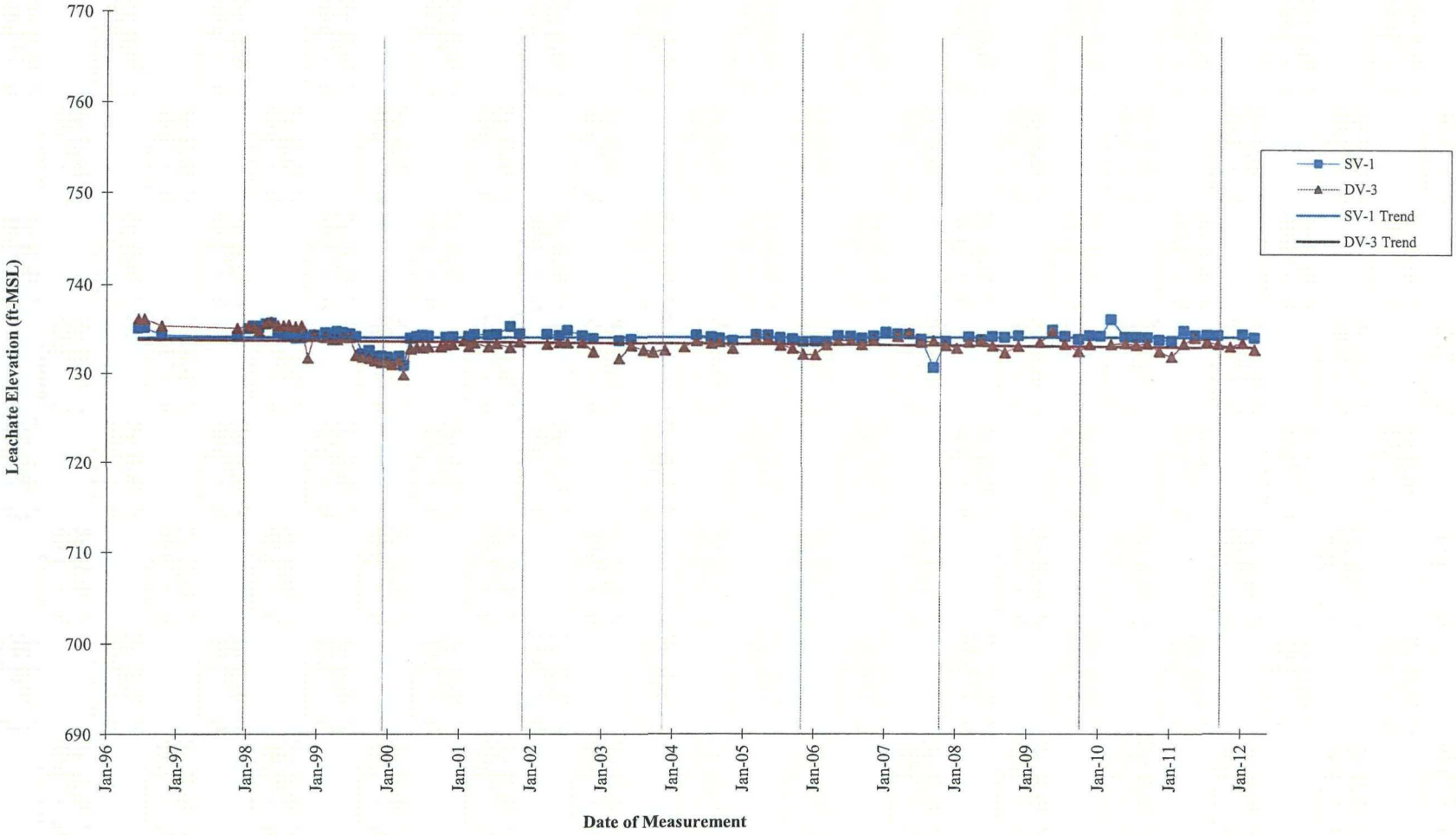
SCALE IN FEET

SCALE				FIGURE
1" = 250'	MWH	BLACKWELL LANDFILL NPL SITE DUPAGE COUNTY, ILLINOIS	CUMULATIVE LEACHATE LEVEL TRENDS THROUGH THE FOURTEENTH YEAR OF LCS OPERATIONS	5

J:\Jobs\100\7333 Blackwell\4.0 Execution (Project Deliverables)\4.1 Drawings\13th Year O&M Report\13th Year_Fig5.dwg Mar 29, 2012 – 1:11pm

DRAWINGS

Drawing 1
Leachate Elevations in Landfill Area 1
Blackwell Landfill NPL Site



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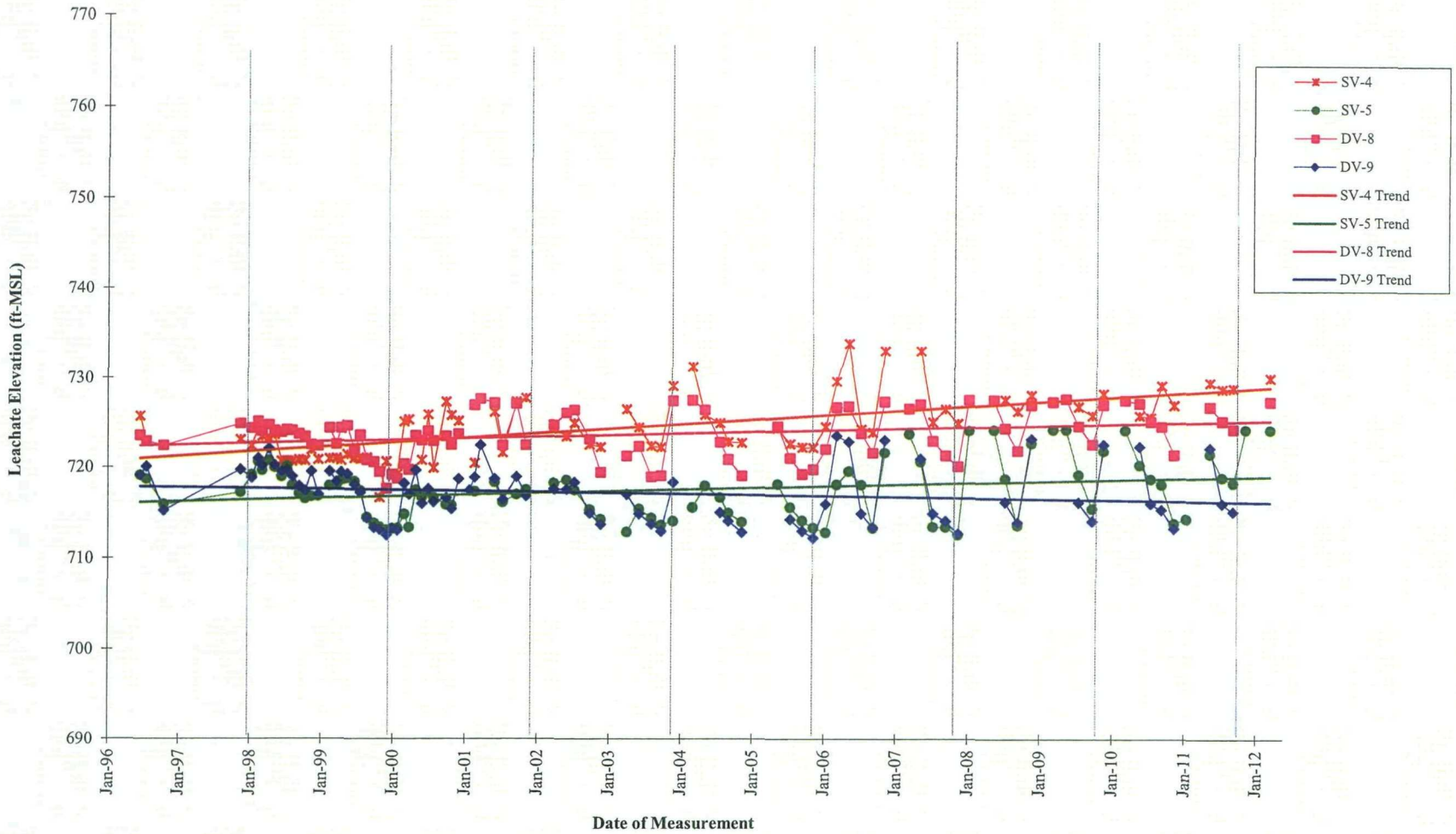
Drawings 1-23.xls\Drawing 1

Drawing 2
Leachate Elevations in Landfill Area 2
Blackwell Landfill NPL Site



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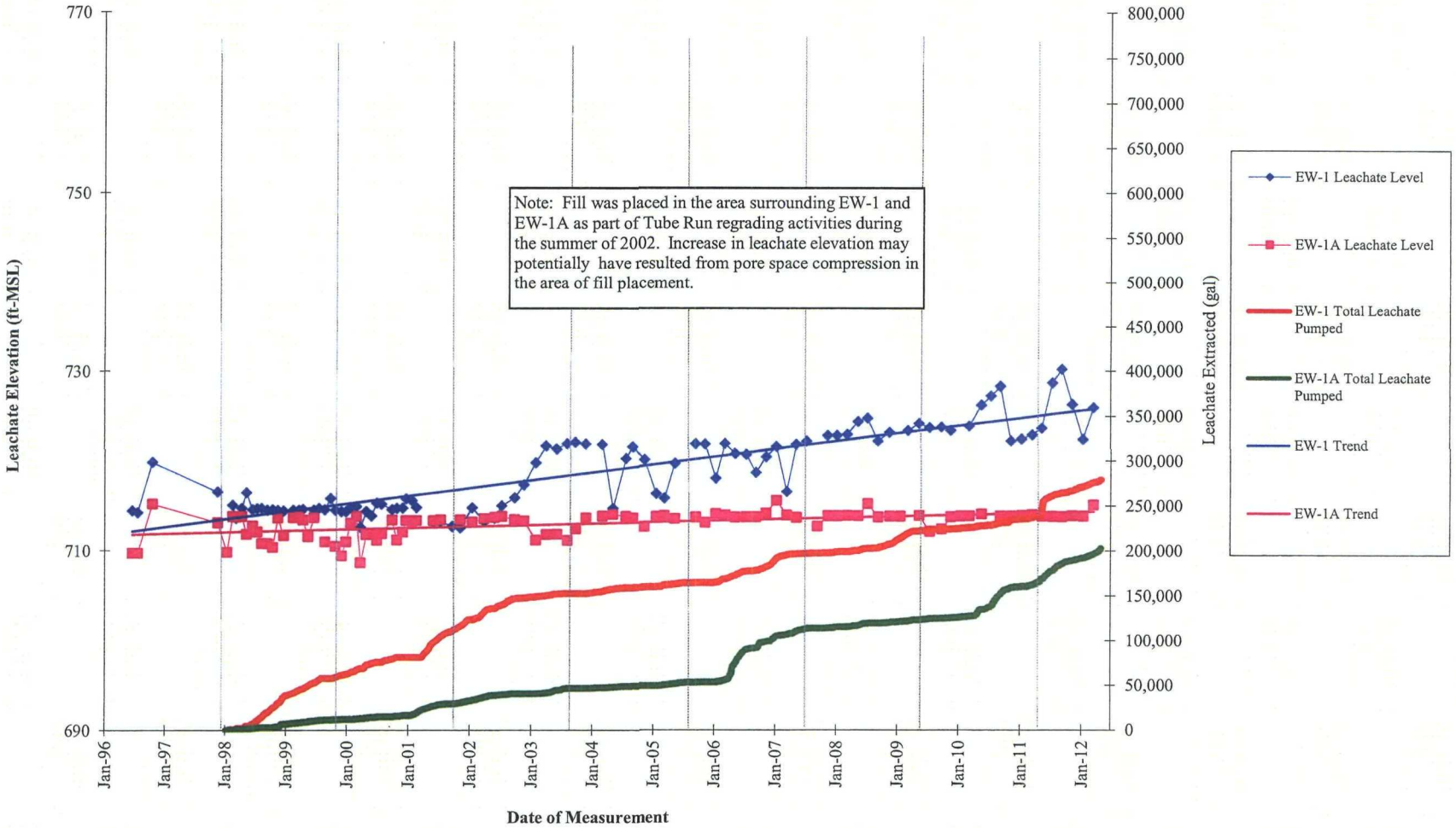
Drawings 1-23.xls\Drawing 2

Drawing 3
Leachate Elevations in Landfill Area 3
Blackwell Landfill NPL Site



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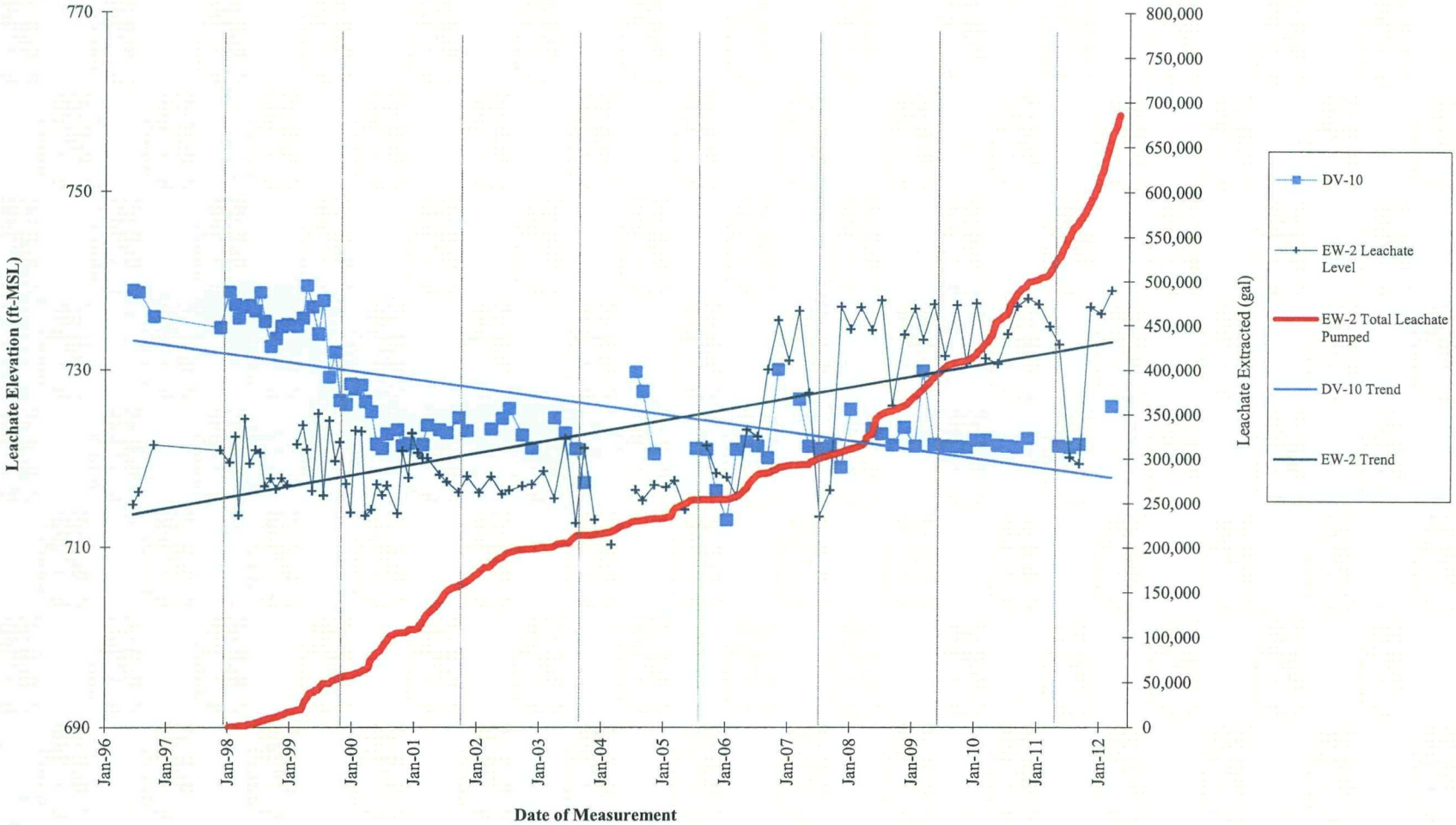
Drawing 4
Leachate Elevations in Landfill Area 4
Blackwell Landfill NPL Site



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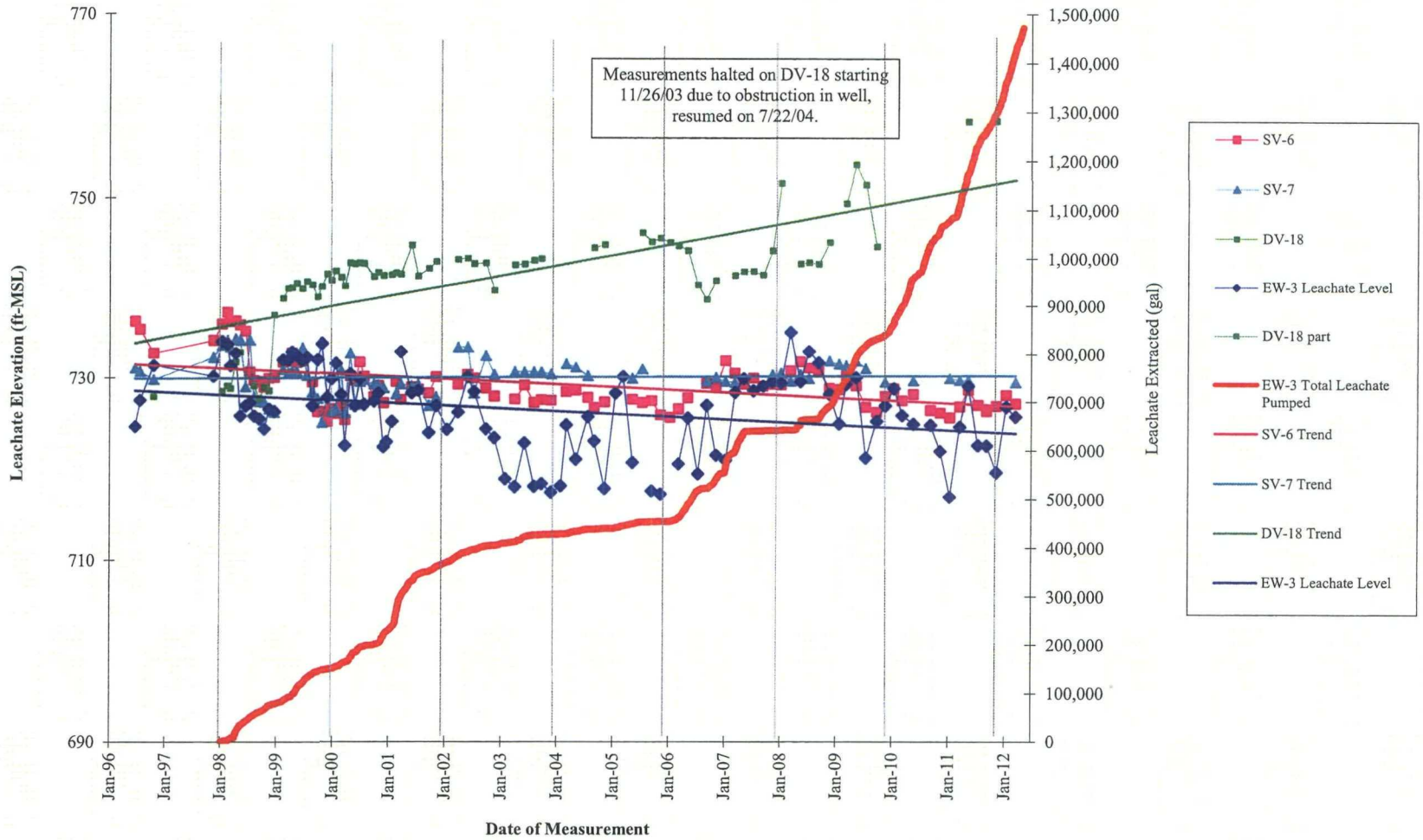
Drawing 5
Leachate Elevations in Landfill Area 5
Blackwell Landfill NPL Site



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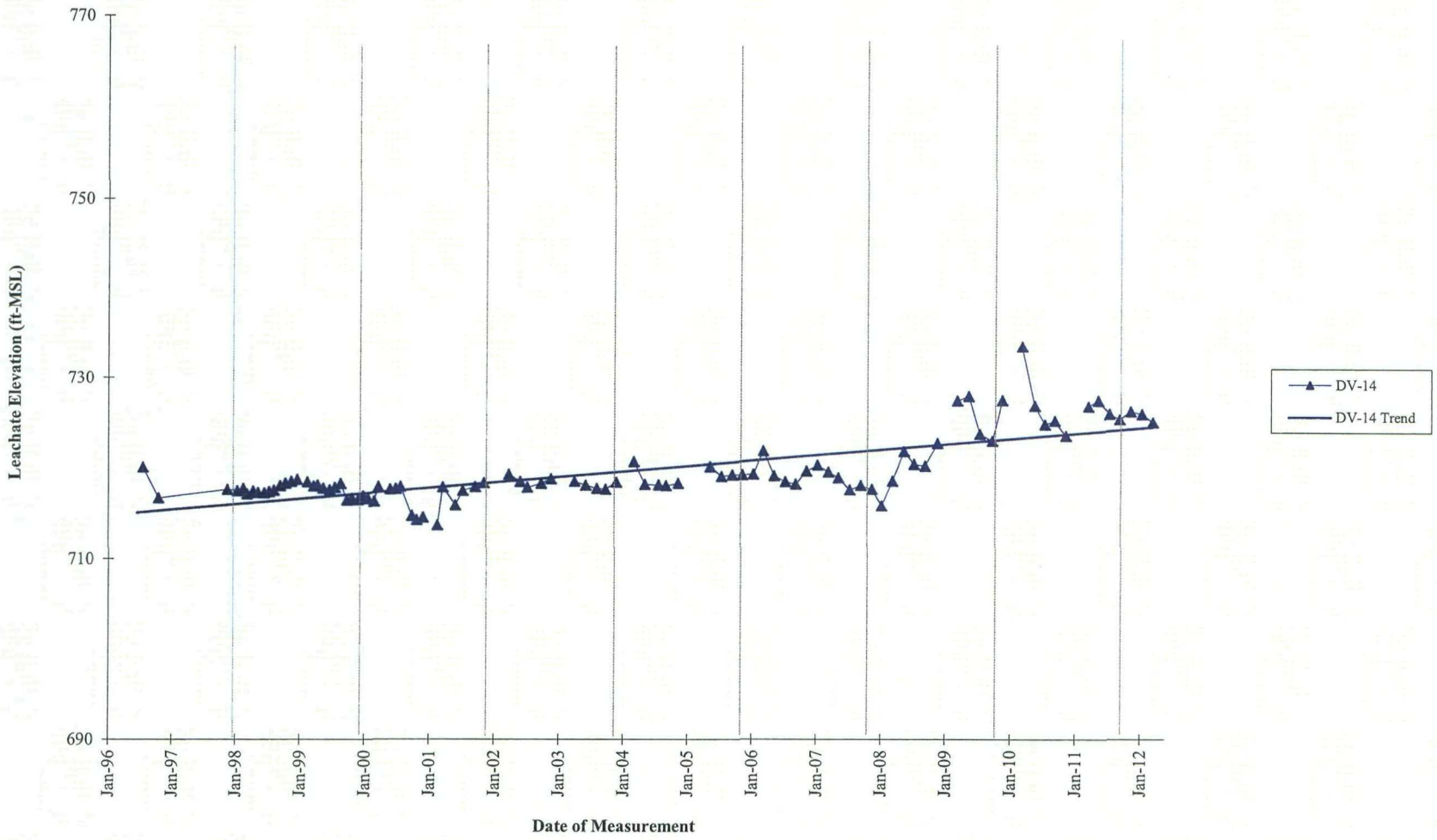
Drawing 6
Leachate Elevations in Landfill Area 6
Blackwell Landfill NPL Site



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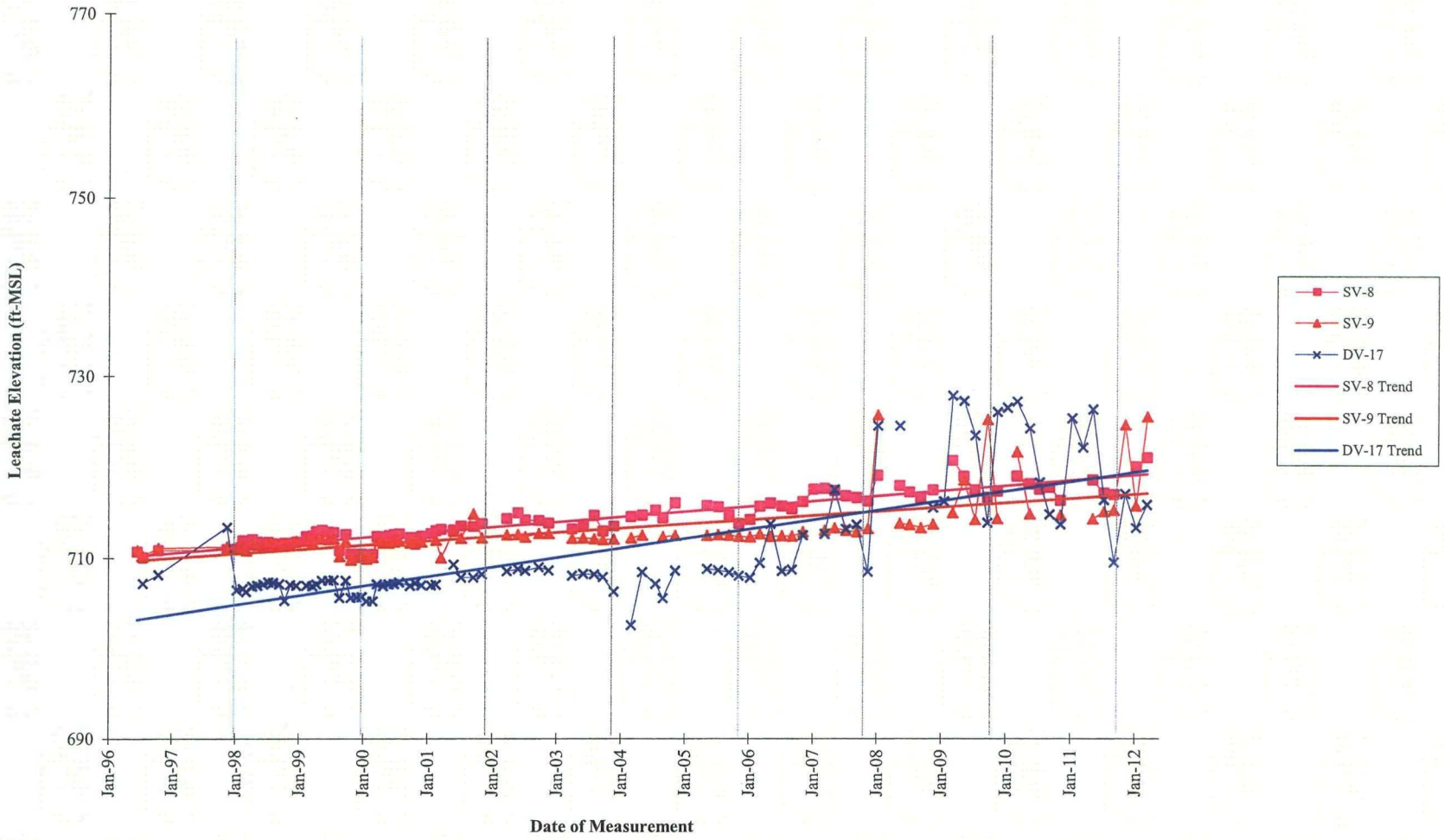
Drawings 1-23.xls\Drawing 6

Drawing 7
Leachate Elevations in Landfill Area 7
Blackwell Landfill NPL Site



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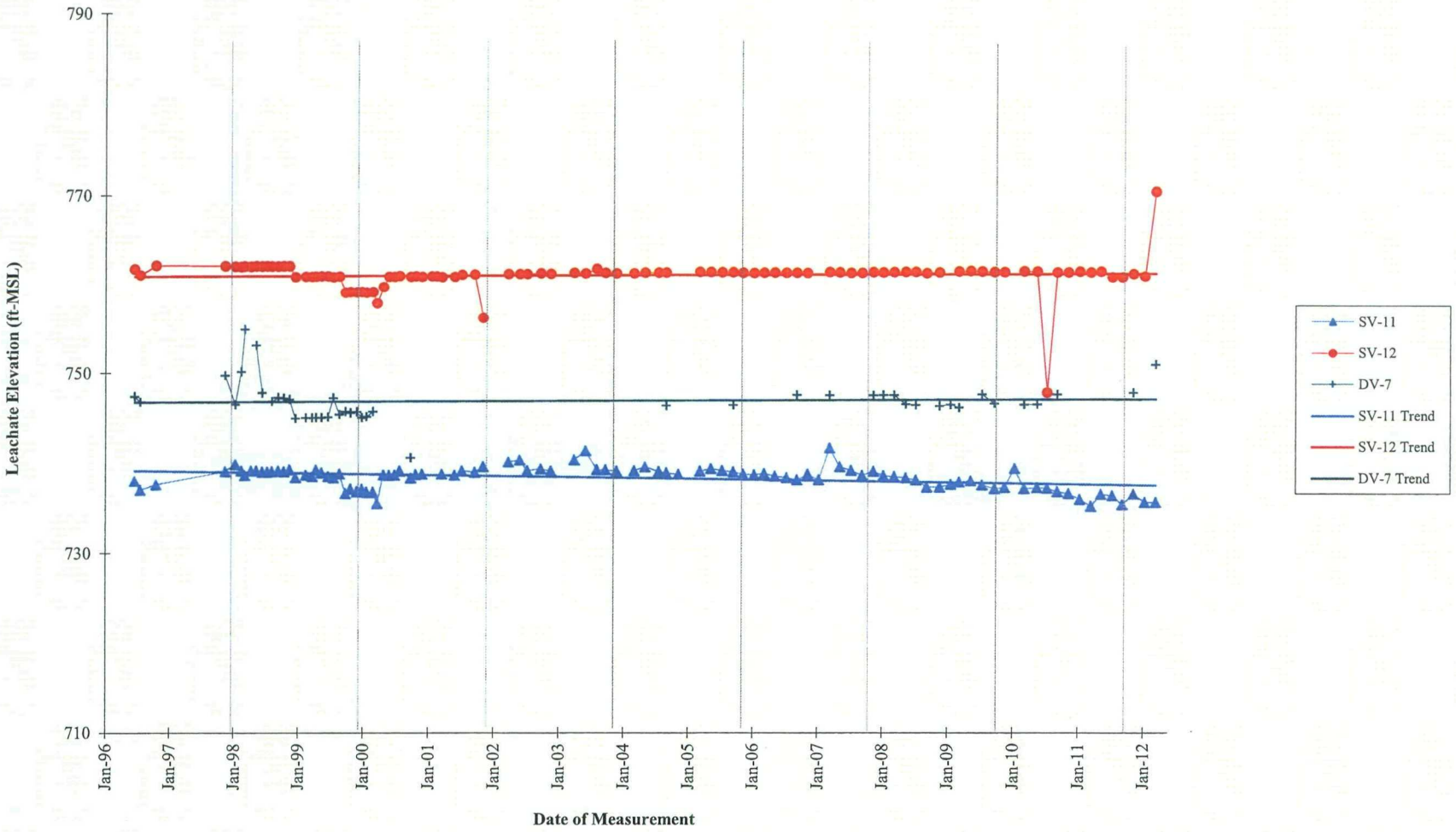
Drawing 8
Leachate Elevations in Landfill Area 8
Blackwell Landfill NPL Site



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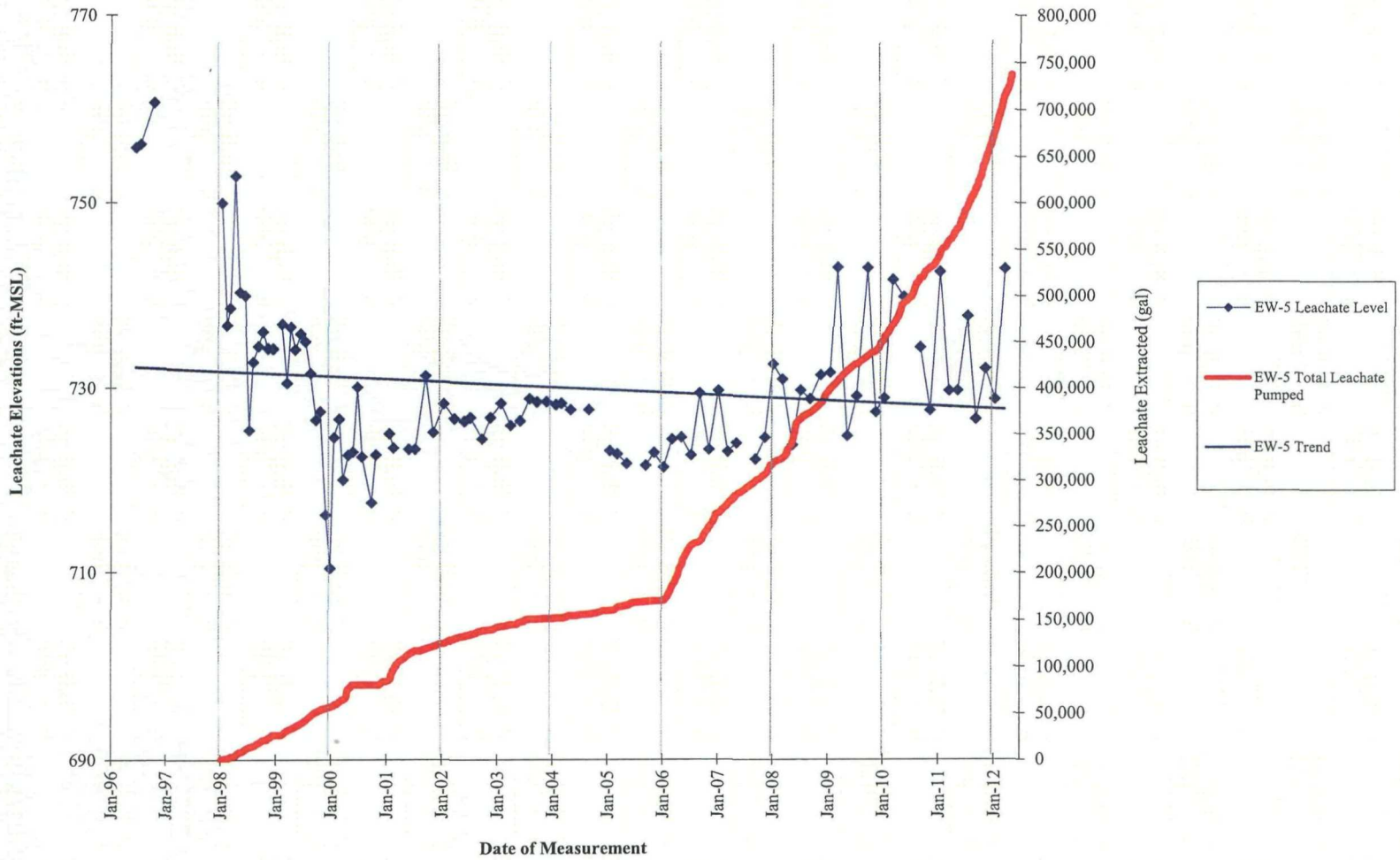
Drawing 9
Leachate Elevations in Landfill Area 9
Blackwell Landfill NPL Site



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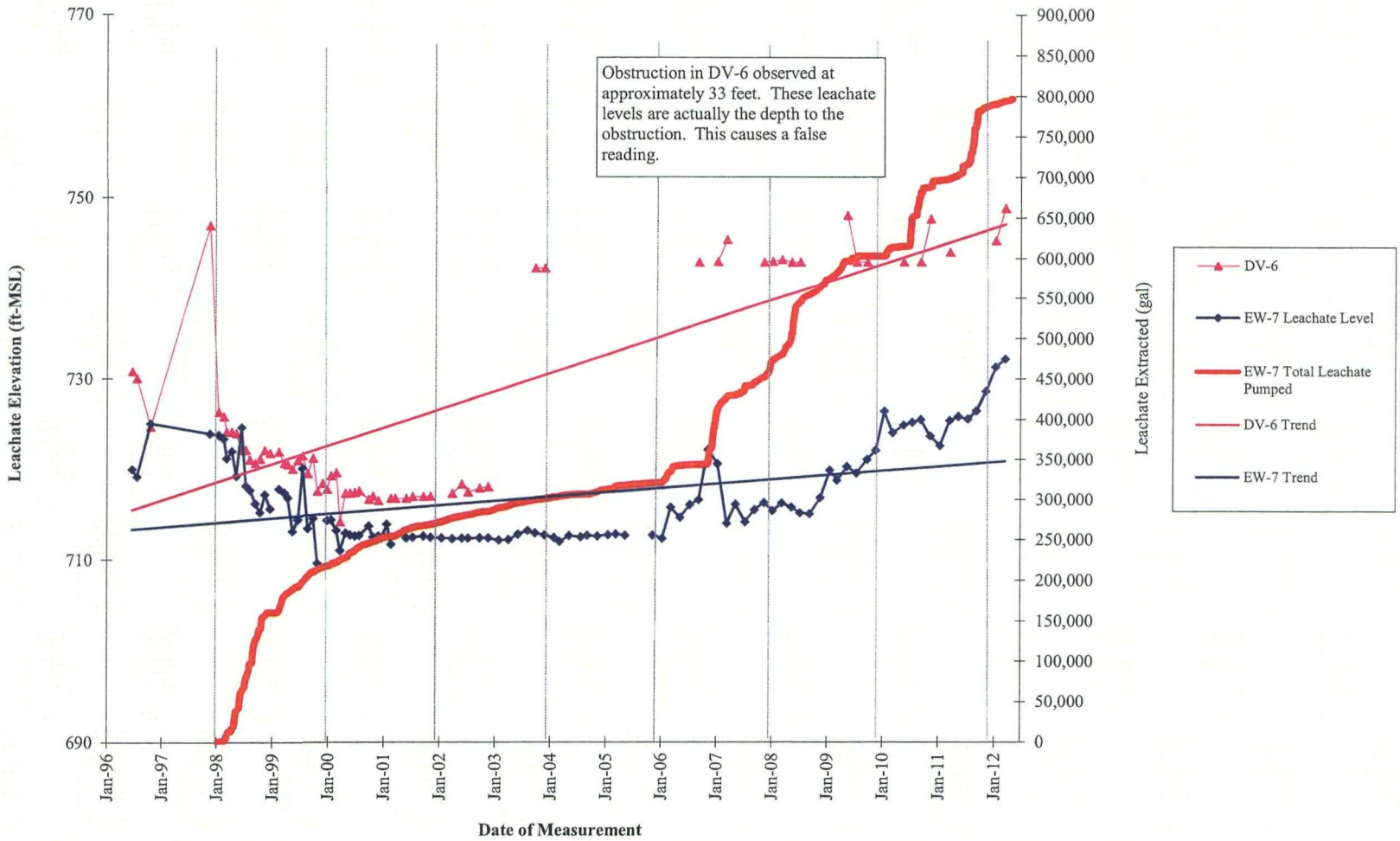
Drawing 10
Leachate Elevations in Landfill Area 10
Blackwell Landfill NPL Site



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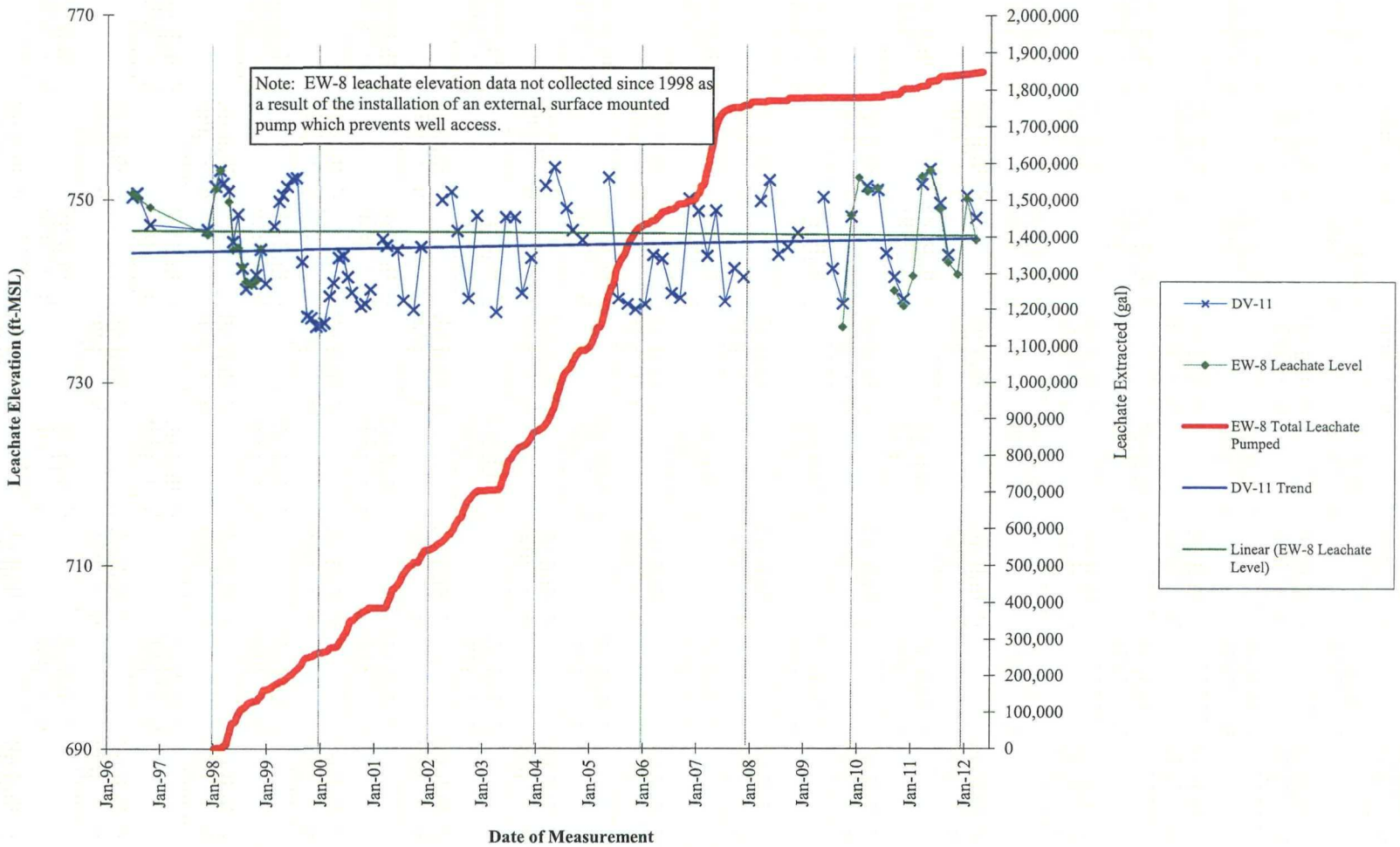
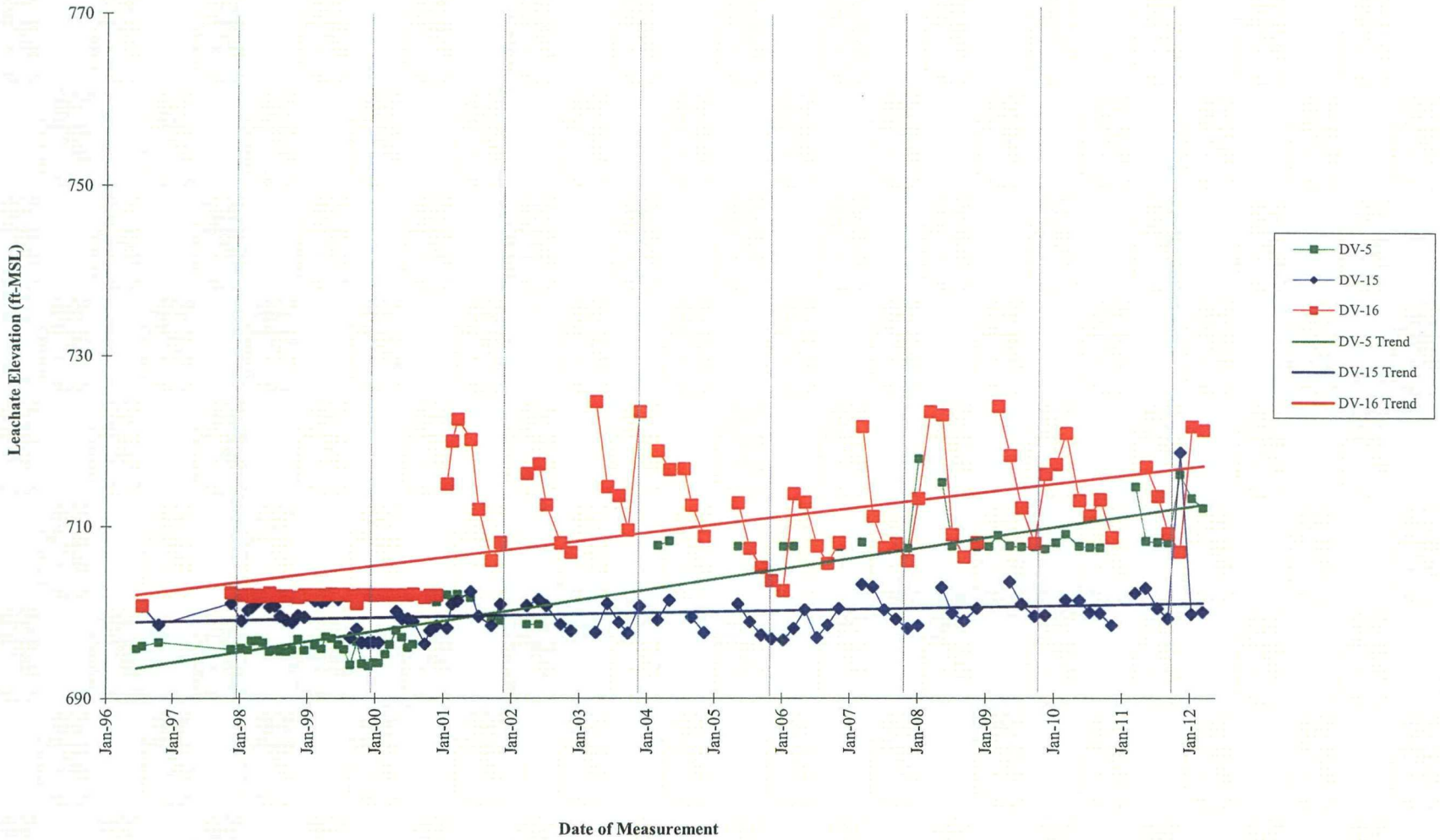
Drawing 11
Leachate Elevations in Landfill Area 11
Blackwell Landfill NPL Site



