

**QUARTERLY PROGRESS REPORT
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE**

TO: Darryl Luce, USEPA
Drew Hoffman, NHDES
Warren Diesl, AECOM Environment

FROM: Work Settling Defendants (WSD)
prepared by Mike Webster and Christene Binger, GeoInsight, Inc.

DATE: October 10, 2009

RE: Quarterly Progress Report

REPORTING PERIOD

- January to March – Due April 10th
 April to June – Due July 10th
 X July to September – Due October 10th
 October to December – Due January 10th

I. PROGRESS REPORT OVERVIEW

For these Quarterly Progress Reports, representatives of the United States Environmental Protection Agency (USEPA) and New Hampshire Department of Environmental Services (NHDES) will be collectively referred to as the “Agency(ies).” Pre-Design Investigation (PDI), Remedial Design (RD), and Remedial Action (RA) activities are being completed at the Dover Municipal Landfill Superfund Site by GeoInsight, Inc. (GeoInsight) and XDD, Inc. (XDD) at the request of the Executive Committee of the Work Settling Defendants (the “Group”). Dean Peschel, Environmental Projects Manager for the City of Dover, is the project coordinator on behalf of the Group.

As requested by Darryl Luce, USEPA Remedial Project Manager, the Quarterly Progress Report was developed to provide an overall summary of completed and ongoing activities. The First Quarterly Report that was submitted on January 10, 2009 included an overview of objectives and an overall summary of activities at the Dover Municipal Landfill. Going forward, Quarterly Progress Reports will only include updates for on-going PDIs, RD, and RA activities. As requested by USEPA, the progress report will be distributed via electronic pdf copies only.

II. OVERVIEW OF LANDFILL ACTIVITIES

This progress report focuses upon activities completed from July to September 2009. During this reporting period, activities were conducted associated with:

- Southern Plume Management of Migration (MOM) (summary attached);

- Northwest Landfill Hot Spot Remedial Design and Remedial Action (summary attached);
- Ecotoxicity and Human Health Assessment of the Cocheco River PDI (summary attached); and
- Source Control (discussed in Section III).

On September 23, 2009, USEPA notified the City of Dover that USEPA had completed their review of the results of the Soil Vapor Intrusion PDI (initiated in 2006) and found that there is no current risk for exposure to indoor air from contamination originating from the Site. USEPA requested that sampling and assessment of a potential future indoor air exposure pathway be conducted annually. These activities will be performed as part of the Environmental Monitoring Program (EMP).

On September 24, 2009, in accordance with the Groundwater Management Permit (GMP), GeoInsight provided NHDES with documentation of notification of the GMP to owners of property located within the Groundwater Management Zone (GMZ). On October 1, 2009, Notice of GMP forms were submitted to the Strafford County Registry of Deeds for recordation.

A master schedule of anticipated activities for 2009 was developed to provide the Agencies and the Group with a consolidated, site-wide summary of activities and likely implementation schedule. The master schedule will be updated each quarter and is included as an attachment.

III. STATUS OF SOURCE CONTROL ACTIVITIES

A Source Control Remedial Design Work Plan (SCRD-WP) was submitted to the agencies on October 5, 2009. Design activities will be initiated upon approval of the SCRD-WP.

IV. COMMUNITY RELATIONS PLAN

Public meetings were not completed during the third quarter of 2009:

V. SUMMARY OF REMEDIAL ACTIVITIES

This section of the Quarterly Progress Report will provide a summary of the estimated mass of volatile organic compounds (VOC) removed (to date) associated with ongoing remedial activities.

| Activity | Pounds of VOCs Removed | | |
|----------------------------|-------------------------------|-------------|--------------|
| | 2008 | 2009 | Total |
| Southern Plume MOM | 4.6 | 2.8 | 7.4 |
| Northwest Landfill Hotspot | 0 | 11,220 | 11,220 |

VI. ATTACHMENTS

- Master Schedule of Anticipated Activities - Year 2009; and
- Summary and Status of Activities (three attachments)

MASTER SCHEDULE OF ANTICIPATED ACTIVITIES - YEAR 2009
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
TOLEND ROAD
DOVER, NEW HAMPSHIRE

| | 2009 | | | | | | | | | 2010 | | |
|---|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| | Q1 | | | Q2 | | | Q3 | | | Q4 | | |
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| SOURCE CONTROL | | | | | | | | | | | | |
| Source Control Focused Feasibility Study | | | | | | | | | | | | |
| Final Version with Response to Agency Comments | | | | | | | | | | | | |
| Explanation of Significant Difference | | | | | | | | | | | | |
| Draft presented at public meeting | | | | | | | | | | | | |
| Final version issued by USEPA on June 30, 2009 | | | | | | | | | | | | |
| Source Control Remedial Design | | | | | | | | | | | | |
| Work Plan for Remedial Design | | | | | | | | | | | | |
| 30 Percent Remedial Design (120 days from Work Plan approval) | | | | | | | | | | | | |
| 75 Percent Remedial Design (90 days from approval of 30 percent design) | | | | | | | | | | | | |
| 100 Percent Remedial Design (60 days from approval of 75 percent design) | | | | | | | | | | | | |
| Northwest Landfill Hotspot Remedial Action | | | | | | | | | | | | |
| Site Preparation Activities and Equipment Testing | | | | | | | | | | | | |
| Baseline Sampling | | | | | | | | | | | | |
| System Start Up | | | | | | | | | | | | |
| Seasonal Operation | | | | | | | | | | | | |
| Performance Monitoring | | | | | | | | | | | | |
| System Shutdown | | | | | | | | | | | | |
| Data submittals (with Quarterly Progress Reports) | | | | | | | | | | | | |
| MANAGEMENT OF MIGRATION | | | | | | | | | | | | |
| Southern Plume - Ground Water Extraction | | | | | | | | | | | | |
| Pre-start up system equipment procurement and configuration modifications | | | | | | | | | | | | |
| Baseline Sampling | | | | | | | | | | | | |
| System Start Up | | | | | | | | | | | | |
| Seasonal Operation | | | | | | | | | | | | |
| Performance Monitoring | | | | | | | | | | | | |
| System Shutdown | | | | | | | | | | | | |
| Data submittals (with Quarterly Progress Reports) | | | | | | | | | | | | |
| OTHER RESPONSE ACTIONS | | | | | | | | | | | | |
| Soil Vapor Intrusion - Indoor Air Pre-Design Investigation | | | | | | | | | | | | |
| Focused Monitoring during EMP Events | | | | | | | | | | | | |
| Ecotoxicity and Human Health Assessment of the Cocheco River | | | | | | | | | | | | |
| Field Sampling Activities | | | | | | | | | | | | |
| Environmental Monitoring Plan | | | | | | | | | | | | |
| Summary Report: Second Monitoring Event (Winter) Year 2008 | | | | | | | | | | | | |
| First Monitoring Event (Summer) 2009 | | | | | | | | | | | | |
| Second Monitoring Event (Winter) 2009 | | | | | | | | | | | | |
| Summary Report: First Monitoring Event (Summer) Year 2009 | | | | | | | | | | | | |
| Summary Report: Second Monitoring Event (Winter) Year 2009 | | | | | | | | | | | | |
| EMP Program Proposed Modifications Summary | | | | | | | | | | | | |

SUMMARY AND STATUS OF ACTIVITIES – Q3 – OCTOBER 10, 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

1. Summary of Activities

- a performance monitoring event was completed on July 15, 2009;
- a new extraction pump was installed in well MW-206(I) on July 7, 2009;
- accumulated silt was removed from well MW-206(I) on July 28, 2009;
- weekly system operation, monitoring, and maintenance activities;
- weekly and monthly sampling activities from extraction wells and the frac tank, respectively; and
- discharge of extracted ground water was overseen weekly between July 7 and September 1, 2009.

2. Deliverables and Correspondence

The following deliverables were submitted or received by the agencies:

- The Interim Remedial Action Report – Southern Plume Management of Migration was submitted on September 14, 2009 and approved by the agencies on September 17, 2009; and
- A Periodic Remedy Performance report for the period April to September 2009 is attached.

3. Schedule for Next Quarter

During the next quarter the following activities are anticipated to be performed:

- weekly system operation, monitoring, and maintenance activities;
- weekly and monthly sampling activities from extraction wells and the frac tank, respectively;
- performance monitoring event on October 6, 2009;
- on-going evaluation of system performance field data; and
- system shut down when freezing temperatures occur.

4. Status of Activities

Reporting Schedule - Information regarding the Southern Plume MOM will be included in two of the four annual Quarterly Progress Reports as specified in September 26, 2008 100 Percent Design Report, consistent with the following reporting schedule:

- April to July activities will be included in the October Report (attached to this summary page)
- August to November activities will be included in the January Report

| | |
|-------------------------------|---|
| Remedy Design: | Completed. |
| Remedy Construction: | 100 Percent Complete. |
| Remedy Implementation Status: | Second system operating season in progress. |

| | |
|------------------------------|-------------------|
| Mass Removal 2008: | 4.6 pounds |
| Mass Removal 2009 (to date): | 2.8 pounds |
| Total Mass Removal | 7.4 pounds |

5. Modifications

None.

PERIODIC REMEDY PERFORMANCE REPORT

SOUTHERN PLUME MANAGEMENT OF MIGRATION DOVER MUNICIPAL LANDFILL SUPERFUND SITE DOVER, NEW HAMPSHIRE

DATE: October 10, 2009
TO: Darryl Luce, USEPA; Andrew Hoffman, NHDES
FROM: Mike Webster and Christene Binger
RE: Periodic Remedy Performance Report – Implementation of 100 Percent Remedial Design, Southern Plume Management of Migration

REPORTING PERIOD

April to July X (Due October 10th)
August to November _____ (Due January 10th)

A. INTRODUCTION

This Periodic Remedy Performance (PRP) Report provides information regarding the performance of the Southern Plume ground water extraction (GWE) system for the period between April 29 and Jul 28, 2009. In addition, ground water elevation data collected during the last quarterly transducer downloading event (September 1, 2009) was included with this report. To be consistent, other available data and activities completed on or prior to September 1, 2009 were also presented in this report. The GWE system was designed and installed as part of the Southern Plume Management of Migration (MOM) Remedial Action (RA) for the Dover Municipal Landfill Superfund Site.

B. ACTIVITIES

i. Pumping Periods

- In general, the GWE system operated continuously between April 29 (date of system start up) and September 1, 2009 (last day of the reporting period). Intermittent brief periods (i.e., hours to several days) of downtime were associated with pump failure and high water alarms in the fractionation (frac) tank. Additional information regarding system operation is presented in the following section of this report. Table 1 summarizes pumping periods for extraction wells MW-206(I) and SB-4D since the GWE system was installed in November 2007.
- During this reporting period, wells MW-206(I) and SB-4D extracted ground water at an average rate of 0.83 and 0.90 gallons per minute (gpm), respectively. The total flow rate for the GWE system (i.e., combined total flow with both extraction wells operating) ranged from 1.50 to 2.10 gpm. Additional information regarding the GWE system flow rates is summarized in Table 2 (modified from Table 2 of the Operation and Maintenance Plan Southern Plume Remedial Action MOM [SPRA O&M Plan]).

ii. GWE System Operation and Maintenance

- Based upon observations of GWE system performance during the 2008 field season, system modifications were proposed in the August 2008 100 Percent Remedial Design Southern Plume MOM report. These modifications were completed prior to initiating the 2009 field season. On March 18, 2009, the cycle counters were removed from the influent air lines and a new manifold was installed adjacent to the Butler Building to support in-line totalizers, influent sample ports, manual flow rate ports, and associated piping. On April 29, 2009, the pneumatic pumps were re-installed into the extraction wells to a depth near the bottom of the screened interval (they were previously installed near the top of the screened interval throughout the 2008 pumping season), air pressure gauges were installed at the well heads, and the GWE system was started for the 2009 season. Updates to the GWE system are depicted in the Process and Instrumentation Diagram (Figure 1) and photographs of the modified system components are presented in Appendix A.
- During the period of system operation, GWE system O&M activities were performed on a weekly basis. GWE system operational history is recorded in Table 2. Maintenance of GWE system components was generally conducted according to manufacturer's specifications and is summarized in the Maintenance Log (Table 3 [modified from Appendix H of the SPRA O&M Plan]).
- In general, the GWE system operated continuously during this reporting period; however, brief periods (i.e., up to three consecutive days) of unscheduled downtimes occurred. Downtimes during this reporting period were caused by iron and sediment fouling in the pump chamber(s), iron and sediment fouling in the water lines, and high water in the frac tank triggering an automatic system shutdown. System downtime was identified during weekly O&M visits, and necessary maintenance activities were typically completed by the conclusion of each site visit.
- Fouled pumps were removed from the extraction well(s), disassembled, brushed with steel wool, and soaked in a mild acid solution prior to resuming operation. Fouled influent water lines were disconnected and purged with pressurized air supplied by the on-site air compressor. To minimize operational downtime associated with pump fouling, a third pump was procured on July 7, 2009. Using three pneumatic pumps on a rotating basis allowed two pumps to be extracting ground water, while the third pump was repaired, cleaned, and/or soaked in the acid solution.
- High water alarm conditions associated with the frac tank occurred during the weeks of May 12, June 9, and August 4, 2009. The GWE system was down for a total of approximately 9 days because of high water level in the frac tank. The frequency of regularly scheduled water transfers was subsequently increased to alleviate issues associated with on-site water storage.
- On July, 28, 2009, Clean Harbors Environmental Services of Bow, New Hampshire re-developed extraction well MW-206(I). A vactor truck was used to remove approximately

11 feet of sediment that had collected at the bottom of the well since the start of the 2009 pumping season. Approximately 125 gallons of water and sediment were removed from the well and transported to the frac tank for storage. Depth to bottom measurements will be obtained during the remainder of the pumping season to monitor the relative rate of sediment accumulation in the well. Sediment accumulation was not observed in extraction well SB-4D.

iii. Discharges

Since the installation of the GWE system in November 2007, approximately 451,000 gallons of ground water have been extracted from the pumping wells and discharged to the City of Dover municipal sewer system for treatment at the Publicly Owned Treatment Works (POTW). During this reporting period, approximately 186,500 gallons of ground water were extracted by the GWE system. GWE system effluent volume estimates are recorded in Table 2.

Extracted Ground Water Summary:

| | |
|--|-----------------|
| Total Volume 2007 and 2008: | 264,588 gallons |
| Total Volume During Reporting Period (April 29 to September 1, 2009): | 186,468 gallons |
| Total Volume to Date: | 451,056 gallons |

iv. Hydraulic Monitoring

- In November 2008, five additional remedy performance monitoring wells that had been proposed in the 100 Percent Design Southern Plume MOM report and the SPRA O&M Plan were installed in the Southern Plume MOM RA area. The wells were positioned to monitor hydraulic and ground water quality conditions near the estimated capture zone associated with extraction well MW-206(I). On December 2, 2008, the new wells were surveyed for elevation and location, and pressure transducers were installed into each well. Well details were summarized in Table 7 of the January 10, 2009 Southern Plume PRP Report. Well completion logs are attached in Appendix B.
- On April 16, 2009, a comprehensive hydraulic monitoring event was conducted to establish “baseline” hydraulic conditions in the Southern Plume MOM RA area prior to system start up. Wells and surface water gauging stations that were included in the comprehensive hydraulic monitoring event are summarized in Table 4 (modified from Table 5 of the SPRA O&M Plan). A second comprehensive hydraulic monitoring event will be conducted in October 2009 (i.e., during a period of system operation) to evaluate hydraulic conditions during a period of system pumping. Gauging data and an evaluation of pumping versus not-pumping hydraulic conditions will be included in the January 2010 Southern Plume PRP Report.
- In addition to semi-annual gauging events, continuous hydraulic influence of the GWE system is monitored using pressure transducers installed in key monitoring wells in the same stratigraphic interval as the pumping well (i.e., the Upper Upper Interbedded [UUI]

unit), and in wells screened in the Upper Sand (US) and Lower Upper Interbedded (LUI) units (i.e., at elevations above and below the pumping interval). Quarterly downloading of continuous hydraulic monitoring data (i.e., transducer data) was conducted during this reporting period on March 24 and September 1, 2009. Hydraulic data were recorded at 30-minute intervals in 12 transducers located in the vicinity of MW-206(I). Transducer data recorded between December 2, 2008 and September 1, 2009 are presented in Figure 2.

- Extraction wells were typically gauged during each O&M site visit. Average drawdown observed in the extraction wells was between 3 to 4 feet during pumping periods. Extraction well gauging data will be presented in the January 2010 PRP Report.

C. GROUND WATER MONITORING

i. Influent Water Quality Monitoring

Water samples were collected from sample ports located in the influent water lines at the system manifold. The influent water samples were collected on a weekly basis and submitted to Resource Laboratories, Inc. of Portsmouth, New Hampshire (RL) and analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260 (including tetrahydrofuran [THF]).

THF is the VOC that was detected at the highest concentrations in the influent water samples. The concentrations of THF ranged from 1,400 to 2,100 micrograms per liter (ug/L) in the water samples collected from MW-206(I) and from 1,200 to 2,700 ug/L in water samples collected from SB-4D, exceeding the Interim Cleanup Level (ICL) of 154 ug/L. Benzene was also detected in the influent water samples at concentrations exceeding the ICL of 5 ug/L. Benzene concentrations ranged from 21 to 31 ug/L in water samples collected from MW-206(I) and from 21 to 38 ug/L in water samples collected from SB-4D. Other VOCs that were detected in the water samples included toluene, ethylbenzene, xylenes, chloroethane, and chlorobenzene. These VOCs were detected in the water samples at concentrations that did not exceed the ICLs. In general, the data is consistent with data collected during the 2008 operating season. Analytical results are summarized in Tables 5A and 6A (2008 data) and Tables 5B and 6B (2009 data) and laboratory analytical reports for influent samples collected since July 2008 will be presented in the January 2010 Southern Plume PRP report. Influent concentrations of THF and benzene versus time for the 2008 and 2009 pumping seasons are illustrated in the attached Figures 3A and 3B (MW-206(I)) and Figures 4A and 4B (SB-4D), respectively.

THF and benzene data from each extraction well during individual pumping seasons were analyzed for statistical parameters, including; peak maximum value, peak minimum value, and average concentration. Statistical parameters are presented on Figures 3A, 3B, 4A, and 4B. The statistical parameters will be calculated for each pumping season and utilized to evaluate concentration trends over time.

ii. POTW Compliance Monitoring

Water samples were collected from the frac tank on a monthly basis to evaluate compliance with Dover POTW requirements. The water samples were analyzed for the parameters consistent with the Dover POTW monitoring requirements summarized in Table 1 of the 100 Percent Remedial Design Southern Plume MOM report. Analytical results are reported to the POTW operator as they become available. To date, the POTW operator has reviewed the data and additional analyses have not been requested. Analytical results are summarized in Table 7A (2008) and Table 7B (2009). Laboratory analytical reports for frac tank samples collected since July 2008 will be presented in the January 2010 Southern Plume PRP report.

iii. Mass Removal Estimates

Water samples were collected monthly basis from the influent sample ports and submitted for VOC analyses (including THF). These analytical data were used to monitor constituent concentration trends over time and to estimate VOC mass removal to date. Calculations of mass removal were based upon the analytical data associated with monthly VOC monitoring and the approximate volumes of ground water transported from the frac tank during the corresponding pumping period.

THF is the VOC that was detected at the highest concentrations in the influent water samples. The concentrations of THF in the influent water samples ranged from 1,200 to 2,700 micrograms per liter (ug/L). Other VOCs that were consistently detected in the water samples included benzene, toluene, ethylbenzene, xylenes, chloroethane, and chlorobenzene (Tables 7A and 7B). These VOCs were detected in the water samples at concentrations that were typically 2 or more orders of magnitude lower than the THF concentrations. Consequently, THF represents the majority of VOC mass that has been removed by the GWE system.