Drawing 12
Leachate Elevations in Landfill Area 12
Blackwell Landfill NPL Site



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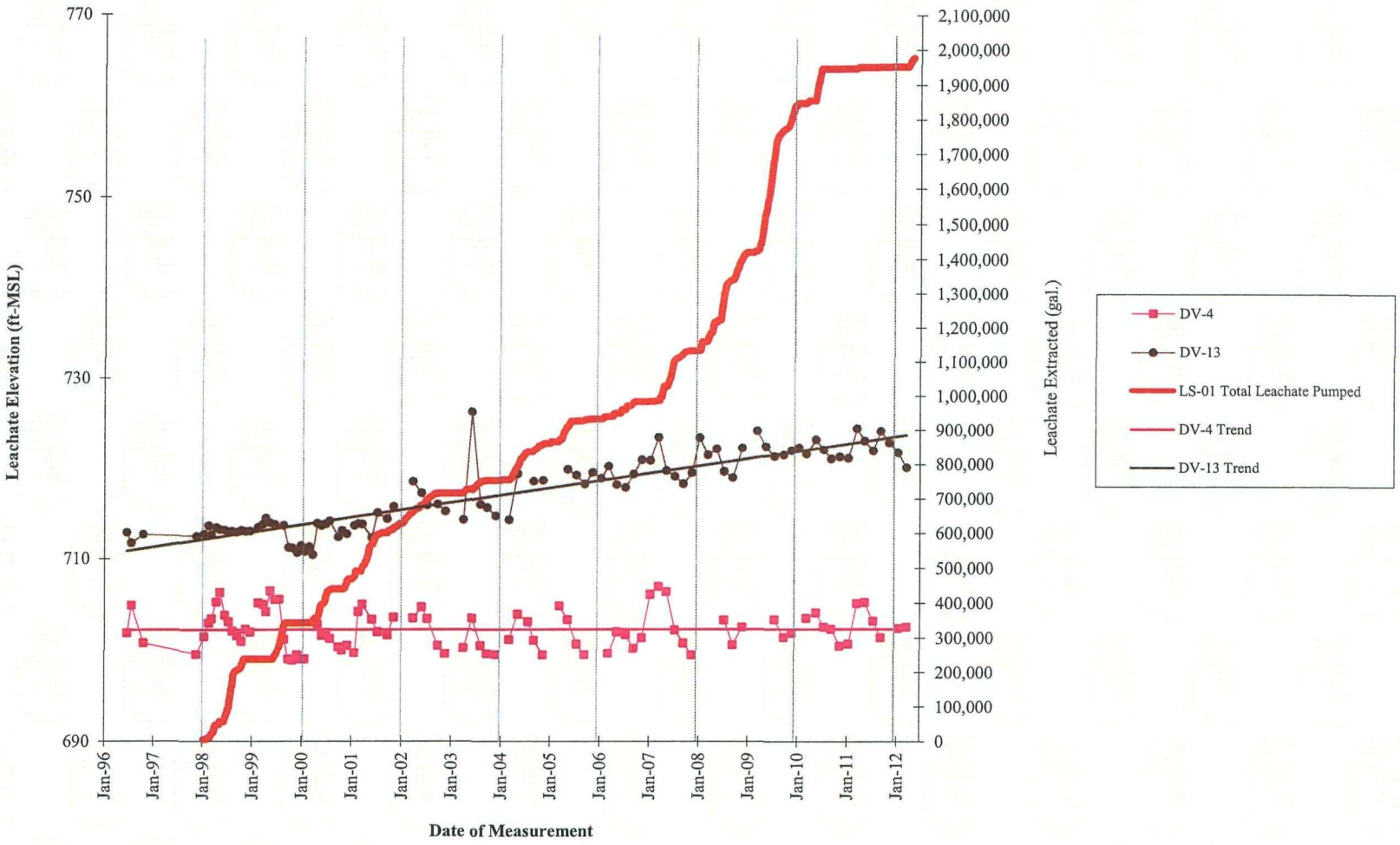
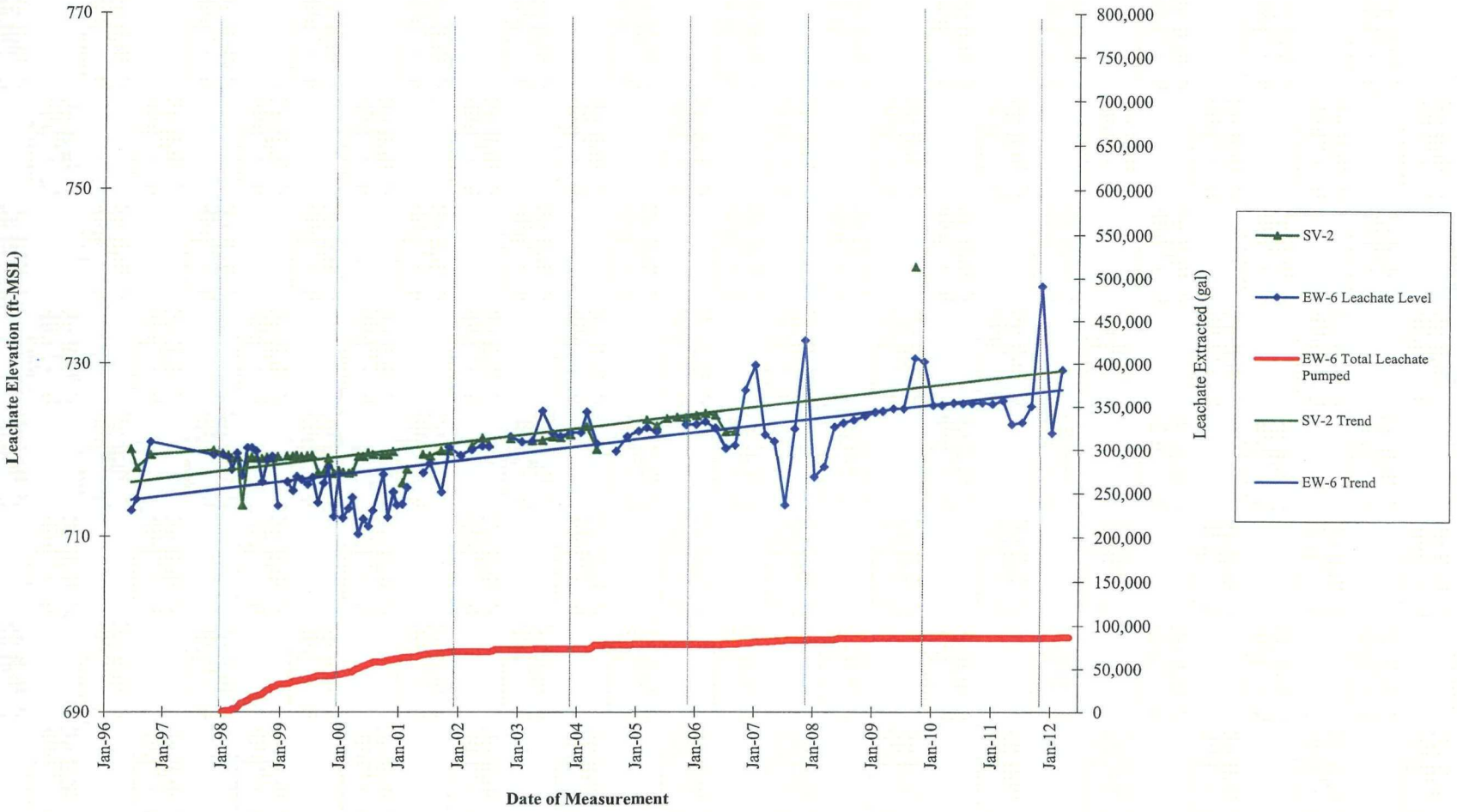
Drawings 1-23.xls\Drawing 12

Drawing 13
Leachate Elevations in Landfill Area 13
Blackwell Landfill NPL Site



Drawing 14
Leachate Elevations in Landfill Area 14
Blackwell Landfill NPL Site



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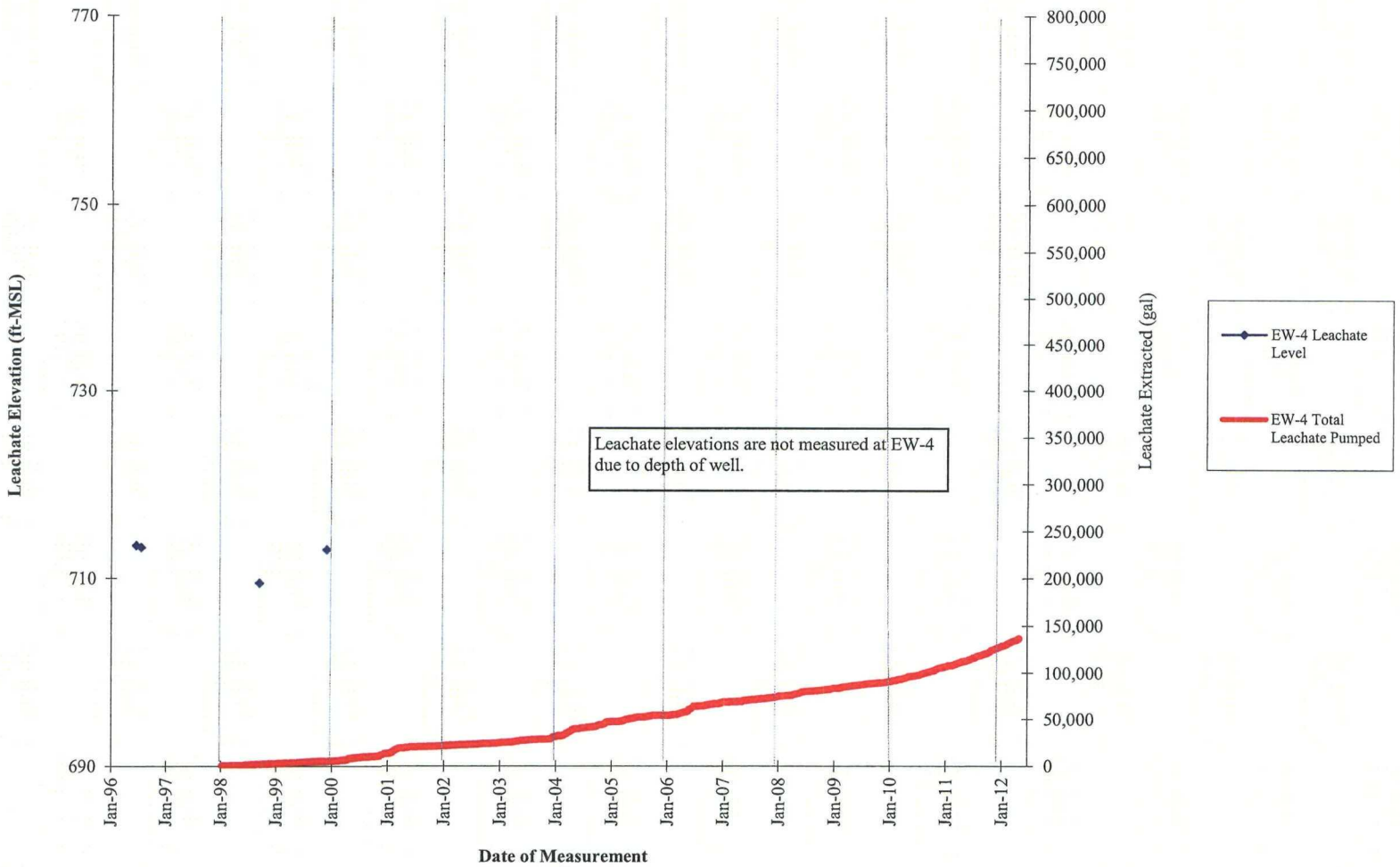
Drawing 15
Leachate Elevations in Landfill Area 15
Blackwell Landfill NPL Site



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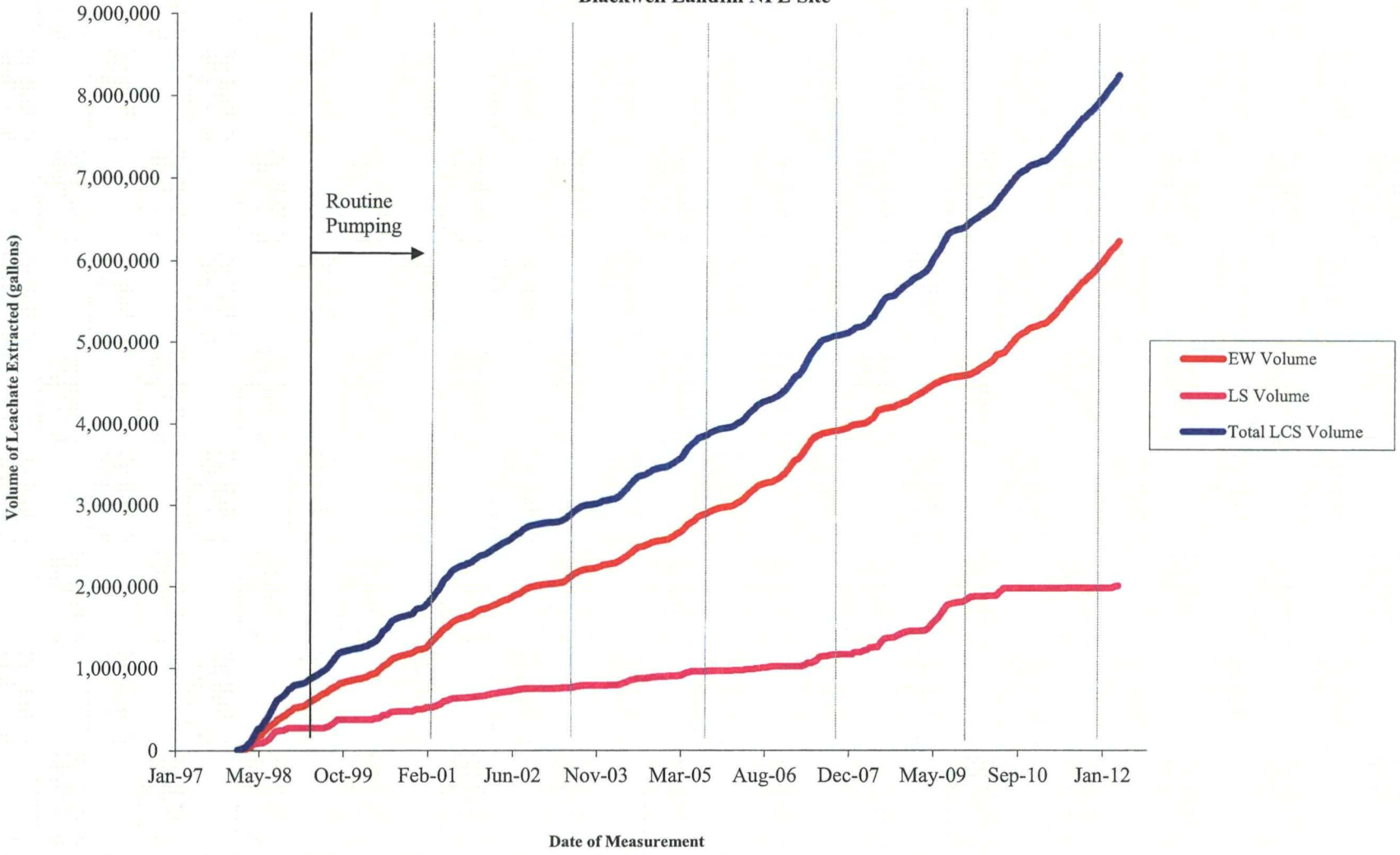
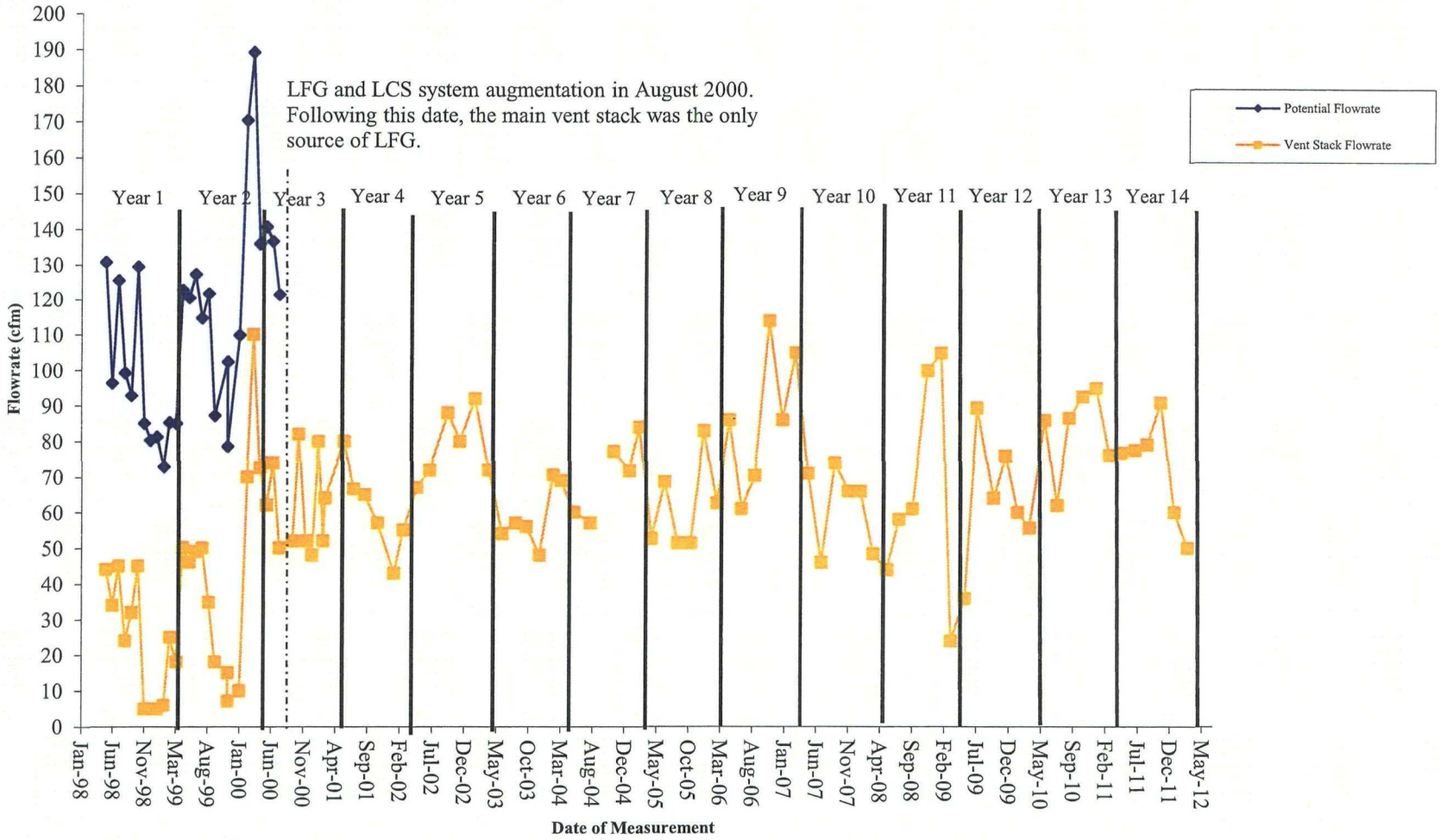
Drawing 16
Cumulative Leachate Pumping Volume
Blackwell Landfill NPL Site



Drawing 17
LFG Flowrate
Blackwell Landfill NPL Site



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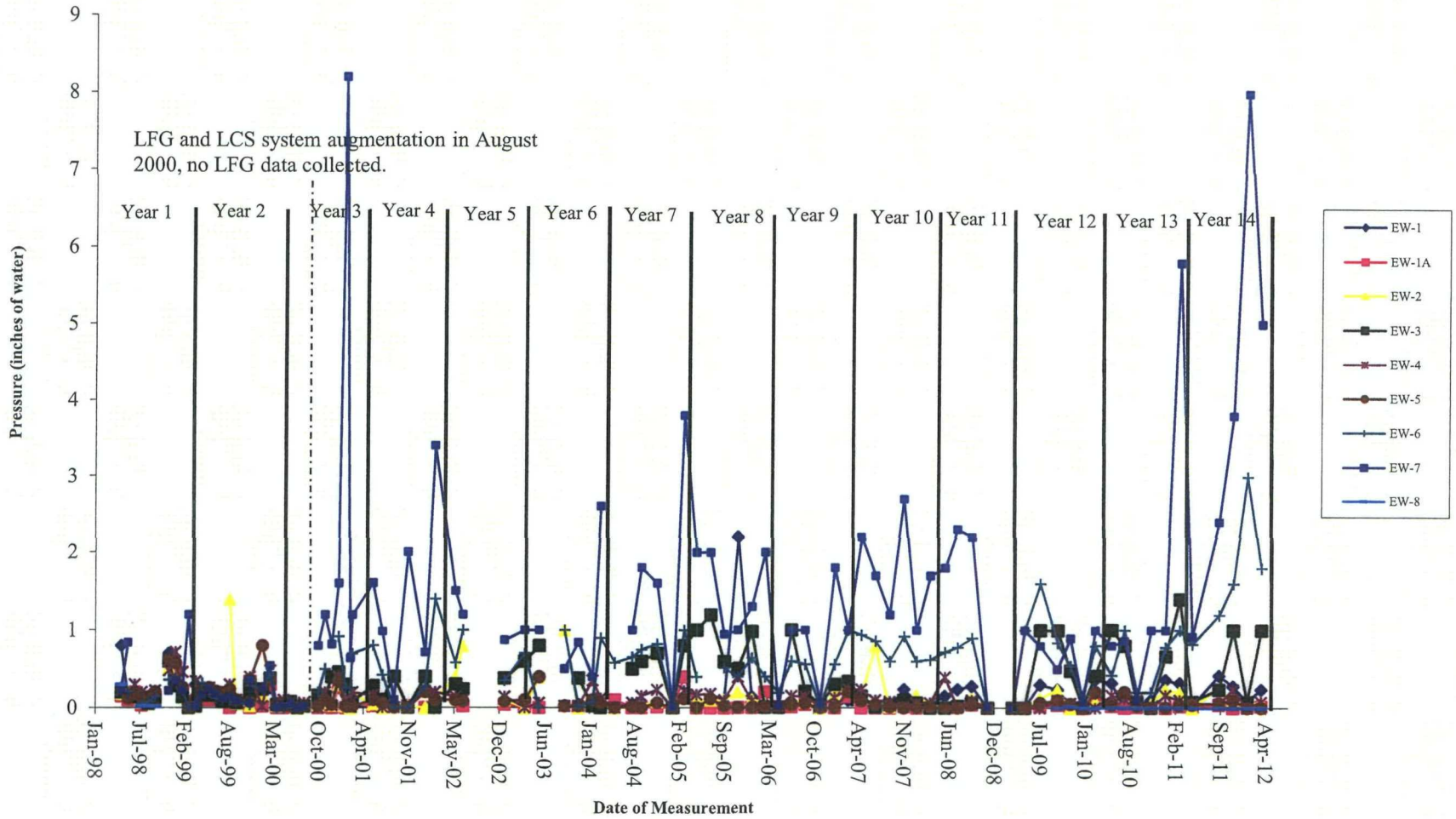
Drawings 1-23.xls\Drawing 17

Drawing 18
Static LFG Pressure - Extraction Wells
Blackwell Landfill NPL Site



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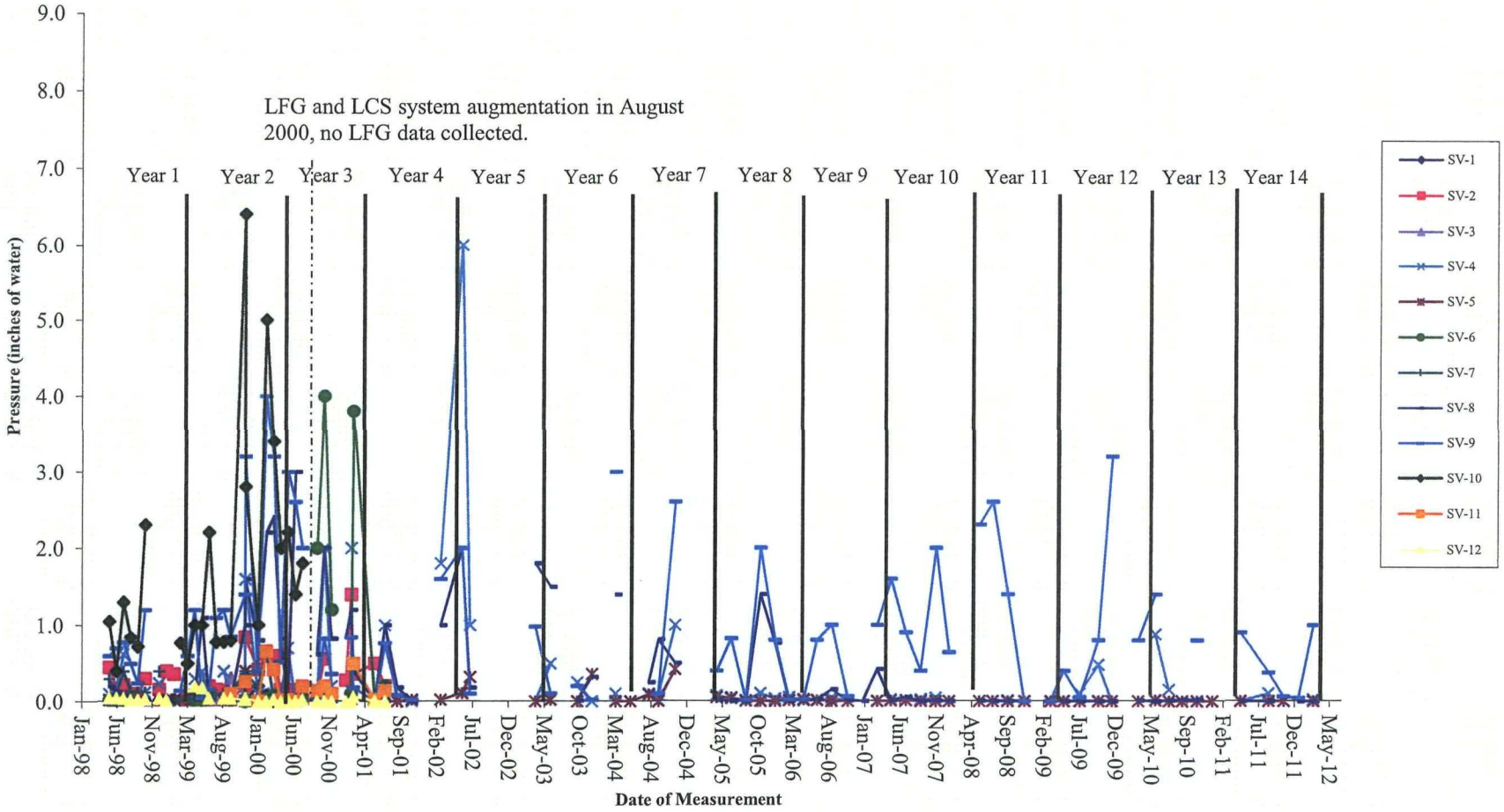
Drawings 1-23.xls\Drawing 18

Drawing 19
Static LFG Pressures - Shallow Gas Vents
Blackwell Landfill NPL Site



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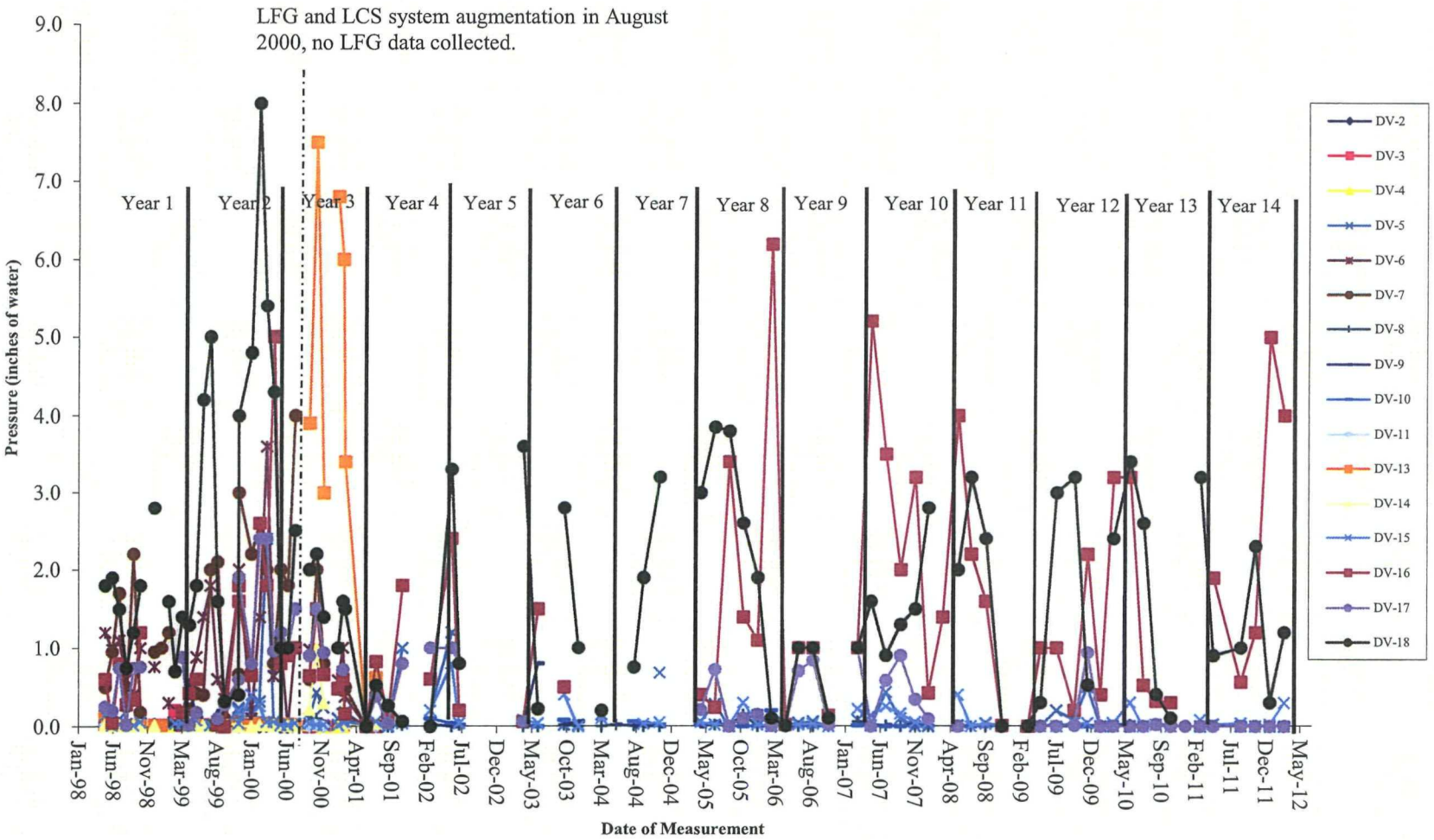
Drawings 1-23.xls\Drawing 19

Drawing 20
Static LFG Pressures - Deep Gas Vents
Blackwell Landfill NPL Site



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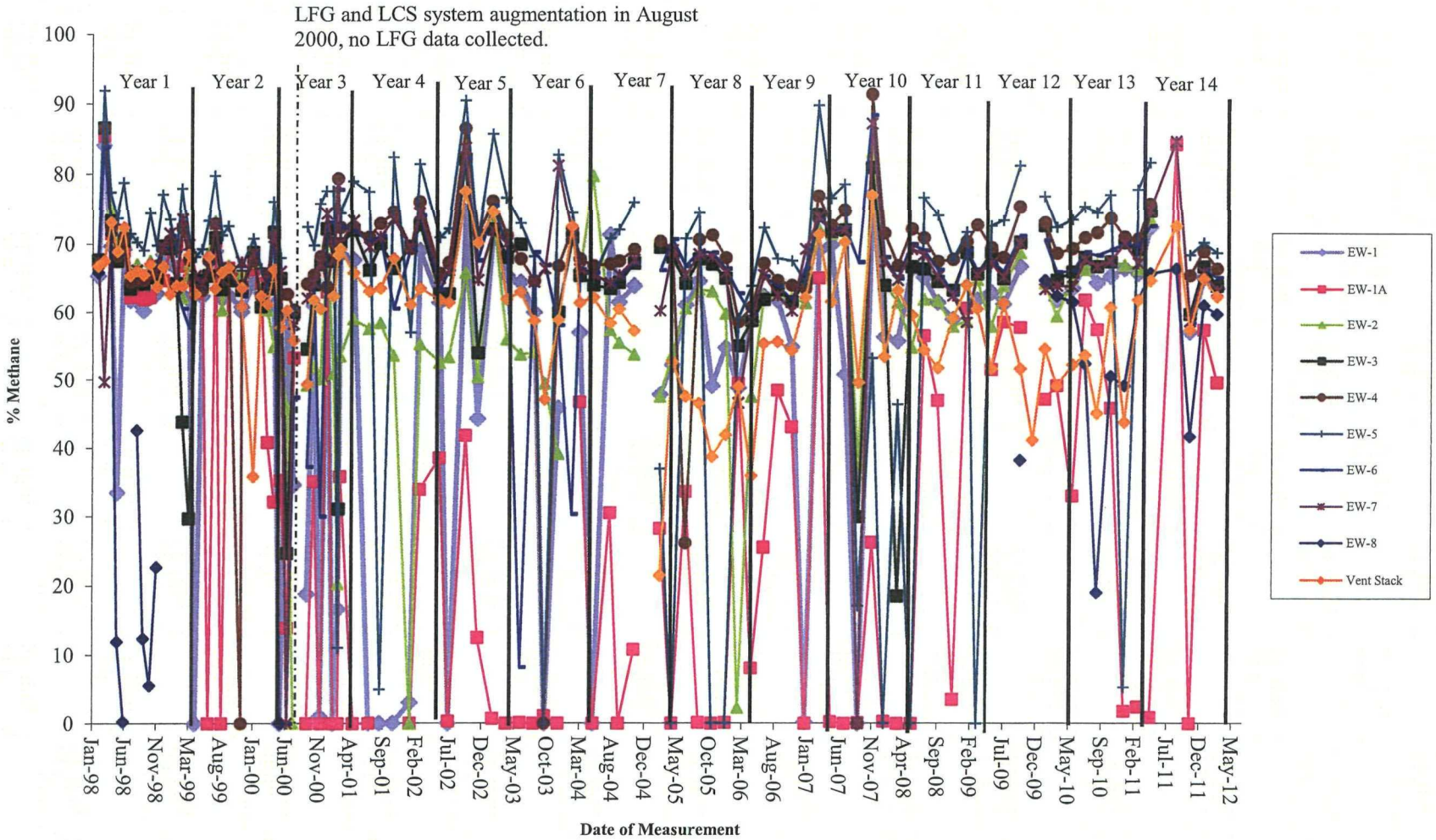
Drawings 1-23.xls\Drawing 20

Drawing 21
Methane Content - Extraction Wells
Blackwell Landfill NPL Site



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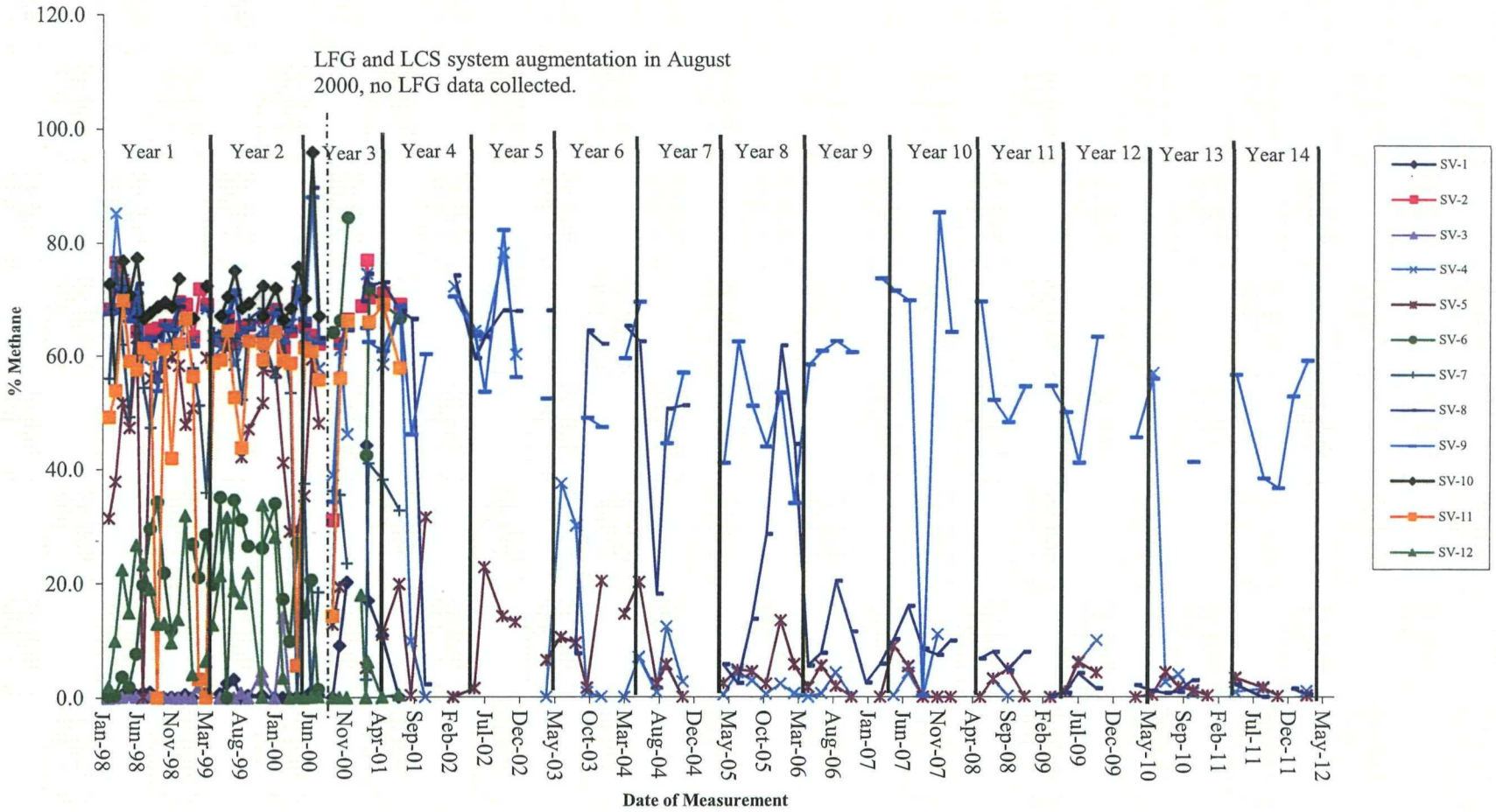
Drawings 1-23.xls\Drawing 21

Drawing 22
Methane Content - Shallow Gas Vents
Blackwell Landfill NPL Site



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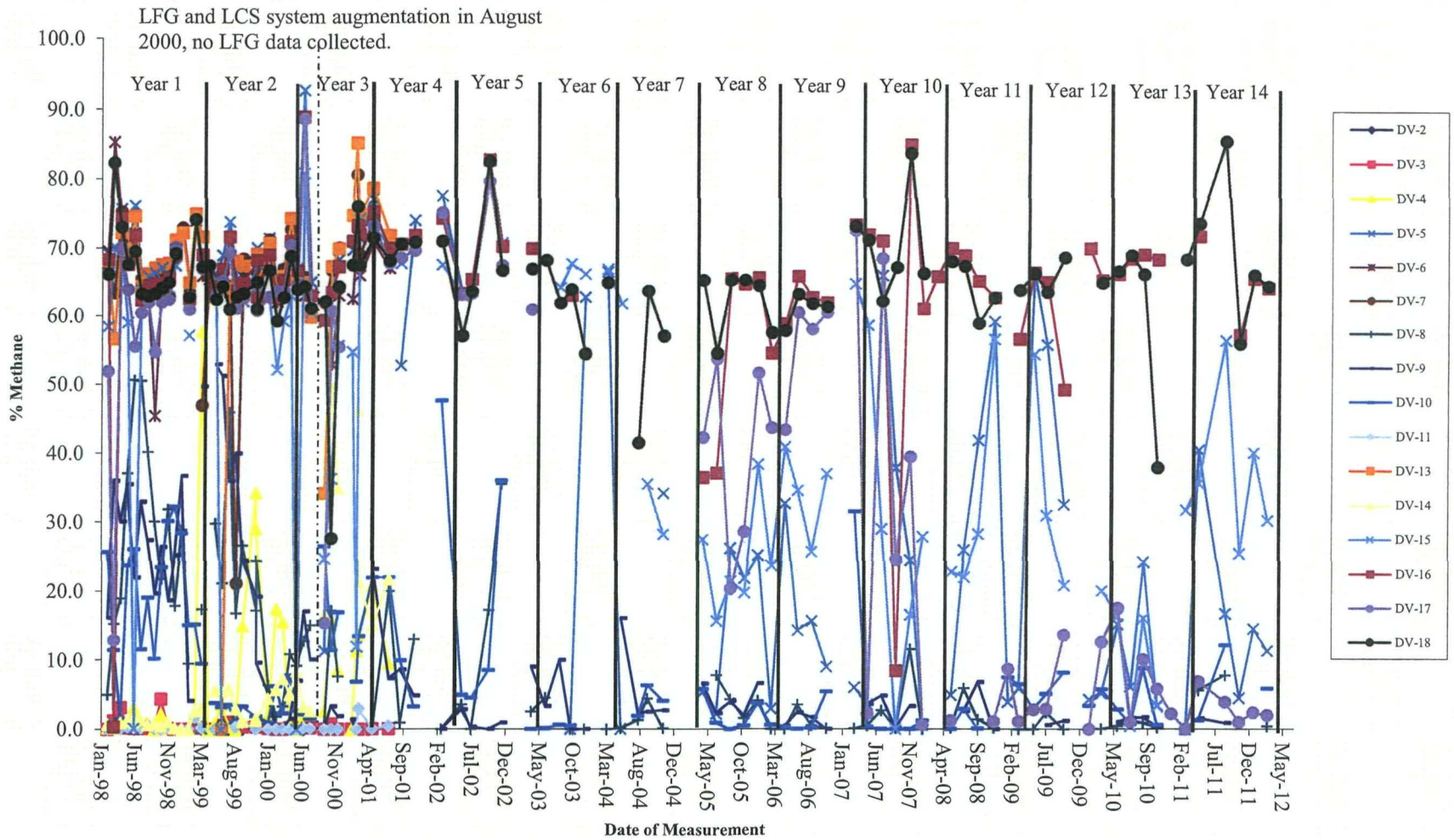
Drawings 1-23.xls\Drawing 22

Drawing 23
Methane Content - Deep Gas Vents
Blackwell Landfill NPL Site



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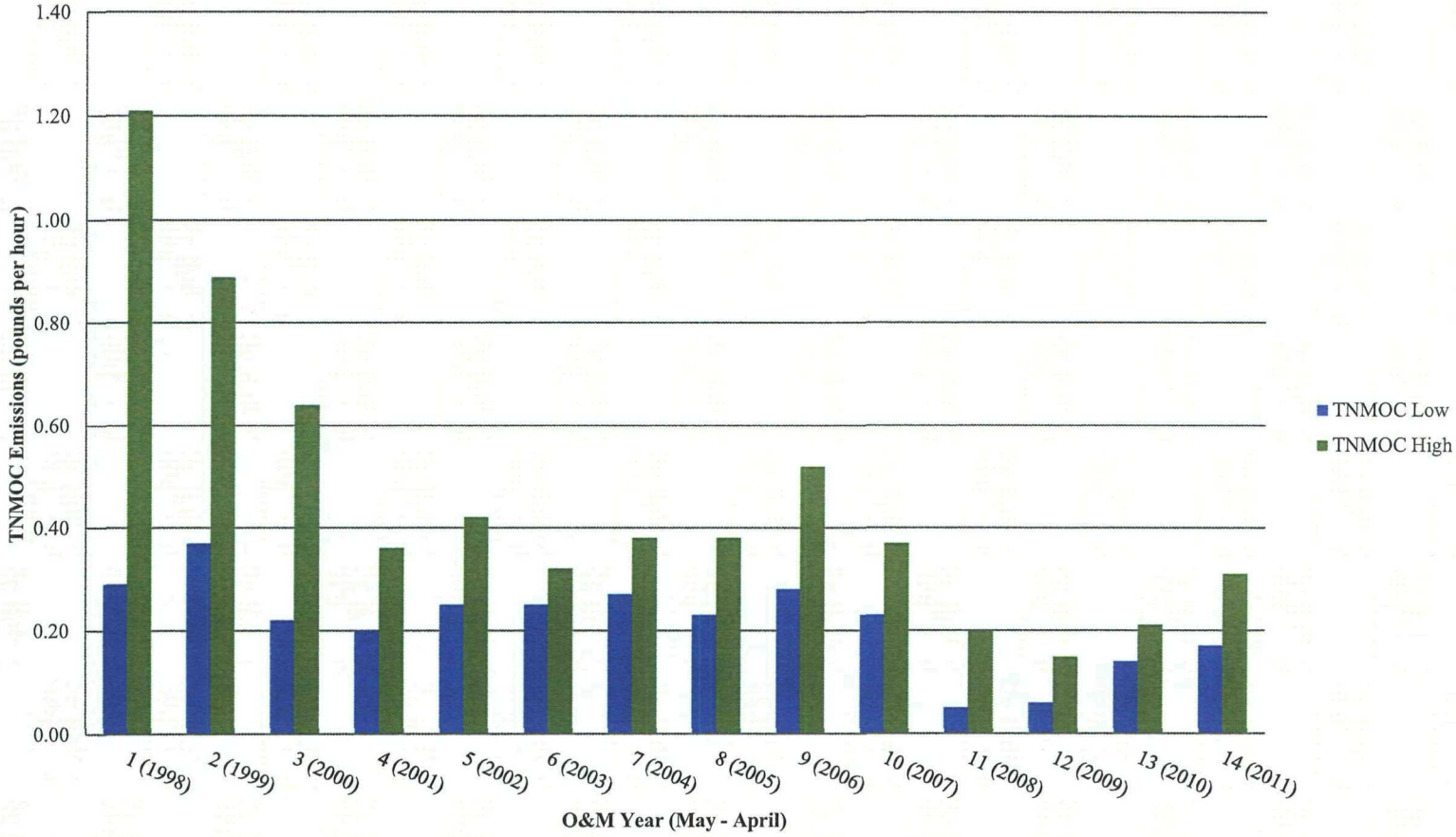
Drawings 1-23.xls\Drawing 23

Drawing 24
Range of TNMOC Emissions per Year of Operation
Blackwell Landfill NPL Site



APPENDICES

APPENDIX A

INSPECTION, MAINTENANCE, MONITORING AND DISPOSAL LOGS

A-1: Site Visit Operating Logs
A-2: Inspection Report Forms
A-3: Maintenance and Repair Record Forms
A-4: Leachate Disposal Logs
A-5: Landfill Gas Vent Monitoring Forms

APPENDIX A-1

Site Visit Operating Logs

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/3/11

Time	LCS System	Remarks (Reason for System on or off)
830 A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	147500				259
EW01A	562930				2032
EW02	2547202				1605
EW03	4057999				2751
EW04	788735				77
EW05	1846379				572
EW06	340599				0
EW07	4928865				281
EW08	3446485				273
LS01	9093931				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/5/11

Time	LCS System	Remarks (Reason for System on or off)
945 A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	147759				3218
EW01A	564962				560
EW02	2548807				1068
EW03	4060750				7825
EW04	788812				184
EW05	1846951				872
EW06	340599				0
EW07	4929146				2583
EW08	34465088				4837
LS01	9093931				
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/12/11

Time	LCS System	Remarks (Reason for System on or off)
800A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	179942				14389
EW01A	565522				552
EW02	2549875				1116
EW03	4068575				6917
EW04	788996				311
EW05	1847823				1593
EW06	340599				0
EW07	4931729				1468
EW08	3446992				170
LS01	9093931				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/17/11

Time	LCS System	Remarks (Reason for System on or off)
730	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. **Leachate Collection System (LCS)**

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	194331				12392
EW01A	566074				978
EW02	2550991				3143
EW03	4075492				8104
EW04	789307				422
EW05	1849416				2655
EW06	340599				0
EW07	4933197				2230
EW08	34470095				1766
LS01	9093931				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/19/11

Time	LCS System	Remarks (Reason for System on or off)
800A	On or Off	SLIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

L Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	206723				457
EW01A	566952				1174
EW02	2554134				3240
EW03	9083596				7266
EW04	789729				455
EW05	1852071				3290
EW06	340599				0
EW07	4935427				496
EW08	34471861				571
LS01	9093931				40
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/24/11

Time	LCS System	Remarks (Reason for System on or off)
800 A	On or Off	Shipping 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	206934				246
EW01A	567447				679
EW02	2555821				1553
EW03	4086777				4065
EW04	789999				185
EW05	1853855				1506
EW06	340599				0
EW07	4935643				280
EW08	3447209				335
LS01	9093953				18
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/26/11

Time	LCS System	Remarks (Reason for System on or off)
800A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	207180				1475
EW01A	568126				1639
EW02	2557374				1864
EW03	4090862				4313
EW04	790184				289
EW05	1855361				1798
EW06	340599				0
EW07	4935923				499
EW08	34472432				25
LS01	9093971				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 5/31/11

Time	LCS System	Remarks (Reason for System on or off)
900A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2086655				229
EW01A	5687758				414
EW02	2559238				736
EW03	4095175				822
EW04	790473				119
EW05	1857159				768
EW06	340599				2
EW07	4936422				223
EW08	3447245 7				181
LS01	9093971				10
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/2/11

Time	LCS System	Remarks (Reason for System on or off)
830A	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	208884				240
EW01A	569172				1142
EW02	2559974				2075
EW03	4095997				7968
EW04	790592				342
EW05	1857927				1895
EW06	340601				0
EW07	4936645				184
EW08	34472638				148
LS01	9093981				1
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/7/11

Time	LCS System	Remarks (Reason for System on or off)
900 A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	209124			246
EW01A	570314			606
EW02	2562049			1272
EW03	4103965			3689
EW04	790939			167
EW05	1859812			1428
EW06	340601			0
EW07	4936789			33087
EW08	34472786			78
LS01	9093982			1
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/9/11

Time	LCS System	Remarks (Reason for System on or off)
10:00 A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	209370				234
EW01A	570920				195
EW02	2563321				1162
EW03	4107652				3750
EW04	791106				228
EW05	1861240				1311
EW06	340601				0
EW07	4969876				143
EW08	3447286				287
LS01	9093983				23
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/14/11

Time	LCS System	Remarks (Reason for System on or off)
8:45	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	209 604				611
EW01A	571115				874
EW02	2564483				1280
EW03	4111404				5154
EW04	791334				250
EW05	1862551				1950
EW06	340601				0
EW07	4970019				16
EW08	34473151				256
LS01	9094006				46
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAW Date: 6/16/11

Time	LCS System	Remarks (Reason for System on or off)
900 A	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	210215				166
EW01A	571989				741
EW02	2565763				1834
EW03	4116558				4303
EW04	791584				257
EW05	1864509				1461
EW06	340601				0
EW07	4970035				1
EW08	34473407				0
LS01	9094052				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DRew Date: 6/21/11

Time	LCS System	Remarks (Reason for System on or off)
900 A	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	210381				288
EW01A	572730				541
EW02	2567597				1078
EW03	4120861				3455
EW04	79841				163
EW05	1865970				1276
EW06	340601				0
EW07	4970036				352
EW08	34973407				397
LS01	9094052				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DREW Date: 6-23-11

Time	LCS System	Remarks (Reason for System on or off)
7:45 AM	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2106669				317
EW01A	573271				651
EW02	2568675				1486
EW03	4124316				3815
EW04	792004				215
EW05	18672416				1683
EW06	340601				0
EW07	4970388				425
EW08	34473804				420
LS01	9094052				14
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DREW Date: 6-28-11

Time	LCS System	Remarks (Reason for System on or off)
8:20 AM	(On) or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	210986				284
EW01A	573922				259
EW02	2570161				1348
EW03	4128131				1906
EW04	792219				202
EW05	1868929				178
EW06	340601				0
EW07	4970813				296
EW08	3447422A				676
LS01	9094066				35
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 6/30/11

Time	LCS System	Remarks (Reason for System on or off)
900 A	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	211270				240
EW01A	574181				248
EW02	2571509				1108
EW03	4130037				3222
EW04	792421				326
EW05	1869107				1884
EW06	340601				0
EW07	4971109				246
EW08	34474900				5082
LS01	9094101				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/7/11

Time	LCS System	Remarks (Reason for System on or off)
9.00 A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. **Leachate Collection System (LCS)**

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	211510				351
EW01A	574429				597
EW02	2572617				2018
EW03	4133259				4288
EW04	792747				206
EW05	1870991				2684
EW06	340601				0
EW07	4971355				668
EW08	34479982				4855
LS01	9094101				56
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/12/11

Time	LCS System	Remarks (Reason for System on or off)
7/12/11	On or Off	System off mwH 04m Shipped 5000
7/13/11	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	211861				510
EW01A	575026				185
EW02	2574635				1171
EW03	4137547				1711
EW04	792953				210
EW05	1823675				926
EW06	340601				0
EW07	4972023				338
EW08	34484837				410
LS01	9094157				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/14/11

Time	LCS System	Remarks (Reason for System on or off)
930	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	212371				311
EW01A	575211				604
EW02	2575806				2324
EW03	4139258				3594
EW04	293163				410
EW05	1874601				2348
EW06	340601				0
EW07	4972361				418
EW08	34485247				1296
LS01	9094157				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN ZINNEN Date: 07/19/11

Time	LCS System	Remarks (Reason for System on or off)
9:15	On or Off	RAG TO RESET LATER. SUPPOSED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	212682				327
EW01A	575815				575
EW02	2578130				1824
EW03	4142852				1997
EW04	793573				128
EW05	1876949				293
EW06	340601				0
EW07	4972779				122
EW08	34486543				34
LS01	9094157				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/21/11

Time	LCS System	Remarks (Reason for System on or off)
730	(On) or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	213543				532
EW01A	576810				420
EW02	2580662				708
EW03	4147354				2505
EW04	794081				380
EW05	1879255				2013
EW06	340601				0
EW07	4984440				11539
EW08	3448 6825				248
LS01	9094158				1
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/26/11

Time	LCS System	Remarks (Reason for System on or off)
730	On or Off	Shipper 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	213543				255
EW01A	576810				737
EW02	2580662				1413
EW03	4147354				2445
EW04	794081				252
EW05	1879255				1345
EW06	340601				0
EW07	4984440				334
EW08	3448625				299
LS01	9094158				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 7/28/11

Time	LCS System	Remarks (Reason for System on or off)
630	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	213798				991
EW01A	577547				986
EW02	2582075				1345
EW03	4149199				2742
EW04	794333				304
EW05	1880600				1013
EW06	340601				0
EW07	4984774				3725609
EW08	34487124				169
LS01	9094158				0
LS02					

counter malfunction

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/2/11

Time	LCS System	Remarks (Reason for System on or off)
800 AM	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	214789				88
EW01A	578533				743
EW02	2583420				925
EW03	4152541				1622
EW04	794637				162
EW05	1881613				1668
EW06	340601				0
EW07	8710383				161
EW08	34487293				0
LS01	9094158				2
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/4/11

Time	LCS System	Remarks (Reason for System on or off)
700A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	214877				104
EW01A	579276				891
EW02	2584345				783
EW03	4154163				2142
EW04	794799				259
EW05	1883208				1607
EW06	340601				0
EW07	8710544				77
EW08	34487293				66
LS01	9094160				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/9/11

Time	LCS System	Remarks (Reason for System on or off)
700A	On or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2149981				253
EW01A	580167				905
EW02	2585128				1172
EW03	4156305				2229
EW04	795058				263
EW05	1884815				1763
EW06	340601				Ø
EW07	8710621			ERROR	* 924447
EW08	34487359				174
LS01	9094160				29
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN Z Date: 08/16/11

Time	LCS System	Remarks (Reason for System on or off)
9:17	On or Off	SHOPPING 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	215 239				219
EW01A	581 072				610
EW02	2586 300				1334
EW03	4158 534				2447
EW04	795 321				289
EW05	1886608				2021
EW06	340601				0
EW07	9635068				480
EW08	34487533				323
LS01	9094109				37
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DREW BERGENTHAL Date: 8/18/11

Time	LCS System	Remarks (Reason for System on or off)
7:40 AM	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	215453				225
EW01A	581682				572
EW02	2587634				574
EW03	4460981				1456
EW04	795610				139
EW05	1888629				1289
EW06	340601				0
EW07	9635548				377064
EW08	34487856				177
LS01	9094226				86
LS02					

Counter malfunction

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/23/11

Time	LCS System	Remarks (Reason for System on or off)
800A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	215678				234
EW01A	582254				574
EW02	25888208				1269
EW03	4162437				2172
EW04	795749				256
EW05	1889918				1521
EW06	340601				20
EW07	13406197				51447
EW08	34488033				342
LS01	9094312				124
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/25/11

Time	LCS System	Remarks (Reason for System on or off)
900 A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	215912				229
EW01A	582828				564
EW02	2589477				697
EW03	4164609				1885
EW04	796005				352
EW05	1891439				1493
EW06	340621				0
EW07	13457644				207
EW08	34488375				139
LS01	9094436				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 8/30/11

Time	LCS System	Remarks (Reason for System on or off)
730	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	216141			
EW01A	583392			
EW02	2590174			
EW03	4166494			
EW04	796357			
EW05	1892932			
EW06	340621			
EW07	13457851			
EW08	34488514			
LS01	9094436			
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/1/11

Time	LCS System	Remarks (Reason for System on or off)
8.00	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	216402				280
EW01A	583774				711
EW02	2592008				1373
EW03	4169197				2170
EW04	796541				285
EW05	1894529				1715
EW06	340621				4
EW07	13458009				338930
EW08	34488530				91
LS01	9094493				47
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/6/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	SHIPPED 5500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	216682				202
EW01A	584485				360
EW02	2593381				1454
EW03	4171367				2230
EW04	796826				259
EW05	1896244				1873
EW06	340625				0
EW07	13796839				140
EW08	34488621				136
LS01	9094540				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/8/11

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	216884				201
EW01A	584845				515
EW02	2594835				120
EW03	4173597				1663
EW04	797085				221
EW05	1898117				1388
EW06	340625				0
EW07	13796979				44445
EW08	34488757				33
LS01	9094540				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/13/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217085				166
EW01A	585360				629
EW02	2595955				1034
EW03	4175260				1674
EW04	797306				169
EW05	1899505				1407
EW06	340625				7
Counter malfunction → EW07	14241429				270854
EW08	34488790				137
LS01	9094540				16
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/15/2011

Time	LCS System	Remarks (Reason for System on or off)
800 Am	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217251				57
EW01A	585989				932
EW02	2596989				1102
EW03	4176934				2347
EW04	797475				300
EW05	1900912				1928
EW06	340632				1
EW07	14512283				167
EW08	34488927				144
LS01	9094556				9
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/20/11

Time	LCS System	Remarks (Reason for System on or off)
10:00A	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217308				158
EW01A	5869921				219
EW02	2598091				916
EW03	4179281				1656
EW04	797775				188
EW05	1902840				1644
EW06	340633				13
EW07	14512450				299
EW08	34489111				209
LS01	9094565				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/22/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipper 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217466				108
EW01A	587140				87
EW02	2599007				1833
EW03	4180937				1136
EW04	797963				160
EW05	1904484				1773
EW06	340646				0
EW07	14512749				93
EW08	34489320				116
LS01	9094565				33
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 9/29/11

Time	LCS System	Remarks (Reason for System on or off)
700A	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217574	217837			263
EW01A	587227	587466			239
EW02	2600804	2602336			1532
EW03	4182069	4186609			4540
EW04	798123	798742			619
EW05	1906257	1909131			2874
EW06	340646	340346			301
EW07	14512842	14512869			27
EW08	34489436	34489652			216
LS01	9094598	9094682			84
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: FRANK Date: 10/4/11

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	SHIFTED 5,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: 10/4 Pump Stroke Counter Values	Time: 10/6 Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217837	217837			0
EW01A	587466	587466			0
EW02	2602336	2602753			417
EW03	4186609	4187261			652
EW04	798742	798817			75
EW05	1909131	1909863			732
EW06	340646	340646			300
EW07	14512869	14512870			1
EW08	34489652	34489652			0
LS01	9094682	9094682			0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DREW Date: 10-6-11

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	SNIPPED 5,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: 10/4 Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	271837				76
EW01A	587466				79
EW02	2602753				1021
EW03	4187261				1939
EW04	798817				283
EW05	1909863				1747
EW06	340646				0
EW07	14512870				3796
EW08	34489652				3
LS01	9094682				13
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 10/11/11

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	217913				263
EW01A	587545				217
EW02	2603774				1591
EW03	4189200				2412
EW04	799100				305
EW05	1911610				2339
EW06	340646				0
EW07	14516666				180
EW08	34489655				234
LS01	9094695				15
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 10/13/11

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	218176				250
EW01A	5877762				147
EW02	2605365				1179
EW03	4191612				1995
EW04	799405				269
EW05	1913949				1763
EW06	340646				0
EW07	14516896				282
EW08	34489889				267
LS01	9094710				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 10/18/11

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2184426				119
EW01A	5877909				92
EW02	2606544				398
EW03	4193557				918
EW04	7996774				130
EW05	1915712				826
EW06	3402646				0
EW07	14517128				216
EW08	34490156				63
LS01	9094710				10
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 10/20/11

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	STARTED 7500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	218545				158
EW01A	588001				164
EW02	2606942				222
EW03	4194475				1568
EW04	799810				449
EW05	1916534				1303
EW06	340646				0
EW07	14517344				238
EW08	34490119				0
LS01	9094720				31
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 10/25/2011

Time	LCS System	Remarks (Reason for System on or off)
730	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	218703				97
EW01A	588165				150
EW02	2607164				4349
EW03	4196043				4032
EW04	800259				239
EW05	1917837				1880
EW06	340646				5
EW07	14517582				187
EW08	3490219				169
LS01	9094751				76
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY (Frank) Date: 11/1/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	218800				118
EW01A	588315				83
EW02	2611513				728
EW03	4200075				2340
EW04	800498				291
EW05	1919717				3975
EW06	340651				0
EW07	14517769				274
EW08	34490388				149
LS01	9094827				105
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/3/11

Time	LCS System	Remarks (Reason for System on or off)
815	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	218918				177
EW01A	588398				94
EW02	2612241				1642
EW03	4202415				2351
EW04	800789				307
EW05	1923692				2006
EW06	340651				0
EW07	14518043				192
EW08	34490537				70
LS01	9094932				32
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/8/11

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	219095				26
EW01A	588492				147
EW02	2613883				692
EW03	4204766				1428
EW04	801096				103
EW05	1925698				826
EW06	340651				0
EW07	14518235				130
EW08	34490607				137
LS01	9094964				41
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/10/11

Time	LCS System	Remarks (Reason for System on or off)
815	On or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	219121				336
EW01A	588639				197
EW02	2614575				1580
EW03	4206194				2833
EW04	801199				310
EW05	1926524				1610
EW06	340651				0
EW07	14518365				582
EW08	34490744				286
LS01	9095005				111
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/15/11

Time	LCS System	Remarks (Reason for System on or off)
11:30	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	219457				162
EW01A	588836				126
EW02	2616155				1555
EW03	4209027				4365
EW04	801509				246
EW05	1928134				2316
EW06	340651				28
EW07	14518947				117
EW08	3449 1030				184
LS01	9095116				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/17/11

Time	LCS System	Remarks (Reason for System on or off)
745	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	219619				356
EW01A	588962				96
EW02	2617710				280
EW03	4213392				495
EW04	8017555				187
EW05	1930450				611
EW06	3406679				10
EW07	14519064				113
EW08	3449 1214				113
LS01	9095116				65
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: (FRANK) RAY Date: 11/23/11

Time	LCS System	Remarks (Reason for System on or off)
700	(On) or Off	SHIPPED 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	219975				215
EW01A	589057				178
EW02	2617990				2267
EW03	4213887				4835
EW04	801942				121
EW05	1931061				1896
EW06	340689				11
EW07	14519177				442
EW08	34491327				97
LS01	9095181				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/28/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	220190				233
EW01A	589235				182
EW02	2620257				3420
EW03	4218722				6185
EW04	802063				510
EW05	1932957				3388
EW06	340700				16
EW07	14519619				244
EW08	34491424				218
LS01	9095181				44
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/1/11

Time	LCS System	Remarks (Reason for System on or off)
700	On or Off	SWIPPED
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	220423				231
EW01A	589417				238
EW02	2623727				2844
EW03	4224907				10437
EW04	802573				324
EW05	1936345				2883
EW06	340716				3
EW07	14519863				180
EW08	34491642				139
LS01	9095225				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/6/11

Time	LCS System	Remarks (Reason for System on or off)
700	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2206.54				153
EW01A	589655				127
EW02	2626571				2401
EW03	4329278				6084
EW04	802897				340
EW05	1939 228				1773
EW06	340719				1
EW07	14520043				102
EW08	34491781				2
LS01	9095225				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/8/11

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2208 07				318
EW01A	589782				106
EW02	2628972				96
EW03	4235362				200
EW04	803237				7
EW05	1941001				589
EW06	340720				0
EW07	14520145				170
EW08	3449 1783				148
LS01	9095225				0
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/13/11

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	Shipped 5000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	221125				213
EW01A	589885				110
EW02	2629068				1929
EW03	4235562				9263
EW04	803244				703
EW05	1941590				1721
EW06	340720				0
EW07	14520315				210
EW08	34491931				378
LS01	9095225				1
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/15/11

Time	LCS System	Remarks (Reason for System on or off)
845	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	221338				263
EW01A	589998				449
EW02	2630997				4829
EW03	4244825				5951
EW04	803947				82
EW05	1943311				4271
EW06	340720				0
EW07	14520525				256
EW08	34492309				157
LS01	9095226				17
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/20/11

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	221601				185
EW01A	590447				131
EW02	2635826				845
EW03	4250776				2998
EW04	804029				252
EW05	1947582				1525
EW06	340720				0
EW07	14520781				73
EW08	3449246				6
LS01	9095243				20
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 12/22/11

Time	LCS System	Remarks (Reason for System on or off)
930	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	221786			193	~~0~~
EW01A	590578			227	0
EW02	26366071			1777	~~2742~~
EW03	[redacted]4253774			3264	~~6071~~
EW04	8042[redacted]81			70	~~310~~
EW05	1949107			736	~~2313~~
EW06	340720			7	0
EW07	14520854			200	0
EW08	34492472			247	0
LS01	9095253			1	~~3~~
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DREW Date: 12-27-11

Time	LCS System	Remarks (Reason for System on or off)
10:15 AM	(On) or Off	SHIPPED - 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	221979			0 ~~193~~ ~~0~~
EW01A	590805			0 ~~227~~ ~~0~~
EW02	2638448			2742 ~~1977~~ ~~2742~~
EW03	4257038			6071 ~~3264~~ ~~6071~~
EW04	804351			310 ~~70~~ ~~310~~
EW05	1949843			2313 ~~736~~ ~~2313~~
EW06	340727			0 ~~7~~ ~~0~~
EW07	1452105A			0 ~~200~~ ~~0~~
EW08	34492719			0 ~~247~~ ~~0~~
LS01	9095254			3 ~~1~~ ~~3~~
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: DAN ZIMMEN Date: 12/29/11

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	221979			
EW01A	590805			
EW02	2641190			
EW03	4263109			
EW04	804661			
EW05	1952156			
EW06	340727			
EW07	14521054			
EW08	34492719			
LS01	9095257			
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 1/3/12

Time	LCS System	Remarks (Reason for System on or off)
900	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	221979				228
EW01A	590805				124
EW02	2643136				2225
EW03	4268027				2690
EW04	804896				146
EW05	1954370				1877
EW06	340727				0
EW07	14521054				120
EW08	34492719				272
LS01	9095257				44
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 1/5/12

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipper 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	222207				322
EW01A	590929				224
EW02	21645361				5366
EW03	4270717				10792
EW04	805042				809
EW05	1956247				4806
EW06	340727				0
EW07	14521174				195
EW08	3449299/				71
LS01	9095301				16
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 11/12/12

Time	LCS System	Remarks (Reason for System on or off)
700	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	222529			
EW01A	591153			
EW02	2650727			
EW03	4281509			
EW04	805854			
EW05	1941053			
EW06	340727			
EW07	14521369			
EW08	34493062			
LS01	9095317			
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: Frank Silva Date: 1-18-2012

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values	Time: _____ Pump Stroke Counter Values
EW01	222787			
EW01A	591285			
EW02	26528641			
EW03	42848667			
EW04	906068			
EW05	1963193			
EW06	340727			
EW07	145216625			
EW08	34493200			
LS01	9095354			
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: Frank Date: 1-19-2012

Time	LCS System	Remarks (Reason for System on or off)
8:00	On or Off	
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	223046				280
EW01A	591417				338
EW02	2654995				1722
EW03	4288225				2639
EW04	806285				159
EW05	1965333				1922
EW06	340727				0
EW07	1452148				143
EW08	3449339				139
LS01	9095430				227
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 1/24/12

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	223326				146
EW01A	591755				155
EW02	2656717				2464
EW03	4290864				3439
EW04	806444				294
EW05	1967255				1812
EW06	304727				10
EW07	14522024				262
EW08	34493339				268
LS01	9095581				45
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 1/26/12

Time	LCS System	Remarks (Reason for System on or off)
730	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	223472				241
EW01A	591910				318
EW02	2659181				2209
EW03	4294303				3652
EW04	806738				252
EW05	1969067				2530
EW06	340737				8
EW07	14522286				449
EW08	3449360 7				325
LS01	9095626				12
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 1/31/12

Time	LCS System	Remarks (Reason for System on or off)
700	(On) or Off	SWIPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	223713				247
EW01A	592228				129
EW02	2661390				4100
EW03	4297955				1640
EW04	866990				196
EW05	1971597				1888
EW06	340743				0
EW07	14522735				210
EW08	34493932				190
LS01	9095638				26
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/2/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	223960				262
EW01A	592357				317
EW02	2665490				847
EW03	4299595				7535
EW04	807186				469
EW05	1973485				2168
EW06	340743				3
EW07	14522945				289
EW08	34494112				322
LS01	9095664				4
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/7/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	224222				604
EW01A	592674				371
EW02	2666337				2373
EW03	4307130				4232
EW04	807655				210
EW05	1975653				1624
EW06	340746				511
EW07	14523234				275
EW08	34494434				231
LS01	9095668				50
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/9/12

Time	LCS System	Remarks (Reason for System on or off)
815	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	224826				152
EW01A	593045				158
EW02	2668710				2137
EW03	4311362				3169
EW04	8078665				154
EW05	1977277				2550
EW06	341257				15
EW07	14523509				168
EW08	34494665				124
LS01	9095718				2
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/14/12

Time	LCS System	Remarks (Reason for System on or off)
730	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	224978				231
EW01A	593203				260
EW02	2670847				2670
EW03	4314531				4805
EW04	808019				363
EW05	1979827				1310
EW06	341272				1
EW07	14523677				192
EW08	34494789				194
LS01	9095720				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/16/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	225209				288
EW01A	593463				258
EW02	2673517				1843
EW03	4319336				2802
EW04	808382				216
EW05	1981137				1689
EW06	341273				0
EW07	14523869				244
EW08	34494983				201
LS01	9095720				45
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/21/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	225497				281
EW01A	593721				85
EW02	2675360				3793
EW03	4322138				5440
EW04	8085998				474
EW05	1982826				3474
EW06	341273				0
EW07	14524113				214
EW08	34495184				178
LS01	9095765				27
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/23/12

Time	LCS System	Remarks (Reason for System on or off)
815	On or Off	SHIPPED 9500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	225778				230
EW01A	593806				232
EW02	2679153				1142
EW03	4327578				1889
EW04	809072				145
EW05	1986300				1525
EW06	341273				1
EW07	14524327				385
EW08	34495362				324
LS01	9095792				1
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 2/28/12

Time	LCS System	Remarks (Reason for System on or off)
815	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	226008				151
EW01A	594038				238
EW02	2680295				2499
EW03	4329467				4840
EW04	809217				408
EW05	1987825				3372
EW06	341274				0
EW07	14524712				165
EW08	34495686				178
LS01	9095793				3
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/1/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	226159				265
EW01A	594276				167
EW02	2682794				3900
EW03	4334307				4771
EW04	809625				356
EW05	199197				2952
EW06	341274				48
EW07	14524877				248
EW08	34495864				257
LS01	9095796				1
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/6/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 9500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	226424				190
EW01A	594443				151
EW02	2686694				2791
EW03	4339078				4977
EW04	809981				335
EW05	1994149				2566
EW06	341322				42
EW07	14525125				248
EW08	34496121				263
LS01	9095797				1
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/8/12

Time	LCS System	Remarks (Reason for System on or off)
825	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	226614				378
EW01A	594594				170
EW02	2689485				1751
EW03	43440055				3269
EW04	810316				180
EW05	1996715				1042
EW06	341364				23
EW07	14525373				18
EW08	34496384				224
LS01	9095798				1
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/13/12

Time	LCS System	Remarks (Reason for System on or off)
700A	On or Off	MW1 testing
8AM	On or Off	SHIPPED 9500
100pm	On or Off	compressor ON
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	226992				99
EW01A	594764				303
EW02	2691236				1686
EW03	4347324				2846
EW04	810496				264
EW05	1997757				239
EW06	341387				6
EW07	14525391				13
EW08	34496608				91
LS01	2095799				0
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/15/12

	Time	LCS System	Remarks (Reason for System on or off)
	100 pm	On or Off	Shipped 9000
(FRANK)	3/20/12	On or Off	Shipped 10,000
		On or Off	
		On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	227091				260
EW01A	595067				2569
EW02	2692922				6899
EW03	4350170				13062
EW04	810760				796
EW05	1997996				7670
EW06	341387				4
EW07	14525404				303
EW08	34496699				175
LS01	9095799				66
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/22/12

Time	LCS System	Remarks (Reason for System on or off)
615	On or Off	Shipped 2500
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	227351				231
EW01A	597636				943
EW02	2699821				2266
EW03	4363232				4258
EW04	811556				296
EW05	2005666				1546
EW06	341391				0
EW07	14525707				263
EW08	34496874				248
LS01	9095865				15622
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/27/12

Time	LCS System	Remarks (Reason for System on or off)
800 A	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	227582				231
EW01A	598579				943
EW02	2702087				2266
EW03	4367490				4258
EW04	811852				296
EW05	2007212				1546
EW06	341391				0
EW07	14525970				263
EW08	34497122				248
LS01	9111487				15622
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 3/29/12

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	Shipper 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	227843				261
EW01A	599010				431
EW02	2704374				2287
EW03	4371992				4502
EW04	812053				201
EW05	2008935				1723
EW06	341391				0
EW07	14526259				289
EW08	34497341				219
LS01	911.5032				3545
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/3/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	228147				308
EW01A	599244				230
EW02	2708392				188
EW03	4380883				122
EW04	812374				205
EW05	2010579				1442
EW06	341392				20
EW07	14526417				16
EW08	34497481				397
LS01	9118096				336
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/5/12

Time	LCS System	Remarks (Reason for System on or off)
800	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	2284955				184
EW01A	599474				633
EW02	2708580				2654
EW03	4381005				4675
EW04	812579				263
EW05	2012021				1400
EW06	341412				0
EW07	14526493				274
EW08	34497868				48
LS01	9121463				332
LS02					

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/10/12

Time	LCS System	Remarks (Reason for System on or off)
630	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	228639				146
EW01A	600107				442
EW02	2711234				2454
EW03	43856 80				3945
EW04	812842				264
EW05	2013421				1996
EW06	341412				0
EW07	14526767				15
EW08	34497916				98
LS01	9124131				833
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/12/12

Time	LCS System	Remarks (Reason for System on or off)
830	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	228785			173
EW01A	600549			748
EW02	2713688			2226
EW03	4389625			3675
EW04	813106			215
EW05	2015417			1827
EW06	341412			4
EW07	14526782			881
EW08	34498014			214
LS01	9124964			1163
LS02				

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/16/12

Time	LCS System	Remarks (Reason for System on or off)
8:15	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	228954			449
EW01A	601297			584
EW02	2715914			1649
EW03	4393300			2228
EW04	813321			226
EW05	2017244			1029
EW06	341416			0
EW07	14527663			167
EW08	34498228			264
LS01	9126127			1223
LS02				

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/17/12

Time	LCS System	Remarks (Reason for System on or off)
830	(On) or Off	Shipper 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values
EW01	229407			442
EW01A	601891			525
EW02	2717563			1487
EW03	4395528			3007
EW04	813547			176
EW05	2018273			2072
EW06	341416			0
EW07	14527830			47
EW08	34498492			293
LS01	9127350			1318
LS02				

LCS Holding Tank:

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

Time: ____ Depth of Fluid: ____ Volume of Liquid: ____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/19/12

Time	LCS System	Remarks (Reason for System on or off)
700	On or Off	SHIPPED 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	229849				151
EW01A	602406				694
EW02	2719050				1963
EW03	43985535				2885
EW04	813723				240
EW05	2020345				2242
EW06	341416				0
EW07	14527877				240
EW08	34498784				98
LS01	9128668				1153
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/24/12

Time	LCS System	Remarks (Reason for System on or off)
800	(On) or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	230000				152
EW01A	603100				339
EW02	2721013				2282
EW03	4401420				3551
EW04	813963				308
EW05	2022587				2366
EW06	341416				1
EW07	14528117				113
EW08	34498882				183
LS01	9129821				451
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

MONTGOMERY WATSON

SITE VISIT OPERATING LOG
BLACKWELL LANDFILL SITE

(Complete this form for every site visit to document operation of the leachate collection and LFG venting systems at the Blackwell Landfill Site.)

Monitored By: RAY Date: 4/26/12

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	Shipped 10,000
	On or Off	
	On or Off	
	On or Off	

I. Leachate Collection System (LCS)

Pump	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	Time: ____ Pump Stroke Counter Values	
EW01	230152				173
EW01A	603439				618
EW02	2723295				1819
EW03	4404971				2977
EW04	814271				260
EW05	2024953				2135
EW06	341417				0
EW07	14528230				296
EW08	34499065				144
LS01	9130272				341
LS02					

LCS Holding Tank:

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

Time: _____ Depth of Fluid: _____ Volume of Liquid: _____

APPENDIX A-2

Inspection Report Forms

MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 5/11/11 Time (start): 0710 Time (end): 1330

Monitored By: JUSTIN FINLER / TIM CARROLL

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North South East West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 70		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.79 or hPA:		

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	SYSTEM OFF FOR O+M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	203014	27,407	188994	30.32
EW01A	565279	76,313	085262	38.34
EW02	2549337	344,161	205976	59.28
EW03	4069100	549,329	654141	39.24
EW04	788943	106,508	364667	—
EW05	1847873	249,463	543808	79.15
EW06	340599	45,981	921676	41.74
EW07	4935405	662,280	862719	46.91
EW08	34465911	4,652,898	1292--	2.92
LS01	9093931	1,227,681	731496	—
LS023	367589	49,625	—	—

Building Inside Temperature (°F): 73 Heater Thermostat Setting (°F): OFF

Status of Intake Fan (circle one): On Off (AUTO @ 90°F)

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Gas Composition Readings
(with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.02	72.5	38.1	0.4	GOOD
EW01A	0.00	0.9	0.0	20.4	GOOD
EW02	0.00	73.6	38.4	0.6	GOOD
EW03	0.08	74.9	35.3	0.2	GOOD
EW04	0.06	75.8	31.8	0.2	GOOD
EW05	0.04	81.8	25.8	0.4	GOOD
EW06	0.82	72.7	36.0	0.2	GOOD
EW07	0.92	74.8	37.5	0.2	GOOD
EW08	0.00	65.8	33.8	2.0	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	384	76.87	64.8	32.3	1.8	68.8

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		SOME EROSIONAL RUTS NEAR EW-3
Vegetative Cover	✓		
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: LEACHATE LEVELS NOT COLLECTED AT SV-2, DV-6, AND DV-7 BECAUSE THESE VENTS WERE DRY.

Signature: [illegible]

Title: PROJECT SCIENTIST/GEOLOGIST

RHS/WGB/mbm/jmf
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2090764.018101

MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 7/13/11 Time (start): 0735 Time (end): 1315

Monitored By: JUSTIN FINCER / TED BOBAK

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 64		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.06 or hPA:		

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	FOR O&M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	211863	28,602	188994	25.24
EW01A	575211	77,654	095646	38.38
EW02	2575806	347,734	232221	72.04
EW03	4139258	558,800	729776	45.77
EW04	793163	107,078	371729	—
EW05	1874601	253,072	566226	71.15
EW06	340601	45,982	921676	41.51
EW07	4972031	671,225	898126	47.18
EW08	34484837	4,655,453	1292 --	7.13
LS01	9094157	1,227,712	734795	—
LS0~~1~~3	367848	49,660	—	—

Building Inside Temperature (°F): 70 Heater Thermostat Setting (°F): OFF

Status of Intake Fan (circle one): On Off AUTO

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
	Gas Composition Readings (with Portable Instrument)				
EW01	NM	NM	NM	NM	GOOD
EW01A	NM	NM	NM	NM	GOOD
EW02	NM	NM	NM	NM	GOOD
EW03	NM	NM	NM	NM	GOOD
EW04	NM	NM	NM	NM	GOOD
EW05	NM	NM	NM	NM	GOOD
EW06	NM	NM	NM	NM	GOOD
EW07	NM	NM	NM	NM	GOOD
EW08	NM	NM	NM	NM	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	388	77.68	NM	NM	NM	NM

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		ABUNDANT VEGETATION
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		ROADS WERE REGRADED BY V3 ON 6/23/11
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: LEACHATE LEVELS NOT COLLECTED AT SV-2, SV-7, DV-6, DV-7, AND DV-18 BECAUSE THESE VENTS WERE DRY.

Signature: [signature]

Title: GEOLOGIST / PROJECT SCIENTIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 9/7/11 Time (start): 0755 Time (end): 1415

Monitored By: JUSTIN FINCER / TED BOBAK

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 60		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.16	or hPA:	

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	SYSTEM OFF FOR O&M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	216682	29,252	188994	23.73
EW01A	584488	78,906	104225	38.41
EW02	2593381	350,106	249701	72.75
EW03	4171367	563,135	766523	45.81
EW04	796826	107,571	377738	—
EW05	1896244	255,993	585525	82.27
EW06	340625	45,984	921676	39.65
EW07	13796849	1,862,575	909695	46.28
EW08	34488621	4,655,964	1292 --	12.88
LS01	9094540	1,227,763	748067	—
LS0~~7~~ 3	368024	49,683	—	—

Building Inside Temperature (°F): 72 Heater Thermostat Setting (°F): OFF

Status of Intake Fan (circle one): On Off (AUTO @ 90°F)

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Location	Static Pressure (in. wc)	Gas Composition Readings (with Portable Instrument) Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.42	94.3	65.0	0.5	GOOD
EW01A	0.04	84.4	45.1	0.2	GOOD
EW02	0.26	92.9	60.7	0.4	GOOD
EW03	0.24	98.1	60.0	0.2	GOOD
EW04	0.05	99.6	50.3	0.2	GOOD
EW05	0.06	107.5	41.4	0.1	GOOD
EW06	1.20	94.7	59.1	0.0	GOOD
EW07	2.40	84.8	63.8	0.2	GOOD
EW08	0.00	66.5	43.2	5.0	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	396	79.28	72.7	45.5	3.8	67.9

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		VEGETATION IS ABUNDANT THROUGHOUT LANDFILL
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: LANDTEC GAS ANALYZER APPEARED TO BE MALFUNCTIONING. METHANE AND CARBON DIOXIDE CONCENTRATIONS WERE EXTREMELY HIGH AT SOME LOCATIONS AND TOTAL PERCENTAGES EXCEED 100%.

LEACHATE ELEVATIONS WERE NOT MEASURED AT SV-2, SV-7, DV-6, DV-7, AND DV-18 BECAUSE THESE VENTS WERE DRY.

AREA SURVEY WAS ON SITE TO SURVEY TOC ELEVATIONS FOR SV-8, SV-11, SV-12, DV-3, DV-10, DV-16, DV-17, AND MONITORING WELL G117.

Signature: [signature] Title: PROJECT SCIENTIST/GEOLOGIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 11/9/11 Time (start): 0735 Time (end): 1400

Monitored By: JUSTIN FINCK / TED BOBAK

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 86		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.69	or hPA:	

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	OFF FOR O&M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	219120	29,581	352345	27.65
EW01A	588497	79,447	114610	38.28
EW02	2614186	352,915	270343	55.15
EW03	4205060	567,683	803016	48.72
EW04	801129	108,152	384838	—
EW05	1926259	260,045	611429	76.75
EW06	340651	45,988	921676	25.66
EW07	14518235	1,959,962	914585	44.15
EW08	34490101	4,656,231	1292--	14.20
LS01	9094964	1,227,820	748607	—
LS03	368104	49,694	—	—

Building Inside Temperature (°F): 76 Heater Thermostat Setting (°F): 50

Status of Intake Fan (circle one): On Off (AUTO)

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Gas Composition Readings
(with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.28	57.1	32.7	0.5	GOOD
EW01A	0.00	0.0	0.1	18.8	GOOD
EW02	0.10	59.7	30.5	0.5	GOOD
EW03	1.00	59.8	29.9	0.1	GOOD
EW04	0.24	65.5	25.1	0.1	GOOD
EW05	0.10	68.5	23.0	0.3	GOOD
EW06	1.60	58.5	29.0	0.2	GOOD
EW07	3.80	58.7	30.7	0.3	GOOD
EW08	0.00	41.7	23.1	5.0	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	455	91.09	57.4	28.2	0.3	55.9

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		REPLACED NEW COMPRESSOR ON 11/1/11
Air Dryer	✓		NEW DRYER COMING WITHIN NEXT COUPLE WEEKS

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		
General Drainage	✓		

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: MEASUREMENTS NOT COLLECTED AT SV-1, SV-4, SV-8, DV-4, DV-6, DV-8, DV-9, DV-10, AND DV-11 DUE TO FLOODED VAULTS.

DEPTH TO LEACHATE MEASUREMENTS NOT COLLECTED AT SV-2, SV-7, AND DV-18 BECAUSE THESE LOCATIONS WERE DRY.

Signature: [signature]

Title: GEOLOGIST / PROJECT SCIENTIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 1/11/12 Time (start): 0745 Time (end): 1415

Monitored By: JUSTIN FINDER / TED BUBAK

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 67		
Barometric Pressure	Low	Moderate	High	In. Hg: 29.62 or hPA:		

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	O&M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	222823	30,081	406464	31.58
EW01A	591153	79,806	125937	38.36
EW02	2648848	357,594	304722	55.91
EW03	4278530	577,602	879123	41.52
EW04	805630	108,760	392765	—
EW05	1959494	264,532	636918	80.10
EW06	340727	45,998	921676	42.75
EW07	14521369	1,960,385	914594	41.45
EW08	34493062	4,656,563	1292--	6.00
LS01	9095301	1,227,866	748656	—
LS0~~2~~3	368105	49,694	—	—

Building Inside Temperature (°F): 76 Heater Thermostat Setting (°F): 50

Status of Intake Fan (circle one): On Off (Auto @ 90°F)

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Gas Composition Readings
(with Portable Instrument)

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
EW01	0.08	65.2	40.7	2.1	GOOD
EW01A	0.01	57.4	27.9	1.8	GOOD
EW02	0.04	65.8	39.2	0.0	GOOD
EW03	0.08	66.8	38.2	0.0	GOOD
EW04	0.00	69.0	31.1	0.0	GOOD
EW05	0.00	70.3	25.8	0.0	GOOD
EW06	3.00	66.5	39.0	0.0	GOOD
EW07	8.00	66.0	39.5	0.0	GOOD
EW08	0.00	61.1	35.7	0.9	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	300	60.06	65.0	35.0	0.0	47.2

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		
General Drainage	✓		SOME STANDING WATER AT BASE OF TUBE RUN

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: MEASUREMENTS NOT COLLECTED AT VENTS SV-4, SV-5, DV-8, AND DV-10 BECAUSE VAULT COVERS WERE FROZEN SHUT.

MEASUREMENTS NOT COLLECTED AT DV-9 BECAUSE VAULT WAS FLOODED.

Signature: [signature]

Title: PROJECT SCIENTIST / GEOLOGIST

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MWH
MONTGOMERY WATSON HARZA

INSPECTION REPORTING FORM
BLACKWELL LANDFILL SITE

Date: 3/13/12 Time (start): 0730 Time (end): 1230

Monitored By: JUSTIN FINCER / TED BOBAK

Conditions	Bright Sun	Clear	Partly Cloudy	Overcast	Heavy Clouds	
Temperature	<32	32-50	50-70	70-85	>85	
Wind	Still	Moderate	High	Direction (from): North/South/East/West		
Precipitation	None	Light	Moderate	Heavy	Rain	Snow
Humidity	Dry	Moderate	Humid	Relative %: 56		
Barometric Pressure	Low	Moderate	High	In. Hg: 30.03 or hPA:		

To obtain climatic weather information logon to http://www.wunderground.com.

I. Leachate Collection System (LCS): General

Time	LCS System	Remarks (Reason for System on or off)
	On or Off	OFF FOR O&M MONITORING
	On or Off	
	On or Off	
	On or Off	

Alarm Panel Alarms	Status (Circle One)		If Unsatisfactory, Explain
Tank Annular Space	Satisfactory	Unsatisfactory	
Leak Detection Riser	Satisfactory	Unsatisfactory	
Tank High Level (75%)	Satisfactory	Unsatisfactory	
Tank High Level (90%)	Satisfactory	Unsatisfactory	

Interlock Alarms	Status (Circle One)		If Unsatisfactory, Explain
Leak Detection	Satisfactory	Unsatisfactory	
High Level	Satisfactory	Unsatisfactory	
Air Dryer	Satisfactory	Unsatisfactory	
Compressor	Satisfactory	Unsatisfactory	

Pump	Control Building Pump Stroke Counter Values	Cumulative Pumped Volume in Gallons (Multiply by 0.135)	Extraction Vault Pump Stroke Counter Values	Depth to Leachate (ft)
EW01	227003	30,646	410186	27.98
EW01A	594764	80,294	142084	37.10
EW02	2691236	363,317	346964	53.25
EW03	4347324	586,889	948436	42.60
EW04	810496	109,417	400571	—
EW05	1997757	269,698	671123	65.96
EW06	341387	46,088	921676	35.41
EW07	14525391	1,960,928	914598	40.59
EW08	34496608	4,657,042	1292__	10.45
LS01	9095799	1,227,933	748691	—
LS0~~1~~3	368109	49,695	—	—

Building Inside Temperature (°F): 68 Heater Thermostat Setting (°F): 50

Status of Intake Fan (circle one): On Off (AUTO @ 70°F)

General Notes/Comments (building, tank risers, fence, etc.):

II. Landfill Gas (LFG) Venting System

Location	Static Pressure (in. wc)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Status of Wellhead Components and Vault Structures*
		Gas Composition Readings (with Portable Instrument)			
EW01	0.24	63.7	38.4	0.0	GOOD
EW01A	0.02	49.7	25.7	0.0	GOOD
EW02	0.08	64.4	37.3	0.0	GOOD
EW03	1.00	64.0	34.8	1.1	GOOD
EW04	0.08	66.5	29.1	0.0	GOOD
EW05	0.00	68.8	25.6	0.0	GOOD
EW06	1.80	65.2	35.4	0.0	GOOD
EW07	5.00	63.3	36.4	0.0	GOOD
EW08	0.00	59.8	34.1	0.6	GOOD

Location	LFG Velocity (fpm)	LFG Flow (cfm)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temperature (°F)
Vent Stack	250	64.69	62.4	33.4	1.2	47.0

To calculate LFG flow (cfm) multiply LFG velocity (fpm) by the inside cross-sectional area of the vent stack pipe.