Consistent with evaluations completed during the Pilot Study and the 2008 pumping season, THF and benzene are the primary VOC constituents of concern (COCs) within the Southern Plume (i.e., the VOCs that have been detected in ground water at concentrations above applicable ICLs). Therefore, preliminary calculations of mass removal associated with the GWE system focused upon these two VOCs. These calculations indicate that approximately 2.78 pounds of THF and benzene (combined) have been removed by operation of the GWE system during the 2009 pumping season. Approximately 7.35 pounds of THF and benzene have been removed since initiation of the GWE system in 2008. THF represents approximately 98.7 percent of the mass removed.

Mass removal calculations associated with THF and benzene are summarized in Tables 8A (2008) and 8B (2009) (modified from Table 5 of the 100 Percent Remedial Design Southern Plume MOM report). These mass removal calculations will be updated as the GWE system is operated during the rest of 2009 and subsequent pumping seasons.

iv. Ground Water Monitoring

Between April 27 and 29, 2009, a ground water sampling event was conducted to evaluate the “baseline” ground water conditions prior to GWE system start up. The ground water samples were collected from monitoring wells located upgradient, within, and downgradient of the Southern Plume MOM RA area. Wells included in the baseline monitoring event are summarized in Table 4 and include wells positioned in the US, UUI, and LUI stratigraphic units.

A quarterly performance monitoring event was conducted on July 15, 2009. The quarterly performance monitoring event was focused upon monitoring wells located within the portion of the Southern Plume MOM RA area that is expected to be most influenced by extraction well MW-206(I). Wells included in the focused ground water monitoring event are summarized in Table 4 and include wells located within the same stratigraphic unit as the pumping well. Quarterly performance monitoring events will also be performed in October and December 2009.

The July 2009 quarterly performance monitoring ground water analytical results are summarized in tables included in Appendix C and laboratory analytical reports will be presented in the January 2010 Southern Plume PRP report.

D. REMEDY PROGRESS AND SYSTEM OPTIMIZATION

i. Overview

The Southern Plume GWE system was installed as part of the Southern Plume MOM RA and was designed to control the migration of the western lobe of the Southern Plume (i.e., the portion of the Southern Plume that is potentially migrating towards the Bellamy Reservoir). The GWE system pumps ground water from two extraction wells located within the Southern Plume Study Area; MW-206(I) which is located near the leading edge of the plume is utilized to control potential migration of the plume towards the Bellamy Reservoir, and SB-4D located near the toe of the Landfill is utilized to “cut off” the source of impacts contributing to the Southern Plume.

As requested by USEPA, periodic evaluations will be conducted to assess the performance of the GWE system with regard to its intended purpose and to assess system optimization to evaluate for possible system enhancements.

ii. Monitoring of Remedy Performance

Monitoring data obtained while operating the Southern Plume GWE system was used to complete a preliminary evaluation of remedial system performance. The approach used to evaluate performance follows the USEPA guidance described in “A Systematic Approach for Evaluation of Capture Zones at Pump and Treat System, Final Project Report,” USEPA Report EPA600/R-08/003 (dated January 2008). The approach consists of evaluation of multiple “lines of evidence” that include estimating the required pumping rate, evaluating hydraulic information and data, estimating capture zone(s), and reviewing trends in VOC concentrations. Based upon available data, the current evaluation of remedial system performance included:

- calculating the pumping rate required to maintain adequate capture based upon plume dimensions and the estimated hydraulic parameters of the aquifer;
- refining the existing hydraulic analysis presented in the 100 Percent Design Southern Plume MOM report using data collected from the enhanced monitoring well network (i.e., network including the additional monitoring wells installed in November 2008); and
- refining the extent of the theoretical capture zone based upon the typical pumping rate of the extraction well(s) and the hydraulic parameters calculated from the revised hydraulic analysis.

Pumping Rate Analysis

Information obtained during the Southern Plume Pre-Design Investigation (PDI) activities indicated that the majority of ground water impacts associated with the Southern Plume were located primarily within 400 feet of the toe of the Landfill, and that the leading edge of the plume (as defined by COC concentrations below ICLs) was located approximately 600 feet from the toe of the Landfill (approximately half of the distance from the north bank of the Bellamy Reservoir to the southwest toe of the Landfill). Information obtained during PDI activities also identified that wells MW-206(I) and SB-B well clusters were located along the estimated axis of the portion of the Southern Plume that is potentially migrating in the direction of the Bellamy Reservoir. In the vicinity of well MW-206(I), the Southern Plume is located within the UUI stratigraphic unit primarily at depths of 35 to 45 feet BGS, and the plume is 200 to 300 feet wide. These dimensions defined the approximate Target Capture Zone for the Southern Plume MOM activities.

The approximate plume dimensions were combined with the estimated hydraulic parameters of the UUI stratigraphic unit to calculate minimum pumping rates required to achieve the three-dimensional Target Capture Zone. Flow rates were estimated using the approach described in “A Systematic Approach for Evaluation of Capture Zones at Pump and Treat System, Final Project Report,” USEPA Report EPA600/R-08/003 (dated January 2008). The equations that were used to complete the evaluation are included in Appendix D-1.

The pumping rate analysis was performed using an extraction well with an effective screen length of 16 feet, which represents the 10-foot screened interval in well MW-206(I), a 3 foot-thick sand pack located above the screen, and an estimated 3-foot sand pack below the well screen interval. The minimum required flow rate to achieve the Target Capture Zone (i.e., 200 to 300 feet) with a well with an effective screen length of 16 feet ranged from 0.58 to 1.2 gpm. The current average pumping rate at each extraction well is approximately 0.9 gpm, occurring well within the range identified by the pumping rate analysis.

Updated Hydraulic Analysis

During this reporting period, two “tests periods” were evaluated to monitor hydraulic influence in the performance monitoring wells installed in the vicinity of the anticipated capture zone. These performance monitoring wells were installed in late 2008 to enhance the data set and,

consequently, refine the preliminary hydraulic analysis conducted during the 2008 Southern Plume MOM Pilot Test.

The first pump test (Test Period 1) was conducted over a 3-day period from April 29 to May 1, 2009 and second pump test (Test Period 2) was conducted over a 3-day period from May 12 to May 14, 2008. Both test periods were conducted immediately following a period of system/pump downtime to allow hydraulic conditions to equilibrate prior to testing (Test Period 1 was conducted immediately following the 2009 seasonal start-up and Test Period 2 was conducted immediately following a period of pump downtime). Both tests were conducted with well MW-206(I) pumped at an average rate of approximately 0.9 gpm. Transducer data obtained from performance monitoring wells MW-207(I), MW-208(I), and MW-209(I) were evaluated associated with each test period.

Methods used to analyze the hydraulic data from the 2009 pumping tests are consistent with the methods used in the initial hydraulic evaluation presented in the 100 Percent Design Southern Plume MOM report. The transmissivity of the vertical pumping interval targeted by the pumping well (MW-206(I)) was evaluated using forms of the Cooper and Jacob non-equilibrium equation and straight line methods following the analytical procedures of Dawson and Istok (1991). A brief description is presented in the following paragraphs. Refer to Section 5.0 of the November 2008 100 Percent Design Southern Plume report for additional information regarding the hydraulic analysis approach.

Time-drawdown and distance-drawdown data were evaluated for each test. For time-drawdown analyses, data were plotted on semi-logarithmic graphs and drawdown over one log cycle of time (referred to as delta s) was estimated for each well, and the values were used to calculate transmissivity. For distance-drawdown analyses, drawdown over one log cycle of distance was used to calculate transmissivity for each test. A summary of time-drawdown and distance-drawdown analyses are presented in Appendix D.

During the test periods, hydraulic responses were observed in monitoring wells that were screened within the same depth interval as the pumping well (UUID), including wells MW-207(I), MW-208(I), and MW-209(I). These wells are located radially outward (in a cross-gradient direction) from pumping well MW-206(I) at distances of 33 feet, 56 feet, and 144 feet, respectively. Hydraulic responses were observed in other UUID monitoring wells including SB-B2(I) and MW-200(I); however, these wells were not installed specifically to monitor system performance and, consequently, data from these wells were not used for the updated hydraulic analysis. Drawdown that could be clearly attributed to hydraulic influences associated with pumping from well MW-206(I) was not observed in performance monitoring wells screened in hydrogeologic units located above (B-10WT, MW-206(S), and MW-208(S)) and below (PT-1) the pumping interval.

A summary of calculations associated with Test Period 1 and Test Period 2 is included in Appendix D-5 and D-6. The transmissivity values obtained from these pump tests were used in the capture zone analysis that follows. In general, the results of the updated analysis indicated that hydraulic conductivity in the UUID ranged from 8 to 12 ft/day, with an average of 9.3 ft/day.

Capture Zone Analysis

Hydraulic information obtained during Test Period 1 and Test Period 2 was used to refine the initial capture zone dimensions estimated in the 100 Percent Design Southern Plume MOM report. The refined theoretical capture zone was then compared to the estimated current footprint of the Southern Plume within the UUI stratigraphic unit. The capture zone was estimated using the approach described in “A Systematic Approach for Evaluation of Capture Zones at Pump and Treat System, Final Project Report,” USEPA Report EPA600/R-08/003 (January 2008), and are consistent with the methods used to perform the initial capture zone analysis as described in the 100 Percent Design Southern Plume MOM report. Methods outlined in the USEPA document were used to calculate the downgradient stagnation point, the width of the capture zone in the area of the ground water extraction well, and the width of the capture zone upgradient of the extraction well. The equations that were used to complete the evaluation are included in Appendix D.

Operating conditions for the GWE system recorded during the 2009 season were used to calculate the refined theoretical hydraulic capture zone. These conditions included an average pumping rate of 0.9 gpm for well MW-206(I) and an effective screen length of 16 feet. The capture zone analysis was performed using the average hydraulic conductivity value (i.e., 9.3 ft/day) calculated from the updated time-drawdown and distance-drawdown analyses. The results of the refined hydraulic capture zone analysis indicated the following for extraction well MW-206(I):

- the downgradient stagnation point was estimated to be approximately 62 feet;
- adjacent to the extraction well, the width of the capture area was estimated to be 194 feet; and
- upgradient of the extraction well, the maximum capture width was estimated to be 388 feet.

These values are presented in the following summary table that includes data associated with the 2008 100 Percent Design Southern Plume MOM report. Hydraulic conductivity values and capture zone dimensions calculated based on the 2009 data fell within the range of values associated with sensitivity analysis that had been completed using the 2008 Pilot Test data presented below.

| | 2008 Pilot Test | | | 2009 |
|--|-----------------|-----------|-----------|------------|
| | Lowest K | Average K | Highest K | |
| Hydraulic conductivity | 4 ft/day | 6 ft/day | 12 ft/day | 9.3 ft/day |
| Downgradient stagnation point (X_o): | 120 ft | 81 ft | 40 ft | 62 ft |
| Width of capture near well ($2^* Y_{well}$): | 376 ft | 255 ft | 125 ft | 194 ft |
| Width of capture upgradient of well ($2^* Y_{max}$): | 752 ft | 511 ft | 251 ft | 388 ft |

The estimated capture zones are illustrated on Figure 5. The updated capture zone evaluation indicated similar results to the 2008 analysis with a smaller capture zone.

Additional Activities

Additional “lines of evidence” will be used to evaluate system performance when the data set is more robust (i.e., after at least one full operating season of collecting hydraulic and chemical data from the enhanced monitoring well network). Additional analyses will include:

- using trend and other appropriate statistical analyses to evaluate changes in VOC concentrations within and downgradient of the Southern Plume;
- mapping and comparing VOC distribution and concentrations over time within the Southern Plume (in plan and cross-section view); and,
- using trend and other appropriate statistical analyses to evaluate changes in hydraulic conditions within and between monitoring wells within the Southern Plume.

Results of the additional analyses using the full set of monitoring data obtained during the 2009 operation season will be presented in the January 10, 2010 PRP Report.

iii. System Optimization Assessment

Monitoring data obtained while operating the Southern Plume GWE system will be used to evaluate system performance and identify possible remedial system enhancements. The evaluation will also include information obtained from the Environmental Monitoring Program and remedial actions conducted elsewhere at the Site, including the Northwest Landfill air sparging/soil vapor extraction system and the Source Control GWE system along the toe of the Landfill.

Based upon the current understanding of conditions within the Southern Plume, possible system enhancements that will be evaluated at the end of the 2009 operating season will include:

- installing additional ground water extraction wells within the Southern Plume;
- modifying ground water extraction rates;
- evaluating use of alternative pumping systems;
- evaluating use of alternative pumping schedules (such as pulsed systems); and
- assessing the utility of possible system tie-ins with other remedies operating at the Site.

A preliminary review of monitoring data obtained to date during the 2009 operating season suggests that the GWE system is operating as designed and that there are no conditions that require immediate attention. Minor operational issues that were identified and mitigated during

the first part of the 2009 operating season were summarized in the September 2009 Interim Remedial Action Report.

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TABLE 1
SUMMARY OF PUMPING PERIODS
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Pumping Period | Average System Flow Rate (gpm) | Wells Operating | Total Volume Extracted To Date (gallons) |
|--|--------------------------------|--------------------|--|
| Initial Pilot Test | | | |
| November 29 to December 1, 2007 | 1.3 | MW-206(I) SB-4D | 7,115 |
| Pilot Test Period | | | |
| April 16 to April 19, 2008 | 2.2 | MW-206(I) SB-4D | 15,441 |
| May 1 to May 5, 2008 | 2.4 | MW-206(I) SB-4D | 30,605 |
| May 12 to June 10, 2008 | 0.7 | MW-206(I) | 56,342 |
| June 13 to June 17, 2008 | 0.7 | MW-206(I) | 60,590 |
| 2008 Operating Season | | | |
| June 20 to July 15, 2008 | 1.3 | SB-4D | 104,782 |
| July 15 to August 5, 2008 | 0.8 | MW-206(I) | 130,030 |
| August 5 to November 11, 2008 | 1.4 | MW-206(I) SB-4D | 256,588 |
| November 11 to November 25, 2008 | 1.4 | SB-4D | 264,588 |
| 2009 Operating Season (to date) | | | |
| April 29 to September 1, 2009 | 1.7 | MW-206(I) SB-4D | 451,056 |

NOTES:

1. gpm = gallons per minute.
2. Average system flow rates were calculated using manual flow measurements collected throughout the specified pumping period. When more than one well was pumping, flow rates for the individual wells were added to calculate the total system flow rate.

TABLE 2
SUMMARY OF GWE SYSTEM OPERATIONAL HISTORY
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| DATE | ACTIVITIES/NOTES | SAMPLES COLLECTED | SYSTEM OPERATING ON ARRIVAL | SYSTEM OPERATING ON DEPARTURE | PRESSURE AT REGULATOR SB-4D (PSI) | PRESSURE AT WELL SB-4D (PSI) | PRESSURE AT REGULATOR MW-206(I) (PSI) | PRESSURE AT WELL MW-206(I) (PSI) | APPROXIMATE FLOW RATE SB-4D (GPM) | APPROXIMATE FLOW RATE MW-206(I) (GPM) | TOTAL SYSTEM FLOW RATE (GPM) | WELL(S) PUMPING | APPROXIMATE VOLUME PUMPED TO DATE | APPROXIMATE VOLUME TRANSFERRED |
|--------------------------------|---|---------------------|-----------------------------|-------------------------------|-----------------------------------|------------------------------|---------------------------------------|----------------------------------|-----------------------------------|---------------------------------------|---|-----------------|-----------------------------------|--------------------------------|
| INITIAL SYSTEM START UP | | | | | | | | | | | | | | |
| 11/29/2007 | CAB, KEZ on-site to start up system | NO | NO | YES | 60 80 80 | --- 90 120 | 60 87 87 | --- NR NR | 0.88 0.27 0.87 | 1.14 NR NR | SB-4D/MW-206(I) SB-4D/MW-206(I) SB-4D/MW-206(I) | --- | --- | |
| 11/30/2007 | KEZ, RSE on-site to check system and work on MW-206 | NO | YES | YES | 80 | --- | 120 | --- | 1.00 0.00 (Frozen) | 1.25 0.00 (Frozen) | 2.25 | SB-4D/MW-206(I) | 2,549 | --- |
| 12/1/2007 | BPP on-site for system inspection | NO | YES | YES | 80 | --- | 120 | --- | NR 0.00 (Frozen) | NR 0.00 (Frozen) | 5,628 | SB-4D/MW-206(I) | 7,115 | --- |
| 12/2/2007 | BPP on-site for system inspection - system on but not pumping | NO | YES | YES | 81 | --- | 120 | --- | --- | --- | 7,115 | --- | --- | --- |
| 12/3/2007 | KEZ and WMC on-site to shut down system for winter and collect sample from frac tank | FRAC TANK | YES | NO | NR | --- | NR | --- | 0.00 (Frozen) | 0.00 (Frozen) | 7,115 | SB-4D/MW-206(I) | 7,115 | --- |
| 12/6/2007 | KEZ on-site to check system and frac tank | NO | NO | NO | NR | --- | NR | --- | --- | --- | --- | --- | 7,115 | --- |
| PILOT TEST | | | | | | | | | | | | | | |
| 04/16/08 | CAB, KEZ on-site for seasonal pump install and system start up, gauge wells | NO | NO | YES | 100 | --- | 100 | --- | 1.25 | 1.00 | 2.25 | SB-4D/MW-206(I) | 7,434 | --- |
| 04/17/08 | KDT on-site for system O&M | NO | YES | YES | 100 | --- | 100 | --- | 1.30 | 0.80 | 2.10 | SB-4D/MW-206(I) | 9,812 | --- |
| 04/18/08 | WMC, KEZ on-site for system O&M | FRAC TANK | YES | YES | 100 | --- | 100 | --- | 1.40 | 0.80 | 2.20 | SB-4D/MW-206(I) | 13,232 | --- |
| 04/19/08 | BPP on-site for system O&M, frac tank full, shut down system | NO | NO | NO | --- | --- | --- | --- | --- | --- | --- | NONE | 15,441 | --- |
| 04/29/08 | KEZ, BPP, JRF on-site for water transfer | NO | NO | NO | --- | --- | --- | --- | --- | --- | --- | NONE | 15,441 | --- |
| 04/30/08 | JRF, BPP on-site for water transfer and make repairs/upgrades to system | NO | NO | NO | --- | --- | --- | --- | --- | --- | --- | NONE | 15,441 | --- |
| 05/01/08 | BPP on-site to restart system and O&M | NO | NO | YES | 120 | --- | 100 | --- | 1.50 | 1.00 | 2.50 | SB-4D/MW-206(I) | 15,441 | --- |
| 05/05/08 | KEZ, WMC on-site for system O&M, shut down system, install four new transducers | FRAC TANK | YES | NO | 100 | --- | 110 | --- | 1.50 | 0.75 | 2.25 | SB-4D/MW-206(I) | 30,605 | --- |
| 05/09/08 | BPP on-site for system shut down and water transfer | NO | NO | NO | --- | --- | --- | --- | --- | --- | --- | NONE | 30,605 | --- |
| 05/12/08 | KEZ on-site to restart system, O&M, and water transfer | INFILUENT | NO | YES | --- | --- | 110 | --- | --- | 0.88 | 0.88 | MW-206(I) | 30,605 | --- |
| 05/20/08 | BPP on-site for system O&M and water transfer | INFILUENT | YES | YES | --- | --- | 110 | --- | --- | 0.75 | 0.75 | MW-206(I) | 36,020 | --- |
| 05/27/08 | BPP on-site for system O&M and water transfer | INFILUENT | YES | YES | --- | --- | 117 | --- | --- | 0.50 | 0.50 | MW-206(I) | 42,626 | --- |
| 06/04/08 | KEZ on-site for system O&M and water transfer | INFILUENT | YES | YES | --- | --- | 115 | --- | --- | 0.65 | 0.65 | MW-206(I) | 49,592 | --- |
| 06/10/08 | BPP on-site for system O&M, gauging, and system shut down | INFILUENT/FRAC TANK | YES | NO | --- | --- | 110 | --- | --- | 0.75 | 0.75 | MW-206(I) | 56,342 | --- |
| 06/13/08 | BPP on-site for system O&M and restart system | NO | NO | YES | --- | --- | 120 | --- | --- | 0.75 | 0.75 | MW-206(I) | 56,342 | --- |
| 06/17/08 | KEZ on-site for system O&M, system shut down, and download transducers | INFILUENT | YES | NO | --- | --- | 110 | --- | --- | 0.70 | 0.70 | MW-206(I) | 60,590 | --- |
| 2008 OPERATING SEASON | | | | | | | | | | | | | | |
| 06/20/08 | BPP on-site for system O&M and restart system | NO | NO | YES | 100 | --- | --- | --- | 1.25 | --- | 1.25 | SB-4D | 64,816 | --- |
| 06/25/08 | BPP on-site for system O&M and water transfer | INFILUENT | YES | YES | 98 | --- | --- | --- | 1.25 | --- | 1.25 | SB-4D | 73,816 | --- |
| 07/01/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D | 82,816 | --- |
| 07/02/08 | KEZ on-site for system O&M and downloading transducers | INFILUENT | YES | YES | 98 | --- | --- | --- | 1.25 | --- | 1.25 | SB-4D | 82,816 | --- |
| 07/03/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D | 88,816 | --- |
| 07/08/08 | BPP on-site for system O&M, water transfer, and well gauging | INFILUENT | YES | YES | 98 | --- | --- | --- | 1.25 | --- | 1.25 | SB-4D | 95,782 | --- |
| 07/15/08 | BPP on-site for system O&M and water transfer | INFILUENT/FRAC TANK | YES | YES | 98 | --- | --- | --- | 1.00 | --- | 1.00 | SB-4D | 104,782 | --- |
| 07/22/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | MW-206(I) | 113,782 | --- |
| 07/23/08 | BPP on-site for system O&M | INFILUENT | YES | YES | --- | --- | 106 | --- | --- | 0.50 | 0.50 | MW-206(I) | 109,030 | --- |
| 07/29/08 | BPP on-site for system O&M and water transfer, took photos of system | INFILUENT | YES | YES | --- | --- | 116 | --- | --- | 0.75 | 0.75 | MW-206(I) | 115,030 | --- |
| 08/05/08 | BPP on-site for system O&M, water transfer, and compressor maintenance | INFILUENT | YES | YES | --- | --- | 116 | --- | --- | 0.75 | 0.75 | MW-206(I) | 121,030 | --- |
| 08/12/08 | BPP on-site for system O&M, water transfer, gauging, and compressor maintenance | INFILUENT/FRAC TANK | YES | YES | 100 | --- | 117 | --- | 0.75 | 0.50 | 1.25 | SB-4D/MW-206(I) | 127,030 | --- |
| 08/19/08 | BPP on-site for system O&M and water transfer | INFILUENT | YES | YES | 100 | --- | 119 | --- | 0.25 | 0.50 | 0.75 | SB-4D/MW-206(I) | 136,030 | --- |
| 08/26/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D/MW-206(I) | 145,030 | --- |
| 09/02/08 | KEZ on-site for system O&M, water transfer, and download transducers | INFILUENT | NO | YES | 100 | --- | 115 | --- | 0.90 | 0.70 | 1.60 | SB-4D/MW-206(I) | 153,781 | --- |
| 09/05/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D/MW-206(I) | 162,781 | --- |
| 09/09/08 | BPP on-site for system O&M, water transfer, and clean/repair pump in MW-206I | INFILUENT | YES | YES | 98 | --- | 117 | --- | 0.75 | 0.75 | 1.50 | SB-4D/MW-206(I) | 166,881 | --- |
| 09/16/08 | BPP on-site for system O&M, water transfer, and gauging | INFILUENT/FRAC TANK | YES | YES | 98 | --- | 117 | --- | 0.75 | 0.50 | 1.25 | SB-4D/MW-206(I) | 175,801 | --- |
| 09/23/08 | BPP on-site for system O&M, water transfer, compressor maintenance, and clean/repair pumps. | INFILUENT | NO | YES | 98 | --- | 118 | --- | 1.00 | 0.75 | 1.75 | SB-4D/MW-206(I) | 181,801 | --- |
| 09/30/08 | BPP on-site for system O&M, water transfer, and clean/repair pump in SB-4D | INFILUENT | YES | YES | 98 | --- | 117 | --- | 1.00 | 0.50 | 1.50 | SB-4D/MW-206(I) | 189,101 | --- |
| 10/07/08 | BPP on-site for system O&M and water transfer | INFILUENT/FRAC TANK | YES | YES | 102 | --- | 117 | --- | 0.75 | 0.67 | 1.42 | SB-4D/MW-206(I) | 196,088 | --- |
| 10/14/08 | BPP on-site for system O&M, water transfer, clean/repairs to both pumps | INFILUENT | NO | YES | 102 | --- | 117 | --- | 1.00 | 0.75 | 1.75 | SB-4D/MW-206(I) | 204,088 | --- |
| 10/21/08 | BPP on-site for system O&M, water transfer, gauging, and clean/repairs to both pumps | INFILUENT | YES | YES | 102 | --- | 117 | --- | 0.75 | 0.50 | 1.25 | SB-4D/MW-206(I) | 213,088 | --- |
| 10/22/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D/MW-206(I) | 220,588 | --- |
| 10/27/08 | BPP on-site for system O&M and clean/repair pump in MW-206I | INFILUENT | YES | YES | 102 | --- | 117 | --- | 0.75 | 0.67 | 1.42 | SB-4D/MW-206(I) | 220,588 | --- |
| 10/28/08 | CHES on-site for water transfer | NO | --- | --- | --- | --- | --- | --- | --- | --- | --- | SB-4D/MW-206(I) | 229,588 | --- |
| 11/04/08 | BPP on-site for system O&M, water transfer, and clean/repair pump in MW-206I | INFILUENT | YES | YES | 102 | --- | 117 | --- | 1.00 | 0.75 | 1.75 | SB-4D/MW-206(I) | 238,588 | --- |
| 11/ | | | | | | | | | | | | | | |

TABLE 3
MAINTENANCE TRACKING LOG - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| DATE | FIELD STAFF | MAINTENANCE PERFORMED | NOTES | SYSTEM AT ARRIVAL (ON/OFF) | SYSTEM AT DEPARTURE (ON/OFF) |
|----------|-------------|--|--|----------------------------|------------------------------|
| 06/16/09 | BPP | Pulled and cleaned pump in MW-206I. | Iron/sediment buildup observed in pump. Pump in MW-206I operating at departure. | ON | ON |
| 06/25/09 | BPP | Dismantled and cleand process piping from totalizers to downspout. | Iron/sediment buildup formed a blockage in process piping. Pumps not operating at arrival. Pumps operating at departure. | OFF | ON |
| 06/30/09 | BPP | Greased compressor motor, pulled and cleaned pump in SB-4D. | Iron/sediment buildup observed in pump. Pump in SB 4D operating at departure. | ON | ON |
| 07/07/09 | BPP | Pulled and replaced pump in MW-206I with new pump. Pump removed from MW-206I cleaned and stored as alternate pump. New connectors installed on both the new and alternate pumps. | Pumps operating at departure. | ON | ON |
| 07/14/09 | BPP | Pulled, inspected, and cleaned pumps in SB-4D and MW-206I. Clean totalizers. MW-206I pump replaced with alternate pump. | Pumps operating at departure. | ON | ON |
| 07/20/09 | BPP | Pulled and cleaned pump in SB-4D. Clear SB-4D return line with compressed air to remove iron/sediment buildup. | Pumps operating at departure. | ON | ON |
| 07/28/09 | BPP | Removed silt from MW-206I using a Vac Truck. Cleaned pump in MW-206I. Replace vac out valve on frac tank. | Pump in MW-206I operating at departure. | ON | ON |
| 08/04/09 | BPP | Greased fittings in air compressor motor. | Pumps not operating at arrival due to high water level in frac tank. Pumps operating at departure. | OFF | ON |
| 08/11/09 | BPP | Changed compressor oil. Pulled and cleaned pump in SB-4D and MW-206I. Clear SB-4D return line with compressed air; return line was clogged with iron/sediment. Check valve on SB-4D pump jammed. | Pump in SB-4D not operating at arrival. Pumps operating at departure. | ON (SB-4D OFF) | ON |
| 08/17/09 | BPP | Pulled and cleaned pump in SB-4D. | Pump in SB-4D not operating at arrival. Pumps operating at departure. | ON (SB-4D OFF) | ON |
| 08/25/09 | BPP | Clear SB-4D influent line with air; influent line was clogged with iron/sediment. Also pulled and cleaned pump in SB-4D. | Pump in SB-4D operating at departure. | ON | ON |
| 09/01/09 | KEZ/SJL | Pulled and inspected pump in SB-4D. SB-4D operated temporarily; issue not resolved. | Pump in SB-4D not operating at arrival. SB-4D not operating at departure. | ON (SB-4D OFF) | ON (SB-4D OFF) |

NOTES:

1. BPP = Brian Poulin; GWE primary system operator.
2. KEZ = Kristin Zeman; GWE system operator.
3. SJL = Shauna Little; GWE system operator.

TABLE 4
MATRIX OF MONITORING ACTIVITIES
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| | | HYDRAULIC MONITORING | | GROUND WATER QUALITY MONITORING | | | |
|----------------------------------|--------------------|-------------------------|---|----------------------------------|---|---|---|
| WELL ID | STRATIGRAPHIC UNIT | ANNUAL BASELINE GAUGING | CONTINUOUS HYDRAULIC INFLUENCE MONITORING | ANNUAL BASELINE SAMPLING (APRIL) | QUARTERLY REMEDY PERFORMANCE MONITORING | | |
| | | JULY | OCTOBER | | DECEMBER | | |
| Existing Monitoring Wells | | | | | | | |
| MW-206(I) | UUI | X | X | | | | |
| PT-1 | LUI | X | X | | | | |
| PT-2 | LUI | X | | | | | |
| PT-3 | LUI | X | | | | | |
| SB-B1(S) | US | X | | X | | | |
| SB-B2(I) | UUI | X | X | X | X | X | X |
| SB-B3(D) | LUI | X | | X | | | |
| B-10WT | US | X | X | | | | |
| MW-200(S) | US | X | | X | | | |
| MW-200(I) | UUI | X | X | X | X | X | X |
| MW-200(D) | LUI | X | | X | | | |
| SB-10I | UUI | X | | X | | | |
| SB-10D | LUI | X | | | | | |
| SB-D1 | US | X | | X | | | |
| SB-D2 | UUI | X | | X | | | |
| SB-D3I | UUI | X | X | X | | | |
| SB-4D | UUI | X | | | | | |
| SC-10US | US | X | | | | | |
| SC-10UUI | UUI | X | | | | | |
| SC-10LUI | LUI | X | | | | | |
| SC-11US | US | X | | | | | |
| SC-11UUI | UUI | X | | | | | |
| SC-18US | US | X | | | | | |
| SC-18UUI | UUI | X | | | | | |
| B-4W | US | X | | | | | |
| SB-8U | UUI | X | | | | | |
| SB-8D | LUI | X | | | | | |
| SB-A1 | US | X | | | | | |
| SB-A2 | US | X | | | | | |
| MW-201(S) | US | X | | | | | |
| MW-201(I) | UUI | X | | | | | |
| MW-201(D) | LUI | X | | | | | |
| MW-202(S) | US | X | | | | | |
| MW-203(S) | US | X | | | | | |
| MW-204(S) | US | X | | | | | |
| MW-204(IA) | UUI | X | X | X | | | |
| MW-204(IB) | UUI | X | | | | | |
| MW-204(D) | LUI | X | | | | | |
| MW-205(I) | UUI | X | | | | | |
| SC-8US | US | X | | | | | |
| SC-8UUI | UUI | X | | | | | |
| SC-8LUI | LUI | X | | | | | |
| SB-C1 | US | X | | | | | |
| SB-C2 | UUI | X | | | | | |
| B-8WT | US | X | | | | | |
| MW-102S | US | X | | | | | |
| MW-102U | UUI | X | | | | | |
| New Performance Monitoring Wells | | | | | | | |
| MW-206(S) | US | X | X | X | | | |
| MW-207(I) | UUI | X | X | X | X | X | X |
| MW-208(S) | US | X | X | X | | | |
| MW-208(I) | UUI | X | X | X | X | X | X |
| MW-209(I) | UUI | X | X | X | X | X | X |

TABLE 5A
SUMMARY OF LABORATORY ANALYSES
INFLUENT VOC MONITORING - MW-206(I) - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Constituent | POTW Screening Levels | 12-May-08 | 20-May-08 | 27-May-08 | 4-Jun-08 | 10-Jun-08 | 17-Jun-08 | 23-Jul-08 | 5-Aug-08 | 13-Aug-08 | 19-Aug-08 | 2-Sep-08 | 9-Sep-08 | 16-Sep-08 | 23-Sep-08 | 30-Sep-08 | 7-Oct-08 | 14-Oct-08 | 21-Oct-08 | 27-Oct-08 | 4-Nov-08 | 11-Nov-08 | |
|---------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| benzene | N/A | 29 | 37 | 19 | 20 | 22 | 56 | 22 | 21 | 19 | 23 | 28 | 27 | 26 | 23 | 23 | 45 | 26 | 23 | 25 | 25 | 19 | |
| ethylbenzene | 1,590 | 23 | 33 | 21 | 21 | 23 | 53 | 23 | 24 | 21 | 26 | 26 | 28 | 28 | 26 | 27 | 41 | 25 | 25 | 26 | 25 | 19 | |
| toluene | 1,350 | 4 | <10 | 2 | 3 | <10 | <10 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | <10 | 3 | 2 | 3 | 3 | 2 | 2 | |
| xylanes (total) | N/A | 63 | 77 | 45 | 47 | 50 | 122 | 52 | 53 | 48 | 59 | 67 | 72 | 72 | 61 | 67 | 65 | 108 | 67 | 64 | 68 | 67 | 50 |
| PCE | 530 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| TCE | 710 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| cis-1,2-DCE | 280* | <2 | <10 | <2 | <2 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| vinyl chloride | 3 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| acetone | 1,176,000 | <50 | <250 | <50 | <50 | <250 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <250 | <50 | <50 | <50 | <50 | <50 | |
| tetrahydrofuran | N/A | 2,600 | 2,700 | 1,500 | 3,600 | 1,700 | 4,200 | 3,100 | 2,400 | 2,100 | 1,700 | 1,900 | 2,200 | 2,000 | 1,900 | 1,800 | 1,200 | 1,500 | 2,900 | 2,500 | 2,200 | 2,100 | 2,200 |
| MEK | 249,000 | <10 | <50 | <10 | <10 | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <50 | <10 | <10 | <10 | <10 | <10 | |
| MIBK | N/A | <10 | <50 | <10 | <10 | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <50 | <10 | <10 | <10 | <10 | <10 | |
| methylene chloride | 4,150 | <5 | <25 | <5 | <5 | <25 | <25 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <25 | <5 | <5 | <5 | <5 | <5 | |
| 1,1,1-TCA | 1,550** | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| 1,1-DCA | 4,580 | 3 | <10 | 2 | <2 | <10 | <2 | 2 | <2 | <2 | 2 | 2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| 1,1-DCE | N/A | <1 | <5 | <1 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | |
| 1,2-DCA | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| bromomethane | 2 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| chloromethane | 7 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| chloroform | 420 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| dibromoform | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| bromoform | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| carbon disulfide | 60 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| styrene | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| chloroethane | N/A | 3 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | 2 | 2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | |
| chlorobenzene | 2,350 | 3 | <10 | 3 | 3 | <10 | 3 | 3 | 2 | 3 | 3 | 4 | 3 | 3 | 3 | <10 | 4 | 3 | 3 | 3 | 2 | | |
| 1,2-dichloropropane | 3,650 | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| 1,1,2-trichloroethane | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| cis-1,3-dichloropropene | 90*** | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| trans-1,3-dichloropropene | 90*** | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| 1,1,2,2-tetrachloroethane | N/A | <2 | <10 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | |
| 2-hexanone | N/A | <10 | <50 | <10 | <10 | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <50 | <10 | <10 | <10 | <10 | |

NOTES:

1. Laboratory analytical results are reported in micrograms per liter (ug/L).

2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone);

MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane;

PCE = Tetrachloroethene; TCE = Trichloroethene.

3. N/A = Not Applicable.

4. Bold values exceed laboratory practical quantitation limits (PQLs).

5. "<" = Not detected above reported PQL.

6. * indicates Screening Level for trans-1,2-dichloroethylene.

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TABLE 5B
SUMMARY OF LABORATORY ANALYSES
INFLUENT VOC MONITORING - MW-206(I) - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Analyte | POTW Screening Levels | 7-May-09 | 12-May-09 | 19-May-09 | 26-May-09 | 2-Jun-09 | 9-Jun-09 | 16-Jun-09 | 25-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 20-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 17-Aug-09 | 25-Aug-09 | 1-Sep-09 |
|---------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| benzene | N/A | 29 | 31 | 28 | 31 | 25 | 28 | 27 | 25 | 26 | 22 | 24 | 26 | 26 | 23 | 24 | 23 | 21 | 22 |
| ethylbenzene | 1,590 | 20 | 23 | 19 | 20 | 22 | 22 | 21 | 20 | 22 | 20 | 25 | 26 | 27 | 20 | 22 | 20 | 17 | 19 |
| toluene | 1,350 | <10 | <10 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| xylenes (total) | N/A | 50 | 58 | 46 | 51 | 50 | 56 | 54 | 51 | 53 | 50 | 67 | 71 | 74 | 58 | 64 | 61 | 53 | 60 |
| PCE | 530 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| TCE | 710 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,2-DCE | 280* | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| vinyl chloride | 3 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| acetone | 1,176,000 | <250 | <250 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| tetrahydrofuran | N/A | 1,800 | 2,100 | 1,800 | 2,000 | 2,500 | 2,000 | 1,800 | 1,700 | 1,900 | 1,700 | 1,900 | 1,600 | 2,000 | 1,600 | 1,500 | 1,600 | 1,600 | 1,400 |
| MEK | 249,000 | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| MIBK | N/A | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| methylene chloride | 4,150 | <25 | <25 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1-TCA | 1,550** | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCA | 4,580 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCE | N/A | <5 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCA | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromomethane | 2 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloromethane | 7 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloroform | 420 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| dibromochloromethane | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromoform | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| carbon disulfide | 60 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| styrene | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloroethane | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chlorobenzene | 2,350 | <10 | <10 | 3 |
| 1,2-dichloropropane | 3,650 | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2-trichloroethane | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,3-dichloropropene | 90*** | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| trans-1,3-dichloropropene | 90*** | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2,2-tetrachloroethane | N/A | <10 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 2-hexanone | N/A | <50 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Trichloroethene.
3. N/A = Not Applicable.
4. "<" = Not detected above laboratory practical quantitation limits (PQLs).
5. Bold values exceed laboratory PQLs.
6. * indicates Screening Level for trans-1,2-dichloroethylene.
7. ** indicates Screening Level for 1,1,1-trichloroethylene.
8. *** indicates Screening Level for total 1,3-dichloropropene.