III. System Integrity Status:

Leachate Collection System

Component	Satisfactory	Unsatisfactory	Remarks
Leachate Holding Tank	✓		
Leak Detection Riser	✓		
Leachate Loadout and Disposal	✓		
System Control and Telemetry	✓		
Wells/Pumps	✓		
Lift Station/Pumps	✓		
Compressor System	✓		
Air Dryer	✓		

Landfill Gas System

Component	Satisfactory	Unsatisfactory	Remarks
Vent Stack	✓		
Driplegs	✓		
Wells	✓		

Landfill Cap Repair Areas

Component	Satisfactory	Unsatisfactory	Remarks
Landfill Cap Soils	✓		
Vegetative Cover	✓		
General Drainage	✓		SOME STANDING WATER NORTH OF LANDFILL

Site Security

Component	Satisfactory	Unsatisfactory	Remarks
Access Roads Conditions	✓		
Site Fencing, Gates	✓		
Posted Sign and Notices	✓		

Additional Comments: MEASUREMENTS NOT COLLECTED AT DV-9 BECAUSE VAULT WAS FLOODED.

Signature: [illegible]

Title: PROJECT SCIENTIST/GEOLOGIST

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APPENDIX A-3

Maintenance and Repair Record Forms

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 6/14/11
Date Problem was Observed: 6/14/11

BRIEF DESCRIPTION OF PROBLEM

Pump in LS2 not working

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 6/14/11

MAINTENANCE or REPAIR PERFORMED

Pump float fixed

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 6/14/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/6/11
Date Problem was Observed: 10/6/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-1 out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/6/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-1

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/6/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/10/11
Date Problem was Observed: 10/10/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-1A out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/10/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-1A

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/10/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/12/11
Date Problem was Observed: 10/12/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-2 out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/12/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-2

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/12/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/17/11
Date Problem was Observed: 10/17/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-7 out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/17/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-7

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/17/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/18/11
Date Problem was Observed: 10/18/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-6 out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/18/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-6

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/18/11

BLACKWELL LANDFILL SITE
MAINTENANCE and REPAIR RECORD FORM

Inspector's Name: Ray Babowice
Date of the Record: 10/20/11
Date Problem was Observed: 10/20/11

BRIEF DESCRIPTION OF PROBLEM

Pump in EW-4 out for cleaning

Person or Contractor Completing Maintenance or Repair: Ray.

Completion Date: 10/20/11

MAINTENANCE or REPAIR PERFORMED

Installed a clean rebuilt pump in EW-4

VERIFICATION OF COMPLETION

Inspector's Name: Ray Babowice
Verification of Completion Date: 10/20/11

APPENDIX A-4

Leachate Disposal Logs

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	4/12/11	007814198 007814199	10,000	ADVanced	RAY	[signature]
	Comments					
2	4/14/11	007501958 007501959	10,000	ADVanced	RAY	[signature]
	Comments					
3	4/18/11	008477084	5000	ADVanced	RAY	[signature]
	Comments					
4	4/19/11	008217213	5000	ADVanced	RAY	[signature]
	Comments					
5	4/21/11	008217214	2600	ADVanced	RAY	[signature]
	Comments					
6	4/26/11	008475127 008475128	10,000	ADVanced	RAY	[signature]
	Comments					
7	4/28/11	008475161 008475162	10,000	ADVanced	RAY	[signature]
	Comments					
8	5/3/11	008475129 008475130	10,000	ADVanced	RAY	[signature]
	Comments					
9	5/5/11	007499650 007499651	10,000	ADVanced	RAY	[signature]
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	5/12/11	007002897 007002898	10,000	ADVanced	RAY	
	Comments					
2	5/17/11	007501510 007647949	10,000	ADVanced	RAY	
	Comments					
3	5/19/11	007814002 007814003	10,000	ADVanced	RAY	
	Comments					
4	5/24/11	007506147 007647975	10,000	ADVanced	RAY	
	Comments					
5	5/26/11	007506138 007506359	10,000	ADVanced	RAY	
	Comments					
6	5/31/11	00002742 007506139	10,000	ADVanced	RAY	
	Comments					
7	6/2/11	007499889 007499890	10,000	ADVanced	RAY	
	Comments					
8	6/7/11	007499891 007499892	10,000	ADVanced	RAY	
	Comments					
9	6/9/11	008433161 008433162	10,000	ADVanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	6/14/11	008433197 008433198	10,000	Advanced	RAY	
	Comments					
2	6/16/11	007648027 007648028	10,000	Advanced	RAY	
	Comments					
3	6/21/11	007814085 008433199	10,000	ADVANCED	DREW	
	Comments					
4	6/23/11	007814139 007814140	10,000	ADVANCED	DREW	
	Comments					
5	6/28/11	008433348 008433349	10,000	ADVANCED	DREW	
	Comments					
6	6/30/11	008433380 008433381	10,000	ADVANCED	RAY	
	Comments					
7	7/7/11	007814316 007814317	10,000	Advanced	RAY	
	Comments					
8	7/12/11	007814397	5000	ADVANCED	RAY	
	Comments					
9	7/14/11	008433269 007814398	10,000	Advanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	7/19/11	008433268 008433267	10,000	ADVANCED WASTE	DAN ZIMMER	Daniel J Zimmer
	Comments					
2	7/21/11	008433260	5000	ADVANCED	RAY BABOUCE	Ray Babouce
	Comments					
3	7/26/11	008433261 008433262	10,000	ADVANCED	RAY Babouce	Ray Babouce
	Comments					
4	7/28/11	008433263 008433264	10,000	ADVANCED	RAY Babouce	Ray Babouce
	Comments					
5	8/2/11	008433265 008433266	10,000	ADVANCED	RAY BABOUCE	Ray Babouce
	Comments					
6	8/4/11	008938028 008938022	10,000	ADVANCED	RAY BABOUCE	Ray Babouce
	Comments					
7	8/9/11	008938027	5000	ADVANCED	RAY BABOUCE	Ray Babouce
	Comments					
8	08/16/11	008938025 008938026	10,000	ADVANCED	DAN ZIMMER	Daniel J Zimmer
	Comments					
9	8/18/11	008938473 008938474	10,000	ADVANCED	DREW BERGENTHAL	Drew Bergenthal
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	8/23/11	008938023 008938024	10,000	Advanced	RAY	Ray Babo
	Comments					
2	8/25/11	008938298 008938299	10000	Advanced	RAY	Ray Babo
	Comments					
3	8/30/11	008938300 008938301	10,000	Advanced	RAY	Ray Babo
	Comments					
4	9/1/11	008938302 008938303	10,000	Advanced	RAY	Ray Babo
	Comments					
5	9/6/11	008938304	5500	Advanced	RAY	Ray Babo
	Comments					
6	9/8/11	008938326 008938327	10,000	Advanced	RAY	Ray Babo
	Comments					
7	9/13/11	008937168 008937169	10,000	Advanced	RAY	Ray Babo
	Comments					
8	9/15/11	008937170	5000	Advanced	RAY	Ray Babo
	Comments					
9	9/20/11	008937448 008937449	10,000	Advanced	RAY	Ray Babo
	Comments		50,500			

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	9/29/11	008937173	5000	ADVANCED	RAY	
	Comments		50,500 55,500			
2	10/4/11	008931718	5000	ADVANCED	FRANK	
	Comments					
3	10/6/11	008931719	5,000	ADVANCED	DREW	
	Comments					
4	10/11/11	008931801	5000	ADVANCED	RAY	
	Comments					
5	10/13/11	008931849 008931850	10,000	ADVANCED	RAY	
	Comments					
6	10/18/11	008937174 008937175	10,000	ADVANCED	RAY	
	Comments					
7	10/20/11	008937176 008937177	7500	ADVANCED	RAY	
	Comments					
8	10/25/11	008931972 008931973	10,000	ADVANCED	RAY	
	Comments					
9	10/27/11	008937550	5000	ADVANCED	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	11/1/11	008937549	5000	ADVanced	FRank (RAY)	
	Comments					
2	11/3/11	008937647	5000	ADVanced	RAY	
	Comments					
3	11/8/11	008937706	5000	ADVanced	RAY	
	Comments					
4	11/10/11	008931763	5000	ADVanced	RAY	
	Comments					
5	11/15/11	008931764 008937648	10,000	ADVanced	RAY	
	Comments					
6	11/17/11	008937811 008937812	10,000	ADVanced	RAY	
	Comments					
7	11/23/11	008937785	5000	ADVanced	FRANK	
	Comments					
8	11/29/11	009327006 009327007	10,0000	ADVand	RAY	
	Comments					
9	12/1/11	008937178 008937786	10,000	ADVanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	12/8/11	008937179	5000	ADvanced	RAY	[signature]
	Comments					
2	12/13/11	009404232	5000	ADVanced	RAY	[signature]
	Comments					
3	12/15/11	009404286 009404287	10,000	ADVANCED	RAY	[signature]
	Comments					
4	12/20/11	009404332 009404333	10,000	ADVANCED	RAY	[signature]
	Comments					
5	12/22/11	008937180 009404233	10,000	ADVANCED	RAY	[signature]
	Comments					
6	12/27/11		10,000	ADVANCED	DREW	DREW W. BERRENTHAL [signature]
	Comments					
7	12/29/11	008937183 008937184	10,000	ADVANCED	DAN ZINNEN	[signature]
	Comments					
8						
	Comments					
9						
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	1/3/12	008937185 008937186	10,000	ADVanced	RAY	
	Comments					
2	1/5/12	009404439 009404440	10,000	ADVanced	RAY	
	Comments					
3	1/12/12	009604514 009604515	10,000	ADVanced	RAY	
	Comments					
4	1/18/12	009604533 009604532	10,000	ADvanced	Frank	
	Comments					
5	1/19/12	009604577	5,000	Advanced	Frank	
	Comments					
6	1/24/12	009604659 009604660	10,000	ADVanced	RAY	
	Comments					
7	1/26/12	008937346 008937347	10,000	ADVanced	RAY	
	Comments					
8	1/31/12	008937348 008937449	10,000	ADVance	RAY	
	Comments					
9	2/2/12	008937504 008937505	10,000	ADVanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	2/7/12	009604790 009604791	10,000	ADVanced	RAY	
	Comments					
2	2/9/12	009604823 009604824	10,000	ADVanced	RAY	
	Comments					
3	2/14/12	009604578 009604691	10,000	ADVanced	RAY	
	Comments					
4	2/16/12	008937350 008937351	10,000	ADVanced	RAY	
	Comments					
5	2/21/12	009604904 009604905	10,000	ADVanced	RAY	
	Comments					
6	2/23/12	009604928 009604929	9500	ADVanced	RAY	
	Comments					
7	2/28/12	009604877 009604878	10,000	ADVanced	RAY	
	Comments					
8	3/1/12	008937187 008937359	10,000	ADVanced	RAY	
	Comments					
9	3/6/12	009604852 009604853	9500	ADVanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	3/8/12	008937352 008937353	10,000	ADVanced	RAY	
	Comments					
2	3/13/12	009602614 009602562	9500	ADVanced	RAY	
	Comments					
3	3/15/12	009602628 009602629	9000	ADVanced	RAY	
	Comments					
4	3/20/12	009602578 009602577	10,000	ADVanced	FRANK	
	Comments					
5	3/22/12	009602719	2500	ADVanced	RAY	
	Comments					
6	3/27/12	008937384 009602718	10,000	ADVanced	RAY	
	Comments					
7	3/29/12	009602760 009602759	10,000	ADVanced	RAY	
	Comments					
8	4/3/12	008937355 008937356	10,000	ADVanced	RAY	
	Comments					
9	4/5/12	009602856 009602857	10,000	ADVanced	RAY	
	Comments					

LEACHATE DISPOSAL LOG
BLACKWELL LANDFILL SITE

Item No.	Date	Waste Manifest Number	Total Quantity (gal)	Transporter Company Name	Generator Representative's Name	Generator Representative's Signature
1	4/10/12	009602887 009602888	10,000	ADVanced	RAY	
	Comments					
2	4/12/12	009602918 009602919	10,000	ADVanced	RAY	
	Comments					
3	4/16/12	009404371 009404372	10,000	ADVanced	RAY	
	Comments					
4	4/17/12	009602669 009602670	10,000	ADVanced	RAY	
	Comments					
5	4/19/12	009602990 009602991	10,000	ADVanced	RAY	
	Comments					
6	4/24/12	010223033 010223034	10,000	ADVanced	RAY	
	Comments					
7	4/26/12	010223049 010223050	10,000	ADVanced	RAY	
	Comments					
8	5/1/12	008937358 008937359	10,000	ADVanced	RAY	
	Comments					
9	5/3/12	010223116 010223117	9000	ADVanced	RAY	
	Comments					

APPENDIX A-5

Landfill Gas Vent Monitoring Forms

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 5/11/2011
Time: 0710 - 1330
Monitored By: JEF/TPC

Temperature(° F): 90
Humidity (%): 70%
Barometric Pressure (in. Hg): 29.79

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					$\%CH_4$	$\%CO_2$	$\%O_2$	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	5.08	734.31	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.71	741.33	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	11.80	729.56	0.9	0.1	20.2	0.172	1	0.023	0.024	0.00	95.0	
SV-5	725.74	27.00	4.15	721.59	3.4	0.9	19.8	0.172	0	0.000	0.000	0.00	92.8	
SV-6	760.46	45.70	31.76	728.70	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.22	729.79	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	723.03	25.20	4.32	718.71	2.2	0.5	20.4	0.172	1	0.023	0.024	0.00	78.0	
SV-9	748.77	50.00	34.34	714.43	56.7	30.7	3.6	0.172	15	0.349	0.362	0.90	81.4	
SV-11	807.38	91.40	70.80	736.58	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	823.82	83.80	62.23	761.59	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.29	36.75	15.27	734.02	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	17.89	705.36	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	11.97	708.38	40.5	21.7	8.2	0.172	67	1.560	1.619	0.03	73.7	
DV-6	775.56	68.25	32.57	742.99	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-7	829.62	86.90	81.72	747.90	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-8	728.73	27.60	1.86	726.87	5.6	1.8	18.7	0.336	5	0.442	0.458	0.00	92.6	
DV-9	723.56	22.40	1.30	722.26	1.6	0.3	20.2	0.336	3	0.265	0.275	0.00	96.0	
DV-10	765.05	67.40	43.57	721.48	1.3	0.3	20.4	0.336	4	0.353	0.367	0.00	95.1	
DV-11	753.50	34.75	0.10	753.40	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	23.17	723.12	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	10.71	727.51	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	33.24	702.93	35.7	18.2	10.1	0.336	26	2.297	2.383	0.02	76.4	
DV-16	733.85	34.00	16.83	717.02	71.8	35.9	0.2	0.336	94	8.306	8.615	1.90	75.2	
DV-17	729.07	37.20	2.61	726.46	6.9	2.4	19.0	0.336	5	0.442	0.458	0.00	76.2	
DV-18	775.13	54.20	16.77	758.36	73.6	36.2	0.2	0.336	62	5.478	5.682	0.90	87.1	
EW-1	753.98	43.85	30.32	723.66	72.5	38.1	0.4	NA	NA	NA	NA	0.02	85.4	Vault counter 188994
EW-1A	752.22	42.50	38.34	713.88	0.9	0.0	20.4	NA	NA	NA	NA	0.00	91.9	Vault counter 085262
EW-2	792.24	81.50	59.28	732.96	73.6	38.4	0.6	NA	NA	NA	NA	0.00	87.5	Vault counter 205976
EW-3	768.36	62.40	39.24	729.12	74.9	35.3	0.2	NA	NA	NA	NA	0.08	80.6	Vault counter 654141
EW-4	835.30	NA	NA	NA	75.8	31.8	0.2	NA	NA	NA	NA	0.06	70.4	Vault counter 364667
EW-5	808.92	89.90	79.15	729.77	81.8	25.8	0.4	NA	NA	NA	NA	0.04	81.6	Vault counter 543808
EW-6	764.73	64.60	41.74	722.99	72.7	36.0	0.2	NA	NA	NA	NA	0.82	65.9	Vault counter 921676
EW-7	772.83	63.10	46.91	725.92	74.8	37.5	0.2	NA	NA	NA	NA	0.92	62.6	Vault counter 862719
EW-8	756.16	43.70	2.92	753.24	65.8	33.8	2.0	NA	NA	NA	NA	0.00	89.5	Vault counter 1292__ Last 2 digits not readable
Main Vent					64.8	32.3	1.8	0.505	384	76.87	79.733	NA	68.8	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 96.41

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH_4	% CO_2	% O_2
LS01	NA	0.6	0.1	20.7

counter = 731496
pressure = 0.00
temperature = 79.0

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 7/13/2011
Time: 0735 - 1315
Monitored By: JEF/TJB

Temperature(° F): 77
Humidity (%): 64%
Barometric Pressure (in. Hg): 30.06

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					$\%CH_4$	$\%CO_2$	$\%O_2$	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	5.07	734.32	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.50	741.54	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	12.51	728.85	NM	NM	NM	0.172	NM	NM	NM	NM	NM	
SV-5	725.74	27.00	6.78	718.96	NM	NM	NM	0.172	NM	NM	NM	NM	NM	
SV-6	760.46	45.70	33.41	727.05	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.32	729.69	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-8	722.29	25.20	5.02	717.27	NM	NM	NM	0.172	NM	NM	NM	NM	NM	
SV-9	748.77	50.00	33.56	715.21	NM	NM	NM	0.172	NM	NM	NM	NM	NM	
SV-11	806.30	91.40	69.85	736.45	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	822.94	83.80	62.00	760.94	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.16	36.75	15.59	733.57	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	19.95	703.30	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	12.09	708.26	NM	NM	NM	0.172	NM	NM	NM	NM	NM	
DV-6	775.56	68.25	32.35	743.21	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-7	829.62	86.90	81.57	748.05	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-8	728.73	27.60	3.47	725.26	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-9	723.56	22.40	7.49	716.07	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-10	765.05	67.40	43.71	721.34	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-11	753.50	34.75	3.81	749.69	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	24.29	722.00	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	12.17	726.05	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	35.61	700.56	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-16	733.63	34.00	20.00	713.63	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-17	729.07	37.20	12.57	716.50	NM	NM	NM	0.336	NM	NM	NM	NM	NM	
DV-18	775.13	54.20	16.58	758.55	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Dry - elevation represents bottom of well
EW-1	753.98	43.85	25.24	728.74	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 188994
EW-1A	752.22	42.50	38.38	713.84	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 095646
EW-2	792.24	81.50	72.04	720.20	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 232221
EW-3	768.36	62.40	45.77	722.59	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 729776
EW-4	835.30	NA	NA	NA	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 371729
EW-5	808.92	89.90	71.15	737.77	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 566226
EW-6	764.73	64.60	41.51	723.22	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 921676
EW-7	772.83	63.10	47.18	725.65	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 898126
EW-8	756.16	43.70	7.13	749.03	NM	NM	NM	NA	NA	NA	NA	NM	NM	Vault counter 1292__ Last 2 digits not readable
Main Vent					NM	NM	NM	0.505	388	77.68	100.000	NA	NM	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 77.68

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH_4	% CO_2	% O_2
LS01	NA	NM	NM	NM

counter = 734795
pressure = NM
temperature = NM

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date
7) Casings for vents SV-8, SV-11, SV-12, DV-3, and DV-16 were cut down prior to July 2011 O&M Event. Vents were resurveyed on 09/07/11.

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 9/7/2011
Time: 0755 - 1415
Monitored By: JEF/TJB

Temperature(° F): 71
Humidity (%): 60%
Barometric Pressure (in. Hg): 30.16

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					%CH_4	%CO_2	%O_2	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	5.10	734.29	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.51	741.53	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	12.45	728.91	1.5	0.8	20.1	0.172	1	0.02	0.025	0.10	82.5	
SV-5	725.74	27.00	7.40	718.34	1.7	0.9	20.5	0.172	2	0.05	0.050	0.00	82.6	
SV-6	760.46	45.70	34.10	726.36	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.35	729.66	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-8	722.29	25.20	5.18	717.11	0.0	0.1	20.5	0.172	0	0.00	0.000	0.00	62.7	
SV-9	748.77	50.00	33.38	715.39	38.5	31.1	9.5	0.172	0	0.00	0.000	0.38	64.8	
SV-11	806.30	91.40	70.85	735.45	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	822.94	83.80	62.00	760.94	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.16	36.75	15.88	733.28	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	21.75	701.50	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	12.14	708.21	16.8	10.8	16.2	0.172	6	0.14	0.150	0.00	66.7	
DV-6	775.56	68.25	33.36	742.20	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-7	829.62	86.90	81.58	748.04	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-8	728.73	27.60	4.39	724.34	7.8	4.5	18.8	0.336	0	0.00	0.000	0.00	82.1	
DV-9	723.56	22.40	8.37	715.19	0.9	0.6	20.4	0.336	0	0.00	0.000	0.00	84.4	
DV-10	764.46	67.40	42.75	721.71	12.2	8.6	17.6	0.336	0	0.00	0.000	0.04	68.6	
DV-11	753.50	34.75	9.42	744.08	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	22.09	724.20	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	12.78	725.44	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	36.81	699.36	56.4	38.0	6.6	0.336	24	2.12	2.274	0.04	67.1	
DV-16	733.63	34.00	24.35	709.28	96.4	60.5	0.2	0.336	91	8.04	8.621	0.56	65.7	
DV-17	721.73	37.20	12.13	709.60	3.9	2.8	19.5	0.336	1	0.09	0.095	0.00	66.9	
DV-18	775.13	54.20	16.93	758.20	85.5	54.8	1.8	0.336	40	3.53	3.789	1.00	80.6	Dry - elevation represents bottom of well
EW-1	753.98	43.85	23.73	730.25	94.3	65.0	0.5	NA	NA	NA	NA	0.42	83.1	Vault counter 188994
EW-1A	752.22	42.50	38.41	713.81	84.4	45.1	0.2	NA	NA	NA	NA	0.04	81.5	Vault counter 104225
EW-2	792.24	81.50	72.75	719.49	92.9	60.7	0.4	NA	NA	NA	NA	0.26	70.2	Vault counter 249701
EW-3	768.36	62.40	45.81	722.55	98.1	60.0	0.2	NA	NA	NA	NA	0.24	80.0	Vault counter 766523
EW-4	835.30	NA	NA	NA	99.6	50.3	0.2	NA	NA	NA	NA	0.05	60.5	Vault counter 377738
EW-5	808.92	89.90	82.27	726.65	107.5	41.4	0.1	NA	NA	NA	NA	0.06	70.7	Vault counter 585525
EW-6	764.73	64.60	39.65	725.08	94.7	59.1	0.0	NA	NA	NA	NA	1.20	66.1	Vault counter 921676
EW-7	772.83	63.10	46.28	726.55	84.8	63.8	0.2	NA	NA	NA	NA	2.40	66.3	Vault counter 909695
EW-8	756.16	43.70	12.88	743.28	66.5	43.2	5.0	NA	NA	NA	NA	0.00	85.1	Vault counter 1292__ Last 2 digits not readable
Main Vent					72.7	45.5	3.8	0.505	396	79.28	84.997	NA	67.9	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 93.27

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH_4	% CO_2	% O_2
LS01	NA	0.4	8.5	18.7

counter = 748067
pressure = 0.00
temperature = 63.7

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date
7) Casing for vents DV-10 and DV-17 were cut down prior to the September 2011 O&M Event. Vents were resurveyed on 09/07/11.
8) Landtec Gas Analyzer appeared to be malfunctioning. Methane and carbon dioxide concentrations were extremely high at some locations, and total percentages exceeded 100%.

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 11/9/2011
Time: 0735 - 1400
Monitored By: JEF/TJB

Temperature(° F): 46
Humidity (%): 86%
Barometric Pressure (in. Hg): 29.69

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					$\%CH_4$	$\%CO_2$	$\%O_2$	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
SV-2	766.04	53.25	24.70	741.34	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to flooded vault
SV-5	725.74	27.00	1.43	724.31	0.2	0.2	19.2	0.172	0	0.00	0.000	0.00	51.9	
SV-6	760.46	45.70	33.55	726.91	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.50	729.51	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-8	722.29	25.20	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to flooded vault
SV-9	748.77	50.00	24.00	724.77	36.8	22.2	6.6	0.172	5	0.12	0.103	0.06	51.0	
SV-11	806.30	91.40	69.68	736.62	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	822.94	83.80	61.62	761.32	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.16	36.75	16.16	733.00	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-5	720.35	29.00	4.20	716.15	4.5	2.8	16.9	0.172	0	0.00	0.000	0.00	53.9	
DV-6	775.56	68.25	NM	NM	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-7	829.62	86.90	81.69	747.93	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-10	764.46	67.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-11	753.50	34.75	NM	NM	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Not measured due to flooded vault
DV-13	746.29	53.60	23.40	722.89	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	11.90	726.32	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	17.44	718.73	25.5	14.9	10.4	0.336	39	3.45	3.061	0.00	51.8	
DV-16	733.63	34.00	26.45	707.18	57.2	29.7	0.5	0.336	167	14.76	13.106	1.20	55.5	
DV-17	721.73	37.20	4.58	717.15	1.0	0.8	18.4	0.336	1	0.09	0.078	0.00	52.7	
DV-18	775.13	54.20	16.75	758.38	55.9	28.6	1.0	0.336	35	3.09	2.747	2.30	58.3	Dry - elevation represents bottom of well
EW-1	753.98	43.85	27.65	726.33	57.1	32.7	0.5	NA	NA	NA	NA	0.28	56.0	Vault counter 352345
EW-1A	752.22	42.50	38.28	713.94	0.0	0.1	18.8	NA	NA	NA	NA	0.00	48.5	Vault counter 114610
EW-2	792.24	81.50	55.15	737.09	59.7	30.5	0.5	NA	NA	NA	NA	0.10	50.5	Vault counter 270343
EW-3	768.36	62.40	48.72	719.64	59.8	29.9	0.1	NA	NA	NA	NA	1.00	58.6	Vault counter 803016
EW-4	835.30	NA	NA	NA	65.5	25.1	0.1	NA	NA	NA	NA	0.24	59.0	Vault counter 384838
EW-5	808.92	89.90	76.75	732.17	68.5	23.0	0.3	NA	NA	NA	NA	0.10	57.5	Vault counter 611429
EW-6	764.73	64.60	25.66	739.07	58.5	29.0	0.2	NA	NA	NA	NA	1.60	58.7	Vault counter 921676
EW-7	772.83	63.10	44.15	728.68	58.7	30.7	0.3	NA	NA	NA	NA	3.80	57.7	Vault counter 914585
EW-8	756.16	43.70	14.20	741.96	41.7	23.1	5.0	NA	NA	NA	NA	0.00	57.6	Vault counter 1292__ Last 2 digits not readable
Main Vent					57.4	28.2	0.3	0.505	455	91.09	80.904	NA	55.9	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 112.59

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	$\%CH_4$	$\%CO_2$	$\%O_2$
LS01	NA	0.3	2.3	18.1

counter = 748607
pressure = 0.00
temperature = 52.7

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date
7) Casing for vents DV-10 and DV-17 were cut down prior to the September 2011 O&M Event. Vents were resurveyed on 09/07/11.

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 1/11/2012
Time: 0745 - 1415
Monitored By: JEF/TJB

Temperature(° F): 39
Humidity (%): 67%
Barometric Pressure (in. Hg): 29.62

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					$\%CH_4$	$\%CO_2$	$\%O_2$	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	5.01	734.38	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.50	741.54	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-5	725.74	27.00	NM	NM	NM	NM	NM	0.172	NM	NM	NM	NM	NM	Not measured due to frozen vault
SV-6	760.46	45.70	32.35	728.11	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.28	729.73	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-8	722.29	25.20	2.12	720.17	1.5	0.7	21.4	0.172	5	0.12	0.144	0.00	66.4	
SV-9	748.77	50.00	32.91	715.86	52.9	32.2	2.7	0.172	15	0.35	0.433	0.04	65.4	
SV-11	806.30	91.40	70.60	735.70	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	822.94	83.80	61.90	761.04	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.16	36.75	15.77	733.39	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	20.76	702.49	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	6.98	713.37	14.6	7.3	16.7	0.172	0	0.00	0.000	0.00	65.5	
DV-6	775.56	68.25	30.22	745.34	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-7	829.62	86.90	81.50	748.12	NA	NA	NA	0.336	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
DV-8	728.73	27.60	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-10	764.46	67.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to frozen vault
DV-11	753.50	34.75	2.98	750.52	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	24.51	721.78	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	12.20	726.02	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	36.30	699.87	40.1	22.5	5.0	0.336	27	2.39	2.957	0.02	61.6	
DV-16	733.63	34.00	11.85	721.78	65.6	37.9	0.0	0.336	174	15.37	19.059	5.00	65.9	
DV-17	721.73	37.20	8.30	713.43	2.4	1.0	21.1	0.336	0	0.00	0.000	0.00	65.3	
DV-18	775.13	54.20	16.55	758.58	66.1	38.0	0.0	0.336	27	2.39	2.957	0.30	54.3	Dry - elevation represents bottom of well
EW-1	753.98	43.85	31.58	722.40	65.2	40.7	2.1	NA	NA	NA	NA	0.08	43.0	Vault counter 406464
EW-1A	752.22	42.50	38.36	713.86	57.4	27.9	1.8	NA	NA	NA	NA	0.01	45.0	Vault counter 125937
EW-2	792.24	81.50	55.91	736.33	65.8	39.2	0.0	NA	NA	NA	NA	0.04	44.0	Vault counter 304722
EW-3	768.36	62.40	41.52	726.84	66.8	38.2	0.0	NA	NA	NA	NA	0.08	55.5	Vault counter 879123
EW-4	835.30	NA	NA	NA	69.0	31.1	0.0	NA	NA	NA	NA	0.00	50.8	Vault counter 392765
EW-5	808.92	89.90	80.10	728.82	70.3	25.8	0.0	NA	NA	NA	NA	0.00	47.3	Vault counter 636918
EW-6	764.73	64.60	42.75	721.98	66.5	39.0	0.0	NA	NA	NA	NA	3.00	62.0	Vault counter 921676
EW-7	772.83	63.10	41.45	731.38	66.0	39.5	0.0	NA	NA	NA	NA	8.00	54.6	Vault counter 914594
EW-8	756.16	43.70	6.00	750.16	61.1	35.7	0.9	NA	NA	NA	NA	0.00	59.5	Vault counter 1292__ Last 2 digits not readable
Main Vent					65.0	35.0	0.0	0.505	300	60.06	74.449	NA	47.2	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 80.67

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	$\%CH_4$	$\%CO_2$	$\%O_2$
LS01	NA	0.7	1.6	21.1

counter = 748656
pressure = 0.00
temperature = 59.5

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date
7) Casing for vents DV-10 and DV-17 were cut down prior to the September 2011 O&M Event. Vents were resurveyed on 09/07/11.

Gas Vent Monitoring Form
Blackwell Landfill NPL Site, DuPage County, Illinois

Date: 3/13/2012
Time: 0730 - 1230
Monitored By: JEF/TJB

Temperature(° F): 69
Humidity (%): 56%
Barometric Pressure (in. Hg): 30.03

Vent Number	TOC Elevation	Measured Well Depth (feet)	Depth to Liquid (feet)	Liquid Elevation (feet)	Gas Readings			Vent Readings						NOTES
					$\%CH_4$	$\%CO_2$	$\%O_2$	I.D. (ft)	Velocity (fpm)	Volume (ft^3/min)	% of Total	Static Pressure (in. H_2O)	Temperature (°F)	
SV-1	739.39	16.00	5.40	733.99	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-2	766.04	53.25	24.70	741.34	NA	NA	NA	0.172	NA	NA	NA	NA	NA	Dry - elevation represents bottom of well
SV-4	741.36	27.15	11.28	730.08	1.1	0.3	21.3	0.172	0	0.00	0.000	0.02	72.1	
SV-5	725.74	27.00	1.45	724.29	0.3	0.0	21.2	0.172	0	0.00	0.000	0.00	71.3	
SV-6	760.46	45.70	33.29	727.17	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-7	781.01	64.70	51.45	729.56	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
SV-8	722.29	25.20	1.15	721.14	0.5	0.1	21.2	0.172	0	0.00	0.000	0.00	63.1	
SV-9	748.77	50.00	23.10	725.67	59.2	33.5	1.2	0.172	10	0.23	0.360	1.00	62.7	
SV-11	806.30	91.40	70.60	735.70	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
SV-12	822.94	83.80	52.41	770.53	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-3	749.16	36.75	16.50	732.66	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-4	723.25	27.10	20.60	702.65	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-5	720.35	29.00	8.09	712.26	11.4	6.0	17.4	0.172	4	0.09	0.144	0.00	60.8	
DV-6	775.56	68.25	26.68	748.88	NA	NA	NA	0.172	NA	NA	NA	NA	NA	
DV-7	829.62	86.90	78.53	751.09	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-8	728.73	27.60	1.29	727.44	0.4	0.0	20.9	0.336	0	0.00	0.000	0.00	68.8	
DV-9	723.56	22.40	NM	NM	NM	NM	NM	0.336	NM	NM	NM	NM	NM	Not measured due to flooded vault
DV-10	764.46	67.40	38.50	725.96	5.9	0.0	19.7	0.336	2	0.18	0.273	0.03	72.0	
DV-11	753.50	34.75	5.40	748.10	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-13	746.29	53.60	26.15	720.14	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-14	738.22	33.10	13.10	725.12	NA	NA	NA	0.336	NA	NA	NA	NA	NA	
DV-15	736.17	43.00	36.05	700.12	30.3	15.1	6.5	0.336	10	0.88	1.366	0.30	67.3	
DV-16	733.63	34.00	12.31	721.32	64.2	35.3	0.0	0.336	120	10.60	16.391	4.00	57.0	
DV-17	721.73	37.20	5.75	715.98	2.0	0.8	20.7	0.336	0	0.00	0.000	0.00	62.2	
DV-18	775.13	54.20	17.15	757.98	64.4	34.8	0.0	0.336	30	2.65	4.098	1.20	56.1	Dry - elevation represents bottom of well
EW-1	753.98	43.85	27.98	726.00	63.7	38.4	0.0	NA	NA	NA	NA	0.24	62.0	Vault counter 410186
EW-1A	752.22	42.50	37.10	715.12	49.7	25.7	0.0	NA	NA	NA	NA	0.02	63.5	Vault counter 142084
EW-2	792.24	81.50	53.25	738.99	64.4	37.3	0.0	NA	NA	NA	NA	0.08	59.8	Vault counter 346964
EW-3	768.36	62.40	42.60	725.76	64.0	34.8	1.1	NA	NA	NA	NA	1.00	53.2	Vault counter 948436
EW-4	835.30	NA	NA	NA	66.5	29.1	0.0	NA	NA	NA	NA	0.08	50.6	Vault counter 400571
EW-5	808.92	89.90	65.96	742.96	68.8	25.6	0.0	NA	NA	NA	NA	0.00	50.2	Vault counter 671123
EW-6	764.73	64.60	35.41	729.32	65.2	35.4	0.0	NA	NA	NA	NA	1.80	57.4	Vault counter 921676
EW-7	772.83	63.10	40.59	732.24	63.3	36.4	0.0	NA	NA	NA	NA	5.00	53.6	Vault counter 914598
EW-8	756.16	43.70	10.45	745.71	59.8	34.1	0.6	NA	NA	NA	NA	0.00	55.6	Vault counter 1292__ Last 2 digits not readable
Main Vent					62.4	33.4	1.2	0.505	250	50.05	77.368	NA	47.0	No static pressure because vent stack is open to the atmosphere No velocity in lift stations or extraction wells due to pipe size constrictions

TOTAL VOLUME (ft^3/min)= 64.69

**I.D. based on 2" Schedule 40 and 4" Schedule 40 PVC pipe
LFG is 6" Schedule 40 galvanized steel pipe based on As-Built drawing

	depth	% CH_4	% CO_2	% O_2
LS01	NA	0.3	0.0	21.2

counter = 748691
pressure = 0.00
temperature = 63.3

Notes:
1) TOC - Top of Casing (EW as of 05/09/07)
2) O_2 - Oxygen Percentage
3) CH_4 - Methane Percentage
4) CO_2 - Carbon Dioxide Percentage
5) NA - Not analyzed as part of O&M
6) NM - Not measured for specific date
7) Casing for vents DV-10 and DV-17 were cut down prior to the September 2011 O&M Event. Vents were resurveyed on 09/07/11.

APPENDIX B

LEACHATE ANALYTICAL RESULTS AND WASTE DISPOSAL PERMIT

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 0095-10 **PERMIT NO.:** 2010-EE-0095

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS **DATE ISSUED:** April 2, 2010
PREPARED BY: Forest Preserve District of DuPage County

SUBJECT: FOREST PRESERVE DISTRICT OF DUPAGE COUNTY - Blackwell Landfill -- Leachate Disposal -- Tributary to Wheaton Sanitary District STP

PERMITTEE TO OWN AND OPERATE

Forest Preserve District of DuPage County
3 South 580 Naperville Road
Wheaton, IL 60187-8761

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows:

Hauling via tanker truck of 10,000 gallons per day DMF (306 BOD_5 P.E.) of landfill leachate from Blackwell Forest Preserve Landfill for discharge into the headworks of Wheaton Sanitary District STP for treatment.

This operating permit expires on March 31, 2015.

This permit renews and replaces Permit Number 2005-EE-3767 which was previously issued for the herein permitted facilities.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: All sludges generated on-site shall be transported for disposal at an Illinois Environmental Protection Agency permitted facility using the Agency's Supplemental Permit and manifest system in accordance with the Environmental Protection Act. If the sludge is a hazardous waste, the generator must comply with all applicable requirements of 35 Ill. Adm. Code Parts 702, 703, 705 and 720 to 725.

SPECIAL CONDITION 2:

a. Liquids, solids, or gases which by reason of their nature or quantity may cause fire or explosion; or be injurious in any other way to sewers, treatment works, or cause a safety hazard to the personnel operating the treatment works, or cause the effluent from the treatment works to violate applicable effluent standards are prohibited;

b. Solid or viscous wastes which cause obstruction to the flow in sewers or other interference with the proper operation of any sewer or treatment works are prohibited.

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

SAK:MEL:009510.wpd

DIVISION OF WATER POLLUTION CONTROL

Alan Keller

Alan Keller, P.E.
Manager, Permit Section

cc: EPA - Des Plaines FOS
Wheaton Sanitary District
Records - Industrial
Binds

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 0095-10 PERMIT NO.: 2010-EE-0095

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS
PREPARED BY: Forest Preserve District of DuPage County

DATE ISSUED: April 2, 2010

SUBJECT: FOREST PRESERVE DISTRICT OF DUPAGE COUNTY - Blackwell Landfill -- Leachate Disposal -- Tributary to Wheaton Sanitary District STP

SPECIAL CONDITION 3: The issuance of this permit does not relieve the permittee of the responsibility of complying with 35 Ill. Adm. Code, Part 307 and/or the General Pretreatment Regulations (40 CFR 403) and any guidelines developed pursuant to Section 301, 306, or 307 of the Federal Clean Water Act of 1977.

SPECIAL CONDITION 4: The issuance of this permit does not relieve the permittee of the responsibility of complying with any limitations and provisions imposed by the Wheaton Sanitary District.

SPECIAL CONDITION 5: MONITORING AND REPORTING REQUIREMENTS

a. A representative truck load of leachate shall be sampled and analyzed prior to discharge into the Wheaton Sanitary District Sewage Treatment Plant for the following parameters on a quarterly basis (once every three months):

Arsenic	Nickel
Barium	pH
Boron	Phenols
Cadmium	Selenium
Chloride	Silver
Chromium (hexavalent)	Sulfate
Chromium (trivalent)	Zinc
Copper	BOD5
Cyanide	COD
Iron (total)	Oil and Grease
Lead	Ammonia (as N)
Manganese	Total Dissolved Solids
Mercury	Total Suspended Solids

The discharge shall also be sampled semiannually for organic toxic pollutants (Volatiles, Acid Compounds, Base/Neutrals, and Pesticides, as defined in 40 CFR 122).

b. Grab samples shall be utilized. Quarterly sampling shall be performed within the first two months of each quarter. Semiannual sampling shall be performed within the first five months of each six-month period. Test methods as described in 40 CFR 136 shall be utilized when analyzing wastewater.

c. Sampling results shall be submitted in the third month of each quarter to the Agency at the following addresses (semiannual sampling results shall be submitted upon your receipt):

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 East North Grand Avenue
P.O. Box 19276
Springfield, IL 62794-9276

Illinois Environmental Protection Agency
DWPC - Des Plaines Region
9511 West Harrison
Des Plaines, IL 60016

First Environmental Laboratories, Inc.

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

May 20, 2011

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell P.O.# 1007333.04811101
First Environmental File ID: 11-1946
Date Received: May 11, 2011

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002687: effective 03/01/2011 through 02/28/2012.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Stan Zaworski
Project Manager

First Environmental Laboratories, Inc.