TABLE 6A
SUMMARY OF LABORATORY ANALYSES
INFLUENT VOC MONITORING - SB-4D - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Constituent | POTW Screening Levels | 12-May-08 | 25-Jun-08 | 1-Jul-08 | 8-Jul-08 | 15-Jul-08 | 5-Aug-08 | 13-Aug-08 | 19-Aug-08 | 2-Sep-08 | 9-Sep-08 | 16-Sep-08 | 23-Sep-08 | 30-Sep-08 | 7-Oct-08 | 14-Oct-08 | 21-Oct-08 | 27-Oct-08 | 4-Nov-08 | 11-Nov-08 | 18-Nov-08 |
|---------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| benzene | N/A | 35 | 34 | 31 | 35 | 31 | 36 | 32 | 31 | 31 | 30 | 30 | 32 | 30 | 37 | 34 | 29 | 29 | 29 | 19 | 25 |
| ethylbenzene | 1,590 | 30 | 22 | 25 | 29 | 25 | 28 | 25 | 19 | 17 | 3 | 8 | 12 | 14 | 11 | 14 | 14 | 19 | 23 | <2 | 15 |
| toluene | 1,350 | 89 | 70 | 74 | 82 | 80 | 50 | 76 | 73 | 69 | 70 | 70 | 55 | 64 | 61 | 58 | 57 | 59 | 67 | 32 | 51 |
| xylenes (total) | N/A | 92 | 97 | 114 | 130 | 116 | 108 | 118 | 107 | 107 | 118 | 115 | 112 | 114 | 105 | 98 | 109 | 112 | 123 | 78 | 92 |
| PCE | 530 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| TCE | 710 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,2-DCE | 280* | 2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| vinyl chloride | 3 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| acetone | 1,176,000 | 56 | 52 | 66 | <250 | 51 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| tetrahydrofuran | N/A | 3,100 | 1,900 | 1,900 | 1,700 | 1,300 | 1,800 | 2,000 | 1,200 | 1,400 | 1,500 | 1,700 | 1,400 | 3,100 | 2,200 | 1,700 | 1,100 | 1,700 | 1,500 | 1,300 | 1,500 |
| MEK | 249,000 | <10 | <10 | <10 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| MIBK | N/A | 15 | <10 | <10 | <50 | <10 | 2 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| methylene chloride | 4,150 | <5 | <5 | <5 | <25 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1-TCA | 1,550** | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCA | 4,580 | 2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCE | N/A | <1 | <1 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCA | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromomethane | 2 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloromethane | 7 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloroform | 420 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| dibromochloromethane | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromoform | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| carbon disulfide | 60 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| styrene | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloroethane | N/A | 9 | 7 | 6 | <10 | 6 | 9 | 6 | 5 | 6 | 4 | 4 |
| chlorobenzene | 2,350 | <2 | <2 | 2 | <10 | 2 | <2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | <2 | <2 |
| 1,2-dichloropropane | 3,650 | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2-trichloroethane | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,3-dichloropropene | 90*** | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| trans-1,3-dichloropropene | 90*** | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2,2-tetrachloroethane | N/A | <2 | <2 | <2 | <10 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 2-hexanone | N/A | <10 | <10 | <10 | <50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |

NOTES:

1. Laboratory analytical results are reported in micrograms per liter(ug/L).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Trichloroethene.
3. N/A = Not Applicable.
4. Bold values exceed laboratory practical quantitation limits (PQLs).
5. "<" = Not detected above reported PQL.
6. * indicates Screening Level for trans-1,2-dichloroethylene.
7. ** indicates Screening Level for 1,1,1-trichloroethylene.
8. *** indicates Screening Level for total 1,3-dichloropropene.

TABLE 6B
SUMMARY OF LABORATORY ANALYSES
INFLUENT VOC MONITORING - SB-4D - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Analyte | POTW Screening Levels | 7-May-09 | 12-May-09 | 19-May-09 | 26-May-09 | 2-Jun-09 | 9-Jun-09 | 16-Jun-09 | 25-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 20-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 17-Aug-09 | 25-Aug-09 | 1-Sep-09 |
|---------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| benzene | N/A | 21 | 35 | 37 | 37 | 33 | 35 | 33 | 34 | 33 | 29 | 34 | 38 | 34 | 32 | 35 | 35 | 29 | 28 |
| ethylbenzene | 1,590 | 23 | 24 | 22 | 23 | 20 | 23 | 26 | 20 | 25 | 27 | 24 | 25 | 29 | 28 | 28 | 28 | 21 | 22 |
| toluene | 1,350 | 36 | 38 | 50 | 46 | 46 | 48 | 47 | 41 | 40 | 40 | 39 | 37 | 41 | 37 | 32 | 34 | 31 | 34 |
| xylenes (total) | N/A | 118 | 136 | 122 | 119 | 136 | 145 | 134 | 147 | 136 | 137 | 157 | 167 | 158 | 159 | 180 | 180 | 155 | 167 |
| PCE | 530 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| TCE | 710 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,2-DCE | 280* | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| vinyl chloride | 3 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| acetone | 1,176,000 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | 57 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| tetrahydrofuran | N/A | 1,500 | 1,600 | 1,400 | 1,400 | 1,500 | 1,700 | 2,900 | 1,700 | 2,000 | 1,500 | 1,600 | 2,500 | 2,700 | 1,700 | 1,400 | 1,500 | 1,400 | 1,200 |
| MEK | 249,000 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| MIBK | N/A | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| methylene chloride | 4,150 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1-TCA | 1,550** | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCA | 4,580 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1-DCE | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCA | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromomethane | 2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloromethane | 7 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 3 |
| chloroform | 420 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| dibromochloromethane | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| bromoform | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| carbon disulfide | 60 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| styrene | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| chloroethane | N/A | <2 | <2 | 5 | 5 | 5 | 5 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 6 | 6 | 6 |
| chlorobenzene | 2,350 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 |
| 1,2-dichloropropane | 3,650 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2-trichloroethane | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| cis-1,3-dichloropropene | 90*** | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| trans-1,3-dichloropropene | 90*** | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 1,1,2,2-tetrachloroethane | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| 2-hexanone | N/A | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Trichloroethene.
3. N/A = Not Applicable.
4. "<" = Not detected above laboratory practical quantitation limits (PQLs).
5. Bold values exceed laboratory PQLs.
6. * indicates Screening Level for trans-1,2-dichloroethylene.
7. ** indicates Screening Level for 1,1,1-trichloroethylene.
8. *** indicates Screening Level for total 1,3-dichloropropene.

TABLE 7A
SUMMARY OF LABORATORY ANALYSES - FRAC TANK WITH POTW LOCAL LIMITS AND SCREENING LEVELS - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Analyte/Parameter | Local Limit | Combined Water SB-4D and MW-206(I) | Combined Water SB-4D and MW-206(I) | Combined Water MW-206(I) | Combined Water MW-206(I) | Combined Water SB-4D and MW-206(I) | Combined Water SB-4D and MW-206(I) | Combined Water SB-4D and MW-206(I) |
|--|-----------------|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | | FRAC TANK | FRAC TANK | FRAC TANK | FRAC TANK | FRAC TANK | FRAC TANK | FRAC TANK |
| Total Arsenic | 0.4 | 0.09 | 0.30 | 0.051 | 0.050 | 0.032 | 0.015 | 0.036 |
| Total Cadmium | 0.02 | <0.005 | <0.005 | 0.01 | <0.005 | <0.005 | <0.005 | <0.005 |
| Total Chromium | 4.03 | <0.05 | 0.05 | <0.50 | <0.05 | 0.34 | <0.05 | <0.05 |
| Total Copper | 3.46 | <0.05 | <0.05 | <0.50 | <0.05 | <0.05 | <0.05 | <0.05 |
| Total Lead | 0.806 | <0.01 | <0.01 | 0.38 | <0.008 | <0.008 | <0.008 | <0.008 |
| Mercury | 0.004 | <0.0009 | <0.0009 | --- | <0.0009 | <0.0009 | <0.0009 | <0.0009 |
| Total Nickel | 1.07 | <0.05 | 0.12 | <0.50 | <0.05 | 0.89 | <0.05 | <0.05 |
| Selenium | 8.55 | <0.05 | <0.05 | 0.06 | <0.05 | <0.05 | <0.05 | <0.05 |
| Silver | 0.713 | <0.007* | <0.007 | <0.007 | <0.007 | <0.007 | <0.007 | <0.007 |
| Total Zinc | 4.33 | <0.05 | 0.07 | 0.99 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cyanide | 0.363 | <0.02 | <0.02 | <0.02 | --- | <0.02 | <0.02 | <0.02 |
| Total Phenol | 182 | <0.05 | 0.09 | 0.20 | 0.08 | 2.1 | <0.05 | 0.51 |
| Analyte/Parameter | Screening Level | 4/18/2008 | 5/5/2008 | 6/10/2008 | 7/15/2008 | 8/13/2008 | 9/16/2008 | 10/7/2008 |
| 1,1,1-Trichloroethylene | 1.55 | <0.01** | <0.01** | <0.01** | <0.002** | <0.002** | <0.002** | <0.002** |
| 1,1-Dichloroethane | 4.58 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| 1,2,4-Trichlorobenzene | 0.43 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| 1,2-Dichlorobenzene | 3.74 | <0.01 | <0.01 | <0.01 | <0.002 | 0.002 | 0.003 | 0.002 |
| 1,2-Dichloropropane | 3.65 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| 1,3-Dichloropropene (Total) | 0.09 | <0.02 | <0.02 | <0.02 | <0.004 | <0.004 | <0.004 | <0.004 |
| 1,4-Dichlorobenzene | 3.54 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| 2-Butanone (MEK) | 249 | <0.05 | <0.05 | <0.05 | <0.010 | <0.010 | <0.010 | <0.010 |
| Acetone | 1,176 | <0.25 | <0.25 | <0.25 | <0.050 | <0.050 | <0.050 | <0.050 |
| Acrylonitrile | 1.24 | --- | --- | --- | --- | --- | --- | --- |
| Bromomethane | 0.002 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Carbon Disulfide | 0.06 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Chlorobenzene | 2.35 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Chloroform | 0.42 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Chloromethane | 0.007 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Dichlorodifluoromethane | 0.04 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Ethylbenzene | 1.59 | 0.015 | 0.21 | 0.25 | 0.018 | 0.009 | 0.014 | 0.009 |
| Ethylene Dichloride | 1.05 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Hexachloroethane | 0.96 | <0.002* | <0.2 | <0.1 | --- | --- | --- | --- |
| Hexachloro-1,3-Butadiene | 0.0002 | --- | --- | --- | --- | --- | --- | --- |
| Methylene Chloride | 4.15 | <0.025 | <0.025 | <0.025 | <0.005 | <0.005 | <0.005 | <0.005 |
| Naphthalene | 3.34 | <0.025 | 0.031 | <0.025 | <0.005 | <0.005 | <0.005 | <0.005 |
| Tetrachloroethylene | 0.53 | <0.01 | 0.26 | 0.093 | <0.002 | <0.002 | <0.002 | <0.002 |
| Toluene | 1.35 | 0.026 | <0.01 | <0.01 | 0.044 | 0.030 | 0.029 | 0.021 |
| trans-1,2-Dichloroethylene | 0.28 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Trichloroethylene | 0.71 | <0.01 | 0.036 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Trichlorofluoromethane | 1.22 | <0.01 | <0.01 | <0.01 | <0.002 | <0.002 | <0.002 | <0.002 |
| Vinyl Acetate | 1.21 | --- | --- | --- | --- | <0.010 | <0.010 | <0.010 |
| Vinyl Chloride | 0.003 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Formaldehyde | 0.07 | 0.069/0.084 ^A | 0.10/0.036 ^A | 1.5 ^B | 0.051/0.653 ^C | 0.590 ^D | 0.076 ^D | 0.13 ^D |
| Heptachlor | 0.003 | --- | --- | --- | --- | --- | --- | --- |
| Sulfate | 150/1,500 | --- | --- | --- | --- | --- | --- | --- |
| Sulfide | 1 | <0.04 | <0.04 | 0.07 | --- | <0.04 | <0.04 | <0.04 |
| Sulfite | 2.00 | --- | --- | --- | --- | --- | --- | --- |
| Oil and Grease | 100 | --- | --- | --- | --- | --- | --- | --- |
| Ammonia-N | 90 | 58 | 160 | 28 | 70 | 63 | 72 | --- |
| pH | <6.0 or >11.0 | 6.46 | 6.45 | 6.28 | 6.38 ^A | 6.22 ^A | 6.23 ^A | 6.26 |
| Alkalinity (as CaCO ₃) | >75.0 | 530 | 1,100 | 1,800 | 630 | 540 | --- | --- |
| Biological Oxygen Demand | 791 | 14 | 22 | 17 | 13 | 17 | 12 | 13 |
| Total Suspended Solids | 847 | 110 | 370 | 11,000 | 65 | 80 | 42 | 80 |
| ADDITIONAL ANALYSES (NON-PERMIT) REQUESTED BY POTW | | | | | | | | |
| Analyte/Parameter | 4/18/2008 | 5/5/2008 | 6/10/2008 | 7/15/2008 | 8/13/2008 | 9/16/2008 | 10/7/2008 | 11/11/2008 |
| Antimony | | 0.007 | 0.01 | 0.53 | <0.006 | <0.006 | <0.006 | <0.006 |
| Beryllium | | <0.004 | <0.004 | 0.01 | <0.004 | <0.004 | <0.004 | <0.004 |
| Molybdenum | | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Thallium | | <0.004 | <0.004 | <0.004 | 0.005 | <0.004 | <0.002 | <0.002 |
| Tetrahydrofuran | | 3.0 | 1.8 | 1.8 | 1.3 | 1.7 | 1.5 | 2.3 |
| Flash Point (Closed Cup) | | NonIgnitable | >140 | >140 | >140 | >140 | --- | --- |

NOTES:

1. Laboratory analytical results are reported in mg/L (milligrams per liter).
2. Bold values exceed laboratory practical quantitation limits (PQLs).
3. Shaded value exceeds screening criteria.
4. "<" = Not detected above reported PQL.
5. --- = Constituent was not analyzed.
6. ** data presented for 1,1,1-trichloroethane.
7. ^ data reported by two different laboratories (Katahdin/ChemServe).
8. ^B data reported by Alpha Analytical.
9. ^C data reported by two different laboratories (Katahdin/Alpha Analytical).
10. ^D data reported by ChemServe.
11. ^ = sample was analyzed beyond method holding time.
12. pH measured in standard pH units.
13. POTW = Dover's Publicly Owned Treatment Works.

TABLE 7B
SUMMARY OF LABORATORY ANALYSES - FRAC TANK WITH POTW LOCAL LIMITS AND SCREENING LEVELS - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Analyte/Parameter | Local Limit | Combined Water SB-4D and MW-206(I) |
|--|-----------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | | FRAC TANK | FRAC TANK | FRAC TANK | FRAC TANK |
| | | 5/7/2009 | 6/2/2009 | 7/7/2009 | 8/4/2009 |
| Total Arsenic | 0.4 | 0.064 | 0.054 | 0.036 | 0.030 |
| Total Cadmium | 0.02 | <0.005 | <0.004 | <0.004 | <0.004 |
| Total Chromium | 4.03 | <0.05 | <0.05 | <0.05 | <0.05 |
| Total Copper | 3.46 | <0.05 | <0.05 | <0.05 | <0.05 |
| Total Lead | 0.806 | <0.008 | <0.008 | <0.008 | <0.008 |
| Mercury | 0.004 | <0.0009 | <0.0009 | <0.0009 | <0.0009 |
| Total Nickel | 1.07 | 0.05 | <0.05 | <0.05 | <0.05 |
| Selenium | 8.55 | <0.05 | <0.05 | <0.05 | <0.05 |
| Silver | 0.713 | <0.007 | <0.007 | <0.007 | <0.007 |
| Total Zinc | 4.33 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cyanide | 0.363 | <0.02 | <0.02 | <0.02 | <0.02 |
| Total Phenol | 182 | <0.05 | 0.05 | <0.05 | 0.05 |
| Analyte/Parameter | Screening Level | 5/7/2009 | 6/2/2009 | 7/7/2009 | 8/4/2009 |
| 1,1,1-Trichloroethylene | 1.55 | <0.010* | <0.002* | <0.002* | <0.002* |
| 1,1-Dichloroethane | 4.58 | <0.010 | <0.002 | <0.002 | <0.002 |
| 1,2,4-Trichlorobenzene | 0.43 | <0.010 | <0.002 | <0.002 | <0.002 |
| 1,2-Dichlorobenzene | 3.74 | <0.010 | 0.002 | 0.003 | 0.002 |
| 1,2-Dichloropropane | 3.65 | <0.010 | <0.002 | <0.002 | <0.002 |
| 1,3-Dichloropropene (Total) | 0.09 | <0.020 | <0.004 | <0.004 | <0.004 |
| 1,4-Dichlorobenzene | 3.54 | <0.010 | <0.002 | <0.002 | <0.002 |
| 2-Butanone (MEK) | 249 | <0.050 | <0.010 | <0.010 | <0.010 |
| Acetone | 1,176 | <0.250 | <0.050 | <0.050 | <0.050 |
| Acrylonitrile | 1.24 | --- | --- | --- | --- |
| Bromomethane | 0.002 | <0.010 | <0.002 | <0.002 | <0.002 |
| Carbon Disulfide | 0.06 | <0.010 | <0.002 | <0.002 | <0.002 |
| Chlorobenzene | 2.35 | <0.010 | 0.002 | 0.002 | 0.002 |
| Chloroform | 0.42 | <0.010 | <0.002 | <0.002 | <0.002 |
| Chloromethane | 0.007 | <0.010 | <0.002 | <0.002 | <0.002 |
| Dichlorodifluoromethane | 0.04 | <0.010 | <0.002 | <0.002 | <0.002 |
| Ethylbenzene | 1.59 | 0.014 | 0.020 | 0.021 | 0.022 |
| Ethylene Dichloride | 1.05 | <0.010 | <0.002 | <0.002 | <0.002 |
| Hexachloroethane | 0.96 | --- | --- | --- | --- |
| Hexachloro-1,3-Butadiene | 0.0002 | --- | --- | --- | --- |
| Methylene Chloride | 4.15 | <0.025 | <0.005 | <0.005 | <0.005 |
| Naphthalene | 3.34 | <0.025 | <0.005 | <0.005 | <0.005 |
| Tetrachloroethylene | 0.53 | <0.010 | <0.002 | <0.002 | <0.002 |
| Toluene | 1.35 | 0.015 | 0.021 | 0.017 | 0.014 |
| trans-1,2-Dichloroethylene | 0.28 | <0.010 | <0.002 | <0.002 | <0.002 |
| Trichlorethylene | 0.71 | <0.010 | <0.002 | <0.002 | <0.002 |
| Trichlorofluoromethane | 1.22 | <0.010 | <0.002 | <0.002 | <0.002 |
| Vinyl Acetate | 1.21 | <0.050 | <0.010 | <0.010 | <0.010 |
| Vinyl Chloride | 0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| Formaldehyde | 0.07 | 0.697^A | 0.310^B | 0.340^B | 0.190^B |
| Heptachlor | 0.003 | --- | --- | --- | --- |
| Sulfate | 150/1,500 | --- | --- | --- | --- |
| Sulfide | 1 | <0.04 | <0.04 | <0.04 | <0.04 |
| Sulfite | 2.00 | --- | --- | --- | --- |
| Oil and Grease | 100 | --- | --- | --- | --- |
| Ammonia-N | 90 | --- | --- | --- | --- |
| pH | <6.0 or >11.0 | 6.3^A | 6.3^A | 6.3^A | 6.5^A |
| Alkalinity (as CaCO ₃) | >75.0 | --- | --- | --- | --- |
| Biological Oxygen Demand | 791 | 20 | 19 | 25 | 25 |
| Total Suspended Solids | 847 | 82 | 95 | 99 | 80 |
| ADDITIONAL ANALYSES (NON-PERMIT) REQUESTED BY POTW | | | | | |
| Analyte/Parameter | | 5/7/2009 | 6/2/2009 | 7/7/2009 | 8/4/2009 |
| Antimony | | <0.006 | 0.006 | <0.006 | <0.006 |
| Beryllium | | <0.004 | <0.004 | <0.004 | <0.004 |
| Molybdenum | | <0.05 | <0.05 | <0.05 | <0.05 |
| Thallium | | <0.002 | <0.002 | <0.002 | <0.002 |
| Tetrahydrofuran | | 1.6 | 1.9 | 1.6 | 1.5 |
| Flash Point (Closed Cup) | | --- | --- | --- | --- |

NOTES:

1. Laboratory analytical results are reported in mg/L (milligrams per liter).
2. Bold values exceed laboratory practical quantitation limits (PQLs).
3. Shaded value exceeds screening criteria.
4. "*n*" = Not detected above reported PQL.
5. --- = Constituent was not analyzed.
6. * data presented for 1,1,1-trichloroethane.
7. ^A data reported by Alpha Analytical.
8. ^B data reported by ChemServe.
9. ^ = sample was analyzed beyond method holding time.
10. pH measured in standard pH units.
11. POTW = Dover's Publicly Owned Treatment Works.