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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O.# 1007333.04811101**

First Environmental File ID: **11-1946**

Date Received: **May 11, 2011**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	7:00
Sample ID:	Trip Blank	**Date Received:**	05/11/11
Sample No:	11-1946-001	**Date Reported:**	05/20/11

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 05/12/11				
Acetone	< 100	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	< 10.0	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	< 5.0	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte		Result	R.L.	Units	Flags
Chloride	**Method: 4500Cl, E**				
Analysis Date: 05/14/11					
Chloride		430	5	mg/L	
Cyanide, Total	**Method: 4500CN,C,E**				
Analysis Date: 05/16/11					
Cyanide, Total		0.006	0.005	mg/L	
COD	**Method: 5220D**				
Analysis Date: 05/16/11					
COD		947	10	mg/L	
Ammonia (as N)	**Method: 350.1R2.0**				
Analysis Date: 05/12/11					
Ammonia (as N)		89.8	0.10	mg/L	
pH @ 25°C	**Method: 4500H+,B**				
Analysis Date: 05/11/11 14:45					
pH @ 25°C		7.42		Units	
Phenols	**Method: 420.1**				
Analysis Date: 05/13/11					
Phenols		0.350	0.010	mg/L	
Sulfate	**Method: 375.2R2.0**				
Analysis Date: 05/13/11					
Sulfate		< 75	15	mg/L	W
Total Metals	**Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 05/13/11			Preparation Date: 05/11/11		
Arsenic		0.009	0.002	mg/L	
Barium		0.400	0.001	mg/L	
Cadmium		0.004	0.001	mg/L	
Chromium		< 0.001	0.001	mg/L	
Lead		0.012	0.002	mg/L	
Selenium		< 0.002	0.002	mg/L	
Silver		< 0.001	0.001	mg/L	
Boron		0.69	0.01	mg/L	
Copper		0.004	0.001	mg/L	
Iron		120	0.01	mg/L	
Manganese		0.629	0.001	mg/L	
Nickel		0.013	0.001	mg/L	
Zinc		1.84	0.005	mg/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte		Result	R.L.	Units	Flags
Total Metals	**Method: 7470A**				
Analysis Date: 05/16/11					
Mercury		< 0.0005	0.0005	mg/L	
Pesticides	**Method: 8081A**		**Preparation Method 3510C**		
Analysis Date: 05/18/11			Preparation Date: 05/13/11		
Aldrin		< 0.05	0.05	ug/L	
alpha-BHC		< 0.05	0.05	ug/L	
beta-BHC		< 0.05	0.05	ug/L	
delta-BHC		< 0.05	0.05	ug/L	
gamma-BHC (Lindane)		< 0.05	0.05	ug/L	
alpha-Chlordane		< 0.50	0.50	ug/L	
gamma-Chlordane		< 0.50	0.50	ug/L	
4,4'-DDD		< 0.10	0.10	ug/L	
4,4'-DDE		< 0.10	0.10	ug/L	
4,4'-DDT		< 0.10	0.10	ug/L	
Dieldrin		< 0.10	0.10	ug/L	
Endosulfan I		< 0.05	0.05	ug/L	
Endosulfan II		< 0.10	0.10	ug/L	
Endosulfan sulfate		< 0.10	0.10	ug/L	
Endrin		< 0.10	0.10	ug/L	
Endrin aldehyde		< 0.10	0.10	ug/L	
Endrin ketone		< 0.10	0.10	ug/L	
Heptachlor		< 0.05	0.05	ug/L	
Heptachlor epoxide		< 0.05	0.05	ug/L	
Methoxychlor		< 0.50	0.50	ug/L	
Toxaphene		< 1.0	1.0	ug/L	
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3510C**		
Analysis Date: 05/16/11			Preparation Date: 05/16/11		
Acenaphthene		< 10	10	ug/L	
Acenaphthylene		< 10	10	ug/L	
Anthracene		< 10	10	ug/L	
Benzidine		< 10	10	ug/L	
Benzo(a)anthracene		< 10	10	ug/L	
Benzo(a)pyrene		< 10	10	ug/L	
Benzo(b)fluoranthene		< 10	10	ug/L	
Benzo(ghi)perylene		< 10	10	ug/L	
Benzo(k)fluoranthene		< 10	10	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3510C**		
Analysis Date: 05/16/11		Preparation Date: 05/16/11		
Benzoic acid	260	50	ug/L	
Benzyl alcohol	< 20	20	ug/L	
bis(2-Chloroethoxy)methane	< 10	10	ug/L	
bis(2-Chloroethyl)ether	< 10	10	ug/L	
bis(2-Chloroisopropyl)ether	< 10	10	ug/L	
bis(2-Ethylhexyl)phthalate	< 5	5	ug/L	
4-Bromophenyl phenyl ether	< 10	10	ug/L	
Butyl benzyl phthalate	< 10	10	ug/L	
Carbazole	< 10	10	ug/L	
4-Chloroaniline	< 10	10	ug/L	
4-Chloro-3-methylphenol	< 20	20	ug/L	
2-Chloronaphthalene	< 10	10	ug/L	
2-Chlorophenol	< 10	10	ug/L	
4-Chlorophenyl phenyl ether	< 10	10	ug/L	
Chrysene	< 10	10	ug/L	
Di-n-butyl phthalate	< 10	10	ug/L	
Di-n-octylphthalate	< 10	10	ug/L	
Dibenzo(a,h)anthracene	< 10	10	ug/L	
Dibenzofuran	< 10	10	ug/L	
1,2-Dichlorobenzene	< 10	10	ug/L	
1,3-Dichlorobenzene	< 10	10	ug/L	
1,4-Dichlorobenzene	< 10	10	ug/L	
3,3'-Dichlorobenzidine	< 20	20	ug/L	
2,4-Dichlorophenol	< 10	10	ug/L	
Diethyl phthalate	< 10	10	ug/L	
2,4-Dimethylphenol	15	10	ug/L	
Dimethyl phthalate	< 10	10	ug/L	
4,6-Dinitro-2-methylphenol	< 50	50	ug/L	
2,4-Dinitrophenol	< 10	10	ug/L	
2,4-Dinitrotoluene	< 10	10	ug/L	
2,6-Dinitrotoluene	< 10	10	ug/L	
Fluoranthene	< 10	10	ug/L	
Fluorene	< 10	10	ug/L	
Hexachlorobenzene	< 10	10	ug/L	
Hexachlorobutadiene	< 10	10	ug/L	
Hexachlorocyclopentadiene	< 10	10	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3510C**		
Analysis Date: 05/16/11		Preparation Date: 05/16/11		
Hexachloroethane	< 5	5	ug/L	
Indeno(1,2,3-cd)pyrene	< 10	10	ug/L	
Isophorone	< 10	10	ug/L	
2-Methylnaphthalene	< 10	10	ug/L	
2-Methylphenol	< 10	10	ug/L	
3 & 4-Methylphenol	188	10	ug/L	
Naphthalene	< 10	10	ug/L	
2-Nitroaniline	< 50	50	ug/L	
3-Nitroaniline	< 50	50	ug/L	
4-Nitroaniline	< 20	20	ug/L	
Nitrobenzene	< 10	10	ug/L	
2-Nitrophenol	< 10	10	ug/L	
4-Nitrophenol	< 50	50	ug/L	
n-Nitrosodimethylamine	< 10	10	ug/L	
n-Nitrosodi-n-propylamine	< 10	10	ug/L	
n-Nitrosodiphenylamine	< 10	10	ug/L	
Pentachlorophenol	< 10	10	ug/L	
Phenanthrene	< 10	10	ug/L	
Phenol	24	10	ug/L	
Pyrene	< 10	10	ug/L	
1,2,4-Trichlorobenzene	< 10	10	ug/L	
2,4,5-Trichlorophenol	< 10	10	ug/L	
2,4,6-Trichlorophenol	< 10	10	ug/L	
Volatile Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 05/16/11				
Acetone	220	100	ug/L	
Benzene	6.4	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	768	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	33.6	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 05/16/11				
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	20.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	12.2	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	13.0	5.0	ug/L	
BOD, 5 Day **Method: 5210B**				
Analysis Date: 05/13/11 15:00				
BOD, 5 Day	625	1	mg/L	
Oil & Grease **Method: 1664A**				
Analysis Date: 05/16/11				
Oil & Grease	31	1	mg/L	
Total Dissolved Solids **Method: 2540C**				
Analysis Date: 05/17/11				
Total Dissolved Solids	2,280	10	mg/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	05/11/11
Project ID:	Blackwell P.O.# 1007333.04811101	**Time Collected:**	8:50
Sample ID:	BW-LCS-55	**Date Received:**	05/11/11
Sample No:	11-1946-002	**Date Reported:**	05/20/11

Analyte		Result	R.L.	Units	Flags
Total Suspended Solids	**Method: 2540D**				
Analysis Date: 05/14/11					
Total Suspended Solids		4,450	1	mg/L	

CHAIN OF CUSTODY RECORD

Page 1 of 1 pgs

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E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: MWH
Street Address: 175 W. JACKSON BLVD, SUITE 1900
City: CHICAGO State: IL Zip: 60604
Phone: (312) 831-3000 Fax: (312) 831-3999 e-mail: JUSTIN.E.FINGER@MWHGLOBAL.COM
Send Report To: JUSTIN FINGER Via: Fax ☐ e-mail ☒
Sampled By: JUSTIN FINGER / TIM CARROLL

Project I.D.: BLACKWELL
P.O. #.: 1007333.04811101

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	VOCs	ARSENIC, BARIUM, BORON, CADMIUM, CHLORIDE	CHROMIUM (TOTAL), COPPER, CYANIDE	IRON (TOTAL), LEAD, MANGANESE, MERCURY	NICKEL, PH, PHENOLS, SELENIUM, SILVER, SULFATE	ZINC, BOD, COD, OIL + GREASE, AMMONIA (AS N)	TDS, TSS, ACID COMPOUNDS	BASE/NEUTRALS, PESTICIDES	Comments	Lab I.D.
5/11/11 0700	TRIP BLANK	W	X									11-1946-001
5/11/11 0850	BW-LCS-55	W	X	X	X	X	X	X	X	X		

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6ºC Yes__ No.__ 4 ºC
Received within 6 hrs. of collection: ✓
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:_____ºC
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____ºC

Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 5/11/11 0930 Received By: L. Faanlgt Date/Time 05/11/11 0930a
Relinqu By: Date/Time F ed By: Date/Time

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July 21, 2011

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell P.O. # 1007333.04811201
First Environmental File ID: 11-2981
Date Received: July 13, 2011

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002687: effective 03/01/2011 through 02/28/2012.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Lorrie Franklin

Lorrie Franklin
Project Manager

First Environmental Laboratories, Inc.

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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O. # 1007333.04811201**

First Environmental File ID: **11-2981**

Date Received: **July 13, 2011**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	07/13/11
Project ID:	Blackwell P.O. # 1007333.04811201	**Time Collected:**	9:15
Sample ID:	BW-LCS-56	**Date Received:**	07/13/11
Sample No:	11-2981-001	**Date Reported:**	07/21/11

Analyte		Result	R.L.	Units	Flags
Total Mercury	**Method: 7470A**				
Analysis Date: 07/15/11					
Mercury		< 0.0005	0.0005	mg/L	
Total Metals	**Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 07/14/11			Preparation Date: 07/14/11		
Arsenic		< 0.002	0.002	mg/L	
Barium		0.404	0.001	mg/L	
Cadmium		< 0.001	0.001	mg/L	
Chromium		0.001	0.001	mg/L	
Lead		< 0.002	0.002	mg/L	
Selenium		< 0.002	0.002	mg/L	
Silver		< 0.001	0.001	mg/L	
Boron		0.68	0.01	mg/L	
Copper		< 0.001	0.001	mg/L	
Iron		42.1	0.01	mg/L	
Manganese		0.601	0.001	mg/L	
Nickel		0.015	0.001	mg/L	
Zinc		0.457	0.005	mg/L	
Phenols	**Method: 420.1**				
Analysis Date: 07/15/11					
Phenols		0.170	0.010	mg/L	
Total Suspended Solids	**Method: 2540D**				
Analysis Date: 07/14/11					
Total Suspended Solids		70	1	mg/L	
Total Dissolved Solids	**Method: 2540C**				
Analysis Date: 07/14/11					
Total Dissolved Solids		1,800	10	mg/L	
pH @ 25°C	**Method: 4500H+,B**				
Analysis Date: 07/13/11 16:10					
pH @ 25°C		7.02		Units	
COD	**Method: 5220D**				
Analysis Date: 07/14/11					
COD		672	10	mg/L	
BOD, 5 Day	**Method: 5210B**				
Analysis Date: 07/13/11 15:00					
BOD, 5 Day		359	1	mg/L	

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Analytical Report

Client: MONTGOMERY WATSON HARZA
Project ID: Blackwell P.O. # 1007333.04811201
Sample ID: BW-LCS-56
Sample No: 11-2981-001

Date Collected: 07/13/11
Time Collected: 9:15
Date Received: 07/13/11
Date Reported: 07/21/11

Analyte		Result	R.L.	Units	Flags
Oil & Grease	**Method: 1664A**				
Analysis Date: 07/20/11					
Oil & Grease		< 1	1	mg/L	
Ammonia (as N)	**Method: 350.1R2.0**				
Analysis Date: 07/14/11					
Ammonia (as N)		55.3	0.10	mg/L	
Cyanide, Total	**Method: 4500CN,C,E**				
Analysis Date: 07/15/11					
Cyanide, Total		< 0.005	0.005	mg/L	
Chloride	**Method: 4500Cl, C**				
Analysis Date: 07/14/11					
Chloride		280	5	mg/L	
Sulfate	**Method: 4500S04,E**				
Analysis Date: 07/14/11					
Sulfate		< 75	15	mg/L	W N

CHAIN OF CUSTODY RECORD

First Environmental Laboratories, Inc.

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E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: MWH
Street Address: 175 W. JACKSON BLVD, SUITE 1900
City: CHICAGO State: IL Zip: 60604
Phone: (312) 831-3447 Fax: (312) 831-3999 e-mail: JUSTIN.E.FINGER@MWHGLOBAL.COM
Send Report To: JUSTIN FINGER Via: Fax ☐ e-mail ☒
Sampled By: JUSTIN FINGER / TED BOBAK

Project I.D.: BLACKWELL
P.O. #.: 1007333.04811201

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	Arsenic, Barium, Boron, Cadmium, Chloride, Chromium (total), Copper, Cyanide, Iron (total), Lead, Manganese, Mercury, Nickel, pH, Phenols, Selenium, Silver, Sulfate, Zinc, BOD, COD, Oil and Grease, Ammonia (as N),	Total Dissolved Solids	Total Suspended Solids	Comments	Lab I.D.
7/13/11 0915	BW-LCS-56	W	X	X	X		11-2981-001

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ✓ No.__ _____°C
Received within 6 hrs. of collection:_____
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:_____°C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____°C

Containers Received Preserved: ☑ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 7/13/11 11:15 Received By: [signature] Date/Time 7/13/11 1115
Relinquished By:_____ Date/Time_____ Received By:_____ Date/Time_____

Rev. 9/08

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November 18, 2011

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell P.O.# 1007333.04811201
First Environmental File ID: 11-5021
Date Received: November 09, 2011

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002687: effective 03/01/2011 through 02/28/2012.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Bill Mottashed
Project Manager

First Environmental Laboratories, Inc.

IL ELAP / NELAC Accreditation # 100292

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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O.# 1007333.04811201**

First Environmental File ID: **11-5021**

Date Received: **November 09, 2011**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333:04811201	**Time Collected:**	9:30
Sample ID:	Trip Blank	**Date Received:**	11/09/11
Sample No:	11-5021-001	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 11/15/11				
Acetone	< 100	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	< 10.0	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	< 5.0	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Phenols	< 0.05	0.05	mg/L	11/14/11	420.1	
Total Suspended Solids	49	1	mg/L	11/10/11	2540D	
Total Dissolved Solids	1,500	10	mg/L	11/15/11	2540C	
pH @ 25°C	7.53		Units	11/09/11 16:00	4500H+,B	
COD	241	10	mg/L	11/10/11	5220D	
BOD, 5 Day	104	1	mg/L	11/09/11 15:30	5210B	
Oil & Grease	< 1	1	mg/L	11/14/11	1664A	
Ammonia (as N)	48.3	0.10	mg/L	11/15/11	350.1R2.0	
Cyanide, Total	< 0.005	0.005	mg/L	11/14/11	4500CN,C,E	
Chloride	230	5	mg/L	11/17/11	4500Cl, E	
Sulfate	< 75	15	mg/L	11/11/11	375.2R2.0	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5030B/8260B**				
Analysis Date: 11/15/11				
Acetone	122	100	ug/L	
Benzene	< 5.0	5.0	ug/L	
Bromodichloromethane	< 1.0	1.0	ug/L	
Bromoform	< 1.0	1.0	ug/L	
Bromomethane	< 5.0	5.0	ug/L	
2-Butanone (MEK)	127	10.0	ug/L	
Carbon disulfide	< 5.0	5.0	ug/L	
Carbon tetrachloride	< 5.0	5.0	ug/L	
Chlorobenzene	13.4	5.0	ug/L	
Chlorodibromomethane	< 1.0	1.0	ug/L	
Chloroethane	< 10.0	10.0	ug/L	
Chloroform	< 1.0	1.0	ug/L	
Chloromethane	< 10.0	10.0	ug/L	
1,1-Dichloroethane	< 5.0	5.0	ug/L	
1,2-Dichloroethane	< 5.0	5.0	ug/L	
1,1-Dichloroethene	< 5.0	5.0	ug/L	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/L	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/L	
1,2-Dichloropropane	< 5.0	5.0	ug/L	
cis-1,3-Dichloropropene	< 1.0	1.0	ug/L	
trans-1,3-Dichloropropene	< 1.0	1.0	ug/L	
Ethylbenzene	< 5.0	5.0	ug/L	
2-Hexanone	< 10.0	10.0	ug/L	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/L	
4-Methyl-2-pentanone (MIBK)	13.2	10.0	ug/L	
Methylene chloride	< 5.0	5.0	ug/L	
Styrene	< 5.0	5.0	ug/L	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/L	
Tetrachloroethene	< 5.0	5.0	ug/L	
Toluene	< 5.0	5.0	ug/L	
1,1,1-Trichloroethane	< 5.0	5.0	ug/L	
1,1,2-Trichloroethane	< 5.0	5.0	ug/L	
Trichloroethene	< 5.0	5.0	ug/L	
Vinyl acetate	< 10.0	10.0	ug/L	
Vinyl chloride	< 2.0	2.0	ug/L	
Xylene, Total	< 5.0	5.0	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3510C**		
Analysis Date: 11/11/11		Preparation Date: 11/10/11		
Acenaphthene	< 10	10	ug/L	
Acenaphthylene	< 10	10	ug/L	
Anthracene	< 10	10	ug/L	
Benzidine	< 10	10	ug/L	
Benzo(a)anthracene	< 10	10	ug/L	
Benzo(a)pyrene	< 10	10	ug/L	
Benzo(b)fluoranthene	< 10	10	ug/L	
Benzo(ghi)perylene	< 10	10	ug/L	
Benzo(k)fluoranthene	< 10	10	ug/L	
Benzoic acid	< 50	50	ug/L	
Benzyl alcohol	< 20	20	ug/L	
bis(2-Chloroethoxy)methane	< 10	10	ug/L	
bis(2-Chloroethyl)ether	< 10	10	ug/L	
bis(2-Chloroisopropyl)ether	< 10	10	ug/L	
bis(2-Ethylhexyl)phthalate	< 5	5	ug/L	
4-Bromophenyl phenyl ether	< 10	10	ug/L	
Butyl benzyl phthalate	< 10	10	ug/L	
Carbazole	< 10	10	ug/L	
4-Chloroaniline	< 10	10	ug/L	
4-Chloro-3-methylphenol	< 20	20	ug/L	
2-Chloronaphthalene	< 10	10	ug/L	
2-Chlorophenol	< 10	10	ug/L	
4-Chlorophenyl phenyl ether	< 10	10	ug/L	
Chrysene	< 10	10	ug/L	
Di-n-butyl phthalate	< 10	10	ug/L	
Di-n-octylphthalate	< 10	10	ug/L	
Dibenzo(a,h)anthracene	< 10	10	ug/L	
Dibenzofuran	< 10	10	ug/L	
1,2-Dichlorobenzene	< 10	10	ug/L	
1,3-Dichlorobenzene	< 10	10	ug/L	
1,4-Dichlorobenzene	< 10	10	ug/L	
3,3'-Dichlorobenzidine	< 20	20	ug/L	
2,4-Dichlorophenol	< 10	10	ug/L	
Diethyl phthalate	< 10	10	ug/L	
2,4-Dimethylphenol	< 10	10	ug/L	
Dimethyl phthalate	< 10	10	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3510C**		
Analysis Date: 11/11/11		Preparation Date: 11/10/11		
4,6-Dinitro-2-methylphenol	< 50	50	ug/L	
2,4-Dinitrophenol	< 10	10	ug/L	
2,4-Dinitrotoluene	< 10	10	ug/L	
2,6-Dinitrotoluene	< 10	10	ug/L	
Fluoranthene	< 10	10	ug/L	
Fluorene	< 10	10	ug/L	
Hexachlorobenzene	< 10	10	ug/L	
Hexachlorobutadiene	< 10	10	ug/L	
Hexachlorocyclopentadiene	< 10	10	ug/L	
Hexachloroethane	< 5	5	ug/L	
Indeno(1,2,3-cd)pyrene	< 10	10	ug/L	
Isophorone	< 10	10	ug/L	
2-Methylnaphthalene	< 10	10	ug/L	
2-Methylphenol	< 10	10	ug/L	
3 & 4-Methylphenol	37	10	ug/L	
Naphthalene	< 10	10	ug/L	
2-Nitroaniline	< 50	50	ug/L	
3-Nitroaniline	< 50	50	ug/L	
4-Nitroaniline	< 20	20	ug/L	
Nitrobenzene	< 10	10	ug/L	
2-Nitrophenol	< 10	10	ug/L	
4-Nitrophenol	< 50	50	ug/L	
n-Nitrosodimethylamine	< 10	10	ug/L	
n-Nitrosodi-n-propylamine	< 10	10	ug/L	
n-Nitrosodiphenylamine	< 10	10	ug/L	
Pentachlorophenol	< 10	10	ug/L	
Phenanthrene	< 10	10	ug/L	
Phenol	< 10	10	ug/L	
Pyrene	< 10	10	ug/L	
1,2,4-Trichlorobenzene	< 10	10	ug/L	
2,4,5-Trichlorophenol	< 10	10	ug/L	
2,4,6-Trichlorophenol	< 10	10	ug/L	
Pesticides **Method: 8081A**		**Preparation Method 3510C**		
Analysis Date: 11/11/11		Preparation Date: 11/10/11		
Aldrin	< 0.05	0.05	ug/L	
alpha-BHC	< 0.05	0.05	ug/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Pesticides **Method: 8081A**		**Preparation Method 3510C**		
Analysis Date: 11/11/11		Preparation Date: 11/10/11		
beta-BHC	< 0.05	0.05	ug/L	
delta-BHC	< 0.05	0.05	ug/L	
gamma-BHC (Lindane)	< 0.05	0.05	ug/L	
alpha-Chlordane	< 0.50	0.50	ug/L	
gamma-Chlordane	< 0.50	0.50	ug/L	
4,4'-DDD	< 0.10	0.10	ug/L	
4,4'-DDE	< 0.10	0.10	ug/L	
4,4'-DDT	< 0.10	0.10	ug/L	
Dieldrin	< 0.10	0.10	ug/L	
Endosulfan I	< 0.05	0.05	ug/L	
Endosulfan II	< 0.10	0.10	ug/L	
Endosulfan sulfate	< 0.10	0.10	ug/L	
Endrin	< 0.10	0.10	ug/L	
Endrin aldehyde	< 0.10	0.10	ug/L	
Endrin ketone	< 0.10	0.10	ug/L	
Heptachlor	< 0.05	0.05	ug/L	
Heptachlor epoxide	< 0.05	0.05	ug/L	
Methoxychlor	< 0.50	0.50	ug/L	
Toxaphene	< 1.0	1.0	ug/L	
Total Mercury **Method: 7470A**				
Analysis Date: 11/14/11				
Mercury	< 0.0005	0.0005	mg/L	
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 11/16/11		Preparation Date: 11/10/11		
Arsenic	< 0.002	0.002	mg/L	
Barium	0.324	0.001	mg/L	
Cadmium	< 0.001	0.001	mg/L	
Chromium	< 0.001	0.001	mg/L	
Lead	< 0.002	0.002	mg/L	
Selenium	< 0.002	0.002	mg/L	
Silver	< 0.001	0.001	mg/L	
Boron	0.69	0.01	mg/L	
Copper	< 0.001	0.001	mg/L	
Iron	20.9	0.01	mg/L	
Manganese	0.399	0.001	mg/L	

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	11/09/11
Project ID:	Blackwell P.O.# 1007333.04811201	**Time Collected:**	9:50
Sample ID:	BW-LCS-57	**Date Received:**	11/09/11
Sample No:	11-5021-002	**Date Reported:**	11/18/11

Analyte	Result	R.L.	Units	Flags
Total Metals **Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 11/16/11		Preparation Date: 11/10/11		
Nickel	0.006	0.001	mg/L	
Zinc	0.054	0.005	mg/L	

CHAIN OF CUSTODY RECORD

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E-mail: firstinfo@firstenv.com
IEPA Certification #100292

Company Name: MWH
Street Address: 175 W. JACKSON BLVD, SUITE 1900
City: CHICAGO State: IL Zip: 60604
Phone: (312) 831-3000 Fax: (312) 831-3999 e-mail: JUSTIN.E.FINCER@MWHGLOBAL.COM
Send Report To: JUSTIN FINCER Via: Fax ☐ e-mail ☒
Sampled By: JUSTIN FINCER / TED BOBAK

Project I.D.: BLACKWELL
P.O. #: 1007333.048/1201

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	VOCs	Arsenic, Barium, Boron, Cadmium, Chloride	Chromium (total), Copper, Cyanide	Iron (total), Lead, Manganese, Mercury	Nickel, pH, Phenols, Selenium, Silver, Sulfate	Zinc, BOD, COD, Oil and Grease	Ammonia (as N), TDS, TSS, Acid Compounds	Base/Neutrals, Pesticides	Comments	Lab I.D.
11/9/11 0930	TRIP BLANK	W	X									11-5021-001
11/9/11 0950	BW-LCS-57	W	X	X	X	X	X	X	X	X		002

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6ºC Yes ✓ No.__ _____ºC
Received within 6 hrs. of collection:_____
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:_____ºC
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____ºC

Containers Received Preserved: ☐ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions: _____

Relinquished By: [signature] Date/Time 11/9/11 1220 Received By: [signature] Date/Time 11/9/11 1220
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

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January 18, 2012

Mr. Justin Finger
MONTGOMERY WATSON HARZA
175 West Jackson Boulevard,
Suite 1900
Chicago, IL 60604

Project ID: Blackwell P.O. # 1007333.04811201
First Environmental File ID: 12-0153
Date Received: January 11, 2012

Dear Mr. Justin Finger:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002687: effective 03/01/2011 through 02/28/2012.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Bill Mottashed
Project Manager

First Environmental Laboratories, Inc.

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Case Narrative

MONTGOMERY WATSON HARZA

Project ID: **Blackwell P.O. # 1007333.04811201**

First Environmental File ID: **12-0153**

Date Received: **January 11, 2012**

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	01/11/12
Project ID:	Blackwell P.O. # 1007333.04811201	**Time Collected:**	9:40
Sample ID:	BW-LCS-58	**Date Received:**	01/11/12
Sample No:	12-0153-001	**Date Reported:**	01/18/12

Analyte	Result	R.L.	Units	Date Analyzed	Method	Flag
Phenols	0.30	0.05	mg/L	01/16/12	420.1	P
Total Suspended Solids	88	1	mg/L	01/12/12	2540D	
Total Dissolved Solids	2,780	10	mg/L	01/13/12	2540C	
pH @ 25°C	7.35		Units	01/11/12 15:45	4500H+,B	
COD	1,520	10	mg/L	01/16/12	5220D	P
BOD, 5 Day	1,600	1	mg/L	01/16/12 15:00	5210B	
Oil & Grease	3	1	mg/L	01/13/12	1664A	
Ammonia (as N)	148	0.10	mg/L	01/12/12	350.1R2.0	
Cyanide, Total	< 0.005	0.005	mg/L	01/17/12	4500CN,C,E	
Chloride	530	5	mg/L	01/13/12	4500Cl, E	
Sulfate	167	15	mg/L	01/16/12	375.2R2.0	

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City: CHICAGO State: IL Zip: 60604
Phone: (312)831-3000 Fax: (312) 831-3999 e-mail: JUSTIN.E.FINCER@MWHGLOBAL.COM
Send Report To: JUSTIN FINCER Via: Fax ☐ e-mail ☒
Sampled By: JUSTIN FINCER, TED BOBAK

Project I.D.: BLACKWELL
P.O. #: 1007333.04811201

Matrix Codes: S = Soil W = Water O = Other

Analyses

Date/Time Taken	Sample Description	Matrix	Arsenic, Barium, Boron, Cadmium	Chloride, Chromium (Total), Copper, Cyanide	Iron (Total), Lead, Manganese, Mercury	Nickel, pH, Phenols, Selenium, Silver, Sulfate	Zinc, BOD, COD, Oil and Grease	Ammonia (As N), Total Dissolved Solids (TDS)	Total Suspended Solids (TSS)		Comments	Lab I.D.
1/11/12 0940	BW-LCS-58	W	X	X	X	X	X	X	X			12-0153-001

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes ✓ No.__ _____°C
Received within 6 hrs. of collection:_____
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:_____°C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____°C

Containers Received Preserved: ☑ Yes ☐ No
Need to meet: IL. TACO ☐ IN. RISC ☐

Notes and Special Instructions: _____

Relinquished By: [signature] Date/Time 1/11/12 1205 Received By: [signature] Date/Time 1/11/12 1205
Relinquished By: _____ Date/Time _____ Received By: _____ Date/Time _____

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Analytical Report

Client:	MONTGOMERY WATSON HARZA	**Date Collected:**	01/11/12
Project ID:	Blackwell P.O. # 1007333.04811201	**Time Collected:**	9:40
Sample ID:	BW-LCS-58	**Date Received:**	01/11/12
Sample No:	12-0153-001	**Date Reported:**	01/18/12

Analyte		Result	R.L.	Units	Flags
Total Mercury	**Method: 7470A**				
Analysis Date: 01/13/12					
Mercury		< 0.0005	0.0005	mg/L	
Total Metals	**Method: 6010B**		**Preparation Method 3010A**		
Analysis Date: 01/17/12			Preparation Date: 01/12/12		
Arsenic		< 0.002	0.002	mg/L	
Barium		0.366	0.001	mg/L	
Cadmium		0.003	0.001	mg/L	
Chromium		0.003	0.001	mg/L	
Lead		0.016	0.002	mg/L	
Selenium		< 0.002	0.002	mg/L	
Silver		< 0.001	0.001	mg/L	
Boron		1.24	0.01	mg/L	
Copper		< 0.001	0.001	mg/L	
Iron		52.9	0.01	mg/L	
Manganese		0.723	0.001	mg/L	
Nickel		0.020	0.001	mg/L	
Zinc		0.575	0.005	mg/L	

APPENDIX C

LANDFILL GAS

Table C-1: Landfill Gas Composition
Table C-2: Landfill Gas Temperature
Table C-3: Static Landfill Gas Pressure
Table C-4: Landfill Gas Velocity
Table C-5: Landfill Gas Flow Rate
Table C-6: TNMOC Emission Rate

APPENDIX C

Table C-1: Landfill Gas Composition

Table C-1
Landfill Gas Composition
Blackwell Landfill NPL Site

Vent	May-11			July-11			September-11			November-11			January-12			March-12		
Number	% CH_4	%CO_2	%O_2	% CH_4	%CO_2	%O_2	% CH_4	%CO_2	%O_2	% CH_4	%CO_2	%O_2	% CH_4	%CO_2	%O_2	% CH_4	%CO_2	%O_2
SV-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-4	0.9	0.1	20.2	NM	NM	NM	1.5	0.8	20.1	NM	NM	NM	NM	NM	NM	1.1	0.3	21.3
SV-5	3.4	0.9	19.8	NM	NM	NM	1.7	0.9	20.5	0.2	0.2	19.2	NM	NM	NM	0.3	0.0	21.2
SV-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-8	2.2	0.5	20.4	NM	NM	NM	0.0	0.1	20.5	NM	NM	NM	1.5	0.7	21.4	0.5	0.1	21.2
SV-9	56.7	30.7	3.6	NM	NM	NM	38.5	31.1	9.5	36.8	22.2	6.6	52.9	32.2	2.7	59.2	33.5	1.2
SV-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-5	40.5	21.7	8.2	NM	NM	NM	16.8	10.8	16.2	4.5	2.8	16.9	14.6	7.3	16.7	11.4	6.0	17.4
DV-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-8	5.6	1.8	18.7	NM	NM	NM	7.8	4.5	18.8	NM	NM	NM	NM	NM	NM	0.4	0.0	20.9
DV-9	1.6	0.3	20.2	NM	NM	NM	0.9	0.6	20.4	NM	NM	NM	NM	NM	NM	NM	NM	NM
DV-10	1.3	0.3	20.4	NM	NM	NM	12.2	8.6	17.6	NM	NM	NM	NM	NM	NM	5.9	0.0	19.7
DV-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DV-15	35.7	18.2	10.1	NM	NM	NM	56.4	38.0	6.6	25.5	14.9	10.4	40.1	22.5	5.0	30.3	15.1	6.5
DV-16	71.8	35.9	0.2	NM	NM	NM	96.4	60.5	0.2	57.2	29.7	0.5	65.6	37.9	0.0	64.2	35.3	0.0
DV-17	6.9	2.4	19.0	NM	NM	NM	3.9	2.8	19.5	1.0	0.8	18.4	2.4	1.0	21.1	2.0	0.8	20.7
DV-18	73.6	36.2	0.2	NM	NM	NM	85.5	54.8	1.8	55.9	28.6	1.0	66.1	38.0	0.0	64.4	34.8	0.0
EW-1	72.5	38.1	0.4	NM	NM	NM	94.3	65.0	0.5	57.1	32.7	0.5	65.2	40.7	2.1	63.7	38.4	0.0
EW-1A	0.9	0.0	20.4	NM	NM	NM	84.4	45.1	0.2	0.0	0.1	18.8	57.4	27.9	1.8	49.7	25.7	0.0
EW-2	73.6	38.4	0.6	NM	NM	NM	92.9	60.7	0.4	59.7	30.5	0.5	65.8	39.2	0.0	64.4	37.3	0.0
EW-3	74.9	35.3	0.2	NM	NM	NM	98.1	60.0	0.2	59.8	29.9	0.1	66.8	38.2	0.0	64.0	34.8	1.1
EW-4	75.8	31.8	0.2	NM	NM	NM	99.6	50.3	0.2	65.5	25.1	0.1	69.0	31.1	0.0	66.5	29.1	0.0
EW-5	81.8	25.8	0.4	NM	NM	NM	107.5	41.4	0.1	68.5	23.0	0.3	70.3	25.8	0.0	68.8	25.6	0.0
EW-6	72.7	36.0	0.2	NM	NM	NM	94.7	59.1	0.0	58.5	29.0	0.2	66.5	39.0	0.0	65.2	35.4	0.0
EW-7	74.8	37.5	0.2	NM	NM	NM	84.8	63.8	0.2	58.7	30.7	0.3	66.0	39.5	0.0	63.3	36.4	0.0
EW-8	65.8	33.8	2.0	NM	NM	NM	66.5	43.2	5.0	41.7	23.1	5.0	61.1	35.7	0.9	59.8	34.1	0.6
Vent Stack	64.8	32.3	1.8	NM	NM	NM	72.7	45.5	3.8	57.4	28.2	0.3	65.0	35.0	0.0	62.4	33.4	1.2
LS01	0.6	0.1	20.7	NM	NM	NM	0.4	8.5	18.7	0.3	2.3	18.1	0.7	1.6	21.1	0.3	0.0	21.2

NOTES:

DV = Deep vent
EW = Extraction well
LS = Lift station
NA =Not analyzed as part of O&M
NM = Not measured for specific date
%CO_2 = Percent carbon dioxide
%CH_4 = Percent methane
%O_2 = Percent oxygen
SV = Shallow vent

1. All measurements taken with a Landtec GA-90 gas analyzer.
2. Landtec gas analyzer appeared to be malfunctioning during 9-7-11 monitoring event. Methane and carbon dioxide concentrations were extremely high at some locations, and total percentages exceeded 100%.
3. Several measurements not collected on 11-9-11 due to flooded vaults.
4. Several measurements not collected on 1-11-12 due to frozen and flooded vaults.

APPENDIX C

Table C-2: Landfill Gas Temperature

Table C-2
Landfill Gas Temperature
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-4	95.0	NM	82.5	NM	NM	72.1
SV-5	92.8	NM	82.6	51.9	NM	71.3
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	78.0	NM	62.7	NM	66.4	63.1
SV-9	81.4	NM	64.8	51.0	65.4	62.7
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	73.7	NM	66.7	53.9	65.5	60.8
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	92.6	NM	82.1	NM	NM	68.8
DV-9	96.0	NM	84.4	NM	NM	NM
DV-10	95.1	NM	68.6	NM	NM	72.0
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	76.4	NM	67.1	51.8	61.6	67.3
DV-16	75.2	NM	65.7	55.5	65.9	57.0
DV-17	76.2	NM	66.9	52.7	65.3	62.2
DV-18	87.1	NM	80.6	58.3	54.3	56.1

Table C-2
Landfill Gas Temperature
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
EW-1	85.4	NM	83.1	56.0	43.0	62.0
EW-1A	91.9	NM	81.5	48.5	45.0	63.5
EW-2	87.5	NM	70.2	50.5	44.0	59.8
EW-3	80.6	NM	80.0	58.6	55.5	53.2
EW-4	70.4	NM	60.5	59.0	50.8	50.6
EW-5	81.6	NM	70.7	57.5	47.3	50.2
EW-6	65.9	NM	66.1	58.7	62.0	57.4
EW-7	62.6	NM	66.3	57.7	54.6	53.6
EW-8	89.5	NM	85.1	57.6	59.5	55.6
Vent Stack	68.8	NM	67.9	55.9	47.2	47.0
LS01	79.0	NM	63.7	52.7	59.5	63.3

Notes:

DV = Deep Well
EW = Extraction well
LS = Lift Station
NA = Not analyzed as part of O&M
NM = Not measured for specific date
SV = Shallow vent

1. Temperature in units of degrees Fahrenheit.
2. All measurements taken with a TSI VELOCICALC Model 8384 velocity/temperature meter.
3. Several temperature measurements not collected on 11-9-11 due to flooded vaults.
4. Several temperature measurements not collected on 1-11-12 due to frozen and flooded vaults.
5. Temperature measurements not collected at DV-9 on 3-13-12 due to flooded vault.

APPENDIX C

Table C-3: Static Landfill Gas Pressure

Table C-3
Static Landfill Gas Pressure
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-4	0.00	NM	0.10	NM	NM	0.02
SV-5	0.00	NM	0.00	0.00	NM	0.00
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	0.00	NM	0.00	NM	0.00	0.00
SV-9	0.90	NM	0.38	0.06	0.04	1.00
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	0.03	NM	0.00	0.00	0.00	0.00
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	0.00	NM	0.00	NM	NM	0.00
DV-9	0.00	NM	0.00	NM	NM	NM
DV-10	0.00	NM	0.04	NM	NM	0.03
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	0.02	NM	0.04	0.00	0.02	0.30
DV-16	1.90	NM	0.56	1.20	5.00	4.00
DV-17	0.00	NM	0.00	0.00	0.00	0.00
DV-18	0.90	NM	1.00	2.30	0.30	1.20

Table C-3
Static Landfill Gas Pressure
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
EW-1	0.02	NM	0.42	0.28	0.08	0.24
EW-1A	0.00	NM	0.04	0.00	0.01	0.02
EW-2	0.00	NM	0.26	0.10	0.04	0.08
EW-3	0.08	NM	0.24	1.00	0.08	1.00
EW-4	0.06	NM	0.05	0.24	0.00	0.08
EW-5	0.04	NM	0.06	0.10	0.00	0.00
EW-6	0.82	NM	1.20	1.60	3.00	1.80
EW-7	0.92	NM	2.40	3.80	8.00	5.00
EW-8	0.00	NM	0.00	0.00	0.00	0.00
Vent Stack	NA	NM	NA	NA	NA	NA
LS01	0.00	NM	0.00	0.00	0.00	0.00
Barometric (in. Hg)	29.79	30.06	30.16	29.69	29.62	30.03

Notes:

DV = Deep Well
EW = Extraction well
Hg = Mercury
in. = Inches
LS = Lift Station
NA = Not analyzed as part of O&M
NM = Not measured for specific date
SV = Shallow vent

1. Pressure in units of inches of water.
2. Pressure measurements were not conducted at the main vent stack as it is open to the atmosphere.
3. All measurements taken with an Alnor 6000AP velometer.
4. Several pressure measurements not collected on 11-9-11 due to flooded vaults.
5. Several pressure measurements not collected on 1-11-12 due to frozen and flooded vaults.
6. Pressure measurements not collected at DV-9 on 3-13-12 due to flooded vault.

APPENDIX C

Table C-4: Landfill Gas Velocity

Table C-4
Landfill Gas Velocity
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-4	1	NM	1	NM	NM	0
SV-5	0	NM	2	0	NM	0
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	1	NM	0	NM	5	0
SV-9	15	NM	0	5	15	10
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	67	NM	6	0	0	4
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	5	NM	0	NM	NM	0
DV-9	3	NM	0	NM	NM	NM
DV-10	4	NM	0	NM	NM	2
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	26	NM	24	39	27	10
DV-16	94	NM	91	167	174	120
DV-17	5	NM	1	1	0	0
DV-18	62	NM	40	35	27	30

Table C-4
Landfill Gas Velocity
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
EW-1	NA	NA	NA	NA	NA	NA
EW-1A	NA	NA	NA	NA	NA	NA
EW-2	NA	NA	NA	NA	NA	NA
EW-3	NA	NA	NA	NA	NA	NA
EW-4	NA	NA	NA	NA	NA	NA
EW-5	NA	NA	NA	NA	NA	NA
EW-6	NA	NA	NA	NA	NA	NA
EW-7	NA	NA	NA	NA	NA	NA
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack	384	388	396	455	300	250
LS01	NA	NM	NA	NA	NA	NA

Notes:

DV = Deep Well
EW = Extraction well
LS = Lift Station
NA = Not analyzed as part of O&M
NM = Not measured for specific date
SV = Shallow vent

1. Velocity in units of standard feet per minute (fpm).
2. All measurements taken with a TSI VELOCICALC Model 8384 velocity/temperature meter.
3. Several velocity measurements not collected on 11-9-11 due to flooded vaults.
4. Several velocity measurements not collected on 1-11-12 due to frozen and flooded vaults.
5. Velocity measurements not collected at DV-9 on 3-13-12 due to flooded vault.

APPENDIX C

Table C-5: Landfill Gas Flow Rate

Table C-5
Landfill Gas Flow Rate
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
SV-1	NA	NA	NA	NA	NA	NA
SV-2	NA	NA	NA	NA	NA	NA
SV-4	0.023	NM	0.020	NM	NM	0.000
SV-5	0.000	NM	0.050	0.000	NM	0.000
SV-6	NA	NA	NA	NA	NA	NA
SV-7	NA	NA	NA	NA	NA	NA
SV-8	0.023	NM	0.000	NM	0.120	0.000
SV-9	0.349	NM	0.000	0.120	0.350	0.230
SV-11	NA	NA	NA	NA	NA	NA
SV-12	NA	NA	NA	NA	NA	NA
DV-3	NA	NA	NA	NA	NA	NA
DV-4	NA	NA	NA	NA	NA	NA
DV-5	1.560	NM	0.140	0.000	0.000	0.090
DV-6	NA	NA	NA	NA	NA	NA
DV-7	NA	NA	NA	NA	NA	NA
DV-8	0.442	NM	0.000	NM	NM	0.000
DV-9	0.265	NM	0.000	NM	NM	NM
DV-10	0.353	NM	0.000	NM	NM	0.180
DV-11	NA	NA	NA	NA	NA	NA
DV-13	NA	NA	NA	NA	NA	NA
DV-14	NA	NA	NA	NA	NA	NA
DV-15	2.297	NM	2.120	3.450	2.390	0.880
DV-16	8.306	NM	8.040	14.760	15.370	10.600
DV-17	0.442	NM	0.090	0.090	0.000	0.000
DV-18	5.478	NM	3.530	3.090	2.390	2.650

Table C-5
Landfill Gas Flow Rate
Blackwell Landfill NPL Site

Vent Number	May-11	July-11	September-11	November-11	January-12	March-12
EW-1	NA	NA	NA	NA	NA	NA
EW-1A	NA	NA	NA	NA	NA	NA
EW-2	NA	NA	NA	NA	NA	NA
EW-3	NA	NA	NA	NA	NA	NA
EW-4	NA	NA	NA	NA	NA	NA
EW-5	NA	NA	NA	NA	NA	NA
EW-6	NA	NA	NA	NA	NA	NA
EW-7	NA	NA	NA	NA	NA	NA
EW-8	NA	NA	NA	NA	NA	NA
Vent Stack Flowrate	76.870	77.680	79.280	91.090	60.060	50.050

Notes:

DV = Deep Well
EW = Extraction well
LS = Lift Station
NA = Not analyzed as part of O&M
NM = Not measured for specific date
SV = Shallow vent

1. Flowrate in units of cubic feet per minute (CFM).
2. All measurements taken with a TSI VELOCICALC Model 8384 velocity/temperature meter.
3. Several velocity measurements not collected on 11-9-11 due to flooded vaults.
4. Several velocity measurements not collected on 1-11-12 due to frozen and flooded vaults.
5. Velocity measurements not collected at DV-9 on 3-13-12 due to flooded vault.

APPENDIX C

Table C-6: TNMOC Emission Rate

Table C-6
TNMOC Emission Rate
Blackwell Landfill NPL Site

Date	I.D. (ft)	Vent Readings			Peak TNMOC Concentration (ppm-carbon)	Peak TNMOC Concentration (ppm-hexane)	TNMOC Emission Rate	
		Velocity (fpm)	Flowrate (ft^3/min)	Flowrate (m^3/min)			(mg/yr)	(lb/hr)
May-11	0.505	384	76.87	2.18	1,400	233.33	1.02	0.2576
July-11	0.505	388	77.68	2.20	1,400	233.33	1.04	0.2602
September-11	0.505	396	79.28	2.24	1,400	233.33	1.06	0.2656
November-11	0.505	455	91.09	2.58	1,400	233.33	1.21	0.3052
January-12	0.505	300	60.06	1.70	1,400	233.33	0.80	0.2012
March-12	0.505	250	50.05	1.42	1,400	233.33	0.67	0.1677

Notes:
fpm = Feet per minute
ft = Feet
ft^3/min = Cubic feet per minute
I.D. = Inside diameter
lb/hr = Pounds per hour
m^3/min = Cubic meters per minute
mg/yr = Milligrams per year
ppm = Parts per million
TNMOC = Total non-methane organic compounds

1. Flowrate in units of cubic feet per minute (cfm).
2. Measurements collected with a Landtec GA90 and TSI VELOCICALC Model 8384 velocity/temperature meter.
3. Peak TNMOC concentration represents highest detected concentration during the 14th O&M year.