TABLE 8A
MASS REMOVAL CALCULATIONS - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Constituents | | | | | | | | Constituent Weekly Totals | |
|---|--------------------------------------|--|--------------|---|----------------|---------------|--------------|---------------------------|--|
| Date | Benzene (ug/L) | Tetrahydrofuran (ug/L) | Well Pumping | Approximate Pumping Rate (gal/min) | Gallons Pumped | Liters Pumped | Benzene (kg) | Tetrahydrofuran (kg) | |
| Pilot Test Period | | | | | | | | | |
| 04/18/08 | 22 | 3,000 | Frac Tank | NA | 15,441 | 58,451 | 1.29E-03 | 1.75E-01 | |
| 05/05/08 | ND(10)* | 1,800 | Frac Tank | NA | 15,164 | 57,402 | 2.87E-04 | 1.03E-01 | |
| 05/12/08 | 29 | 2,600 | MW-206I | 0.88 | 5,415 | 20,498 | 5.94E-04 | 5.33E-02 | |
| 05/20/08 | 37 | 2,700 | MW-206I | 0.75 | 6,606 | 25,006 | 9.25E-04 | 6.75E-02 | |
| 05/27/08 | 19 | 1,500 | MW-206I | 0.50 | 6,966 | 26,369 | 5.01E-04 | 3.96E-02 | |
| 06/04/08 | 20 | 3,600 | MW-206I | 0.65 | 6,750 | 25,552 | 5.11E-04 | 9.20E-02 | |
| 6/10 & 6/17/2008 | 39** | 2,950** | MW-206I | 0.73 | 4,248 | 16,080 | 6.27E-04 | 4.74E-02 | |
| 2008 Operating Season (6/17/2008 - 11/25/2008) | | | | | | | | | |
| Well ID | Average Benzene Concentration (ug/L) | Average Tetrahydrofuran Concentration (ug/L) | Well Pumping | Average Pumping Rate per Well (gal/min) | Gallons Pumped | Liters Pumped | Benzene (kg) | Tetrahydrofuran (kg) | |
| MW-206I | 25 | 2,106 | NA | 0.64 | 86,827 | 328,677 | 8.22E-03 | 6.92E-01 | |
| SB-4D | 31 | 1,679 | NA | 0.93 | 126,171 | 477,608 | 1.48E-02 | 8.02E-01 | |
| TOTAL TO DATE: | | | | | 273,588 | 1,035,643 | 2.78E-02 | 2.07E+00 | |
| SUMMARY | | | | | | | | | |
| TOTAL ESTIMATED MASS REMOVED IN 2008: | | | | | | | kg | lbs | |
| Benzene | | | | | | | 0.028 | 0.06 | |
| Tetrahydrofuran | | | | | | | 2.073 | 4.57 | |

NOTES:

1. * = constituent not detected above detection limit; mass removal calculated using half of the detection limit.
2. ** = average concentrations calculated from two influent samples collected during pumping period.
3. Frac Tank = indicates water sample was collected from fractionation tank (i.e., water storage tank); SB-4D and MW-206I combined effluent.
4. NA = not applicable.
5. ug/L = micrograms per liter.
6. gal/min = gallons per minute.
7. kg = kilograms.
8. lbs = pounds.
9. "Gallons Pumped" estimated based upon volume monitoring of frac tank and/or recorded water transfer volume.

TABLE 8B
MASS REMOVAL CALCULATIONS
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| Date | Constituents | | Well Pumping | Approximate Pumping Rate (gal/min) | Gallons Pumped | Liters Pumped | Constituent Weekly Totals | |
|--|-------------------------|---------------------------------|---------------|------------------------------------|----------------|---------------|---------------------------|----------------------|
| | Benzene (ug/L) Influent | Tetrahydrofuran (ug/L) Influent | | | | | Benzene (kg) | Tetrahydrofuran (kg) |
| 2009 Operating Season (to date): | | | | | | | | |
| 5/7/2009 | 25 | 1,650 | MW-206I/SB-4D | 0.95 | 9,000 | 34,069 | 8.52E-04 | 5.62E-02 |
| 5/12/2009 | 33 | 1,850 | MW-206I/SB-4D | 1.05 | 9,000 | 34,069 | 1.12E-03 | 6.30E-02 |
| 5/19/2009 | 32.5 | 1,600 | MW-206I/SB-4D | 0.90 | 12,000 | 45,425 | 1.48E-03 | 7.27E-02 |
| 5/26/2009 | 34 | 1,700 | MW-206I/SB-4D | 0.85 | 9,000 | 34,069 | 1.16E-03 | 5.79E-02 |
| 6/2/2009 | 29 | 2,000 | MW-206I/SB-4D | 0.88 | 9,000 | 34,069 | 9.88E-04 | 6.81E-02 |
| 6/9/2009 | 31.5 | 1,850 | MW-206I/SB-4D | 0.90 | 9,000 | 34,069 | 1.07E-03 | 6.30E-02 |
| 6/16/2009 | 30 | 2,350 | MW-206I/SB-4D | 0.90 | 9,000 | 34,069 | 1.02E-03 | 8.01E-02 |
| 6/25/2009 | 29.5 | 1,700 | MW-206I/SB-4D | 0.75 | 9,000 | 34,069 | 1.01E-03 | 5.79E-02 |
| 6/30/2009 | 29.5 | 1,950 | MW-206I/SB-4D | 0.80 | 7,000 | 26,498 | 7.82E-04 | 5.17E-02 |
| 7/7/2009 | 25.5 | 1,600 | MW-206I/SB-4D | 0.75 | 9,000 | 34,069 | 8.69E-04 | 5.45E-02 |
| 7/14/2009 | 29 | 1,750 | MW-206I/SB-4D | 0.80 | 18,668 | 70,666 | 2.05E-03 | 1.24E-01 |
| 7/28/2009 | 30 | 2,350 | MW-206I/SB-4D | 1.00 | 22,500 | 85,172 | 2.56E-03 | 2.00E-01 |
| 8/4/2009 | 27.5 | 1,650 | MW-206I/SB-4D | 0.83 | 14,800 | 56,024 | 1.54E-03 | 9.24E-02 |
| 8/11/2009 | 29.5 | 1,450 | MW-206I/SB-4D | 0.80 | 10,000 | 37,854 | 1.12E-03 | 5.49E-02 |
| 8/17/2009 | 29 | 1,550 | MW-206I/SB-4D | 0.78 | 11,000 | 41,640 | 1.21E-03 | 6.45E-02 |
| 8/25/2009 | 25 | 1,500 | MW-206I/SB-4D | 0.78 | 10,500 | 39,747 | 9.94E-04 | 5.96E-02 |
| 9/1/2009 | 25 | 1,300 | MW-206I | 0.44 | 8,000 | 30,283 | 7.57E-04 | 3.94E-02 |
| TOTAL ESTIMATED MASS REMOVED DURING CURRENT OPERATING SEASON: | | | | | | | kg | lbs |
| Benzene | | | | | | | 0.021 | 0.05 |
| Tetrahydrofuran | | | | | | | 1.260 | 2.78 |

NOTES:

1. ug/L = micrograms per liter.
2. kg = kilograms.
3. lbs = pounds.
4. "Gallons Pumped" estimated based upon recorded water transfer volume; reported quantity includes transfer volumes following previous sample date up to and including current sample date.

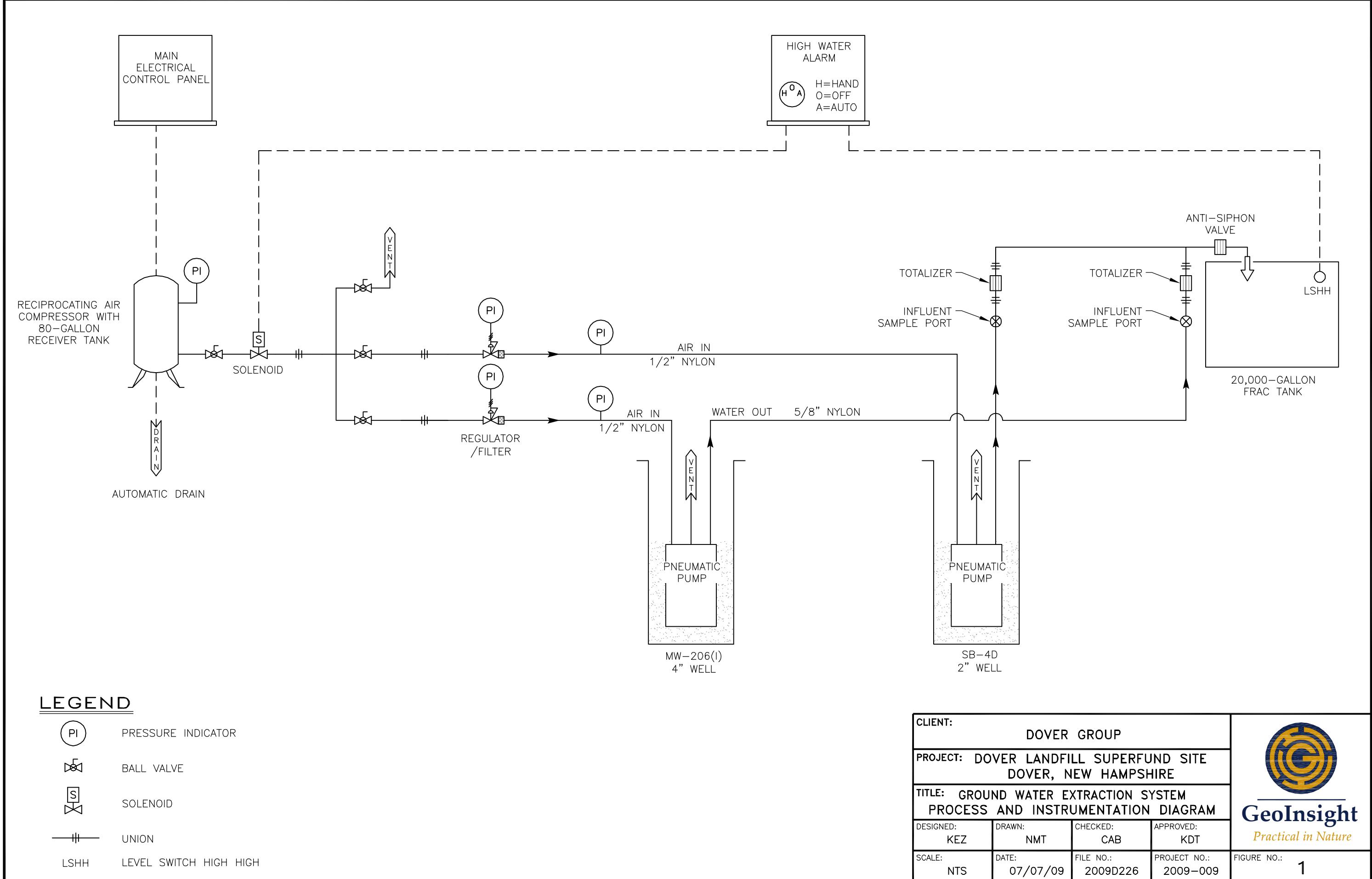


FIGURE 2
TRANSDUCER DATA WATER ELEVATION - DECEMBER 2, 2008 - SEPTEMBER 1, 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

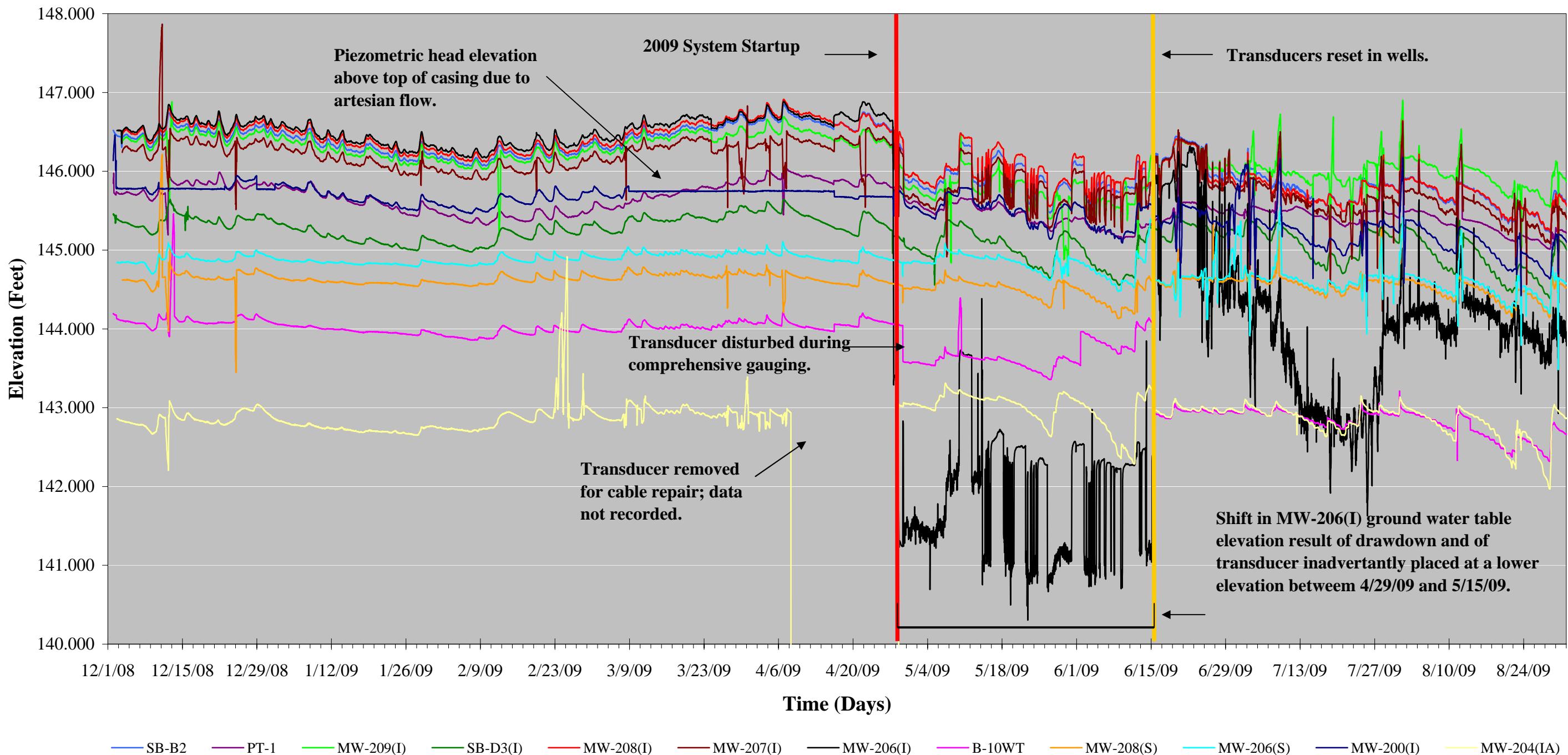
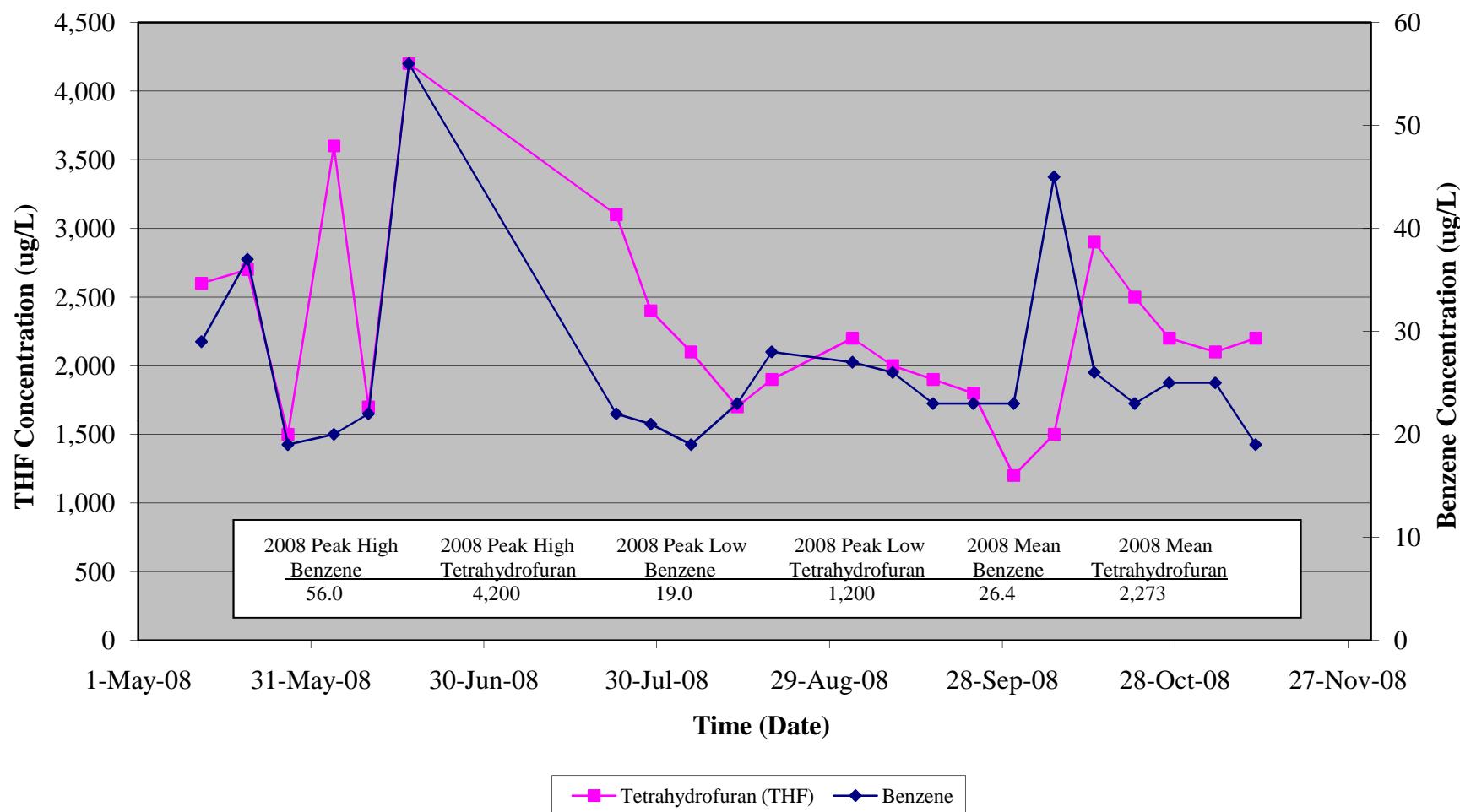


FIGURE 3A
CONCENTRATION VERSUS TIME - MW-206I - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