APPENDIX D

LANDFILL GAS ANALYTICAL DATA

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001;AIHA 101160; NVLAP LabCode 101202-

May 27, 2011

Montgomery Watson Harza
175 W. Jackson Blvd.
Suite 1900
Chicago, IL 60604
Telephone: (312) 831-3800
Fax: (312) 831-3999

RE: 1007333.04811101, Blackwell, Warrenville, IL STAT Project No 11050463

Dear Justin Finger:

STAT Analysis received 1 sample for the referenced project on 5/12/2011 4:30:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Craig Chawla
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone.This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: May 27, 2011

Client: Montgomery Watson Harza
Project: 1007333.04811101, Blackwell, Warrenville, IL
Lab Order: 11050463

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11050463-001A	BW-LFGStack-58A		5/11/2011 3:07:00 PM	5/12/2011

CLIENT:	Montgomery Watson Harza
Project:	1007333.04811101, Blackwell, Warrenville, IL
Lab Order:	11050463

CASE NARRATIVE

A modified version of EPA 25C was performed on this sample. The method is modified to perform non-methane organic compound (NMOC) reduction without catalytic oxidation. Therefore NMOC (reduced) is quantitated directly, without conversion to methane.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 27, 2011
Print Date: May 27, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGStack-58A
Lab Order:	11050463	**Tag Number:**	
Project:	1007333.04811101, Blackwell, Warrenville, IL	**Collection Date:**	5/11/2011 3:07:00 PM
Lab ID:	11050463-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
EPA Method 25	**METHOD 25C**			Prep Date: **5/12/2011**		Analyst: **VP**
NMOC	1400	94	*	ppmv	1	5/27/2011
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date: **5/12/2011**		Analyst: **ART**
Carbon Dioxide	29.3	0.0753		mol %	1	5/13/2011
Methane	53	0.0942		mol %	1	5/13/2011
Nitrogen	5.92	1.88		mol %	1	5/13/2011
Oxygen	ND	0.753		mol %	1	5/13/2011
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **5/12/2011**		Analyst: **ART**
1,1,1-Trichloroethane	11	9.4		ppbv	25	5/18/2011
1,1,2,2-Tetrachloroethane	ND	9.4		ppbv	25	5/18/2011
1,1,2-Trichloroethane	ND	9.4		ppbv	25	5/18/2011
1,1-Dichloroethane	120	9.4		ppbv	25	5/18/2011
1,1-Dichloroethene	15	9.4		ppbv	25	5/18/2011
1,2,4-Trichlorobenzene	ND	9.4		ppbv	25	5/18/2011
1,2,4-Trimethylbenzene	2300	9.4		ppbv	25	5/18/2011
1,2-Dibromoethane	ND	9.4		ppbv	25	5/18/2011
1,2-Dichlorobenzene	29	9.4		ppbv	25	5/18/2011
1,2-Dichloroethane	15	9.4		ppbv	25	5/18/2011
1,2-Dichloropropane	130	9.4		ppbv	25	5/18/2011
1,3,5-Trimethylbenzene	1000	9.4		ppbv	25	5/18/2011
1,3-Butadiene	ND	9.4		ppbv	25	5/18/2011
1,3-Dichlorobenzene	ND	9.4		ppbv	25	5/18/2011
1,4-Dichlorobenzene	800	9.4		ppbv	25	5/18/2011
1,4-Dioxane	ND	24		ppbv	25	5/18/2011
2-Butanone	1900	24		ppbv	25	5/18/2011
2-Hexanone	ND	47		ppbv	25	5/18/2011
4-Ethyltoluene	780	9.4		ppbv	25	5/18/2011
4-Methyl-2-pentanone	840	47		ppbv	25	5/18/2011
Acetone	1200	94	*	ppbv	25	5/18/2011
Benzene	1500	9.4		ppbv	25	5/18/2011
Benzyl chloride	ND	24		ppbv	25	5/18/2011
Bromodichloromethane	ND	9.4		ppbv	25	5/18/2011
Bromoform	ND	24		ppbv	25	5/18/2011
Bromomethane	ND	24		ppbv	25	5/18/2011
Carbon disulfide	ND	9.4		ppbv	25	5/18/2011
Carbon tetrachloride	ND	9.4		ppbv	25	5/18/2011
Chlorobenzene	700	9.4		ppbv	25	5/18/2011
Chloroethane	430	9.4		ppbv	25	5/18/2011

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation
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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 27, 2011
Print Date: May 27, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGStack-58A
Lab Order:	11050463	**Tag Number:**	
Project:	1007333.04811101, Blackwell, Warrenville, IL	**Collection Date:**	5/11/2011 3:07:00 PM
Lab ID:	11050463-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds in Air by GC/MS TO-15				Prep Date: **5/12/2011**		Analyst: **ART**
Chloroform	ND	9.4		ppbv	25	5/18/2011
Chloromethane	ND	24		ppbv	25	5/18/2011
cis-1,2-Dichloroethene	1900	9.4		ppbv	25	5/18/2011
cis-1,3-Dichloropropene	ND	9.4		ppbv	25	5/18/2011
Cyclohexane	630	9.4		ppbv	25	5/18/2011
Dibromochloromethane	ND	9.4		ppbv	25	5/18/2011
Dichlorodifluoromethane	2000	9.4		ppbv	25	5/18/2011
Ethyl acetate	ND	9.4		ppbv	25	5/18/2011
Ethylbenzene	5700	94		ppbv	250	5/18/2011
Freon-113	ND	9.4		ppbv	25	5/18/2011
Freon-114	500	47		ppbv	25	5/18/2011
Heptane	2100	9.4		ppbv	25	5/18/2011
Hexachlorobutadiene	ND	9.4		ppbv	25	5/18/2011
Hexane	1300	24		ppbv	25	5/18/2011
Isopropyl Alcohol	81	47		ppbv	25	5/18/2011
m,p-Xylene	12000	190		ppbv	250	5/18/2011
Methyl tert-butyl ether	ND	9.4		ppbv	25	5/18/2011
Methylene chloride	ND	94		ppbv	25	5/18/2011
o-Xylene	3100	94		ppbv	250	5/18/2011
Propene	4000	940		ppbv	250	5/18/2011
Styrene	130	9.4		ppbv	25	5/18/2011
Tetrachloroethene	420	9.4		ppbv	25	5/18/2011
Tetrahydrofuran	210	24		ppbv	25	5/18/2011
Toluene	21000	94		ppbv	250	5/18/2011
trans-1,2-Dichloroethene	190	9.4		ppbv	25	5/18/2011
trans-1,3-Dichloropropene	ND	9.4		ppbv	25	5/18/2011
Trichloroethene	540	9.4		ppbv	25	5/18/2011
Trichlorofluoromethane	14	9.4		ppbv	25	5/18/2011
Vinyl acetate	ND	94		ppbv	25	5/18/2011
Vinyl chloride	4800	94		ppbv	250	5/18/2011
Xylenes, Total	15000	280		ppbv	250	5/18/2011

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com AIHA, NVLAP and NELAP accredited

CHAIN OF CUSTODY RECORD

Nº: 835286 **Page:** 1 **of** 1

Company: [illegible]
Project Number: [illegible] Client Tracking No.:
Project Name: [illegible]
Project Location: [illegible]
Sampler(s): [illegible]
Report To: [illegible] Phone: [illegible]
Fax: [illegible]
QC Level: 1 ___ 2 ___ 3 ___ 4 ___ e-mail: [illegible]

P.O. No.:
Quote No.:

Turn Around: STANDARD
Results Needed: am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	TC15	EPA 3C	EPA 25C ([illegible])										Remarks	Lab No.:
BH-EFG-STACK-53A	5/11/11	[illegible]	AIR		X	A	1	X	X	X											

Relinquished by: (Signature)	[signature]	Date/Time:	5/12/11 1545
Received by: (Signature)	[signature]	Date/Time:	5/12/11 15:45
Relinquished by: (Signature)	[signature]	Date/Time:	5/12/11 16:30
Received by: (Signature)	[signature]	Date/Time:	5/12/11 1630
Relinquished by: (Signature)	[signature]	Date/Time:	
Receiv[illegible] (Signature)	[signature]	Date/Time:	

Comments: CANISTER # 092
INITIAL VAC = -28 Hg
FINAL VAC = -6" Hg

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 11050463

Received on Ice: Yes ☐ No ☒

Temperature: 4 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name MWHARZA

Date and Time Received: 5/12/2011 4:30:00 PM

Work Order Number 11050463

Received by: CDF

Checklist completed by: Signature Date 5/12/11

Reviewed by: Initials CK Date 5/13/11

Matrix: Carrier name: STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature Ambient °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments.

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **MB051811-6** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: ZZZZZ Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.20									
1,1,2,2-Tetrachloroethane	ND	0.20									
1,1,2-Trichloroethane	ND	0.20									
1,1-Dichloroethane	ND	0.20									
1,1-Dichloroethene	ND	0.20									
1,2,4-Trichlorobenzene	ND	0.20									
1,2,4-Trimethylbenzene	ND	0.20									
1,2-Dibromoethane	ND	0.20									
1,2-Dichlorobenzene	ND	0.20									
1,2-Dichloroethane	ND	0.20									
1,2-Dichloropropane	ND	0.20									
1,3,5-Trimethylbenzene	ND	0.20									
1,3-Butadiene	ND	0.20									
1,3-Dichlorobenzene	ND	0.20									
1,4-Dichlorobenzene	ND	0.20									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	0.50									
2-Hexanone	ND	1.0									
4-Ethyltoluene	ND	0.20									
4-Methyl-2-pentanone	ND	1.0									
Acetone	0.27	2.0									J*
Benzene	ND	0.20									
Benzyl chloride	ND	0.50									
Bromodichloromethane	ND	0.20									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon disulfide	ND	0.20									
Carbon tetrachloride	ND	0.20									
Chlorobenzene	ND	0.20									
Chloroethane	ND	0.20									
Chloroform	ND	0.20									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **MB051811-6** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: ZZZZZ Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.20									
cis-1,3-Dichloropropene	ND	0.20									
Cyclohexane	ND	0.20									
Dibromochloromethane	ND	0.20									
Dichlorodifluoromethane	ND	0.20									
Ethyl acetate	ND	0.20									
Ethylbenzene	ND	0.20									
Freon-113	ND	0.20									
Freon-114	ND	1.0									
Heptane	ND	0.20									
Hexachlorobutadiene	ND	0.20									
Hexane	ND	0.50									
Isopropyl Alcohol	ND	1.0									
m,p-Xylene	ND	0.40									
Methyl tert-butyl ether	ND	0.20									
Methylene chloride	ND	2.0									
o-Xylene	ND	0.20									
Propene	ND	2.0									
Styrene	ND	0.20									
Tetrachloroethene	ND	0.20									
Tetrahydrofuran	ND	0.50									
Toluene	ND	0.20									
trans-1,2-Dichloroethene	ND	0.20									
trans-1,3-Dichloropropene	ND	0.20									
Trichloroethene	ND	0.20									
Trichlorofluoromethane	ND	0.20									
Vinyl acetate	ND	2.0									
Vinyl chloride	ND	0.20									
Xylenes, Total	ND	0.60									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **BLANK JAR**	SampType: **MBLK**	TestCode: **TO_15A+**	Units: **ppbv**	Prep Date:	Run ID: **VOA-6_110518A**
Client ID: **ZZZZZ**	Batch ID: **R71720**	TestNo: **TO-15**		Analysis Date: **5/19/2011**	SeqNo: **1920621**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.40									
1,1,2,2-Tetrachloroethane	ND	0.40									
1,1,2-Trichloroethane	ND	0.40									
1,1-Dichloroethane	ND	0.40									
1,1-Dichloroethene	ND	0.40									
1,2,4-Trichlorobenzene	ND	0.40									
1,2,4-Trimethylbenzene	ND	0.40									
1,2-Dibromoethane	ND	0.40									
1,2-Dichlorobenzene	ND	0.40									
1,2-Dichloroethane	ND	0.40									
1,2-Dichloropropane	ND	0.40									
1,3,5-Trimethylbenzene	ND	0.40									
1,3-Butadiene	ND	0.40									
1,3-Dichlorobenzene	ND	0.40									
1,4-Dichlorobenzene	ND	0.40									
1,4-Dioxane	ND	2.0									
2-Butanone	ND	1.0									
2-Hexanone	ND	2.0									
4-Ethyltoluene	ND	0.40									
4-Methyl-2-pentanone	ND	2.0									
Acetone	3.92	4.0									J*
Benzene	ND	0.40									
Benzyl chloride	ND	1.0									
Bromodichloromethane	ND	0.40									
Bromoform	ND	1.0									
Bromomethane	ND	1.0									
Carbon disulfide	ND	0.40									
Carbon tetrachloride	ND	0.40									
Chlorobenzene	ND	0.40									
Chloroethane	ND	0.40									
Chloroform	ND	0.40									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **BLANK JAR** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: ZZZZZ Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/19/2011** SeqNo: **1920621**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	0.22	1.0									J
cis-1,2-Dichloroethene	ND	0.40									
cis-1,3-Dichloropropene	ND	0.40									
Cyclohexane	ND	0.40									
Dibromochloromethane	ND	0.40									
Dichlorodifluoromethane	ND	0.40									
Ethyl acetate	ND	0.40									
Ethylbenzene	ND	0.40									
Freon-113	ND	0.40									
Freon-114	ND	2.0									
Heptane	ND	0.40									
Hexachlorobutadiene	ND	0.40									
Hexane	1.74	1.8									J
Isopropyl Alcohol	6.76	6.8									J
m,p-Xylene	0.28	0.80									J
Methyl tert-butyl ether	ND	0.40									
Methylene chloride	5.66	11									J
o-Xylene	ND	0.40									
Propene	ND	4.0									
Styrene	ND	0.40									
Tetrachloroethene	ND	0.40									
Tetrahydrofuran	ND	1.0									
Toluene	0.4	0.60									J
trans-1,2-Dichloroethene	ND	0.40									
trans-1,3-Dichloropropene	ND	0.40									
Trichloroethene	ND	0.40									
Trichlorofluoromethane	ND	0.40									
Vinyl acetate	ND	4.0									
Vinyl chloride	ND	0.40									
Xylenes, Total	0.4	1.2									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **LCS051811-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: **ZZZZZ** Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	5.72	0.20	5	0	114	70	130	0	0		
1,1,2,2-Tetrachloroethane	5.75	0.20	5	0	115	70	130	0	0		
1,1,2-Trichloroethane	5.57	0.20	5	0	111	70	130	0	0		
1,1-Dichloroethane	5.45	0.20	5	0	109	70	130	0	0		
1,1-Dichloroethene	5.4	0.20	5	0	108	70	130	0	0		
1,2,4-Trichlorobenzene	5.91	0.20	5	0	118	70	130	0	0		
1,2,4-Trimethylbenzene	5.66	0.20	5	0	113	70	130	0	0		
1,2-Dibromoethane	5.77	0.20	5	0	115	70	130	0	0		
1,2-Dichlorobenzene	5.62	0.20	5	0	112	70	130	0	0		
1,2-Dichloroethane	5.67	0.20	5	0	113	70	130	0	0		
1,2-Dichloropropane	5.74	0.20	5	0	115	70	130	0	0		
1,3,5-Trimethylbenzene	5.71	0.20	5	0	114	70	130	0	0		
1,3-Butadiene	5.05	0.20	5	0	101	70	130	0	0		
1,3-Dichlorobenzene	5.72	0.20	5	0	114	70	130	0	0		
1,4-Dichlorobenzene	5.68	0.20	5	0	114	70	130	0	0		
1,4-Dioxane	4.98	1.0	5	0	99.6	70	130	0	0		
2-Butanone	6.07	0.50	5	0	121	70	130	0	0		
2-Hexanone	6.24	1.0	5	0	125	70	130	0	0		
4-Ethyltoluene	5.75	0.20	5	0	115	70	130	0	0		
4-Methyl-2-pentanone	6.29	1.0	5	0	126	70	130	0	0		
Acetone	4.97	2.0	5	0.27	94	70	130	0	0		*
Benzene	5.65	0.20	5	0	113	70	130	0	0		
Benzyl chloride	6.44	0.50	5	0	129	70	130	0	0		
Bromodichloromethane	5.99	0.20	5	0	120	70	130	0	0		
Bromoform	6.52	0.50	5	0	130	70	130	0	0		S
Bromomethane	5.06	0.50	5	0	101	70	130	0	0		
Carbon disulfide	5.55	0.20	5	0	111	70	130	0	0		
Carbon tetrachloride	5.64	0.20	5	0	113	70	130	0	0		
Chlorobenzene	5.68	0.20	5	0	114	70	130	0	0		
Chloroethane	5.17	0.20	5	0	103	70	130	0	0		
Chloroform	5.62	0.20	5	0	112	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **LCS051811-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: ZZZZZ Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	5.49	0.50	5	0	110	70	130	0	0		
cis-1,2-Dichloroethene	5.59	0.20	5	0	112	70	130	0	0		
cis-1,3-Dichloropropene	6.09	0.20	5	0	122	70	130	0	0		
Cyclohexane	5.73	0.20	5	0	115	70	130	0	0		
Dibromochloromethane	6.09	0.20	5	0	122	70	130	0	0		
Dichlorodifluoromethane	5.53	0.20	5	0	111	70	130	0	0		
Ethyl acetate	5.94	0.20	5	0	119	70	130	0	0		
Ethylbenzene	5.72	0.20	5	0	114	70	130	0	0		
Freon-113	5.27	0.20	5	0	105	70	130	0	0		
Freon-114	5.64	1.0	5	0	113	70	130	0	0		
Heptane	5.97	0.20	5	0	119	70	130	0	0		
Hexachlorobutadiene	6.28	0.20	5	0	126	70	130	0	0		
Hexane	5.73	0.50	5	0	115	70	130	0	0		
Isopropyl Alcohol	5	1.0	5	0	100	70	130	0	0		
m,p-Xylene	11.41	0.40	10	0	114	70	130	0	0		
Methyl tert-butyl ether	5.51	0.20	5	0	110	70	130	0	0		
Methylene chloride	4.63	2.0	5	0	92.6	70	130	0	0		
o-Xylene	5.68	0.20	5	0	114	70	130	0	0		
Propene	5.9	2.0	5	0	118	70	130	0	0		
Styrene	5.83	0.20	5	0	117	70	130	0	0		
Tetrachloroethene	5.68	0.20	5	0	114	70	130	0	0		
Tetrahydrofuran	5.7	0.50	5	0	114	70	130	0	0		
Toluene	5.72	0.20	5	0	114	70	130	0	0		
trans-1,2-Dichloroethene	5.3	0.20	5	0	106	70	130	0	0		
trans-1,3-Dichloropropene	6.57	0.20	5	0	131	70	130	0	0		S
Trichloroethene	5.52	0.20	5	0	110	70	130	0	0		
Trichlorofluoromethane	5.42	0.20	5	0	108	70	130	0	0		
Vinyl acetate	6.04	2.0	5	0	121	70	130	0	0		
Vinyl chloride	5.09	0.20	5	0	102	70	130	0	0		
Xylenes, Total	17.09	0.60	15	0	114	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **LCSD051811-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: **ZZZZZ** Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	5.81	0.20	5	0	116	70	130	5.72	1.56	25	
1,1,2,2-Tetrachloroethane	5.85	0.20	5	0	117	70	130	5.75	1.72	25	
1,1,2-Trichloroethane	5.65	0.20	5	0	113	70	130	5.57	1.43	25	
1,1-Dichloroethane	5.5	0.20	5	0	110	70	130	5.45	0.913	25	
1,1-Dichloroethene	5.36	0.20	5	0	107	70	130	5.4	0.743	25	
1,2,4-Trichlorobenzene	5.7	0.20	5	0	114	70	130	5.91	3.62	25	
1,2,4-Trimethylbenzene	5.71	0.20	5	0	114	70	130	5.66	0.880	25	
1,2-Dibromoethane	5.85	0.20	5	0	117	70	130	5.77	1.38	25	
1,2-Dichlorobenzene	5.62	0.20	5	0	112	70	130	5.62	0	25	
1,2-Dichloroethane	5.8	0.20	5	0	116	70	130	5.67	2.27	25	
1,2-Dichloropropane	5.83	0.20	5	0	117	70	130	5.74	1.56	25	
1,3,5-Trimethylbenzene	5.71	0.20	5	0	114	70	130	5.71	0	25	
1,3-Butadiene	5.16	0.20	5	0	103	70	130	5.05	2.15	25	
1,3-Dichlorobenzene	5.81	0.20	5	0	116	70	130	5.72	1.56	25	
1,4-Dichlorobenzene	5.75	0.20	5	0	115	70	130	5.68	1.22	25	
1,4-Dioxane	5.31	1.0	5	0	106	70	130	4.98	6.41	25	
2-Butanone	5.99	0.50	5	0	120	70	130	6.07	1.33	25	
2-Hexanone	6.45	1.0	5	0	129	70	130	6.24	3.31	25	
4-Ethyltoluene	5.78	0.20	5	0	116	70	130	5.75	0.520	25	
4-Methyl-2-pentanone	6.49	1.0	5	0	130	70	130	6.29	3.13	25	
Acetone	5.01	2.0	5	0.27	94.8	70	130	4.97	0.802	25	*
Benzene	5.74	0.20	5	0	115	70	130	5.65	1.58	25	
Benzyl chloride	6.57	0.50	5	0	131	70	130	6.44	2.00	25	S
Bromodichloromethane	6.1	0.20	5	0	122	70	130	5.99	1.82	25	
Bromoform	6.63	0.50	5	0	133	70	130	6.52	1.67	25	S
Bromomethane	5.02	0.50	5	0	100	70	130	5.06	0.794	25	
Carbon disulfide	5.56	0.20	5	0	111	70	130	5.55	0.180	25	
Carbon tetrachloride	5.72	0.20	5	0	114	70	130	5.64	1.41	25	
Chlorobenzene	5.71	0.20	5	0	114	70	130	5.68	0.527	25	
Chloroethane	5.18	0.20	5	0	104	70	130	5.17	0.193	25	
Chloroform	5.72	0.20	5	0	114	70	130	5.62	1.76	25	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71720

Sample ID: **LCSD051811-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110518A**
Client ID: **ZZZZZ** Batch ID: **R71720** TestNo: **TO-15** Analysis Date: **5/18/2011** SeqNo: **1915935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	5.47	0.50	5	0	109	70	130	5.49	0.365	25	
cis-1,2-Dichloroethene	5.56	0.20	5	0	111	70	130	5.59	0.538	25	
cis-1,3-Dichloropropene	6.16	0.20	5	0	123	70	130	6.09	1.14	25	
Cyclohexane	5.82	0.20	5	0	116	70	130	5.73	1.56	25	
Dibromochloromethane	6.2	0.20	5	0	124	70	130	6.09	1.79	25	
Dichlorodifluoromethane	5.54	0.20	5	0	111	70	130	5.53	0.181	25	
Ethyl acetate	6.11	0.20	5	0	122	70	130	5.94	2.82	25	
Ethylbenzene	5.75	0.20	5	0	115	70	130	5.72	0.523	25	
Freon-113	5.24	0.20	5	0	105	70	130	5.27	0.571	25	
Freon-114	5.66	1.0	5	0	113	70	130	5.64	0.354	25	
Heptane	6.07	0.20	5	0	121	70	130	5.97	1.66	25	
Hexachlorobutadiene	6.02	0.20	5	0	120	70	130	6.28	4.23	25	
Hexane	5.78	0.50	5	0	116	70	130	5.73	0.869	25	
Isopropyl Alcohol	5.11	1.0	5	0	102	70	130	5	2.18	25	
m,p-Xylene	11.49	0.40	10	0	115	70	130	11.41	0.699	25	
Methyl tert-butyl ether	5.54	0.20	5	0	111	70	130	5.51	0.543	25	
Methylene chloride	4.7	2.0	5	0	94	70	130	4.63	1.50	25	
o-Xylene	5.73	0.20	5	0	115	70	130	5.68	0.876	25	
Propene	5.86	2.0	5	0	117	70	130	5.9	0.680	25	
Styrene	5.87	0.20	5	0	117	70	130	5.83	0.684	25	
Tetrachloroethene	5.73	0.20	5	0	115	70	130	5.68	0.876	25	
Tetrahydrofuran	5.82	0.50	5	0	116	70	130	5.7	2.08	25	
Toluene	5.81	0.20	5	0	116	70	130	5.72	1.56	25	
trans-1,2-Dichloroethene	5.27	0.20	5	0	105	70	130	5.3	0.568	25	
trans-1,3-Dichloropropene	6.73	0.20	5	0	135	70	130	6.57	2.41	25	S
Trichloroethene	5.55	0.20	5	0	111	70	130	5.52	0.542	25	
Trichlorofluoromethane	5.43	0.20	5	0	109	70	130	5.42	0.184	25	
Vinyl acetate	6.05	2.0	5	0	121	70	130	6.04	0.165	25	
Vinyl chloride	5.08	0.20	5	0	102	70	130	5.09	0.197	25	
Xylenes, Total	17.21	0.60	15	0	115	70	130	17.09	0.700	25	

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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71615

Sample ID: **MB051311-3C** SampType: **MBLK** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_110513A**
Client ID: ZZZZZ Batch ID: **R71615** TestNo: **Method 3c** Analysis Date: **5/13/2011** SeqNo: **1913095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	ND	0.0400									
Methane	ND	0.0500									
Nitrogen	ND	1.00									
Oxygen	ND	0.400									

Sample ID: **LCS051311-3C L5** SampType: **LCS** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_110513A**
Client ID: ZZZZZ Batch ID: **R71615** TestNo: **Method 3c** Analysis Date: **5/13/2011** SeqNo: **1913094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	33.2	0.0400	35	0	0	80	120	0	0		
Methane	45.28	0.0500	50	0	0	80	120	0	0		
Nitrogen	9.871	1.00	10	0	0	80	120	0	0		
Oxygen	5.037	0.400	5	0	0	80	120	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R71966

Sample ID: **MB052711-F** SampType: **MBLK** TestCode: **EPA_25C** Units: **ppmv** Prep Date: Run ID: **GC-TCD1_110527A**
Client ID: ZZZZZ Batch ID: **R71966** TestNo: **Method 25c** Analysis Date: **5/27/2011** SeqNo: **1923141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NMOC	ND	50									*
Methane	ND	2.0									*

Sample ID: **LCS052711-F L4** SampType: **LCS** TestCode: **EPA_25C** Units: **ppmv** Prep Date: Run ID: **GC-TCD1_110527A**
Client ID: ZZZZZ Batch ID: **R71966** TestNo: **Method 25c** Analysis Date: **5/27/2011** SeqNo: **1923140**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	1029	2.0	1000	0	103	90	110	0	0		*

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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11050463
Project: 1007333.04811101, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: 56104

Sample ID: **11050463-001A** SampType: **DUP** TestCode: **EPA_25C** Units: **ppmv** Prep Date: **5/12/2011** Run ID: **GC-TCD1_110527A**
Client ID: **BW-LFGStack-58A** Batch ID: **56104** TestNo: **Method 25c** Analysis Date: **5/27/2011** SeqNo: **1923143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NMOC	1385	94	0	0	0	0	0	1380	0.409	5	*

Sample ID: **11050463-001A** SampType: **DUP** TestCode: **EPA_3C** Units: **mol %** Prep Date: **5/12/2011** Run ID: **GC-TCD1_110513A**
Client ID: **BW-LFGStack-58A** Batch ID: **56104** TestNo: **Method 3c** Analysis Date: **5/13/2011** SeqNo: **1913098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	29.25	0.0753	0	0	0	0	0	29.29	0.142	5	
Methane	53.12	0.0942	0	0	0	0	0	53.03	0.181	5	
Nitrogen	5.913	1.88	0	0	0	0	0	5.925	0.191	5	
Oxygen	0.6893	0.753	0	0	0	0	0	0.7326	6.09	5	JR

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STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001;AIHA 101160; NVLAP LabCode 101202-

August 09, 2011

Montgomery Watson Harza
175 W. Jackson Blvd.
Suite 1900
Chicago, IL 60604
Telephone: (312) 831-3800
Fax: (312) 831-3999

RE: 1007333.04811201, Blackwell, Warrenville, IL STAT Project No: 11070455

Dear Justin Finger:

STAT Analysis received 1 sample for the referenced project on 7/14/2011 4:40:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Katelin Lewis

Katelin Lewis
Project Mananger

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone.This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: August 09, 2011

Client: Montgomery Watson Harza
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab Order: 11070455

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11070455-001A	BW-LFGStack-59A		7/13/2011 3:30:00 PM	7/14/2011

CLIENT:	Montgomery Watson Harza
Project:	1007333.04811201, Blackwell, Warrenville, IL
Lab Order:	11070455

CASE NARRATIVE

A modified version of EPA 25C was performed on this sample. The method is modified to perform non-methane organic compound (NMOC) reduction without catalytic oxidation. Therefore NMOC (reduced) is quantitated directly, without conversion to methane.

STAT Analysis Corporation
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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: August 09, 2011
Print Date: August 09, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGStack-59A
Lab Order:	11070455	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	7/13/2011 3:30:00 PM
Lab ID:	11070455-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
EPA Method 25	**METHOD 25C**			Prep Date: **7/15/2011**		Analyst: **VP**
NMOC	1100	86	*	ppmv	1	7/25/2011
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date: **7/15/2011**		Analyst: **ART**
Carbon Dioxide	25.8	0.0689		mol %	1	7/16/2011
Methane	46.8	0.0861		mol %	1	7/16/2011
Nitrogen	14.4	1.72		mol %	1	7/16/2011
Oxygen	2.94	0.689		mol %	1	7/16/2011
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **7/15/2011**		Analyst: **VP**
1,1,1-Trichloroethane	ND	8.6		ppbv	25	7/16/2011
1,1,2,2-Tetrachloroethane	ND	8.6		ppbv	25	7/16/2011
1,1,2-Trichloroethane	ND	8.6		ppbv	25	7/16/2011
1,1-Dichloroethane	100	8.6		ppbv	25	7/16/2011
1,1-Dichloroethene	12	8.6		ppbv	25	7/16/2011
1,2,4-Trichlorobenzene	ND	8.6		ppbv	25	7/16/2011
1,2,4-Trimethylbenzene	1500	170		ppbv	500	7/20/2011
1,2-Dibromoethane	ND	8.6		ppbv	25	7/16/2011
1,2-Dichlorobenzene	ND	8.6		ppbv	25	7/16/2011
1,2-Dichloroethane	12	8.6		ppbv	25	7/16/2011
1,2-Dichloropropane	93	8.6		ppbv	25	7/16/2011
1,3,5-Trimethylbenzene	1000	8.6		ppbv	25	7/16/2011
1,3-Butadiene	ND	8.6		ppbv	25	7/16/2011
1,3-Dichlorobenzene	ND	8.6		ppbv	25	7/16/2011
1,4-Dichlorobenzene	800	8.6		ppbv	25	7/16/2011
1,4-Dioxane	250	22		ppbv	25	7/16/2011
2-Butanone	1100	22		ppbv	25	7/16/2011
2-Hexanone	ND	43		ppbv	25	7/16/2011
4-Ethyltoluene	750	8.6		ppbv	25	7/16/2011
4-Methyl-2-pentanone	650	43		ppbv	25	7/16/2011
Acetone	730	86	*	ppbv	25	7/16/2011
Benzene	1200	8.6		ppbv	25	7/16/2011
Benzyl chloride	ND	22		ppbv	25	7/16/2011
Bromodichloromethane	ND	8.6		ppbv	25	7/16/2011
Bromoform	ND	22		ppbv	25	7/16/2011
Bromomethane	ND	22		ppbv	25	7/16/2011
Carbon disulfide	ND	8.6		ppbv	25	7/16/2011
Carbon tetrachloride	ND	8.6		ppbv	25	7/16/2011
Chlorobenzene	840	8.6		ppbv	25	7/16/2011
Chloroethane	380	8.6		ppbv	25	7/16/2011

Qualifiers:
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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: August 09, 2011
Print Date: August 09, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGStack-59A
Lab Order:	11070455	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	7/13/2011 3:30:00 PM
Lab ID:	11070455-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **7/15/2011**		Analyst: **VP**
Chloroform	ND	8.6		ppbv	25	7/16/2011
Chloromethane	ND	22		ppbv	25	7/16/2011
cis-1,2-Dichloroethene	1400	8.6		ppbv	25	7/16/2011
cis-1,3-Dichloropropene	ND	8.6		ppbv	25	7/16/2011
Cyclohexane	500	8.6		ppbv	25	7/16/2011
Dibromochloromethane	ND	8.6		ppbv	25	7/16/2011
Dichlorodifluoromethane	2000	8.6		ppbv	25	7/16/2011
Ethyl acetate	ND	8.6		ppbv	25	7/16/2011
Ethylbenzene	3200	170		ppbv	500	7/20/2011
Freon-113	ND	8.6		ppbv	25	7/16/2011
Freon-114	490	43		ppbv	25	7/16/2011
Heptane	1700	8.6		ppbv	25	7/16/2011
Hexachlorobutadiene	ND	8.6		ppbv	25	7/16/2011
Hexane	1000	22		ppbv	25	7/16/2011
Isopropyl Alcohol	66	43		ppbv	25	7/16/2011
m,p-Xylene	6500	340		ppbv	500	7/20/2011
Methyl tert-butyl ether	ND	8.6		ppbv	25	7/16/2011
Methylene chloride	ND	86		ppbv	25	7/16/2011
o-Xylene	1700	170		ppbv	500	7/20/2011
Propene	1900	86		ppbv	25	7/16/2011
Styrene	110	8.6		ppbv	25	7/16/2011
Tetrachloroethene	300	8.6		ppbv	25	7/16/2011
Tetrahydrofuran	170	22		ppbv	25	7/16/2011
Toluene	12000	170		ppbv	500	7/20/2011
trans-1,2-Dichloroethene	160	8.6		ppbv	25	7/16/2011
trans-1,3-Dichloropropene	ND	8.6		ppbv	25	7/16/2011
Trichloroethene	340	8.6		ppbv	25	7/16/2011
Trichlorofluoromethane	15	8.6		ppbv	25	7/16/2011
Vinyl acetate	ND	86		ppbv	25	7/16/2011
Vinyl chloride	3100	170		ppbv	500	7/20/2011
Xylenes, Total	8200	520		ppbv	500	7/20/2011

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E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation
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e-mail address: STATinfo@STATAnalysis.com AIHA, NVLAP and NELAP accredited

CHAIN OF CUSTODY RECORD

№: 838255 Page: 1 of 1

Company: MWH
Project Number: 1007333.04811201 Client Tracking No.:
Project Name: BLACKWELL
Project Location: WARRENVILLE, IL
Sampler(s): JUSTIN FINGER / TED BOBAK
Report To: JUSTIN FINGER Phone: (312) 831-3447
Fax: (312) 831-3999
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail:

P.O. No.:
Quote No.:

Turn Around: STANDARD
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	TO15	EPA 3C	EPA 25C (TNMOC)	Remarks	Lab No.:
BW-LFGSTACK-59A	7/13/11	0730-1530	AIR		X	A	1	X	X	X		001

Relinquished by: (Signature) Date/Time: 7/14/11 1600
Received by: (Signature) Date/Time: 7/14/11 1600
Relinquished by: (Signature) Date/Time: 7/14/11 4:40PM
Received by: (Signature) Date/Time: 7/14/11 1640
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments: CANISTER # 110
INITIAL VAC = -29" Hg
FINAL VAC = -3" Hg

Preservation Code: A = None B = HNO_3 C = NaOH = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 1107045S

Received on Ice: Yes ☐ No ☒

Temperature: Amb

STAT Analysis Corporation

Sample Receipt Checklist

Client Name MWHARZA

Date and Time Received: 7/14/2011 4:40:00 PM

Work Order Number 11070455

Received by: CDF

Checklist completed by: Signature | Date 7/14/11

Reviewed by: CG 7/18/11 (Initials | Date)

Matrix:

Carrier name: STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature Ambient °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments: _____

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response: _____

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **MB071511-6** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.20									
1,1,2,2-Tetrachloroethane	ND	0.20									
1,1,2-Trichloroethane	ND	0.20									
1,1-Dichloroethane	ND	0.20									
1,1-Dichloroethene	ND	0.20									
1,2,4-Trichlorobenzene	ND	0.20									
1,2-Dibromoethane	ND	0.20									
1,2-Dichlorobenzene	ND	0.20									
1,2-Dichloroethane	ND	0.20									
1,2-Dichloropropane	ND	0.20									
1,3,5-Trimethylbenzene	ND	0.20									
1,3-Butadiene	ND	0.20									
1,3-Dichlorobenzene	ND	0.20									
1,4-Dichlorobenzene	ND	0.20									
1,4-Dioxane	ND	1.0									
2-Butanone	ND	0.50									
2-Hexanone	ND	1.0									
4-Ethyltoluene	ND	0.20									
4-Methyl-2-pentanone	ND	1.0									
Acetone	0.12	2.0									J*
Benzene	ND	0.20									
Benzyl chloride	ND	0.50									
Bromodichloromethane	ND	0.20									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon disulfide	ND	0.20									
Carbon tetrachloride	ND	0.20									
Chlorobenzene	ND	0.20									
Chloroethane	ND	0.20									
Chloroform	ND	0.20									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **MB071511-6** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.20									
cis-1,3-Dichloropropene	ND	0.20									
Cyclohexane	ND	0.20									
Dibromochloromethane	ND	0.20									
Dichlorodifluoromethane	ND	0.20									
Ethyl acetate	ND	0.20									
Freon-113	ND	0.20									
Freon-114	ND	1.0									
Heptane	ND	0.20									
Hexachlorobutadiene	ND	0.20									
Hexane	ND	0.50									
Isopropyl Alcohol	ND	1.0									
Methyl tert-butyl ether	ND	0.20									
Methylene chloride	ND	2.0									
Propene	ND	2.0									
Styrene	ND	0.20									
Tetrachloroethene	ND	0.20									
Tetrahydrofuran	ND	0.50									
trans-1,2-Dichloroethene	ND	0.20									
trans-1,3-Dichloropropene	ND	0.20									
Trichloroethene	ND	0.20									
Trichlorofluoromethane	ND	0.20									
Vinyl acetate	ND	2.0									

Sample ID: **LCS071511-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	5.55	0.20	5	0	111	70	130	0	0		
1,1,2,2-Tetrachloroethane	6.07	0.20	5	0	121	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **LCS071511-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	5.69	0.20	5	0	114	70	130	0	0		
1,1-Dichloroethane	5.49	0.20	5	0	110	70	130	0	0		
1,1-Dichloroethene	5.33	0.20	5	0	107	70	130	0	0		
1,2,4-Trichlorobenzene	5.77	0.20	5	0	115	70	130	0	0		
1,2-Dibromoethane	5.86	0.20	5	0	117	70	130	0	0		
1,2-Dichlorobenzene	5.87	0.20	5	0	117	70	130	0	0		
1,2-Dichloroethane	5.73	0.20	5	0	115	70	130	0	0		
1,2-Dichloropropane	5.42	0.20	5	0	108	70	130	0	0		
1,3,5-Trimethylbenzene	5.84	0.20	5	0	117	70	130	0	0		
1,3-Butadiene	5.83	0.20	5	0	117	70	130	0	0		
1,3-Dichlorobenzene	5.98	0.20	5	0	120	70	130	0	0		
1,4-Dichlorobenzene	5.87	0.20	5	0	117	70	130	0	0		
1,4-Dioxane	5.11	1.0	5	0	102	70	130	0	0		
2-Butanone	5.34	0.50	5	0	107	70	130	0	0		
2-Hexanone	5.18	1.0	5	0	104	70	130	0	0		
4-Ethyltoluene	5.93	0.20	5	0	119	70	130	0	0		
4-Methyl-2-pentanone	5.48	1.0	5	0	110	70	130	0	0		
Acetone	5.03	2.0	5	0.12	98.2	70	130	0	0		*
Benzene	5.36	0.20	5	0	107	70	130	0	0		
Benzyl chloride	5.43	0.50	5	0	109	70	130	0	0		
Bromodichloromethane	5.92	0.20	5	0	118	70	130	0	0		
Bromoform	6.51	0.50	5	0	130	70	130	0	0		S
Bromomethane	6.27	0.50	5	0	125	70	130	0	0		
Carbon disulfide	4.85	0.20	5	0	97	70	130	0	0		
Carbon tetrachloride	5.86	0.20	5	0	117	70	130	0	0		
Chlorobenzene	5.76	0.20	5	0	115	70	130	0	0		
Chloroethane	6.03	0.20	5	0	121	70	130	0	0		
Chloroform	5.62	0.20	5	0	112	70	130	0	0		
Chloromethane	5.6	0.50	5	0	112	70	130	0	0		
cis-1,2-Dichloroethene	5.63	0.20	5	0	113	70	130	0	0		
cis-1,3-Dichloropropene	5.6	0.20	5	0	112	70	130	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **LCS071511-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyclohexane	5.35	0.20	5	0	107	70	130	0	0		
Dibromochloromethane	6.23	0.20	5	0	125	70	130	0	0		
Dichlorodifluoromethane	6.01	0.20	5	0	120	70	130	0	0		
Ethyl acetate	5.98	0.20	5	0	120	70	130	0	0		
Freon-113	5.31	0.20	5	0	106	70	130	0	0		
Freon-114	6.13	1.0	5	0	123	70	130	0	0		
Heptane	5.48	0.20	5	0	110	70	130	0	0		
Hexachlorobutadiene	6.47	0.20	5	0	129	70	130	0	0		
Hexane	5.35	0.50	5	0	107	70	130	0	0		
Isopropyl Alcohol	5.46	1.0	5	0	109	70	130	0	0		
Methyl tert-butyl ether	5.28	0.20	5	0	106	70	130	0	0		
Methylene chloride	4.82	2.0	5	0	96.4	70	130	0	0		
Propene	5.62	2.0	5	0	112	70	130	0	0		
Styrene	5.86	0.20	5	0	117	70	130	0	0		
Tetrachloroethene	5.87	0.20	5	0	117	70	130	0	0		
Tetrahydrofuran	5.18	0.50	5	0	104	70	130	0	0		
trans-1,2-Dichloroethene	5.19	0.20	5	0	104	70	130	0	0		
trans-1,3-Dichloropropene	5.66	0.20	5	0	113	70	130	0	0		
Trichloroethene	5.73	0.20	5	0	115	70	130	0	0		
Trichlorofluoromethane	6.15	0.20	5	0	123	70	130	0	0		
Vinyl acetate	4.57	2.0	5	0	91.4	70	130	0	0		

Sample ID: **LCSD071511-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	5.59	0.20	5	0	112	70	130	5.55	0.718	25	
1,1,2,2-Tetrachloroethane	6.04	0.20	5	0	121	70	130	6.07	0.495	25	
1,1,2-Trichloroethane	5.72	0.20	5	0	114	70	130	5.69	0.526	25	
1,1-Dichloroethane	5.53	0.20	5	0	111	70	130	5.49	0.726	25	
1,1-Dichloroethene	5.39	0.20	5	0	108	70	130	5.33	1.12	25	

Qualifiers:
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B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **LCSD071511-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	6.1	0.20	5	0	122	70	130	5.77	5.56	25	
1,2-Dibromoethane	5.88	0.20	5	0	118	70	130	5.86	0.341	25	
1,2-Dichlorobenzene	5.96	0.20	5	0	119	70	130	5.87	1.52	25	
1,2-Dichloroethane	5.73	0.20	5	0	115	70	130	5.73	0	25	
1,2-Dichloropropane	5.47	0.20	5	0	109	70	130	5.42	0.918	25	
1,3,5-Trimethylbenzene	5.91	0.20	5	0	118	70	130	5.84	1.19	25	
1,3-Butadiene	6	0.20	5	0	120	70	130	5.83	2.87	25	
1,3-Dichlorobenzene	6.05	0.20	5	0	121	70	130	5.98	1.16	25	
1,4-Dichlorobenzene	5.98	0.20	5	0	120	70	130	5.87	1.86	25	
1,4-Dioxane	5.03	1.0	5	0	101	70	130	5.11	1.58	25	
2-Butanone	5.39	0.50	5	0	108	70	130	5.34	0.932	25	
2-Hexanone	5	1.0	5	0	100	70	130	5.18	3.54	25	
4-Ethyltoluene	5.93	0.20	5	0	119	70	130	5.93	0	25	
4-Methyl-2-pentanone	5.36	1.0	5	0	107	70	130	5.48	2.21	25	
Acetone	4.92	2.0	5	0.12	96	70	130	5.03	2.21	25	*
Benzene	5.42	0.20	5	0	108	70	130	5.36	1.11	25	
Benzyl chloride	5.41	0.50	5	0	108	70	130	5.43	0.369	25	
Bromodichloromethane	5.93	0.20	5	0	119	70	130	5.92	0.169	25	
Bromoform	6.48	0.50	5	0	130	70	130	6.51	0.462	25	
Bromomethane	6.34	0.50	5	0	127	70	130	6.27	1.11	25	
Carbon disulfide	4.84	0.20	5	0	96.8	70	130	4.85	0.206	25	
Carbon tetrachloride	5.79	0.20	5	0	116	70	130	5.86	1.20	25	
Chlorobenzene	5.75	0.20	5	0	115	70	130	5.76	0.174	25	
Chloroethane	6.17	0.20	5	0	123	70	130	6.03	2.30	25	
Chloroform	5.64	0.20	5	0	113	70	130	5.62	0.355	25	
Chloromethane	5.63	0.50	5	0	113	70	130	5.6	0.534	25	
cis-1,2-Dichloroethene	5.67	0.20	5	0	113	70	130	5.63	0.708	25	
cis-1,3-Dichloropropene	5.67	0.20	5	0	113	70	130	5.6	1.24	25	
Cyclohexane	5.37	0.20	5	0	107	70	130	5.35	0.373	25	
Dibromochloromethane	6.25	0.20	5	0	125	70	130	6.23	0.321	25	
Dichlorodifluoromethane	6.12	0.20	5	0	122	70	130	6.01	1.81	25	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73166

Sample ID: **LCSD071511-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110715A**
Client ID: **ZZZZZ** Batch ID: **R73166** TestNo: **TO-15** Analysis Date: **7/15/2011** SeqNo: **1957714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethyl acetate	6.07	0.20	5	0	121	70	130	5.98	1.49	25	
Freon-113	5.39	0.20	5	0	108	70	130	5.31	1.50	25	
Freon-114	6.31	1.0	5	0	126	70	130	6.13	2.89	25	
Heptane	5.57	0.20	5	0	111	70	130	5.48	1.63	25	
Hexachlorobutadiene	6.91	0.20	5	0	138	70	130	6.47	6.58	25	S
Hexane	5.39	0.50	5	0	108	70	130	5.35	0.745	25	
Isopropyl Alcohol	5.26	1.0	5	0	105	70	130	5.46	3.73	25	
Methyl tert-butyl ether	5.35	0.20	5	0	107	70	130	5.28	1.32	25	
Methylene chloride	4.93	2.0	5	0	98.6	70	130	4.82	2.26	25	
Propene	5.84	2.0	5	0	117	70	130	5.62	3.84	25	
Styrene	5.89	0.20	5	0	118	70	130	5.86	0.511	25	
Tetrachloroethene	5.9	0.20	5	0	118	70	130	5.87	0.510	25	
Tetrahydrofuran	5.22	0.50	5	0	104	70	130	5.18	0.769	25	
trans-1,2-Dichloroethene	5.27	0.20	5	0	105	70	130	5.19	1.53	25	
trans-1,3-Dichloropropene	5.75	0.20	5	0	115	70	130	5.66	1.58	25	
Trichloroethene	5.71	0.20	5	0	114	70	130	5.73	0.350	25	
Trichlorofluoromethane	6.13	0.20	5	0	123	70	130	6.15	0.326	25	
Vinyl acetate	4.58	2.0	5	0	91.6	70	130	4.57	0.219	25	

Qualifiers:
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B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73241

Sample ID: **MB071911-6** SampType: **MBLK** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110719A**
Client ID: **ZZZZZ** Batch ID: **R73241** TestNo: **TO-15** Analysis Date: **7/19/2011** SeqNo: **1959749**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.20									
Ethylbenzene	ND	0.20									
m,p-Xylene	ND	0.40									
o-Xylene	ND	0.20									
Toluene	ND	0.20									
Vinyl chloride	ND	0.20									
Xylenes, Total	ND	0.60									

Sample ID: **LCS071911-6** SampType: **LCS** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110719A**
Client ID: **ZZZZZ** Batch ID: **R73241** TestNo: **TO-15** Analysis Date: **7/19/2011** SeqNo: **1959750**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	5.6	0.20	5	0	112	70	130	0	0		
Ethylbenzene	5.37	0.20	5	0	107	70	130	0	0		
m,p-Xylene	10.79	0.40	10	0	108	70	130	0	0		
o-Xylene	5.45	0.20	5	0	109	70	130	0	0		
Toluene	5.1	0.20	5	0	102	70	130	0	0		
Vinyl chloride	5.18	0.20	5	0	104	70	130	0	0		
Xylenes, Total	16.23	0.60	15	0	108	70	130	0	0		

Sample ID: **LCSD071911-6** SampType: **LCSD** TestCode: **TO_15A+** Units: **ppbv** Prep Date: Run ID: **VOA-6_110719A**
Client ID: **ZZZZZ** Batch ID: **R73241** TestNo: **TO-15** Analysis Date: **7/19/2011** SeqNo: **1959898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	5.62	0.20	5	0	112	70	130	5.6	0.357	25	
Ethylbenzene	5.36	0.20	5	0	107	70	130	5.37	0.186	25	
m,p-Xylene	10.75	0.40	10	0	108	70	130	10.79	0.371	25	
o-Xylene	5.41	0.20	5	0	108	70	130	5.45	0.737	25	
Toluene	5.27	0.20	5	0	105	70	130	5.1	3.28	25	
Vinyl chloride	5.68	0.20	5	0	114	70	130	5.18	9.21	25	
Xylenes, Total	16.16	0.60	15	0	108	70	130	16.23	0.432	25	

Qualifiers:
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B - Analyte detected in the associated Method Blank
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CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73186

Sample ID: **MB071611-3C** SampType: **MBLK** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_110716A**
Client ID: **ZZZZZ** Batch ID: **R73186** TestNo: **Method 3c** Analysis Date: **7/16/2011** SeqNo: **1958234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	ND	0.0400									
Methane	ND	0.0500									
Nitrogen	0.03	1.00									J
Oxygen	ND	0.400									

Sample ID: **LCS071611-3C L5** SampType: **LCS** TestCode: **EPA_3C** Units: **mol %** Prep Date: Run ID: **GC-TCD1_110716A**
Client ID: **ZZZZZ** Batch ID: **R73186** TestNo: **Method 3c** Analysis Date: **7/16/2011** SeqNo: **1958233**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	32.94	0.0400	35	0	94.1	80	120	0	0		
Methane	45.13	0.0500	50	0	90.3	80	120	0	0		
Nitrogen	9.866	1.00	10	0	98.7	80	120	0	0		
Oxygen	5.005	0.400	5	0	100	80	120	0	0		

Sample ID: **11070455-001A** SampType: **DUP** TestCode: **EPA_3C** Units: **mol %** Prep Date: **7/15/2011** Run ID: **GC-TCD1_110716A**
Client ID: **BW-LFGStack-59A** Batch ID: **R73186** TestNo: **Method 3c** Analysis Date: **7/16/2011** SeqNo: **1958236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon Dioxide	25.79	0.0689	0	0	0	0	0	25.79	0.00668	5	
Methane	46.76	0.0861	0	0	0	0	0	46.84	0.158	5	
Nitrogen	14.44	1.72	0	0	0	0	0	14.44	0.0238	5	
Oxygen	2.953	0.689	0	0	0	0	0	2.939	0.468	5	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Montgomery Watson Harza
Work Order: 11070455
Project: 1007333.04811201, Blackwell, Warrenville, IL

ANALYTICAL QC SUMMARY REPORT

BatchID: R73426

Sample ID: **MB072511-F** SampType: **MBLK** TestCode: **EPA_25C** Units: **ppmv** Prep Date: Run ID: **GC-TCD1_110725A**
Client ID: **ZZZZZ** Batch ID: **R73426** TestNo: **Method 25c** Analysis Date: **7/25/2011** SeqNo: **1964509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NMOC	ND	50	0	0	0	0	0	0	0		*
Methane	ND	2.0	0	0	0	0	0	0	0		*

Sample ID: **LCS072511-F 100** SampType: **LCS** TestCode: **EPA_25C** Units: **ppmv** Prep Date: Run ID: **GC-TCD1_110725A**
Client ID: **ZZZZZ** Batch ID: **R73426** TestNo: **Method 25c** Analysis Date: **7/25/2011** SeqNo: **1964507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	93.03	2.0	100	0	93	90	110	0	0		*

Sample ID: **11070455-001A** SampType: **DUP** TestCode: **EPA_25C** Units: **ppmv** Prep Date: **7/15/2011** Run ID: **GC-TCD1_110725A**
Client ID: **BW-LFGStack-59A** Batch ID: **R73426** TestNo: **Method 25c** Analysis Date: **7/25/2011** SeqNo: **1964511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NMOC	1143	86	0	0	0	0	0	1109	2.99	5	*

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STAT Analysis Corporation
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November 18, 2011

Montgomery Watson Harza
175 W. Jackson Blvd.
Suite 1900
Chicago, IL 60604
Telephone: (312) 831-3800
Fax: (312) 831-3999

RE: 1007333.04811201, Blackwell, Warrenville, IL STAT Project No: 11110436

Dear Justin Finger:

STAT Analysis received 2 samples for the referenced project on 11/11/2011 3:15:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Catia Giannini
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: November 18, 2011

Client: Montgomery Watson Harza
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab Order: 11110436

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
11110436-001A	BW-LFGSTACK-60A		11/9/2011 3:32:00 PM	11/11/2011
11110436-002A	BW-LFGSTACK-960A		11/9/2011 3:32:00 PM	11/11/2011

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Report Date: November 18, 2011
Print Date: November 18, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGSTACK-60A
Lab Order:	11110436	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	11/9/2011 3:32:00 PM
Lab ID:	11110436-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
EPA Method 25	**METHOD 25C**			Prep Date: **11/15/2011**		Analyst: **ART**
NMOC	1300	84	*	ppmv	1	11/18/2011
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date: **11/15/2011**		Analyst: **ART**
Carbon Dioxide	29.7	0.0673		mol %	1	11/16/2011
Methane	53.1	0.0841		mol %	1	11/16/2011
Nitrogen	6.72	1.68		mol %	1	11/16/2011
Oxygen	< 0.673	0.673		mol %	1	11/16/2011
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **11/15/2011**		Analyst: **ART**
1,1,1-Trichloroethane	< 8.4	8.4		ppbv	25	11/17/2011
1,1,2,2-Tetrachloroethane	< 8.4	8.4		ppbv	25	11/17/2011
1,1,2-Trichloroethane	< 8.4	8.4		ppbv	25	11/17/2011
1,1-Dichloroethane	100	8.4		ppbv	25	11/17/2011
1,1-Dichloroethene	19	8.4		ppbv	25	11/17/2011
1,2,4-Trichlorobenzene	< 8.4	8.4		ppbv	25	11/17/2011
1,2,4-Trimethylbenzene	1800	8.4		ppbv	25	11/17/2011
1,2-Dibromoethane	< 8.4	8.4		ppbv	25	11/17/2011
1,2-Dichlorobenzene	29	8.4		ppbv	25	11/17/2011
1,2-Dichloroethane	13	8.4		ppbv	25	11/17/2011
1,2-Dichloropropane	100	8.4		ppbv	25	11/17/2011
1,3,5-Trimethylbenzene	860	8.4		ppbv	25	11/17/2011
1,3-Butadiene	< 8.4	8.4		ppbv	25	11/17/2011
1,3-Dichlorobenzene	< 8.4	8.4		ppbv	25	11/17/2011
1,4-Dichlorobenzene	730	8.4		ppbv	25	11/17/2011
1,4-Dioxane	150	21		ppbv	25	11/17/2011
2-Butanone	1100	21		ppbv	25	11/17/2011
2-Hexanone	< 42	42		ppbv	25	11/17/2011
4-Ethyltoluene	640	8.4		ppbv	25	11/17/2011
4-Methyl-2-pentanone	570	42		ppbv	25	11/17/2011
Acetone	1100	84	*	ppbv	25	11/17/2011
Benzene	1300	8.4		ppbv	25	11/17/2011
Benzyl chloride	< 21	21		ppbv	25	11/17/2011
Bromodichloromethane	< 8.4	8.4		ppbv	25	11/17/2011
Bromoform	< 21	21		ppbv	25	11/17/2011
Bromomethane	< 21	21		ppbv	25	11/17/2011
Carbon disulfide	< 8.4	8.4		ppbv	25	11/17/2011
Carbon tetrachloride	< 8.4	8.4		ppbv	25	11/17/2011
Chlorobenzene	870	8.4		ppbv	25	11/17/2011
Chloroethane	420	8.4		ppbv	25	11/17/2011

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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HT - Sample received past holding time
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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Report Date: November 18, 2011
Print Date: November 18, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGSTACK-60A
Lab Order:	11110436	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	11/9/2011 3:32:00 PM
Lab ID:	11110436-001A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **11/15/2011**		Analyst: **ART**
Chloroform	< 8.4	8.4		ppbv	25	11/17/2011
Chloromethane	< 21	21		ppbv	25	11/17/2011
cis-1,2-Dichloroethene	1600	8.4		ppbv	25	11/17/2011
cis-1,3-Dichloropropene	< 8.4	8.4		ppbv	25	11/17/2011
Cyclohexane	620	8.4		ppbv	25	11/17/2011
Dibromochloromethane	< 8.4	8.4		ppbv	25	11/17/2011
Dichlorodifluoromethane	1900	8.4		ppbv	25	11/17/2011
Ethyl acetate	< 8.4	8.4		ppbv	25	11/17/2011
Ethylbenzene	5000	84		ppbv	250	11/17/2011
Freon-113	8.8	8.4		ppbv	25	11/17/2011
Freon-114	390	42		ppbv	25	11/17/2011
Heptane	1800	8.4		ppbv	25	11/17/2011
Hexachlorobutadiene	< 8.4	8.4		ppbv	25	11/17/2011
Hexane	1200	21		ppbv	25	11/17/2011
Isopropyl Alcohol	190	42		ppbv	25	11/17/2011
m,p-Xylene	4100	17		ppbv	25	11/17/2011
Methyl tert-butyl ether	< 8.4	8.4		ppbv	25	11/17/2011
Methylene chloride	< 84	84		ppbv	25	11/17/2011
o-Xylene	2000	8.4		ppbv	25	11/17/2011
Propene	2700	840		ppbv	250	11/17/2011
Styrene	150	8.4		ppbv	25	11/17/2011
Tetrachloroethene	380	8.4		ppbv	25	11/17/2011
Tetrahydrofuran	200	21		ppbv	25	11/17/2011
Toluene	15000	84		ppbv	250	11/17/2011
trans-1,2-Dichloroethene	180	8.4		ppbv	25	11/17/2011
trans-1,3-Dichloropropene	< 8.4	8.4		ppbv	25	11/17/2011
Trichloroethene	570	8.4		ppbv	25	11/17/2011
Trichlorofluoromethane	78	8.4		ppbv	25	11/17/2011
Vinyl acetate	< 84	84		ppbv	25	11/17/2011
Vinyl chloride	4200	84		ppbv	250	11/17/2011
Xylenes, Total	6100	25		ppbv	25	11/17/2011

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Report Date: November 18, 2011
Print Date: November 18, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGSTACK-960A
Lab Order:	11110436	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	11/9/2011 3:32:00 PM
Lab ID:	11110436-002A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
EPA Method 25	**METHOD 25C**			Prep Date: **11/15/2011**		Analyst: **ART**
NMOC	1300	86	*	ppmv	1	11/18/2011
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date: **11/15/2011**		Analyst: **ART**
Carbon Dioxide	28.8	0.0685		mol %	1	11/16/2011
Methane	51.6	0.0856		mol %	1	11/16/2011
Nitrogen	6.53	1.71		mol %	1	11/16/2011
Oxygen	< 0.685	0.685		mol %	1	11/16/2011
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **11/15/2011**		Analyst: **ART**
1,1,1-Trichloroethane	< 8.6	8.6		ppbv	25	11/17/2011
1,1,2,2-Tetrachloroethane	< 8.6	8.6		ppbv	25	11/17/2011
1,1,2-Trichloroethane	< 8.6	8.6		ppbv	25	11/17/2011
1,1-Dichloroethane	100	8.6		ppbv	25	11/17/2011
1,1-Dichloroethene	20	8.6		ppbv	25	11/17/2011
1,2,4-Trichlorobenzene	< 8.6	8.6		ppbv	25	11/17/2011
1,2,4-Trimethylbenzene	1800	8.6		ppbv	25	11/17/2011
1,2-Dibromoethane	< 8.6	8.6		ppbv	25	11/17/2011
1,2-Dichlorobenzene	29	8.6		ppbv	25	11/17/2011
1,2-Dichloroethane	14	8.6		ppbv	25	11/17/2011
1,2-Dichloropropane	100	8.6		ppbv	25	11/17/2011
1,3,5-Trimethylbenzene	870	8.6		ppbv	25	11/17/2011
1,3-Butadiene	< 8.6	8.6		ppbv	25	11/17/2011
1,3-Dichlorobenzene	< 8.6	8.6		ppbv	25	11/17/2011
1,4-Dichlorobenzene	730	8.6		ppbv	25	11/17/2011
1,4-Dioxane	180	21		ppbv	25	11/17/2011
2-Butanone	1200	21		ppbv	25	11/17/2011
2-Hexanone	< 43	43		ppbv	25	11/17/2011
4-Ethyltoluene	620	8.6		ppbv	25	11/17/2011
4-Methyl-2-pentanone	590	43		ppbv	25	11/17/2011
Acetone	1100	86	*	ppbv	25	11/17/2011
Benzene	1300	8.6		ppbv	25	11/17/2011
Benzyl chloride	< 21	21		ppbv	25	11/17/2011
Bromodichloromethane	< 8.6	8.6		ppbv	25	11/17/2011
Bromoform	< 21	21		ppbv	25	11/17/2011
Bromomethane	< 21	21		ppbv	25	11/17/2011
Carbon disulfide	< 8.6	8.6		ppbv	25	11/17/2011
Carbon tetrachloride	< 8.6	8.6		ppbv	25	11/17/2011
Chlorobenzene	860	8.6		ppbv	25	11/17/2011
Chloroethane	420	8.6		ppbv	25	11/17/2011

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Report Date: November 18, 2011
Print Date: November 18, 2011

Client:	Montgomery Watson Harza	**Client Sample ID:**	BW-LFGSTACK-960A
Lab Order:	11110436	**Tag Number:**	
Project:	1007333.04811201, Blackwell, Warrenville, IL	**Collection Date:**	11/9/2011 3:32:00 PM
Lab ID:	11110436-002A	**Matrix:**	Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **11/15/2011**		Analyst: **ART**
Chloroform	< 8.6	8.6		ppbv	25	11/17/2011
Chloromethane	< 21	21		ppbv	25	11/17/2011
cis-1,2-Dichloroethene	1600	8.6		ppbv	25	11/17/2011
cis-1,3-Dichloropropene	< 8.6	8.6		ppbv	25	11/17/2011
Cyclohexane	630	8.6		ppbv	25	11/17/2011
Dibromochloromethane	< 8.6	8.6		ppbv	25	11/17/2011
Dichlorodifluoromethane	1800	8.6		ppbv	25	11/17/2011
Ethyl acetate	< 8.6	8.6		ppbv	25	11/17/2011
Ethylbenzene	5100	86		ppbv	250	11/17/2011
Freon-113	9	8.6		ppbv	25	11/17/2011
Freon-114	380	43		ppbv	25	11/17/2011
Heptane	1900	8.6		ppbv	25	11/17/2011
Hexachlorobutadiene	< 8.6	8.6		ppbv	25	11/17/2011
Hexane	1200	21		ppbv	25	11/17/2011
Isopropyl Alcohol	180	43		ppbv	25	11/17/2011
m,p-Xylene	4100	17		ppbv	25	11/17/2011
Methyl tert-butyl ether	< 8.6	8.6		ppbv	25	11/17/2011
Methylene chloride	< 86	86		ppbv	25	11/17/2011
o-Xylene	2000	8.6		ppbv	25	11/17/2011
Propene	2700	860		ppbv	250	11/17/2011
Styrene	150	8.6		ppbv	25	11/17/2011
Tetrachloroethene	380	8.6		ppbv	25	11/17/2011
Tetrahydrofuran	200	21		ppbv	25	11/17/2011
Toluene	15000	86		ppbv	250	11/17/2011
trans-1,2-Dichloroethene	180	8.6		ppbv	25	11/17/2011
trans-1,3-Dichloropropene	< 8.6	8.6		ppbv	25	11/17/2011
Trichloroethene	560	8.6		ppbv	25	11/17/2011
Trichlorofluoromethane	76	8.6		ppbv	25	11/17/2011
Vinyl acetate	< 86	86		ppbv	25	11/17/2011
Vinyl chloride	4200	86		ppbv	250	11/17/2011
Xylenes, Total	6100	26		ppbv	25	11/17/2011

Qualifiers:

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HT - Sample received past holding time
* - Non-accredited parameter

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R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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e-mail address: STATinfo@STATAnalysis.com AIHA, NVLAP and NELAP accredited

CHAIN OF CUSTODY RECORD

№: 839744 Page: 1 of 1

Company: MWH
Project Number: 1007333.04811201 Client Tracking No.:
Project Name: BLACKWELL
Project Location: WARRENVILLE, IL
Sampler(s): JUSTIN FINCER / TED BOBAK
Report To: JUSTIN FINCER Phone: (312) 831-3000
Fax: (312) 831-3949
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: JUSTIN.E.FINCER@MWHGLOBAL.COM

P.O. No.:
Quote No.:
Turn Around:
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	TO15	EPA 3C	EPA 25C (TNMOC)	Remarks	Lab No.:
BW-LFGSTACK-60A	11/9/11	0732-1532	AIR		X	A	1	X	X	X	CAN #117	001
BW-LFGSTACK-960A	11/9/11	0732-1532	AIR		X	A	1	X	X	X	CAN #120	002

Relinquished by: (Signature)	Date/Time: 11/11/11 1515	
Received by: (Signature)	Date/Time: 11/11/11 1515	
Relinquished by: (Signature)	Date/Time:	
Received by: (Signature)	Date/Time:	
Relinquished by: (Signature)	Date/Time:	
Received by: (Signature)	Date/Time:	

Comments: CAN #117 INITIAL VAC = -30" Hg FINAL VAC = -8" Hg
CAN #120 INITIAL VAC = -24" Hg FINAL VAC = -7" Hg

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 1110436
Received on Ice: Yes ☐ No ☒
Temperature: Ambient °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name MWHARZA

Date and Time Received: 11/11/2011 3:15:00 PM

Work Order Number 11110436

Received by: CDF

Checklist completed by: Signature | Date 11/11/11

Reviewed by: Initials | Date 11/18/11

Matrix: Carrier name: Client Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature Ambient °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments: _____

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response: _____

STAT Analysis Corporation
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March 22, 2012

Montgomery Watson Harza
175 W. Jackson Blvd.
Suite 1900
Chicago, IL 60604
Telephone: (312) 831-3800
Fax: (312) 831-3999

RE: 1007333.04811201, Blackwell, Warrenville, IL STAT Project No: 12030288

Dear Justin Finger:

STAT Analysis received 1 sample for the referenced project on 3/14/2012 9:30:00 AM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Katelin Lewis

Katelin Lewis
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

STAT Analysis Corporation

Date: March 22, 2012

Client: Montgomery Watson Harza
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab Order: 12030288

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
12030288-001A	BW-LFGSTACK-61A		3/13/2012 3:30:00 PM	3/14/2012

CLIENT: Montgomery Watson Harza
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab Order: 12030288

CASE NARRATIVE

Analysis of samples for method 25C were performed with a modified method using only the methanizer catalyst.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Date Reported: March 22, 2012
Date Printed: March 22, 2012

Client: Montgomery Watson Harza
Lab Order: 12030288
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab ID: 12030288-001

Client Sample ID: BW-LFGSTACK-61A
Collection Date: 3/13/2012 3:30:00 PM
Matrix: Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
EPA Method 25	**METHOD 25C**			Prep Date: **3/16/2012**		Analyst: **ART**
NMOC	1300	98	*	ppmv	1	3/19/2012
Landfill Gases by EPA Method 3c	**METHOD 3C**			Prep Date: **3/16/2012**		Analyst: **ART**
Carbon Dioxide	29.7	0.0782		mol %	1	3/19/2012
Methane	53.5	0.0978		mol %	1	3/19/2012
Nitrogen	6.47	1.96		mol %	1	3/19/2012
Oxygen	< 0.782	0.782		mol %	1	3/19/2012
Volatile Organic Compounds in Air by GC/MS	**TO-15**			Prep Date: **3/16/2012**		Analyst: **VP**
1,1,1-Trichloroethane	< 20	20		ppbv	50	3/21/2012
1,1,2,2-Tetrachloroethane	< 20	20		ppbv	50	3/21/2012
1,1,2-Trichloroethane	< 20	20		ppbv	50	3/21/2012
1,1-Dichloroethane	62	20		ppbv	50	3/21/2012
1,1-Dichloroethene	< 20	20		ppbv	50	3/21/2012
1,2,4-Trichlorobenzene	< 20	20		ppbv	50	3/21/2012
1,2,4-Trimethylbenzene	2600	20		ppbv	50	3/21/2012
1,2-Dibromoethane	< 20	20		ppbv	50	3/21/2012
1,2-Dichlorobenzene	< 20	20		ppbv	50	3/21/2012
1,2-Dichloroethane	< 20	20		ppbv	50	3/21/2012
1,2-Dichloropropane	71	20		ppbv	50	3/21/2012
1,3,5-Trimethylbenzene	1000	20		ppbv	50	3/21/2012
1,3-Butadiene	< 20	20		ppbv	50	3/21/2012
1,3-Dichlorobenzene	< 20	20		ppbv	50	3/21/2012
1,4-Dichlorobenzene	480	20		ppbv	50	3/21/2012
1,4-Dioxane	89	49		ppbv	50	3/21/2012
2-Butanone	820	49		ppbv	50	3/21/2012
2-Hexanone	< 98	98		ppbv	50	3/21/2012
4-Ethyltoluene	660	20		ppbv	50	3/21/2012
4-Methyl-2-pentanone	850	98		ppbv	50	3/21/2012
Acetone	820	200	*	ppbv	50	3/21/2012
Benzene	1000	20		ppbv	50	3/21/2012
Benzyl chloride	< 49	49		ppbv	50	3/21/2012
Bromodichloromethane	< 20	20		ppbv	50	3/21/2012
Bromoform	< 49	49		ppbv	50	3/21/2012
Bromomethane	< 49	49		ppbv	50	3/21/2012
Carbon disulfide	< 20	20		ppbv	50	3/21/2012
Carbon tetrachloride	< 20	20		ppbv	50	3/21/2012
Chlorobenzene	590	20		ppbv	50	3/21/2012
Chloroethane	240	20		ppbv	50	3/21/2012

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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Date Reported: March 22, 2012
Date Printed: March 22, 2012

Client: Montgomery Watson Harza
Lab Order: 12030288
Project: 1007333.04811201, Blackwell, Warrenville, IL
Lab ID: 12030288-001

Client Sample ID: BW-LFGSTACK-61A
Collection Date: 3/13/2012 3:30:00 PM
Matrix: Air

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds in Air by GC/MS TO-15				Prep Date: **3/16/2012**		Analyst: **VP**
Chloroform	< 20	20		ppbv	50	3/21/2012
Chloromethane	< 49	49		ppbv	50	3/21/2012
cis-1,2-Dichloroethene	1100	20		ppbv	50	3/21/2012
cis-1,3-Dichloropropene	< 20	20		ppbv	50	3/21/2012
Cyclohexane	400	20		ppbv	50	3/21/2012
Dibromochloromethane	< 20	20		ppbv	50	3/21/2012
Dichlorodifluoromethane	2000	20		ppbv	50	3/21/2012
Ethyl acetate	< 20	20		ppbv	50	3/21/2012
Ethylbenzene	4100	20		ppbv	50	3/21/2012
Freon-113	< 20	20		ppbv	50	3/21/2012
Freon-114	310	98		ppbv	50	3/21/2012
Heptane	1600	20		ppbv	50	3/21/2012
Hexachlorobutadiene	< 20	20		ppbv	50	3/21/2012
Hexane	890	49		ppbv	50	3/21/2012
Isopropyl Alcohol	< 98	98		ppbv	50	3/21/2012
m,p-Xylene	7700	39		ppbv	50	3/21/2012
Methyl tert-butyl ether	< 20	20		ppbv	50	3/21/2012
Methylene chloride	< 200	200		ppbv	50	3/21/2012
o-Xylene	2400	20		ppbv	50	3/21/2012
Propene	2100	200		ppbv	50	3/21/2012
Styrene	100	20		ppbv	50	3/21/2012
Tetrachloroethene	230	20		ppbv	50	3/21/2012
Tetrahydrofuran	110	49		ppbv	50	3/21/2012
Toluene	24000	200		ppbv	500	3/21/2012
trans-1,2-Dichloroethene	120	20		ppbv	50	3/21/2012
trans-1,3-Dichloropropene	< 20	20		ppbv	50	3/21/2012
Trichloroethene	260	20		ppbv	50	3/21/2012
Trichlorofluoromethane	55	20		ppbv	50	3/21/2012
Vinyl acetate	< 200	200		ppbv	50	3/21/2012
Vinyl chloride	2400	20		ppbv	50	3/21/2012
Xylenes, Total	10000	59		ppbv	50	3/21/2012

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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e-mail address: STATinfo@STATAnalysis.com AIHA, NVLAP and NELAP accredited

CHAIN OF CUSTODY RECORD

№: 839806 Page : ____ of ____

Company: MWH
Project Number: 1007333.04811201 Client Tracking No.:
Project Name: BLACKWELL
Project Location: WARRENVILLE, IL
Sampler(s): J. FINGER, T. BOBAK
Report To: JUSTIN FINGER Phone: (312) 831-3447
Fax: (312) 831-3999
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: JUSTIN.E.FINGER@MWHGLOBAL.COM

P.O. No.:
Quote No.:

Turn Around: STANDARD
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	TO-15	EPA 3C	EPA 25C (TNMOC)	Remarks	Lab No.:
BW-LFG-STACK-61A	3/13/12	0736-1530	AIR		X	A	1	X	X	X	CAN #085	001

Relinquished by: (Signature) Date/Time: 3/13/12 1545
Received by: (Signature) Date/Time: 3/14/12 930
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments: INITIAL VAC = -30" Hg
FINAL VAC = -8" Hg

Preservation Code: A = None B = HNO_3 C = NaOH
D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 12030288
Received on Ice: Yes ☐ No ☒
Temperature: Ambient

STAT Analysis Corporation

Sample Receipt Checklist

Client Name MWHARZA

Date and Time Received: 3/14/2012 9:30:00 AM

Work Order Number 12030288

Received by: CDF

Checklist completed by: Signature | Date 3/14/12

Reviewed by: ICL Initials | Date 3/15/12

Matrix:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature Ambient °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments: _____

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response: _____

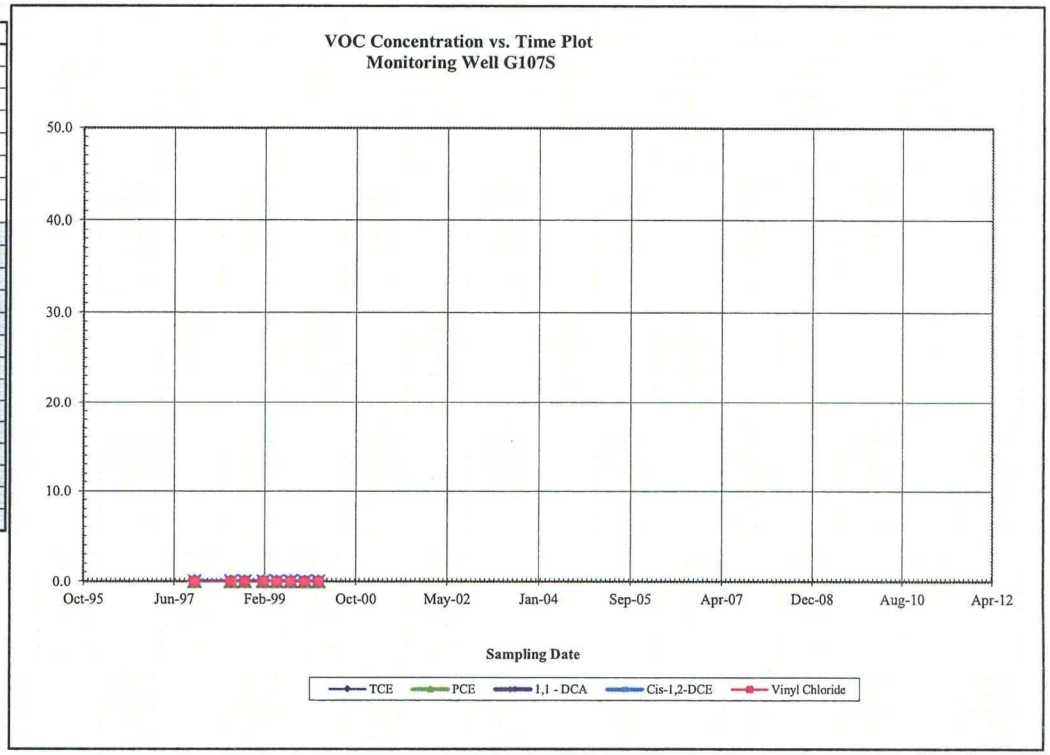
APPENDIX E

GROUNDWATER CONCENTRATION VS. TIME PLOTS

Concentration vs. Time Plot for Monitoring Well G107S

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

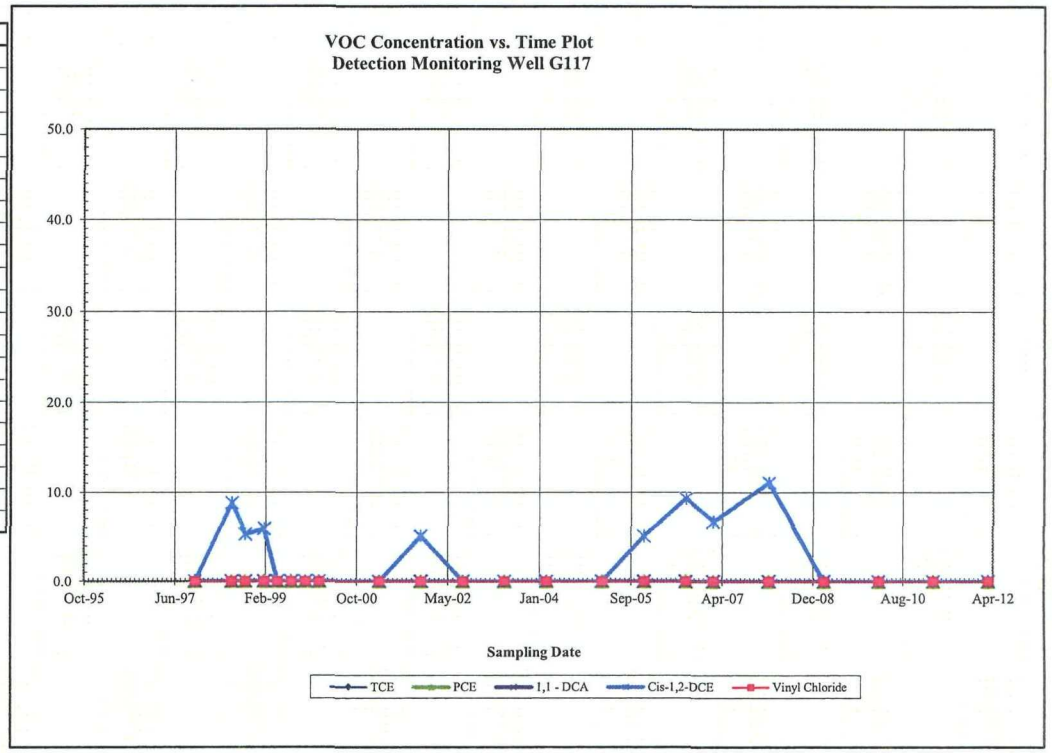
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Detection Monitoring Well G117

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	8.8	ND
October-98	ND	ND	ND	5.3	ND
February-99	ND	ND	ND	5.9	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	5.1	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	5.1	ND
September-06	ND	ND	ND	9.3	ND
March-07	ND	ND	ND	6.7	ND
March-08	ND	ND	ND	11.1	ND
March-09	ND	ND	ND	ND	ND
March-10	ND	ND	ND	ND	ND
March-11	ND	ND	ND	ND	ND
March-12	ND	ND	ND	ND	ND

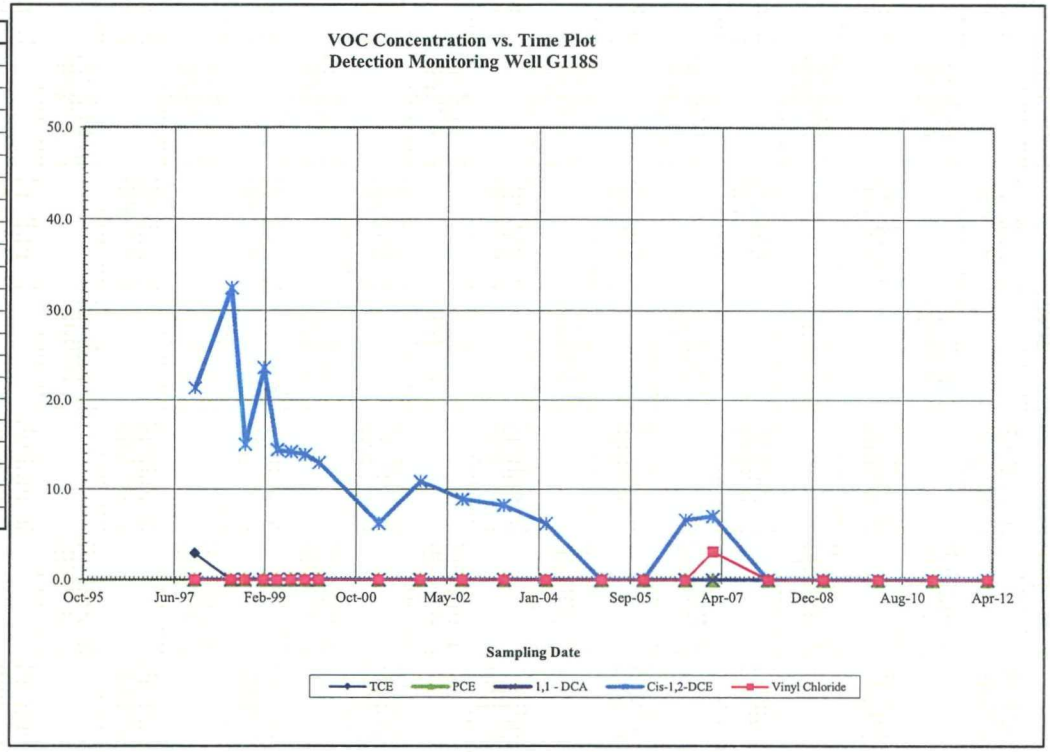
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter



Concentration vs. Time Plot for
Detection Monitoring Well G118S

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	2.9	ND	ND	21.4	ND
July-98	ND	ND	ND	32.5	ND
October-98	ND	ND	ND	15.0	ND
February-99	ND	ND	ND	23.7	ND
May-99	ND	ND	ND	14.4	ND
August-99	ND	ND	ND	14.2	ND
November-99	ND	ND	ND	13.9	ND
February-00	ND	ND	ND	13.0	ND
March-01	ND	ND	ND	6.2	ND
December-01	ND	ND	ND	10.9	ND
September-02	ND	ND	ND	8.9	ND
June-03	ND	ND	ND	8.2	ND
March-04	ND	ND	ND	6.2	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	6.6	ND
March-07	ND	ND	ND	7.0	3.1
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10	ND	ND	ND	ND	ND
March-11	ND	ND	ND	ND	ND
March-12	ND	ND	ND	ND	ND

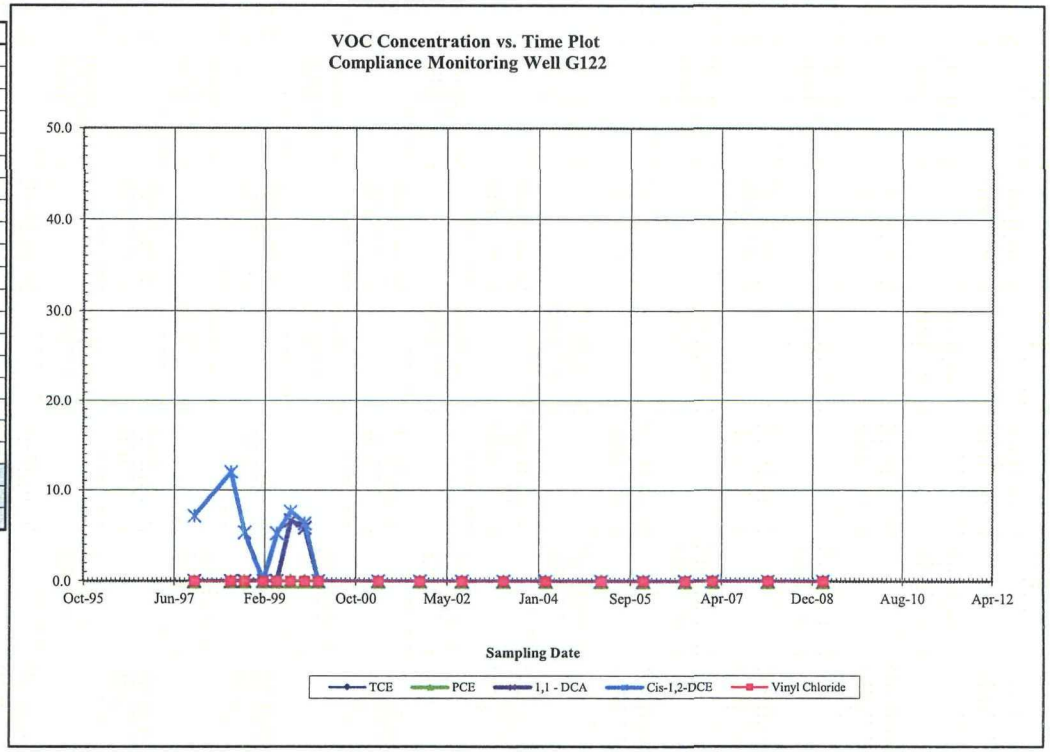
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter



Concentration vs. Time Plot for
Compliance Monitoring Well G122

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	7.1	ND
July-98	ND	ND	ND	12.0	ND
October-98	ND	ND	ND	5.3	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	5.2	ND
August-99	ND	ND	6.6	7.6	ND
November-99	ND	ND	5.8	6.3	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

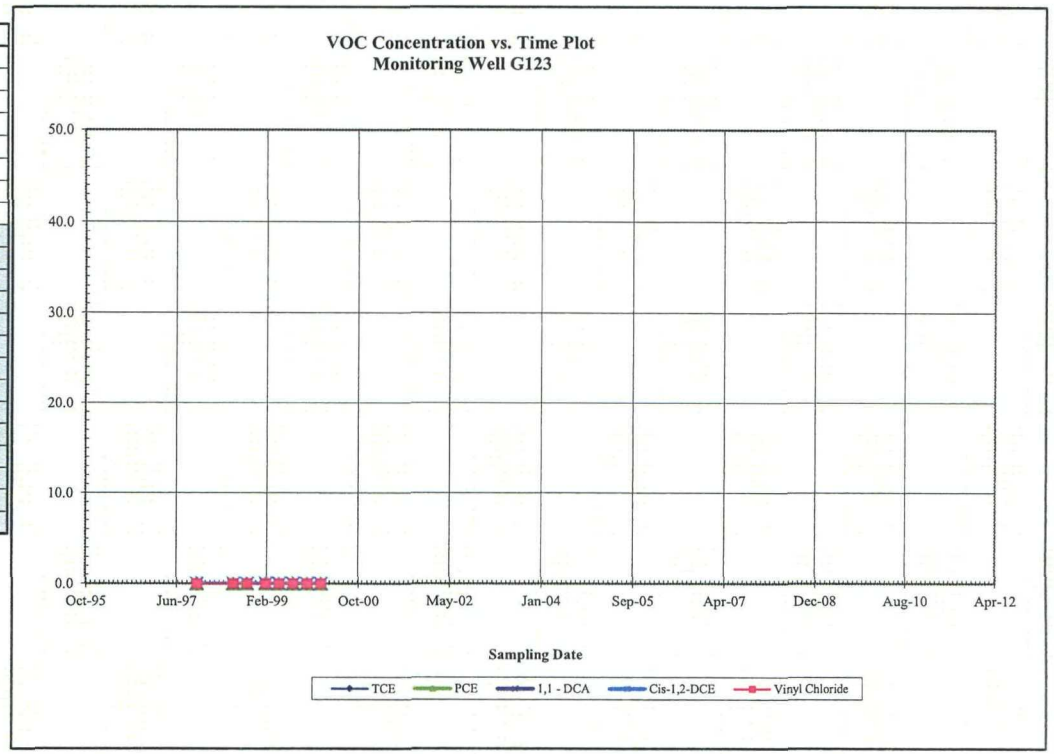
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G123

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

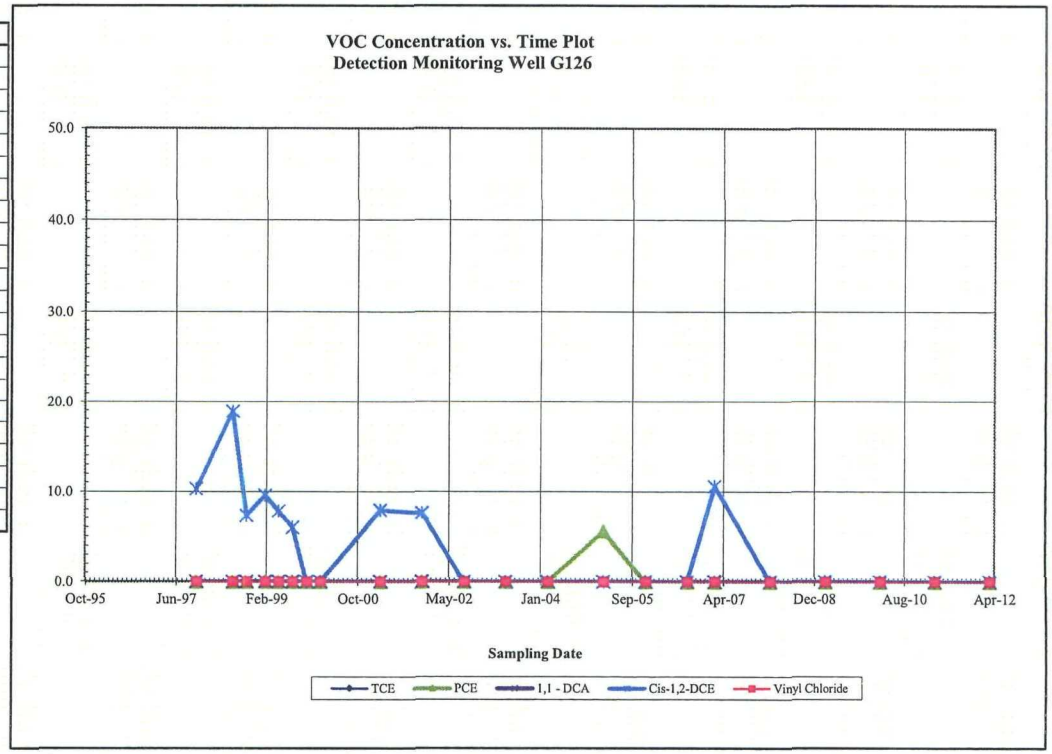
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Detection Monitoring Well G126

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	10.3	ND
July-98	ND	ND	ND	18.9	ND
October-98	ND	ND	ND	7.3	ND
February-99	ND	ND	ND	9.6	ND
May-99	ND	ND	ND	7.8	ND
August-99	ND	ND	ND	6.0	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	7.9	ND
December-01	ND	ND	ND	7.6	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	5.6	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	10.6	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10	ND	ND	ND	ND	ND
March-11	ND	ND	ND	ND	ND
March-12	ND	ND	ND	ND	ND

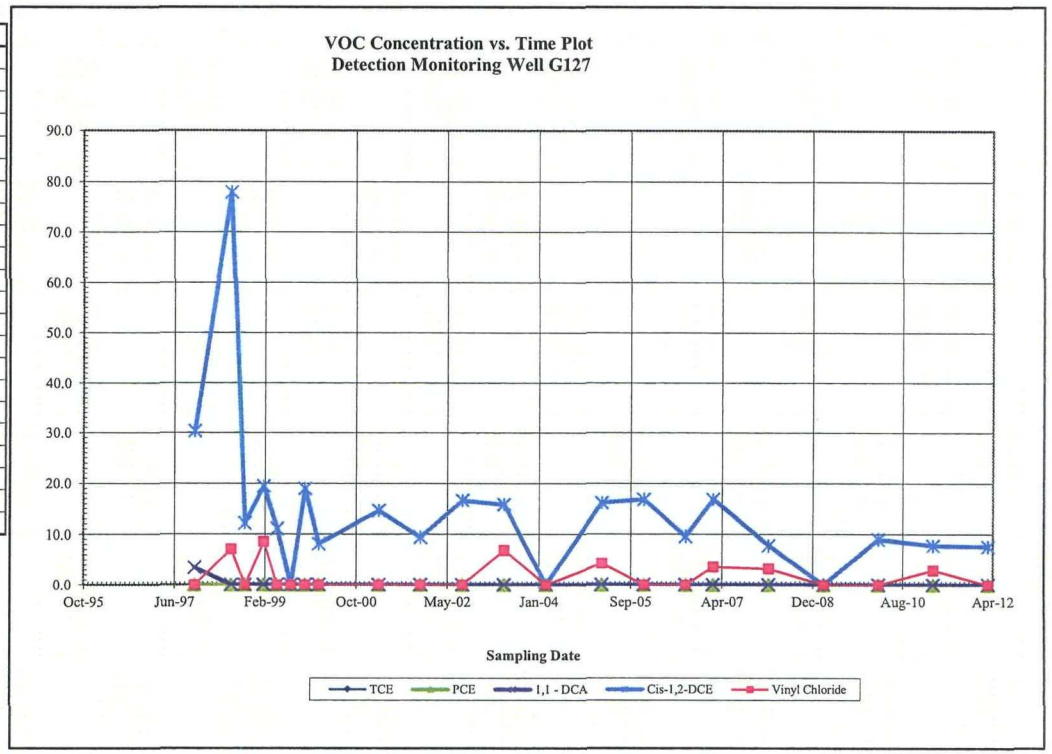
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter



Concentration vs. Time Plot for
Detection Monitoring Well G127

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	3.4	30.3	ND
July-98	ND	ND	ND	77.9	7.1
October-98	ND	ND	ND	12.1	ND
February-99	ND	ND	ND	19.5	8.6
May-99	ND	ND	ND	11.1	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	19.0	ND
February-00	ND	ND	ND	8.1	ND
March-01	ND	ND	ND	14.6	ND
December-01	ND	ND	ND	9.4	ND
September-02	ND	ND	ND	16.6	ND
June-03	ND	ND	ND	15.8	6.9
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	16.2	4.3
December-05	ND	ND	ND	16.8	ND
September-06	ND	ND	ND	9.6	ND
March-07	ND	ND	ND	16.8	3.6
March-08	ND	ND	ND	7.8	3.2
March-09	ND	ND	ND	ND	ND
March-10	ND	ND	ND	9.0	ND
March-11	ND	ND	ND	7.8	2.9
March-12	ND	ND	ND	7.6	ND

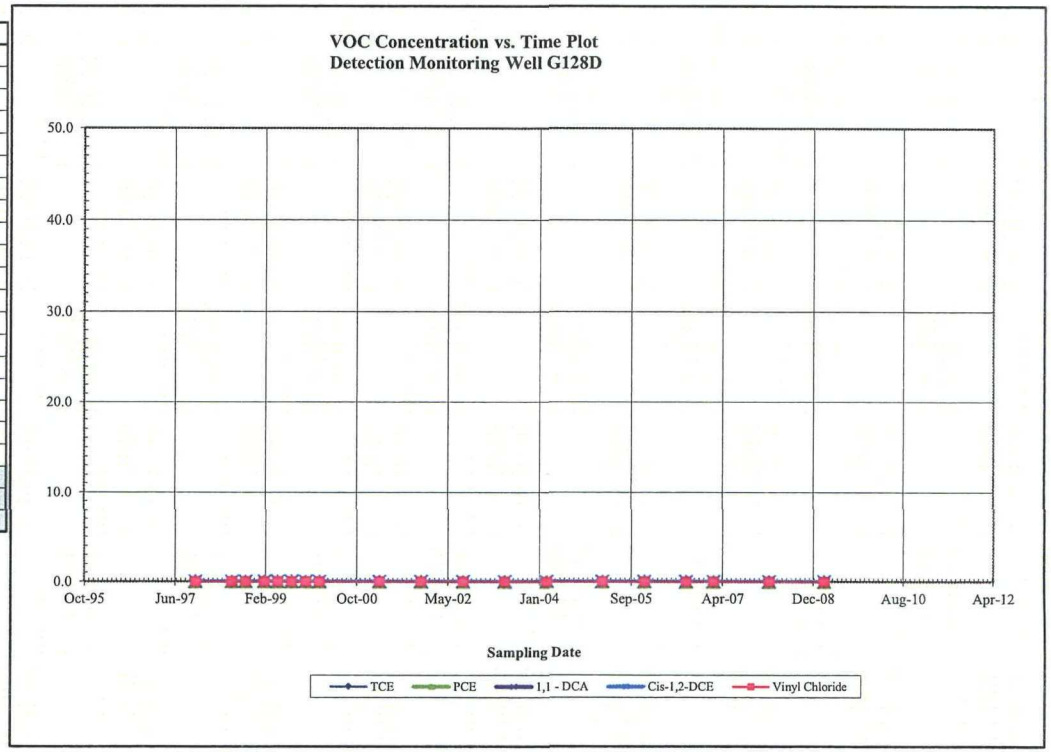
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter



Concentration vs. Time Plot for
Detection Monitoring Well G128D

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

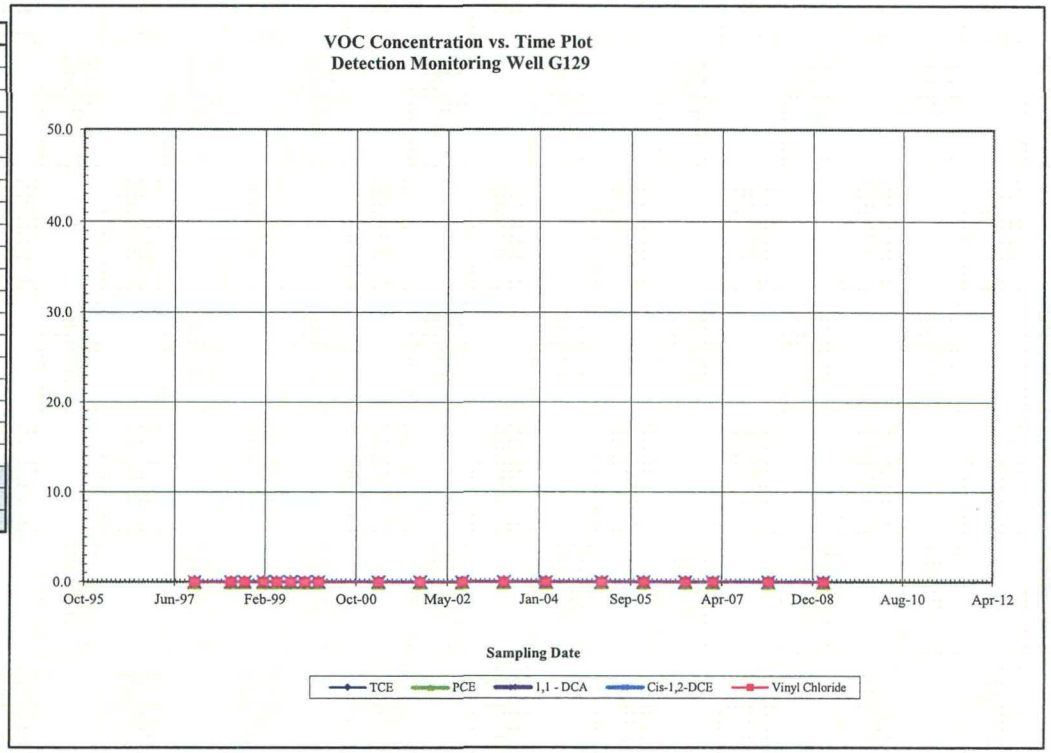
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Detection Monitoring Well G129

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

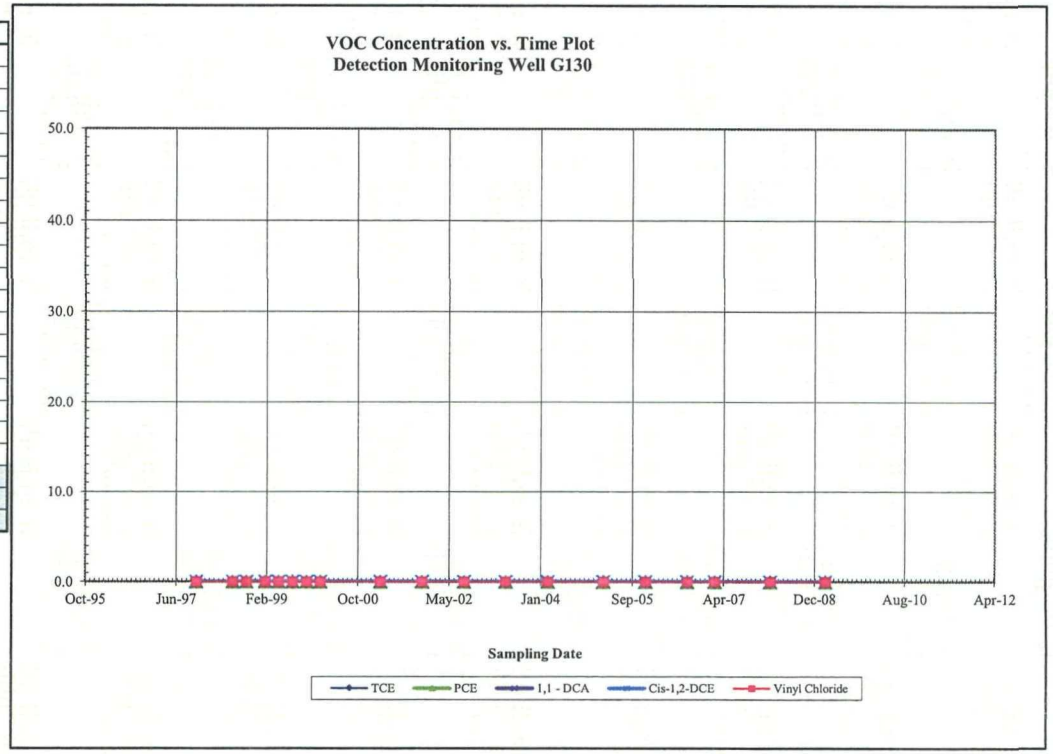
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Detection Monitoring Well G130

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

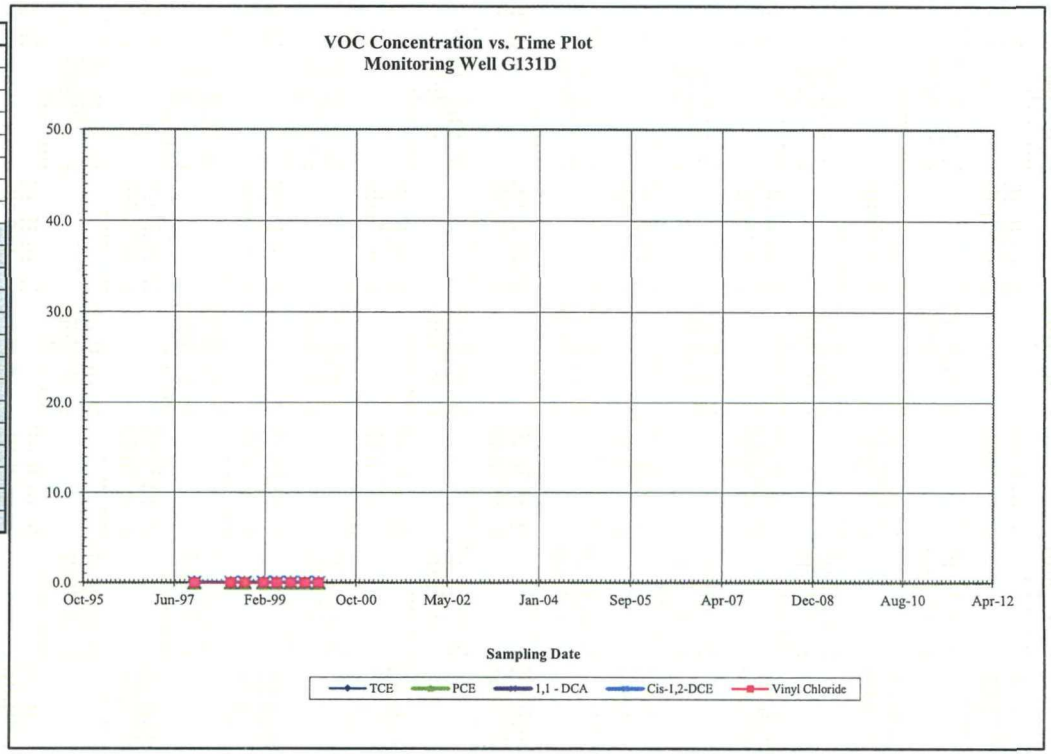
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G131D

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

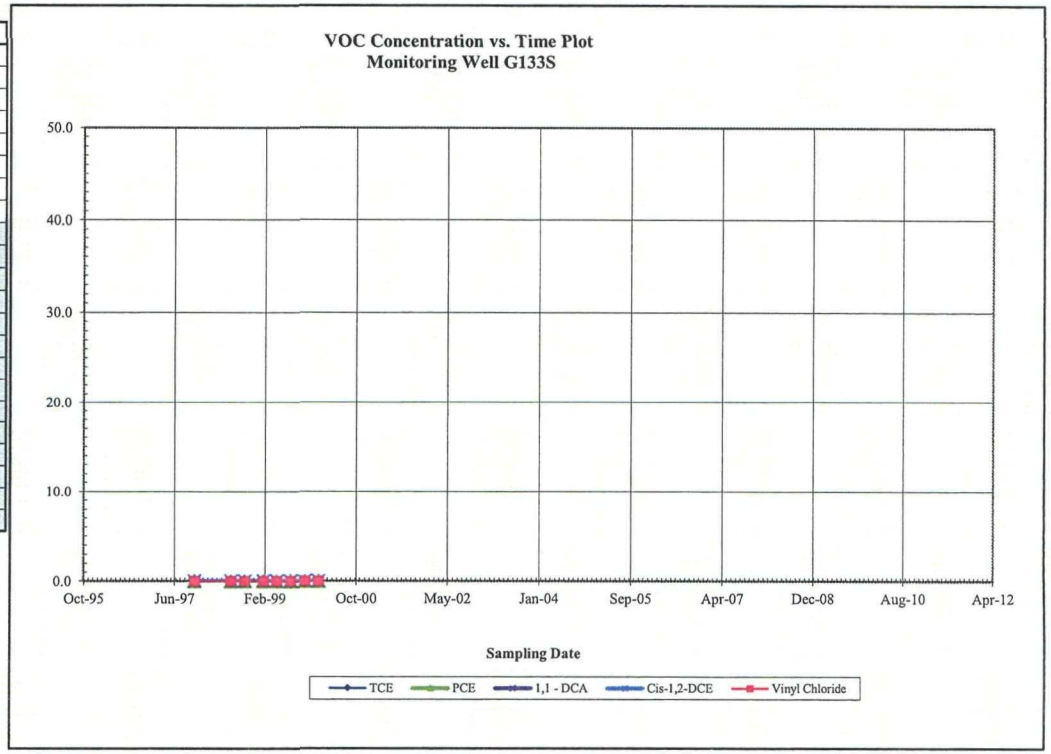
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G133S

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

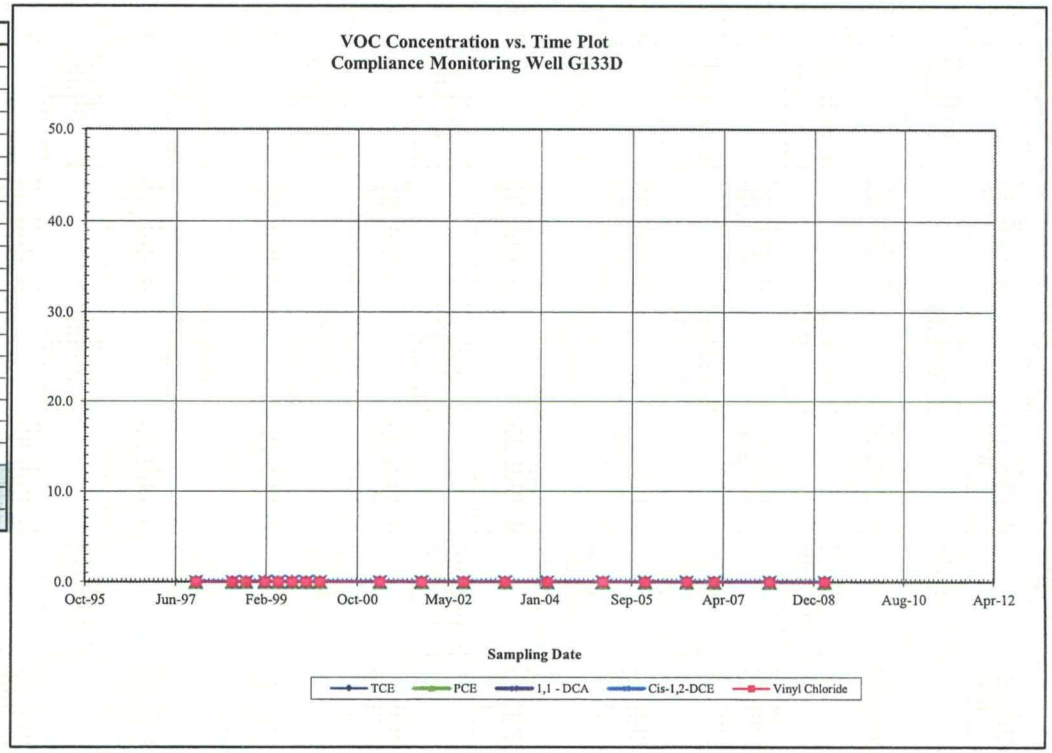
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Compliance Monitoring Well G133D

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

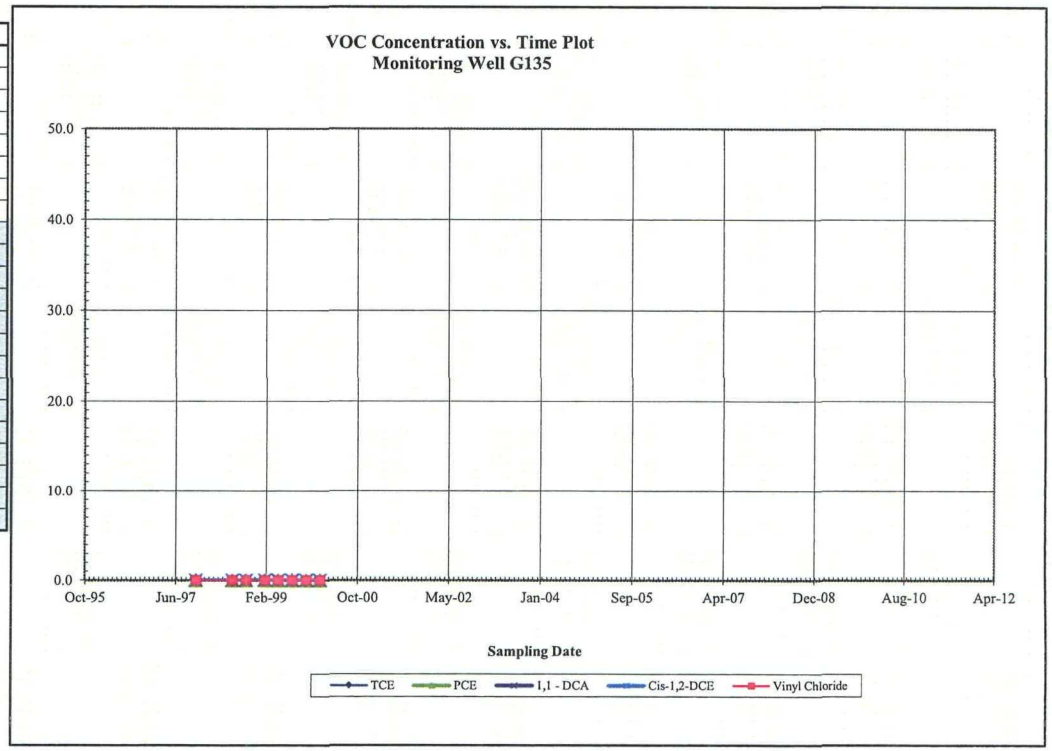
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G135

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

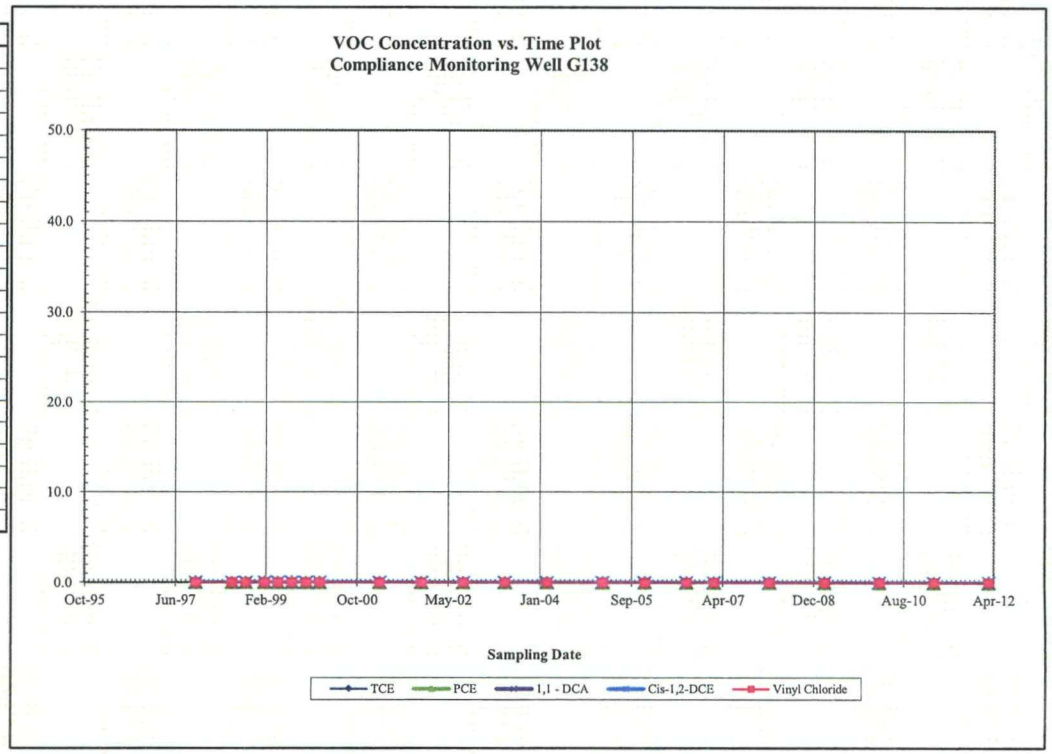
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Compliance Monitoring Well G138

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10	ND	ND	ND	ND	ND
March-11	ND	ND	ND	ND	ND
March-12	ND	ND	ND	ND	ND

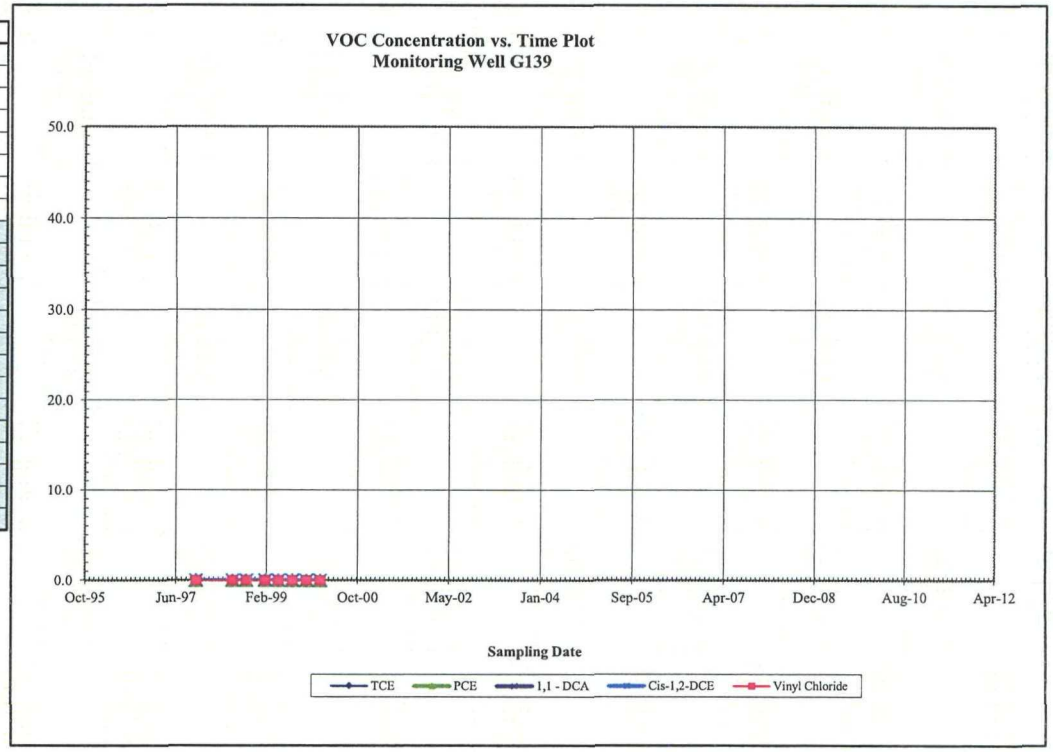
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter



Concentration vs. Time Plot for
Monitoring Well G139

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

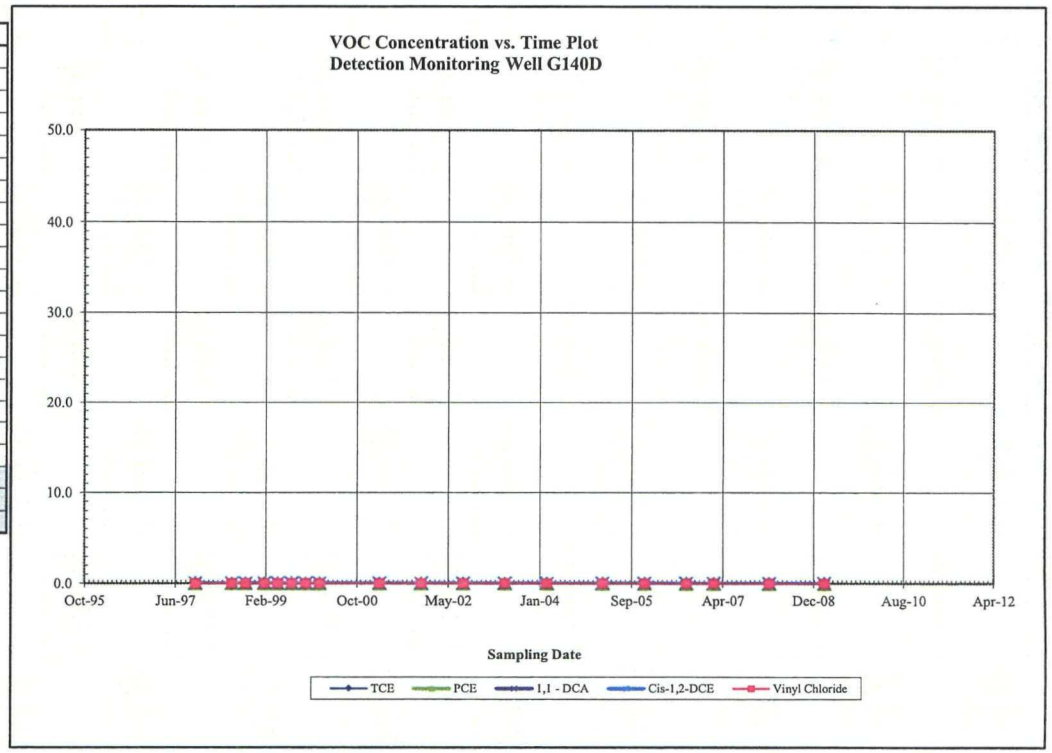
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Detection Monitoring Well G140D

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02	ND	ND	ND	ND	ND
June-03	ND	ND	ND	ND	ND
March-04	ND	ND	ND	ND	ND
March-05	ND	ND	ND	ND	ND
December-05	ND	ND	ND	ND	ND
September-06	ND	ND	ND	ND	ND
March-07	ND	ND	ND	ND	ND
March-08	ND	ND	ND	ND	ND
March-09	ND	ND	ND	ND	ND
March-10					
March-11					
March-12					

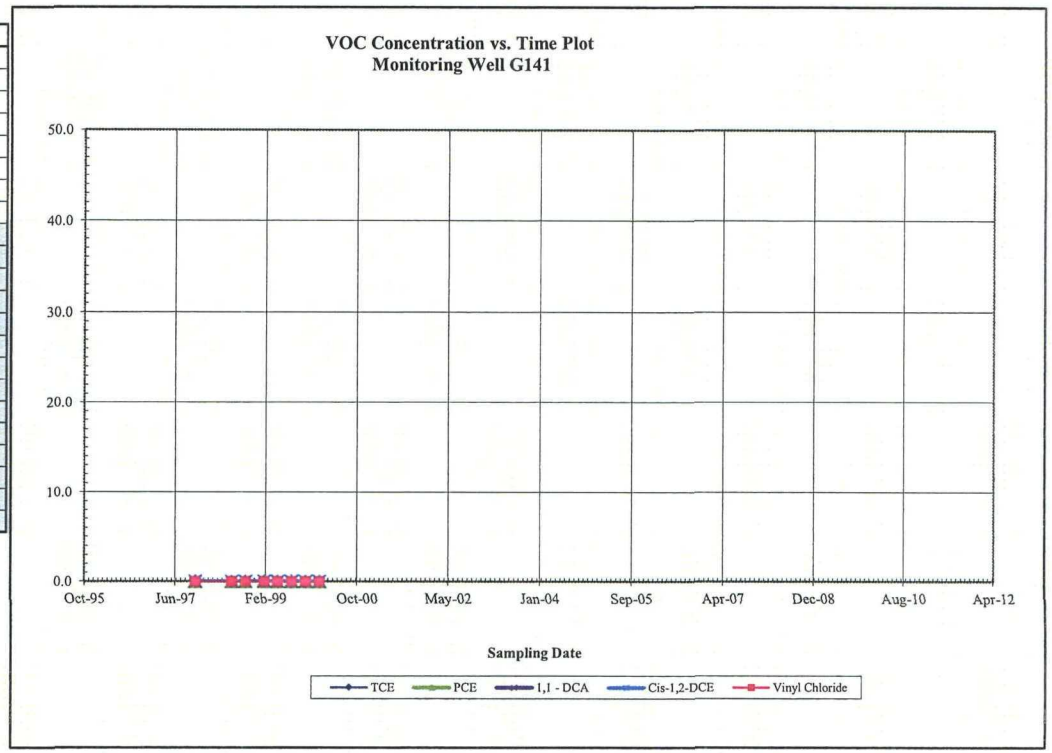
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G141

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

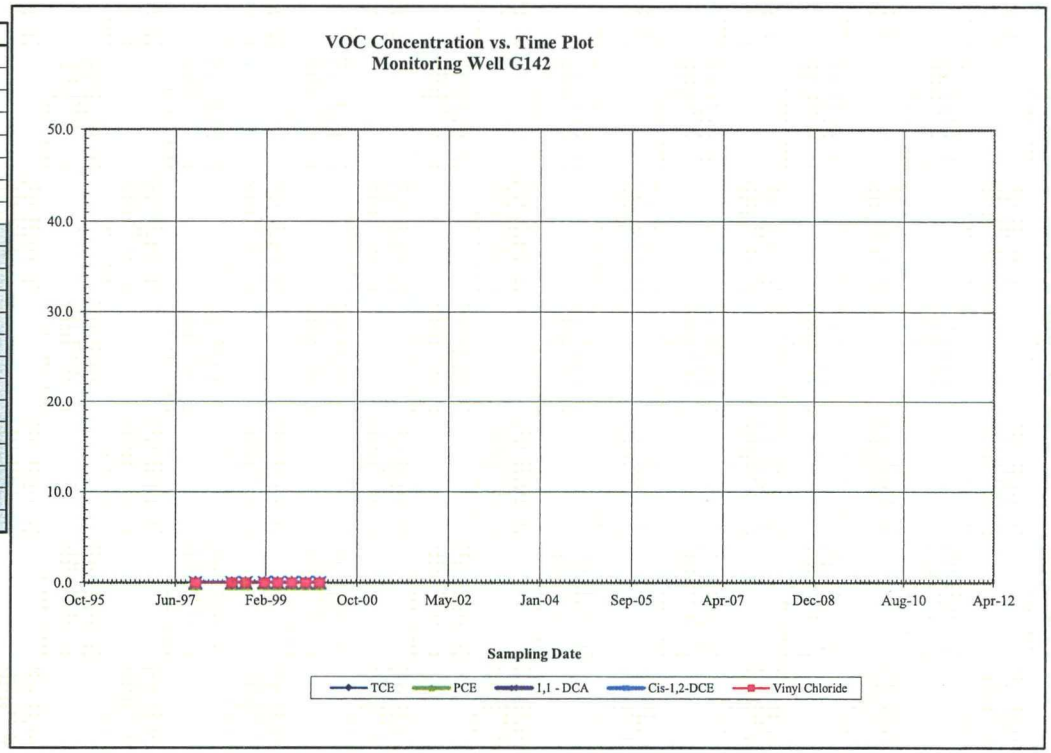
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G142

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

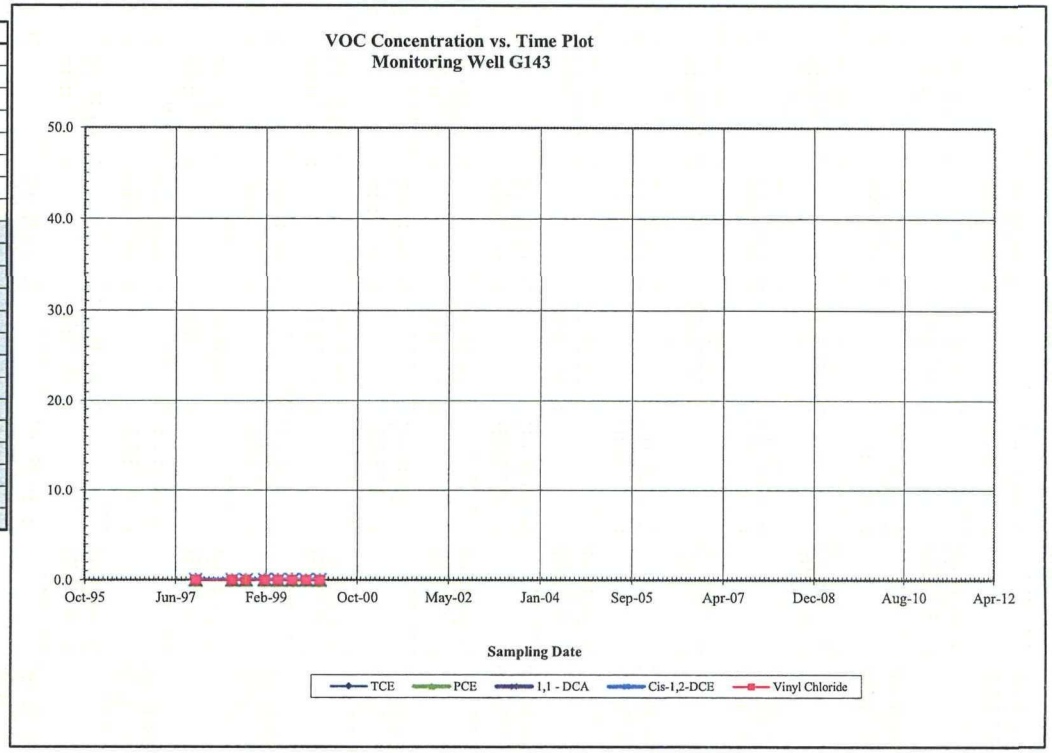
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G143

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

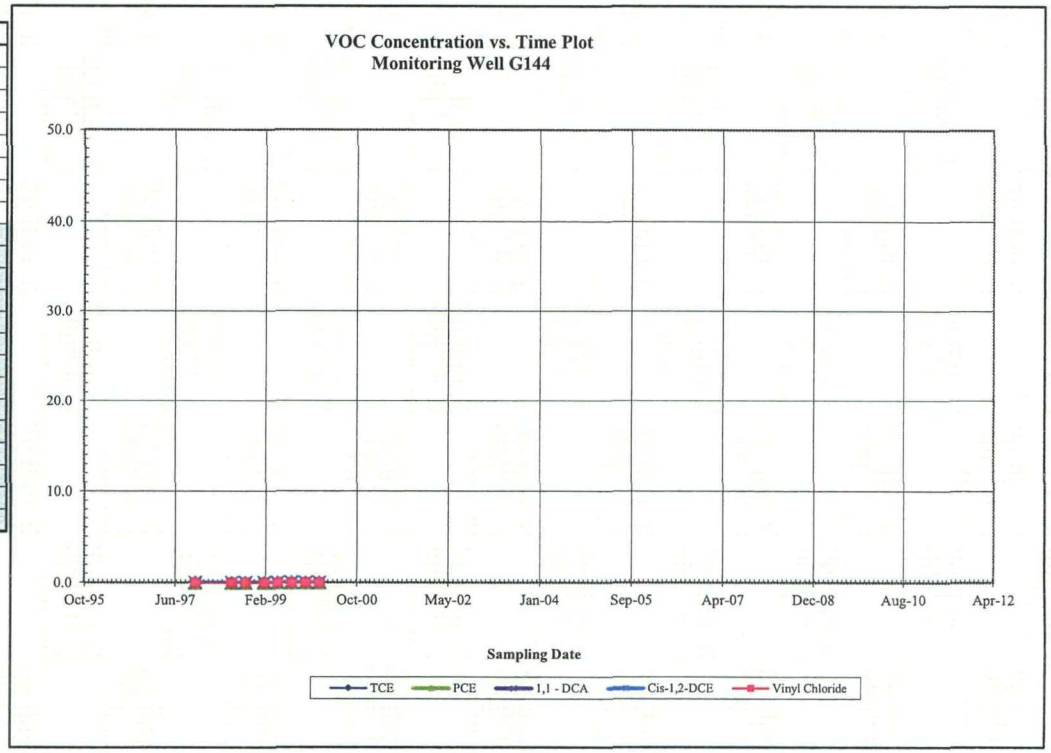
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G144

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

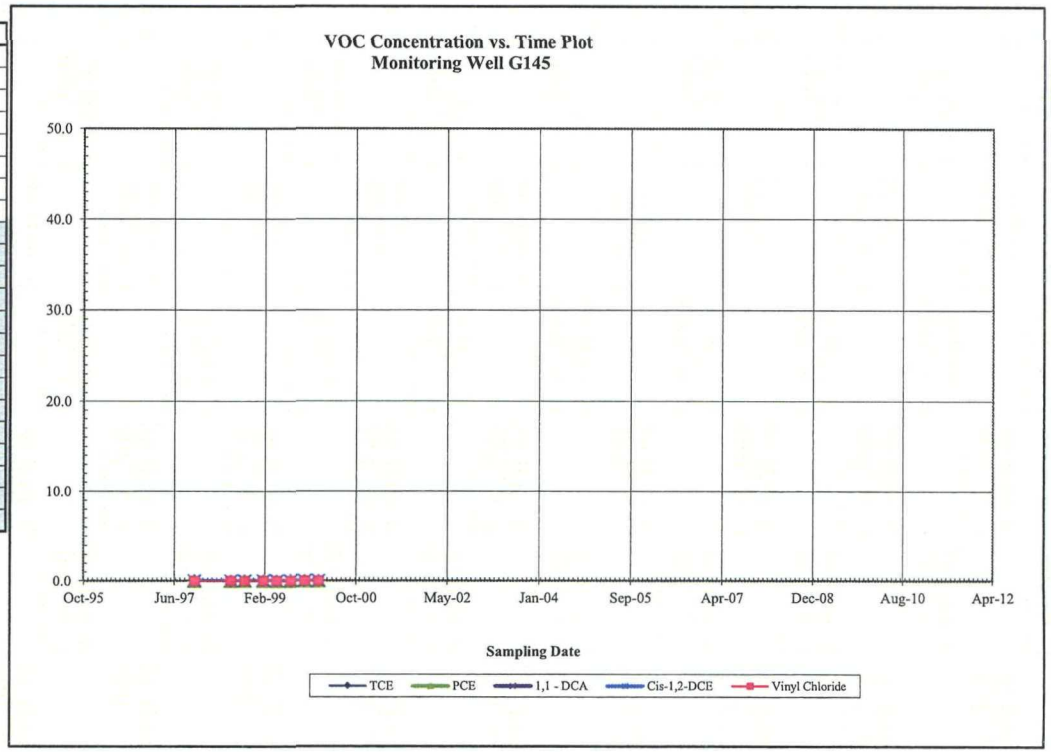
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for Monitoring Well G145

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

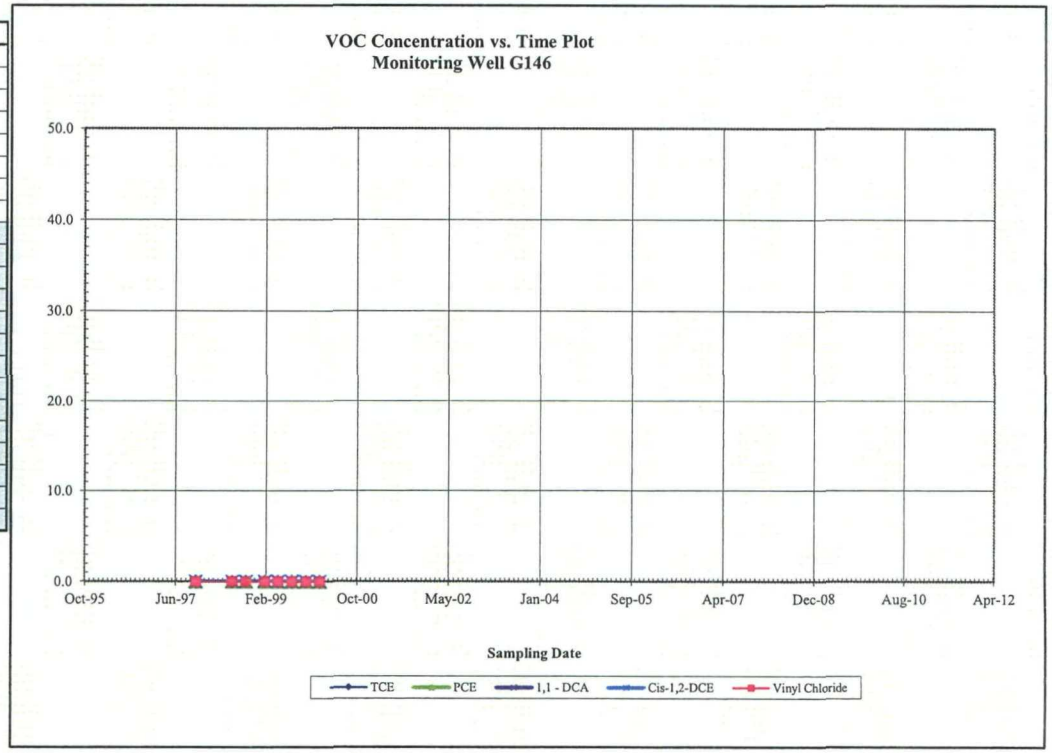
Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



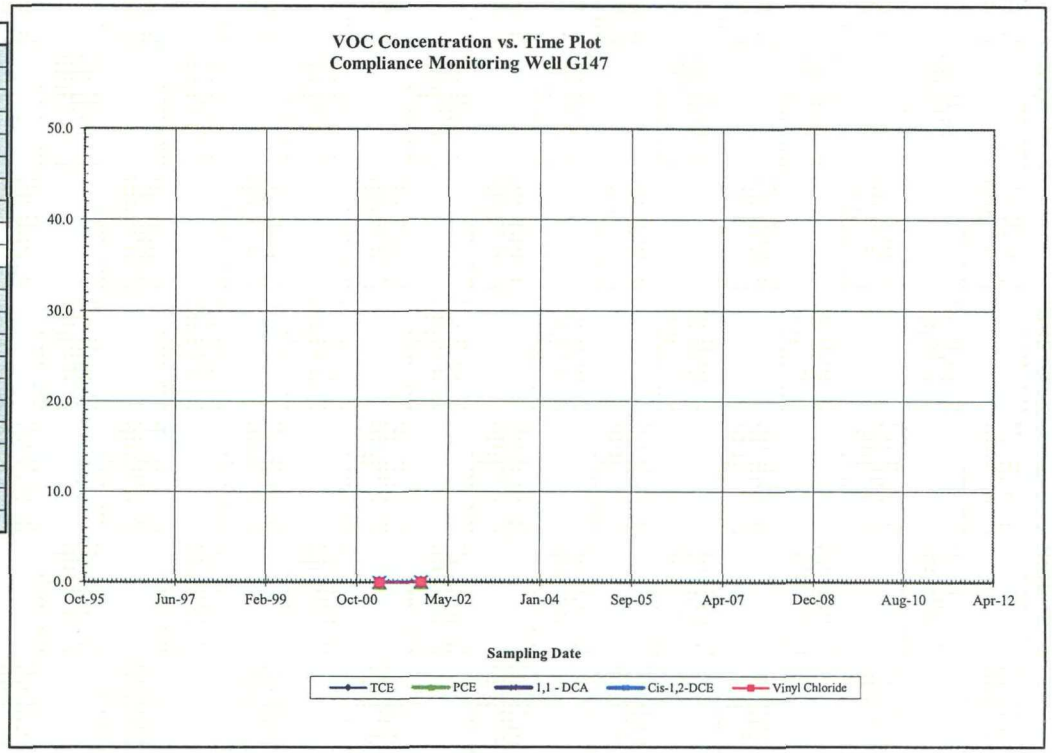
Concentration vs. Time Plot for Monitoring Well G146

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97	ND	ND	ND	ND	ND
July-98	ND	ND	ND	ND	ND
October-98	ND	ND	ND	ND	ND
February-99	ND	ND	ND	ND	ND
May-99	ND	ND	ND	ND	ND
August-99	ND	ND	ND	ND	ND
November-99	ND	ND	ND	ND	ND
February-00	ND	ND	ND	ND	ND
March-01					
December-01					
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event



Concentration vs. Time Plot for
Compliance Monitoring Well G147

DATE	TCE	PCE	1,1 - DCA	Cis-1,2-DCE	Vinyl Chloride
November-97					
July-98					
October-98					
February-99					
May-99					
August-99					
November-99					
February-00					
March-01	ND	ND	ND	ND	ND
December-01	ND	ND	ND	ND	ND
September-02					
June-03					
March-04					
March-05					
December-05					
September-06					
March-07					
March-08					
March-09					
March-10					
March-11					
March-12					

Notes:
1,1 - DCA = 1,1-Dichloroethane
Cis-1,2-DCE = Cis-1,2-Dichloroethene
ND = Not Detected
PCE = Tetrachloroethene
TCE = Trichloroethene
All concentrations reported in micrograms per liter
Well was not sampled during particular monitoring event