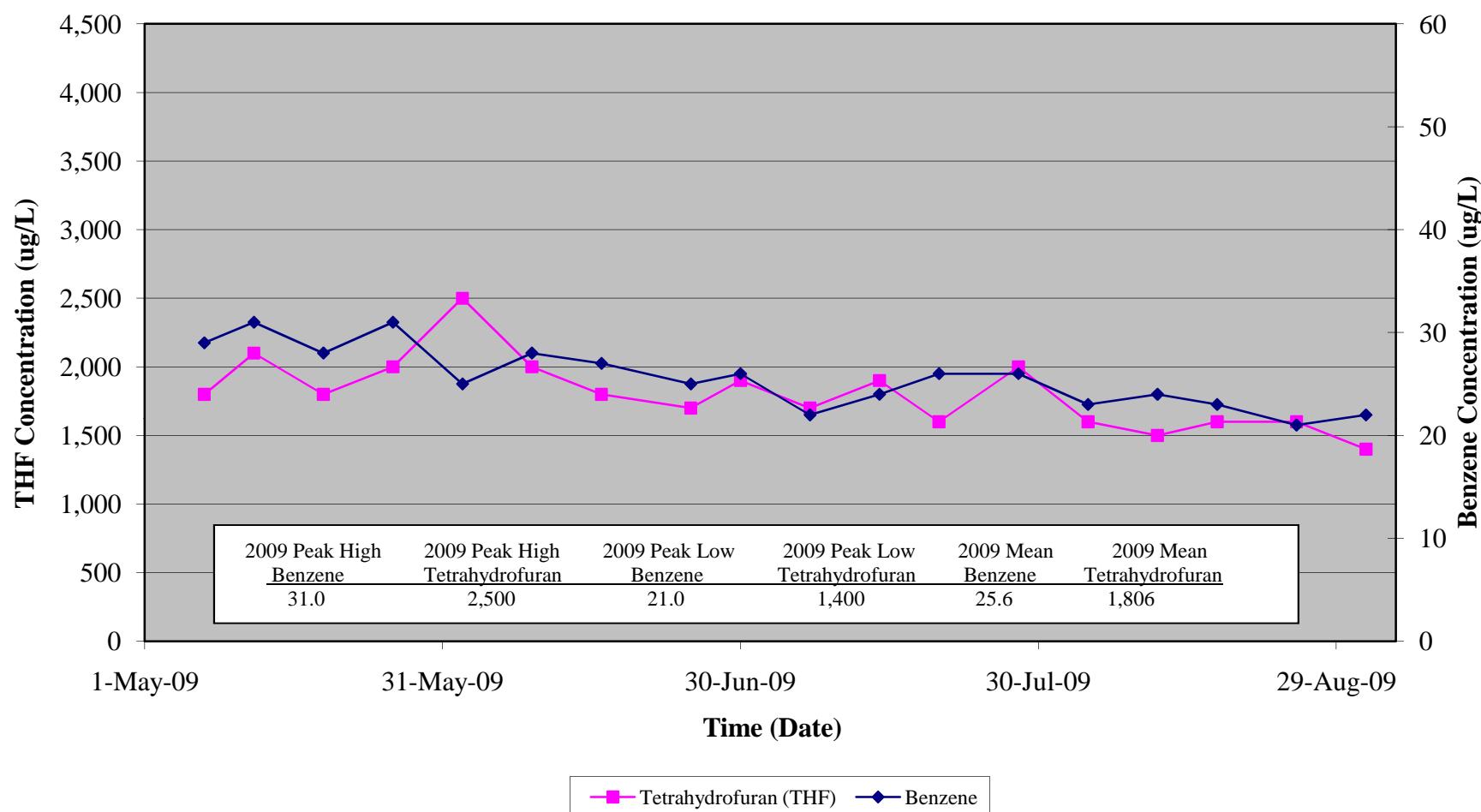


October 10, 2009

GeoInsight Project 2009-009/Table 5A and 5B - Summary of Laboratory Analyses MW-206I/Fig 3A 2008

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FIGURE 3B
CONCENTRATION VERSUS TIME - MW-206I - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

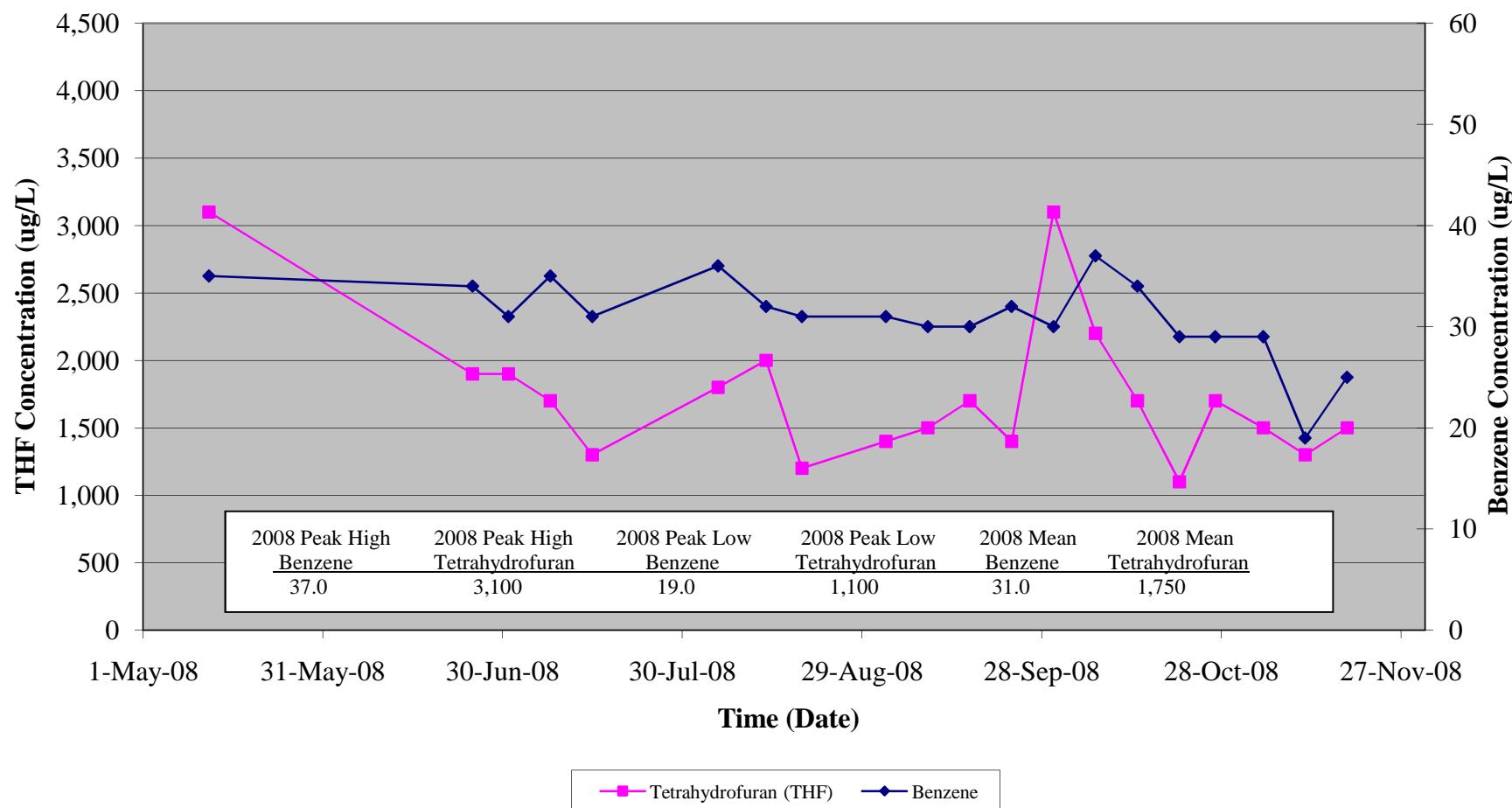


October 10, 2009

GeoInsight Project 2009-009/Table 5A and 5B - Summary of Laboratory Analyses MW-206I/Fig 3B 2009

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FIGURE 4A
CONCENTRATION VERSUS TIME - SB-4D - 2008
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

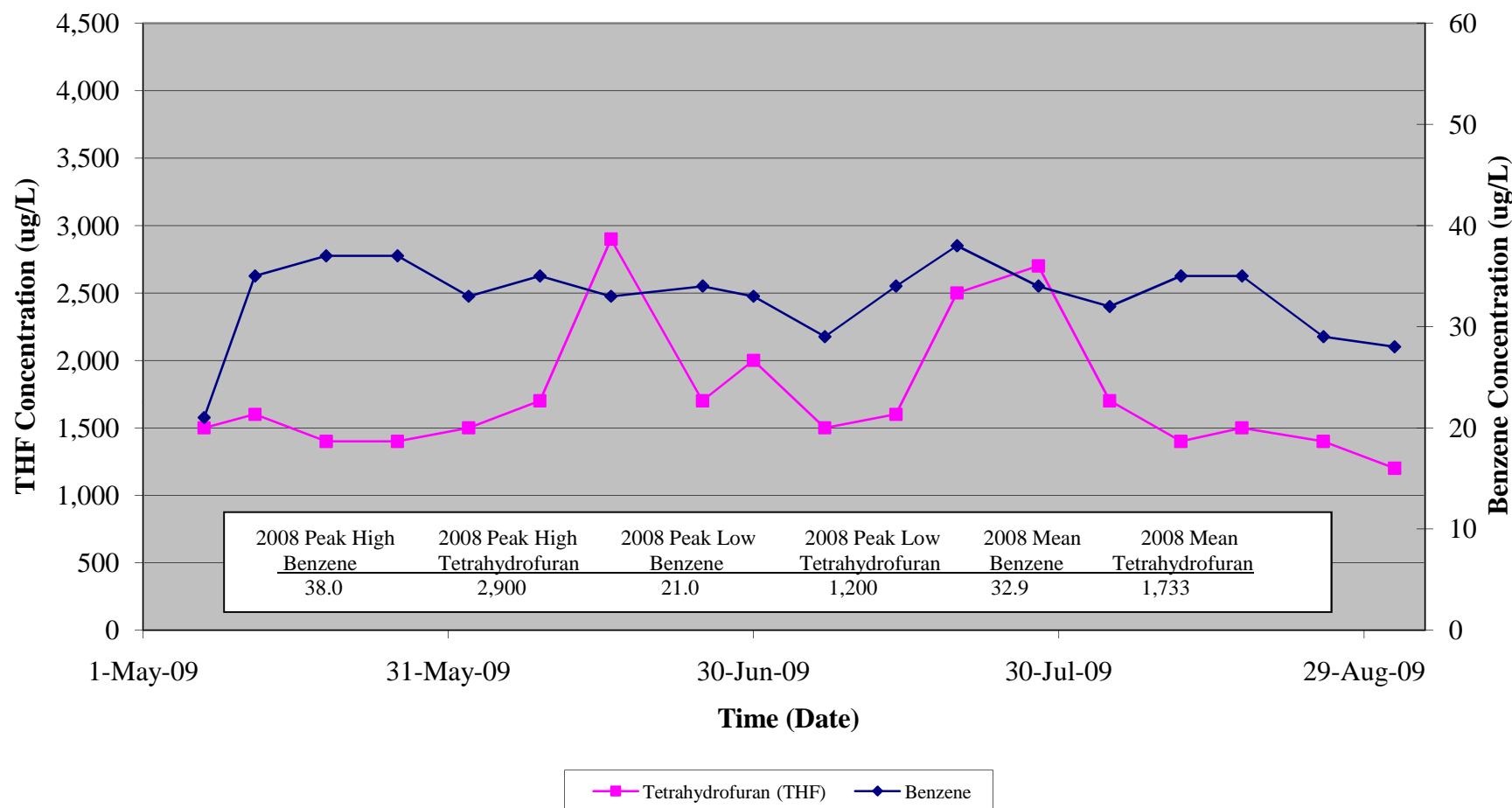


October 10, 2009

GeoInsight Project 2009-009/Table 6A AND 6B - Summary of Laboratory Analyses SB-4D/Fig 4A 2008

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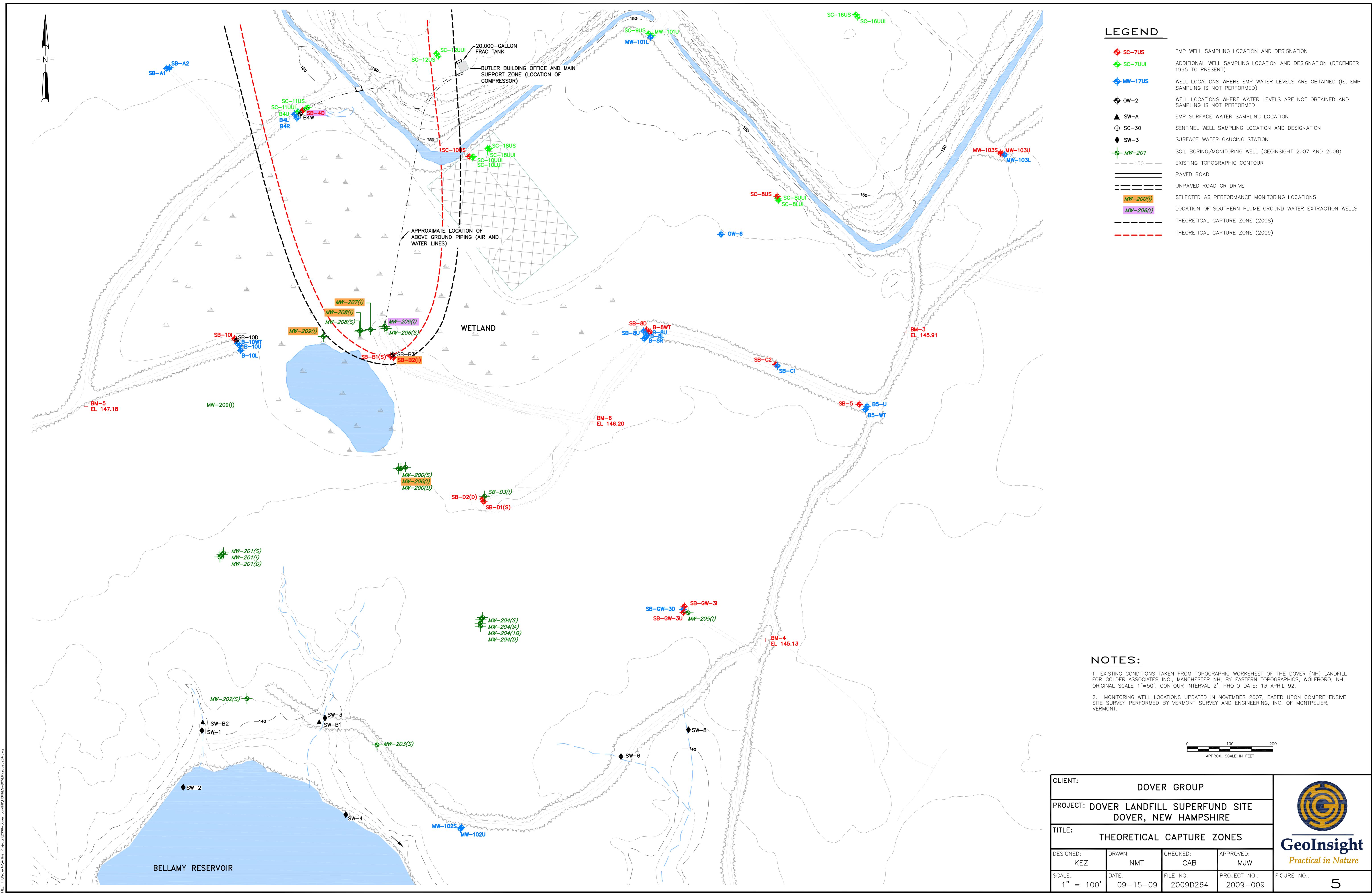
FIGURE 4B
CONCENTRATION VERSUS TIME - SB-4D - 2009
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



October 10, 2009

GeoInsight Project 2009-009/Table 6A AND 6B - Summary of Laboratory Analyses SB-4D/Fig 4B 2009

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APPENDIX A
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



1. GWE system control panel (top right), main electrical control panel (bottom center).



2. 80-gallon reciprocating air compressor inside Butler Building.

APPENDIX A
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



3. Air line manifold, air filter/regulators, and compressor auto drain.



4. View of manifold, including; totalizers, influent sample ports, and manual flow ports.

APPENDIX A
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



5. Siphon relief valves located at top of fractionation tank.

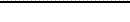


6. Pumping well MW-206(I).

APPENDIX A
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

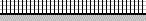


7. Pumping well SB-4D.

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | Boring No.: NA | Well ID: MW-206S | |
|--|----------|---|--|---|--|-----------------------------|---|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | Sheet: 1 | Of: 1 | |
| | | Location: Dover, New Hampshire | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | |
| Drilling Co.: GeoSearch, Inc. | | | Boring Location: . Adjacent to MW-206I | | | | |
| Foreman: Brad Brock | | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | |
| GeoInsight Eng./Geol: RSE | | | Date Started: 11/20/08 Date Completed: 11/20/08 | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION |
| Model: 850 | | Hammer(lb): 360 | | | | | |
| Method: Hollow Stem Auger | | Fall (in): NA | | | | | |
| DEPTH (ft) | SAMPLE | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | | | | | |
| 0 | | | | Samples were not collected. | | | |
| 5 | | | | | | | Upper Sand |
| 10 | | | | | | | |
| 15 | | | | End of boring at 13 feet BGS. Refusal not encountered. | | | |
| GRANULAR SOILS | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 |  |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | |  |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | |  |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 0.5-2 |  |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 2-13 |  |
| | | >30 | HARD | Riser | | 0-3 |  |
| | | | | Screen (0.01-inch Slot Screen) | | 3-13 |  |
| NOTES: | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | |
| 4. NA = Not applicable. | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | Boring No.: NA | Well ID: MW-207I | | |
|--|---------------|-------------------------------------|--|---------------------------------------|--|--------------------------------|--------------------------------------|----------------------------|
| | | Project: | Dover Municipal Landfill Southern Plume Management of Migration | | Sheet: 1 | Of: 3 | | |
| | | Location: | Dover, New Hampshire | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . | | Approximately 25 feet west of MW-206I | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS | | Well: NS | | Datum: NA | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/18/08 | | Date Completed: 11/18/08 | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | |
| Model: 850 | | Hammer(lb): NA | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | DEPTH (ft) | | | | | |
| 0 | | | | | Samples were not collected. | | | |
| 5 | | | | | | | | Upper Sand |
| 10 | | | | | | | | |
| 15 | | | | | | | | Upper Upper Interbedded |
| GRANULAR SOILS | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL | LEGEND |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | FEET BGS | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-30.5 | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 30.5-33 | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 | | |
| | | >30 | HARD | Riser | | 0-35 | | |
| | | | | Screen (0.01-inch Slot Screen) | | 35-45 | | |
| NOTES: | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | |

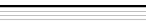
|  | | WELL COMPLETION LOG | | | Boring No.: NA | Well ID: MW-207I | | | |
|--|----------|---|---------------|--|--|------------------------|---|----------------------|----------|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | Sheet: 2 | Of: 3 | | | |
| | | Location: Dover, New Hampshire | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . Approximately 25 feet west of MW-206I | | | | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | | | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/18/08 Date Completed: 11/18/08 | | | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE | |
| | NO. | PEN/REC (in) | DEPTH (ft) | | | | | | BLOWS/6" |
| 20 | | | | | Samples were not collected. | | | | |
| 25 | | | | | | | | | |
| 30 | | | | | | | | | |
| 35 | | | | | | | | | |
| GRANULAR SOILS | | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 |  | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | |  | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-30.5 |  | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 30.5-33 |  | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 |  | | |
| | | >30 | HARD | Riser | | 0-35 |  | | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | 35-45 |  | | |
| NOTES: | | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | | |

|  | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-207I | | |
|--|----------|---|------------------------------|--|---|--|---|------|--|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 3 | Of: 3 | | |
| | | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . Approximately 25 feet west of MW-206I | | | | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS Well: NS | | | | Datum: NA | | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/18/08 | | | | Date Completed: 11/18/08 | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE | |
| | NO. | PEN/REC (in) | | DEPTH (ft) | BLOWS/6" | | | | |
| 40 | | | | | Samples were not collected. | Upper Upper Interbedded | | | |
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| 45 | | | | | End of boring at 45 feet BGS. Refusal not encountered. | | | | |
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| GRANULAR SOILS | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND | | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 |  | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | |  | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-30.5 |  | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 30.5-33 |  | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 |  | | |
| | | >30 | HARD | Riser | | 0-35 |  | | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | 35-45 |  | | |
| NOTES: | | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | | |

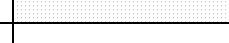


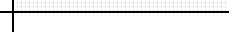
| GeoInsight Practical in Nature | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-208S | |
|--|----------|--|---------------|--------------------------------|---|--------------------------|-----------------------------|------------|
| | | Project: Dover Municipal Landfill | | Sheet: 1 | | Of: 1 | | |
| | | Southern Plume Management of Migration | | Project Number: 2009-009 | | Chkd By: KEZ/CAB | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . Approximately 50 feet west of MW-206I | | | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS Well: NS | | | | Datum: NA | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/19/08 | | | | Date Completed: 11/19/08 | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | |
| Model: 850 | | Hammer(lb): NA | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | DEPTH (ft) | | | | | |
| 0 | | | | | Samples were not collected. | | | |
| 5 | | | | | | | | Upper Sand |
| 10 | | | | | | | | |
| 15 | | | | | End of boring at 12 feet BGS. Refusal not encountered. | | | |
| GRANULAR SOILS | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 0.5-1.5 | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 1.5-12 | | |
| | | >30 | HARD | Riser | | 0-2 | | |
| | | | | Screen (0.01-inch Slot Screen) | | 2-12 | | |
| NOTES: | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | Boring No.: NA | Well ID: MW-208I | | | |
|--|---------------|-------------------------------------|--|---------------------------------------|--|--------------------------------|--------------------------------------|------------------------------|---------------|
| | | Project: | Dover Municipal Landfill Southern Plume Management of Migration | | Sheet: 1 | Of: 3 | | | |
| | | Location: | Dover, New Hampshire | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . | | Approximately 50 feet west of MW-206I | | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS | | Well: NS | | Datum: NA | | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/19/08 | | Date Completed: 11/19/08 | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE | |
| | NO. | PEN/REC (in) | DEPTH (ft) | | | | | | BLOWS/6" |
| 0 | | | | | Samples were not collected. | | | | |
| 5 | | | | | | | | | |
| 10 | | | | | | | | | |
| 15 | | | | | | | | | |
| GRANULAR SOILS | | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 | | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-31 | | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 31-33 | | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 | | | |
| | | >30 | HARD | Riser | | 0-35 | | | |
| | | | | Screen (0.01-inch Slot Screen) | | 35-45 | | | |
| NOTES: | | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-208I | | |
|--|---|-----------------|--|--|--|--------------------------------|---|---------------|
| | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 2 | Of: 3 | | |
| | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | | Boring Location: . Approximately 50 feet west of MW-206I | | | | | |
| Foreman: Brad Brock | | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | | |
| GeoInsight Eng./Geol: RSE | | | Date Started: 11/19/08 Date Completed: 11/19/08 | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | |
| Model: 850 | | Hammer(lb): NA | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | DEPTH (ft) | | | | | |
| 20 | | | | | Samples were not collected. | | | |
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| GRANULAR SOILS | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL | LEGEND |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | FEET BGS | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 |  | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | |  | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-31 |  | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 31-33 |  | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 |  | |
| | | >30 | HARD | Riser | | 0-35 |  | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | 35-45 |  | |
| NOTES: | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-208I | | |
|--|---------------|---|-----------------------|--|---|--|---|--------------------------------------|-------------|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 3 | Of: 3 | | |
| | | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | Boring Location: . Approximately 50 feet west of MW-206I | | | | | | | |
| Foreman: Brad Brock | | Ground Surface Elevation (feet): NS Well: NS | | | | Datum: NA | | | |
| GeoInsight Eng./Geol: RSE | | Date Started: 11/19/08 | | | | Date Completed: 11/19/08 | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | DEPTH (ft) | | BLOWS/6" | Samples were not collected. | | | |
| 40 | | | | | | | Upper Upper Interbedded | | |
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| 45 | | | | | End of boring at 45 feet BGS. Refusal not encountered. | | | | |
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| GRANULAR SOILS | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL | LEGEND | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | FEET BGS | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 |  | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | |  | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-31 |  | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 31-33 |  | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-45 |  | | |
| | | >30 | HARD | Riser | | 0-35 |  | | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | 35-45 |  | | |
| NOTES: | | | | | | | | | |
| 1. 2-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-2091 | | |
|---|----------|---|------------------------------|---|----------|--|------------------------|---|----------------------------|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 1 | Of: 3 | | |
| | | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | | | Boring Location: . Approximately 150 feet west of MW-206I | | | | | |
| Foreman: Brad Brock | | | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | | |
| GeoInsight Eng./Geol: RSE | | | | Date Started: 11/19/08 Date Completed: 11/20/08 | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | | | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | | DEPTH (ft) | BLOWS/6" | | | | |
| 0 | | | | Samples were not collected. | | | | | |
| 5 | | | | | | | | | Upper Sand |
| 10 | | | | | | | | | |
| 15 | | | | | | | | | Upper Upper Interbedded |
| GRANULAR SOILS | | COHESIVE SOILS | | WELL CONSTRUCTION | | | INTERVAL FEET BGS | LEGEND | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | | 0-0.5 |  | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | |  | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | | 0.5-31 |  | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | | 31-33 |  | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | | 33-50 |  | |
| | | >30 | HARD | Riser | | | 0-35, 45-50 |  | |
| | | | | Screen (0.01-inch Slot Screen) | | | 35-45 |  | |
| NOTES: <ol style="list-style-type: none"> 1. 4-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. 2. PPM = Parts per million. 3. NS = Not surveyed. 4. NA = Not applicable. 5. BGS = Below ground surface. 6. Sump installed below screen interval; constructed of PVC riser at 45-50 feet BGS. | | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-2091 | | |
|--|----------|---|------------------------------|---|----------|--|------------------------|---|----------------------------|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 2 | Of: 3 | | |
| | | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | | | Boring Location: . Approximately 150 feet west of MW-206I | | | | | |
| Foreman: Brad Brock | | | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | | |
| GeoInsight Eng./Geol: RSE | | | | Date Started: 11/19/08 Date Completed: 11/20/08 | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | DEPTH | REFERENCE | STABILIZATION | | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | WELL COMPLETION DETAIL | SAMPLE DESCRIPTION | | | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | | DEPTH (ft) | BLOWS/6" | | | | |
| 20 | | | | Samples were not collected. | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | | | | | | Upper Upper Interbedded |
| 35 | | | | | | | | | |
| GRANULAR SOILS | | COHESIVE SOILS | | WELL CONSTRUCTION | | | INTERVAL FEET BGS | LEGEND | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | | 0-0.5 |  | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | |  | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | | 0.5-31 |  | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | | 31-33 |  | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | | 33-50 |  | |
| | | >30 | HARD | Riser | | | 0-35, 45-50 |  | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | | 35-45 |  | |
| NOTES: | | | | | | | | | |
| 1. 4-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. | | | | | | | | | |
| 2. PPM = Parts per million. | | | | | | | | | |
| 3. NS = Not surveyed. | | | | | | | | | |
| 4. NA = Not applicable. | | | | | | | | | |
| 5. BGS = Below ground surface. | | | | | | | | | |
| 6. Sump installed below screen interval; constructed of PVC riser at 45-50 feet BGS. | | | | | | | | | |

|  GeoInsight <i>Practical in Nature</i> | | WELL COMPLETION LOG | | | | Boring No.: NA | Well ID: MW-2091 | | |
|---|----------|--|------------------------------|---|--------------------|---|------------------------|-----------------------------|----------------------------|
| | | Project: Dover Municipal Landfill Southern Plume Management of Migration | | | | Sheet: 3 | Of: 3 | | |
| | | Location: Dover, New Hampshire | | | | Project Number: 2009-009 Chkd By: KEZ/CAB | | | |
| Drilling Co.: GeoSearch, Inc. | | | | Boring Location: . Approximately 150 feet west of MW-206I | | | | | |
| Foreman: Brad Brock | | | | Ground Surface Elevation (feet): NS Well: NS Datum: NA | | | | | |
| GeoInsight Eng./Geol: RSE | | | | Date Started: 11/19/08 Date Completed: 11/20/08 | | | | | |
| DRILLING METHOD | | SAMPLER | | GROUND WATER READINGS | | | | | |
| Vehicle: CME | | Type: NA | | DATE | | DEPTH | REFERENCE | STABILIZATION | |
| Model: 850 | | Hammer(lb): NA | | | | | | | |
| Method: Drive and Wash | | Fall (in): NA | | | | | | | |
| DEPTH (ft) | SAMPLE | | WELL COMPLETION DETAIL | | SAMPLE DESCRIPTION | | STRATUM DESCRIPTION | FIELD SCREENING (ppm) | NOTE |
| | NO. | PEN/REC (in) | DEPTH (ft) | BLOWS/6" | | | | | |
| 40 | | | | | | Samples were not collected. | | | |
| 45 | | | | | | | | | Upper Upper Interbedded |
| 50 | | | | | | End of boring at 50 feet BGS. Refusal not encountered. | | | |
| 55 | | | | | | | | | |
| GRANULAR SOILS | | | COHESIVE SOILS | | WELL CONSTRUCTION | | INTERVAL FEET BGS | LEGEND | |
| BLOWS/ft. | DENSITY | BLOWS/ft. | CONSISTENCY | MATERIAL | TYPE | | | | |
| 0-4 | V. LOOSE | <2 | V. SOFT | Concrete | | 0-0.5 | | | |
| 4-10 | LOOSE | 2-4 | SOFT | Backfill | | | | | |
| 10-30 | M. DENSE | 4-8 | M. STIFF | Grout | | 0.5-31 | | | |
| 30-50 | DENSE | 8-15 | STIFF | Bentonite (Chips) | | 31-33 | | | |
| >50 | V. DENSE | 15-30 | V. STIFF | Sandpack (No. 1 Sand) | | 33-50 | | | |
| | | >30 | HARD | Riser | | 0-35, 45-50 | | | |
| | | | | Screen (0.01-inch Slot Screen, pre-packed) | | 35-45 | | | |
| NOTES: <ol style="list-style-type: none"> 1. 4-inch diameter PVC monitoring well installed with 3 feet of PVC riser above ground, expansion plug, and standpipe with protective cover set with concrete. 2. PPM = Parts per million. 3. NS = Not surveyed. 4. NA = Not applicable. 5. BGS = Below ground surface. 6. Sump installed below screen interval; constructed of PVC riser at 45-50 feet BGS. | | | | | | | | | |

**SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA
WELL SR-B1**

Well SB-B
[5-15 feet BG]

**DOWNGRADIENT WELL
SCREENED INTERVAL - 5 - 15 FEET BGS**

| constituent (ppb) | ICL | Apr-93 | Jul-93 | Oct-93 | May-94 | Oct-94 | May-95 | Dec-95 | Jun-96 | Dec-96 | May-97 | Dec-97 | May-98 | Nov-98 | May-99 | Dec-99 | Aug-00 | Dec-00 | Jul-01 | Nov-01 | May-02 | Dec-02 | May-03 | Nov-03 | May-04 | Dec-04 | May-05 | Oct-05 | Jun-06* | Oct-06 | Jun-07 | Oct-07 | Jun-08 | Nov-08 | Apr-09 | |
|---------------------------|--------|---------|---------|--------|--------|---------|--------|--------|---------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|---------|---------|--------|--------|--------|--------|
| benzene | 5 | 0.3 | 0.6 | 0.4 | <1 | 0.5(J) | <1 | <1 | <1 | 0.6(J) | 0.7(J) | 0.5(J) | 0.8(J) | <1 | 3 | 0.6(J) | <1 | <1 | 0.5(J) | <1 | 0.6(J) | 0.7(J) | 0.7(J) | <10 | 1 | 0.9(J) | 1 | 0.9(J) | 1 | 1 | 1 | 2 | 2 | 2 | | |
| ethylbenzene | --- | 0.7 | 0.8 | 0.9 | 0.6(J) | 0.7(J) | 0.5(J) | <1 | 0.5(J) | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.1(J) | 0.2(J) | <10 | <1 | 0.2(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| toluene | 1,000 | 0.5 | 0.8 | 0.4 | 0.5(J) | <1 | 0.5(J) | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| xylene | --- | <0.7 | <0.7 | 0.5 | <1 | <1 | <1 | <1 | <1 | 0.9(J) | <1 | <1 | 2 | <1 | 0.9(J) | <1 | <1 | <1 | <1 | <1 | 0.4(J) | <1 | <10 | <1 | <3 | <3 | <3 | <3 | <3 | <3 | <3 | 1(J) | 0.3(J) | | | |
| PCE | 5 | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| TCE | 5 | <0.3 | 0.4 | 0.3 | <1 | 0.4(J) | <1 | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| 1,2-DCE | 70 | 7 | 8 | 6 | 4(J) | 5 | 4 | 3 | 3 | 2 | 3 | 2 | 2.5(J) | 2 | <1 | 2 | <1 | 1 | 1 | 1 | 2 | <1 | 1(J) | <1 | 0.9(J) | 1(J) | 0.8(J) | <1 | 1 | 0.7(J) | 0.9(J) | 0.8(J) | | | | |
| vinyl chloride | 2 | 2 | 2 | 2 | 1(J) | <1 | 1 | 1 | 0.7(J) | 0.7(J) | 1 | 1(J) | 1 | <1 | 0.9(J) | 0.7(J) | 1(J) | 0.5(J) | 0.9(J) | 2 | 0.8(J) | <1 | 1(J) | <1 | 1(J) | 1 | 0.7(J) | 1 | 1(J) | 0.9(J) | 0.7(J) | | | | | |
| acetone | 700 | --- | <5 | <5 | 5(R) | 2(J) | 12 | <5 | <5 | <5 | <5 | 8 | <5 | 7 | <5 | <5 | <5 | <5 | 13 | <5 | <5 | <10 | <1 | 4(J) | <5 | <5 | <5 | <5 | <5 | <5 | 3(JB) | <5 | <5 | | | |
| tetrahydrofuran | 154 | <1 | <5 | 11 | 5(R) | 3(R) | <5 | <5 | <5 | <5 | <5 | 6 | <5 | 3(J) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 4(J) | 5(J) | | |
| 2-butanon | 200 | --- | <5 | <5 | 5(R) | 5(R) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | | |
| 4-methyl 2-pentanone | 350 | --- | <5 | <5 | 5(J) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | | |
| methylene chloride | 5 | <1 | <1 | <1 | <1 | 0.8(JB) | 0.6(J) | 1(B) | 0.8(J) | 3(B) | 5(B) | 1(B) | 7(B) | 0.8(JB) | 0.7(J) | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <2 | <1 | <5 | <5 | <5 | <5 | <5 | 0.5(JB) | 0.4(JB) | | | | |
| 1,1,1-TCA | --- | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,1-DCA | --- | 5 | 6 | 4 | 3(J) | 3 | 2 | 1 | 1 | 1 | 1(J) | 1 | <1 | 0.7(J) | <1 | 0.6(J) | 0.5(J) | 0.5(J) | <1 | 0.7(J) | <1 | <10 | <1 | 0.8(J) | <1 | 0.5(J) | <1 | 0.5(J) | 0.6(J) | 0.8(J) | 0.9(J) | 0.8(J) | | | | |
| 1,1-DCE | 7 | <1.3 | <1.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,2-DCA | 5 | 0.8 | 0.7 | <0.7 | <1 | <1 | 2 | <1 | <1 | 0.5(J) | <1 | 0.6(J) | 0.6(J) | <1 | 0.8(J) | <1 | 0.9(J) | 1(J) | <1 | 0.7(J) | <1 | 0.6(J) | <10 | <1 | 0.8(J) | 0.8(J) | <1 | 1 | 1(J) | 0.9(J) | 1(J) | 1 | | | | |
| bromomethane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| chloromethane | --- | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.7(J) | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.3(J) | | | | | |
| chloroform | --- | <0.7 | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| dib & mochloromethane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| bromoform | --- | <0.3 | 0.4 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| carbon disulfide | --- | --- | <5 | 10 | <1 | <1 | <1 | 0.9(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 8 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | |
| styrene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| chloroethane | 14,000 | 0.8 | 1 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| chlorobenzene | --- | <0.2 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,2-dichloropropane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,1,2-trichloroethane | --- | <0.2 | <0.2 | <0 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| cis-1,3-dichloropropene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| trans-1,3-dichloropropene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,1,2-tetrachloroethane | --- | 0.4 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 2-hexanone | --- | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | | | |
| arsenic (dissolved) | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | <1.98 | <2.53 | 3.3(B) | <2.53 | <2.08 | <2 | <1.8 | 4.3(B) | 2.4(B) | <3 | <2.81 | <3.45 | <8 | <3.09 | 2.9(B) | 2.9(B) | <1.7 | 2.5(B) | 1.8(B) |
| arsenic (total) | --- | --- | --- | <2.40 | <2.60 | <2 | <3.80 | 4.80 | 5.20(B) | 2.60(B) | <3.00 | <2.54 | <1.81 | 2.60(B) | <2.07 | <2.19 | <1.98 | <2.53 | 6(B) | 3.0(B) | <2.08 | 2.2(B) | 3.1(B) | 1.5(B) | 1.4(B) | <3 | <2.81 | <3.45 | <8 | <3.09 | 4.0(B) | 3.3(B) | <1.7 | 2.6(B) | 2.2(B) | |
| calcium | --- | 38,400 | 37,600 | 26,600 | 30,000 | 28,200 | 28,100 | 27,100 | 40,000 | 32,000 | 32,400 | 31,200 | 30,200 | 30,000 | 27,300 | 27,300 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| iron (dissolved) | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 42,500 | 52,900 | 49,500 | 48,000 | 48,600 | 39,200 | 50,000 | 37,600 | 43,400 | 45,600 | 46,800 | 40,000 | 52,900 | 44,400 | 53,700 | 47,100 | 44,800 | 48,600 | 59,900 |
| iron (total) | --- | 148,000 | 170,000 | 70,700 | 74,700 | 71,300 | 69,000 | 62,300 | 82,600 | 74,000 | 75,200 | 72,800 | 71,200 | 70,900 | 65,900 | 64,300 | 42,800 | 53,800 | 49,100 | 49,700 | 48,500 | 47,200 | 48,700 | 17,200 | 42, | | | | | | | | | | | |

"*" denotes the ground water sample collected for well SB-B1 was incorrectly identified in the field and on the laboratory analytical report as SB-B3.

**SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA
WELL SB-B2**

Well SB-B1
[34-44 feet BGS]

**DOWNGRADIENT WELL
CREENED INTERVAL - 34 - 44 FEET BGS**

*** denotes the ground water sample collected for well SB-B2 was incorrectly identified in the field and on the laboratory analytical report as SB-B1.

SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA
WELL SB-B3

DOWNGRADIENT WELL
SCREENED INTERVAL - 47 - 57 FEET BGS

| constituent (ppb) | ICL | Apr-93 | Jul-93 | Oct-93 | May-04 | Dec-04 | Jun-05 | Jun-06* | Oct-06 | Jun-07 | Oct-07 | Apr-09 |
|---------------------------|--------|---------------|---------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| benzene | 5 | 2 | 1 | 1 | 4.9 | 4 | 4 | 4 | 5 | 5 | 6 | 4 |
| ethylbenzene | --- | 2 | 1 | 2 | 3.3 | 3 | 2 | 3 | 3 | 3 | 4 | 2 |
| toluene | 1,000 | 0.5 | 0.4 | 0.6 | <1 | <1 | <1 | 0.7(J) | <1 | <1 | <1 | 0.6(J) |
| xylene | --- | 1.7 | 1 | 3 | 7.2 | 6 | 4 | 6 | 6 | 6 | 6 | 2(J) |
| PCE | 5 | <0.4 | <0.4 | 0.6 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| TCE | 5 | <0.3 | <0.3 | 0.8 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCE | 70 | <0.4 | <0.4 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.3(J) |
| vinyl chloride | 2 | 0.9 | <0.4 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 |
| acetone | 700 | --- | 15 | <5 | <1 | 7 | <5 | <5 | <5 | 5 | 6 | 3(J) |
| tetrahydrofuran | 154 | 74 | 360 | 94 | 83 | 82 | <5 | 74 | 110 | 140 | 160 | 19 |
| 2-butanone | 200 | --- | <5 | <5 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | --- | <5 | <5 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| methylene chloride | 5 | <1 | <1 | <1 | <1 | <1 | <2 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1,-TCA | --- | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1-DCA | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | 0.5(J) |
| 1,1-DCE | 7 | <1.3 | <0.4 | <1.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCA | 5 | 1 | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.4(J) |
| bromomethane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 |
| chloromethane | --- | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 |
| chloroform | --- | <0.7 | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| dibromochloromethane | --- | <0.3 | <0.3 | --- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| bromoform | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| carbon disulfide | --- | --- | <5 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| styrene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| chloroethane | 14,000 | 0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 |
| chlorobenzene | --- | 0.2 | <0.2 | 0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-dichloropropane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,2-trichloroethane | --- | <0.2 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| cis-1,3-dichloropropene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-dichloropropene | --- | <0.4 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <0.3 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-hexanone | --- | --- | --- | --- | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| arsenic (dissolved) | 10 | --- | 39.5 | --- | 40 | 42 | 43 | 42.8 | 39 | 43.9 | 46.2 | 51.9 |
| arsenic (total) | --- | --- | --- | --- | 41 | 46 | 40 | 42 | 38 | 41.9 | 48 | 55.1 |
| calcium | --- | 38,800 | 22,200 | 18,800 | --- | --- | --- | --- | --- | --- | --- | --- |
| iron (dissolved) | --- | --- | --- | --- | 44,000 | 52,400 | 51,700 | 55,700 | 56,400 | 62,500 | 68,200 | 68,400 |
| iron (total) | --- | 76,900 | 44,800 | 32,900 | 44,000 | 56,000 | 51,600 | 56,100 | 57,100 | 62,700 | 70,700 | 70,100 |
| magnesium | --- | 18,400 | 11,300 | 8,530 | --- | --- | --- | --- | --- | --- | --- | --- |
| manganese (dissolved) | --- | --- | --- | 842 | 1,600 | 1,840 | 1,940 | 2,040 | 1,990 | 2,100 | 2,380 | --- |
| manganese (total) | --- | 1,900 | 1,110 | --- | 1,700 | 1,980 | 1,920 | 2,060 | 2,010 | 2,130 | 2,450 | --- |
| potassium | --- | 12,700 | 7,610 | 4,860(B) | --- | --- | --- | --- | --- | --- | --- | --- |
| sodium | --- | 30,300 | 25,000 | 22,000 | --- | --- | --- | --- | --- | --- | --- | --- |
| pH (SU) | --- | --- | --- | --- | 6.17 | 6.21 | 5.65 | 6.28 | 6.18 | 6.38 | 6.28 | |
| SC (mS/cm) | --- | --- | --- | --- | 1.176 | 0.933 | 0.946 | 1.269 | 1.304 | 0.00962 | 1.301 | |
| Turb (NTU) | --- | --- | --- | --- | 1.33 | 1.88 | 0.64 | 1.56 | 0.39 | 0.98 | 55.4 | |
| DO (mg/l) | --- | --- | --- | --- | 0.38 | 0.76 | 3.01 | 0.32 | 0.59 | 0.3 | 0.25 | |
| Eh (mv) | --- | --- | --- | --- | -99.9 | 6.8 | -20.6 | -108.7 | -4.8 | -188 | -67 | |
| Temp (°C) | --- | --- | --- | --- | 7.67 | 9.79 | 14.28 | 9.87 | 11.57 | 10.15 | 10.17 | |
| Water Level Elevation | --- | --- | --- | --- | 146.88 | 147.23 | 147.63 | 146.78 | 146.98 | 146.05 | 141.94 | |

"**" denotes the ground water sample collected for well SB-B3 was incorrectly identified in the field and on the laboratory report as SB-B2.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-200(S)
SCREENED INTERVAL - 17 - 27 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Nov-07 | Apr-09 |
|---------------------------|--------|----------------|-----------------|
| benzene | 5 | 2 | 4 |
| ethylbenzene | --- | 0.6 (J) | 0.7 (J) |
| toluene | 1,000 | <1 | 0.4 (J) |
| xylenes (total) | --- | <3 | <3 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | 0.7 (J) | 0.7 (J) |
| vinyl chloride | 2 | 0.8 (J) | 1 (J) |
| acetone | 700 | <5 | 3 (J) |
| tetrahydrofuran | 154 | <5 | 2 (J) |
| 2-butanone | 200 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 |
| methylene chloride | 5 | <5 | 0.5 (JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | <1 | 1 |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | <1 | 0.9 (J) |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | <2 | <2 |
| chlorobenzene | --- | 0.4 (J) | 0.4 (J) |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | <5 |
| arsenic (dissolved) | 10 | 24.3 | 22.7 |
| arsenic (total) | --- | 24.3 | 23.1 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 84,600 | 82,800 |
| iron (total) | --- | 86,800 | 83,600 |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | 1,430 | --- |
| manganese (total) | --- | 1,460 | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 6.19 | 6.25 |
| SC (mS/cm) | --- | 0.864 | 0.995 |
| Turb (NTU) | --- | 56.8 | 73.2 |
| DO (mg/l) | --- | 0.08 | 0.28 |
| ORP (mv) | --- | -17 | -46 |
| Temp ('C) | --- | 9.65 | 11.66 |
| Water Level Elevation | NA | 143.80 | 144.12 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

**SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-200(I)
SCREENED INTERVAL - 35 - 45 FEET BGS**

**SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE**

| constituent (ppb) | ICL | Nov-07 | Nov-08 | Apr-09 | Jul-09 |
|---------------------------|--------|----------------|---------------|----------------|----------------|
| benzene | 5 | 4 | 6 | 6 | 6 |
| ethylbenzene | --- | 3 | 5 | 5 | 5 |
| toluene | 1,000 | 0.8 (J) | 1 | 1 | 1 |
| xylenes (total) | --- | 2 (J) | 4 | 6 | 5 |
| PCE | 5 | <1 | <1 | <1 | <1 |
| TCE | 5 | <1 | <1 | <1 | <1 |
| cis-1,2-DCE | 70 | 0.5 (J) | <1 | 0.7 (J) | 0.7 (J) |
| vinyl chloride | 2 | 1 (J) | 1 | 1 (J) | 1 (J) |
| acetone | 700 | <5 | <5 | 7 | 3 (J) |
| tetrahydrofuran | 154 | 5 | 26 | 57 | 58 |
| 2-butanone | 200 | <5 | <5 | 2 (J) | 3 (J) |
| 4-methyl 2-pentanone | 350 | 7 | <5 | <5 | <5 |
| methylene chloride | 5 | 0.7 (J) | <5 | 2 (JB) | <5 |
| 1,1,1-TCA | --- | <1 | <1 | <1 | <1 |
| 1,1-DCA | --- | <1 | <1 | 0.9 (J) | 0.8 (J) |
| 1,1-DCE | 7 | <1 | <1 | <1 | <1 |
| 1,2-DCA | 5 | 0.5 (J) | <1 | 0.6 (J) | 0.6 (J) |
| bromomethane | --- | <2 | <1 | <2 | <2 |
| chloromethane | --- | <2 | <1 | <2 | <2 |
| chloroform | --- | <1 | <1 | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 | <1 | <1 |
| bromoform | --- | <1 | <1 | <1 | <1 |
| carbon disulfide | --- | <1 | <1 | <1 | <1 |
| styrene | --- | <1 | <1 | <1 | <1 |
| chloroethane | 14,000 | <2 | <1 | <2 | <2 |
| chlorobenzene | --- | 0.4 (J) | <1 | 0.6 (J) | 0.5 (J) |
| 1,2-dichloropropane | --- | <1 | <1 | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 | <1 | <1 |
| 2-hexanone | --- | <5 | <5 | <5 | <5 |
| arsenic (dissolved) | 10 | 21.7 | 16.5 | 16.1 | 21.2 |
| arsenic (total) | --- | 19.5 | 16.6 | 18.2 | 20.8 |
| calcium | --- | --- | --- | --- | --- |
| iron (dissolved) | --- | 83,100 | 93,900 | 95,800 | --- |
| iron (total) | --- | 80,400 | 89,500 | 98,100 | --- |
| magnesium | --- | --- | --- | --- | --- |
| manganese (dissolved) | --- | 1,760 | 1,980 | 1,900 | --- |
| manganese (total) | --- | 1,720 | 1,870 | 1,930 | --- |
| potassium | --- | --- | --- | --- | --- |
| sodium | --- | --- | --- | --- | --- |
| pH (SU) | --- | 6.22 | 6.36 | 6.20 | 6.20 |
| SC (mS/cm) | --- | 0.841 | 0.945 | 1.151 | 1.139 |
| Turb (NTU) | --- | 66.2 | 9.54 | 35.5 | --- |
| DO (mg/l) | --- | 0.06 | 0.2 | 0.13 | 0.21 |
| ORP (mv) | --- | -85 | --- | -70 | -1 |
| Temp (°C) | --- | 10.42 | 9.27 | 10.75 | 11.73 |
| Water Level Elevation | --- | --- | --- | 145.12 | 144.96 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Pentachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
WELL MW-200(D)
SCREENED INTERVAL - 60 - 70 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Nov-07 | Apr-09 |
|---------------------------|--------|--------------|----------------|
| benzene | 5 | <1 | <1 |
| ethylbenzene | --- | <1 | <1 |
| toluene | 1,000 | <1 | <1 |
| xylenes (total) | --- | <3 | <3 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | <1 | <1 |
| vinyl chloride | 2 | <2 | <2 |
| acetone | 700 | <5 | <5 |
| tetrahydrofuran | 154 | <5 | <5 |
| 2-butanone | 200 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 |
| methylene chloride | 5 | <5 | 0.6(JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | <1 | <1 |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | <1 | <1 |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | <2 | <2 |
| chlorobenzene | --- | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | >5 |
| arsenic (dissolved) | 10 | 89.6 | 89.4 |
| arsenic (total) | --- | 92.8 | 86.4 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 158 | 131 |
| iron (total) | --- | 1,170 | 206 |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | 226 | --- |
| manganese (total) | --- | 246 | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 9.51 | 7.45 |
| SC (mS/cm) | --- | 0.169 | 0.170 |
| Turb (NTU) | --- | 88 | 13.6 |
| DO (mg/l) | --- | 0.14 | 0.06 |
| ORP (mv) | --- | -88 | -109 |
| Temp (°C) | --- | 10.73 | 11.01 |
| Water Level Elevation | NA | 144.16 | 144.66 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA
WELL SB-10I

DOWNGRADIENT WELL
SCREENED INTERVAL - 30-40 FEET BGS

| constituent (ppb) | ICL | Jun-01 | Nov-01 | May-02 | Dec-02 | Jun-03 | Nov-03 | May-04 | Dec-04 | May-05 | Oct-05 | Jun-06 | Oct-06 | Jun-07 | Oct-07 | Jun-08 | Nov-08 | Apr-09 | May-09 |
|---------------------------|--------|---------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| benzene | 5 | <1 | <1 | <1 | <1 | <10 | <1 | 0.2(J) | <1 | 0.4(J) | <1 | <1 | <1 | 0.7(J) | 0.7(J) | 1(J) | 0.9(J) | 1 | 1(J) |
| ethylbenzene | --- | <1 | <1 | <1 | 0.2(JB) | 0.3(J) | <10 | <1 | 1(J) | 2 | 2 | 3 | 3 | 3 | 4 | 6 | 6 | 7 | 6 |
| toluene | 1,000 | <1 | <1 | <1 | <1 | 3 | <10 | <1 | 0.5(J) | <1 | 0.6(J) | 0.8(J) | 0.8(J) | 1 | 1(J) | 1 | 1 | 2 | 1 |
| xylene | --- | <1 | <1 | <1 | 0.5(J) | 6 | <10 | 2 | 3 | 3 | 3 | 2(J) | <3 | 2(J) | 2(J) | 3(J) | 2(J) | 4 | 3(J) |
| PCE | 5 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| TCE | 5 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | 0.4(J) | <1 | <1 | <1 | <1 | 0.5(J) | 0.4(J) | 0.6(J) | 0.5(J) |
| 1,2-DCE | 70 | 0.6(J) | <1 | <1 | <1 | <1 | <10 | 1 | 2 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 6 | 7 | 8 |
| vinyl chloride | 2 | <1 | <1 | <1 | <1 | <10 | <1 | 0.7(J) | <1 | 1 | <1 | 2 | 4 | 4 | 5 | 5 | 4 | 6 | |
| acetone | 700 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | 2(J) | <5 | <5 | <5 | <5 | 7 | <5 | 4(J) | 3(J) | 3(J) | 4(J) |
| tetrahydrofuran | 154 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 2(J) | 2(J) | 8 | <5 |
| 2-butanone | 200 | <5 | <5 | 7 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | 11 | 17 | <5 | 19 | 4(J) | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| methylene chloride | 5 | <1 | 0.7(JB) | <1 | <1 | 5(B) | <10 | <1 | <1 | <2 | <2 | <5 | <5 | <5 | <5 | 0.4(J) | <5 | 1(JB) | 1(JB) |
| 1,1,1-TCA | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1-DCA | --- | <1 | <1 | <1 | 0.3(J) | 0.6(J) | <10 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 6 |
| 1,1-DCE | 7 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-DCA | 5 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | 0.2(J) | <1 | <1 | <1 | <1 | 0.7(J) | 1 | 0.8(J) | 1 | 1(J) | 1 |
| bromomethane | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 | <1 |
| chloromethane | --- | <1 | 0.6(J) | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 | <1 |
| chloroform | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| dibromo-chloromethane | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| bromoform | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| carbon disulfide | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| styrene | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| chloroethane | 14,000 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 | <1 |
| chlorobenzene | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-hexanone | --- | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| arsenic (dissolved) | 10 | 12.4(B) | 14.9 | 12.4 | 14 | 14.6 | 11.4 | 15.4 | 16.8 | 15.2 | 12 | 13.8 | 14.6 | 13.6 | 13.2 | 16.4 | 14.0 | 14.1 | --- |
| arsenic (total) | --- | 31.8(B) | 13.4 | 13.2 | 16.6 | 15.3 | 15.6 | 14.5 | 14.4 | 17.1 | 11.4 | 11.7 | 15.6 | 13.8 | 13.6 | 17.1 | 15.3 | 16.4 | --- |
| calcium | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| iron (dissolved) | --- | 3,840 | 10,400 | 8,650 | 10,800 | 10,900 | 10,300 | 11,600 | 12,700 | 14,500 | 13,900 | 16,600 | 17,200 | 21,800 | 21,300 | 24,800 | 25,700 | 27,000 | --- |
| iron (total) | --- | 55,000 | 15,700 | 9,980 | 11,900 | 11,300 | 9,780 | 11,900 | 14,100 | 14,700 | 13,400 | 16,400 | 16,900 | 21,100 | 21,400 | 25,200 | 26,100 | 26,600 | --- |
| magnesium | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| manganese (dissolved) | --- | 540 | 318 | 305 | 290 | 282 | 277 | 305 | 322 | 352 | 339 | 418 | 443 | 542 | 565 | 642 | 649 | 653 | --- |
| manganese (total) | --- | 1,240 | 374 | 286 | 298 | 277 | 260 | 314 | 340 | 355 | 322 | 409 | 438 | 520 | 555 | 643 | 651 | 645 | --- |
| potassium | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| sodium | --- | --- | --- | --- | --- | --- | 5,500 | 5,500 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH (SU) | --- | 6.29 | 6.77 | 6.82 | 6.60 | 6.77 | 6.91 | 6.61 | 6.61 | 6.76 | 6.82 | 6.63 | 6.54 | 6.49 | 7.06 | 6.57 | 6.44 | 6.95 | 6.64 |
| SC (mS/cm) | --- | 0.071 | 0.100 | 0.109 | 0.108 | 0.110 | 0.103 | 0.154 | 0.117 | 0.118 | 0.145 | 0.154 | 0.169 | 0.187 | 0.208 | 0.223 | 0.219 | 0.260 | 0.249 |
| Turb (NTU) | --- | --- | 98 | 8.98 | 6.15 | 4.90 | 4.74 | 17 | 1.62 | 2.90 | 8.35 | 1.81 | 0.93 | 3.04 | 2.21 | 1.40 | 14.90 | 6.6 | 5.21 |
| DO (mg/l) | --- | 0.15 | 0.66 | 0.23 | 1.46 | 0.28 | 0.28 | 0.18 | 0.32 | 0.67 | 0.24 | 0.32 | 0.37 | 0.61 | 0.8 | 0.39 | 0.37 | 0.35 | 0.31 |
| Eh (mv) | --- | -23.8 | -43.5 | -60.1 | -77.2 | -12.4 | -114 | 16 | 154 | -57.8 | -103 | -103.3 | -111.8 | -4.3 | -217.8 | -102.8 | -94.6 | -129 | -96.3 |
| Temp (°C) | --- | 9.9 | 9.3 | 8.9 | 7.7 | 10.2 | 9 | 8.9 | 8.4 | 8.5 | 9.48 | 11.74 | 10 | 10.91 | 10.59 | 10.84 | 11.10 | 11.09 | 10.08 |
| Water Level Elevation | 149.39 | 146.49 | 143.89 | 146.38 | 145.89 | 146.68 | 146.54 | 147.16 | 146.73 | 146.96 | 146.79 | 147.31 | 146.44 | --- | --- | --- | --- | --- | --- |

SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA
WELL SB-D1(S)

Well SB-D1(S)
[5-15 feet BGS]

DOWNGRADIENT WELL
SCREENED INTERVAL - 5 - 15 FEET BGS

| constituent (ppb) | ICL | Apr-93 | Jul-93 | Oct-93 | May-94 | Oct-94 | May-95 | Dec-95 | Jun-96 | Dec-96 | May-97 | Dec-97 | May-98 | Nov-98 | May-99 | Dec-99 | Aug-00 | Dec-00 | Jul-01 | Nov-01 | May-02 | Dec-02 | May-03 | Nov-03 | May-04 | Dec-04 | Jun-05 | Oct-05 | Jun-06 | Oct-06 | Jun-07 | Oct-07 | Jun-08 | Nov-08 | Apr-09 | May-09 |
|-------------------------------|-------|--------|--------|--------|--------|---------|--------|---------|---------|---------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| benzene | 5 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| ethylbenzene | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.7(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| toluene | 1,000 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.9(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| xylene | --- | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.9(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| PCE | 5 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| TCE | 5 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1(B) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| 1,2-DCE | 70 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <2 | |
| vinyl chloride | 2 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| acetone | 700 | --- | 4 | <5 | <5 | 5(R) | 16 | <5 | <5 | 3(JB) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 3(JB) | 13(B) | <5 | <5 | <5 | <10 | <1 | 2(J) | <5 | <5 | <5 | 3(JB) | <5 | <5 | 4(J) | | |
| tetrahydrofuran | 154 | <1 | <5 | <5 | <5 | 1(R) | <5 | <5 | <5 | <5 | <5 | 3(J) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 2(J) | <5 |
| 2-butanone | 200 | --- | <5 | <5 | <5 | 5(R) | <5 | <5 | <5 | 0.8(JB) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | |
| 4-methyl 2-pentanone | 350 | --- | <5 | <5 | <5 | <5 | <5 | <5 | 0.9(JB) | <1 | 0.9(JB) | <1 | 5(B) | 5(B) | 1(B) | 1(B) | 0.7(JB) | <1 | <1 | <1 | 1 | <10 | <1 | <1 | <2 | <1 | <5 | <5 | <5 | 0.6(JB) | 0.8(JB) | 0.7(J) | | | | |
| methylene chloride | 5 | <1 | <1 | <1 | <1 | 0.9(JB) | <1 | 0.9(JB) | <1 | 5(B) | 5(B) | 1(B) | 1(B) | 0.5(J) | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| 1,1,1-TCA | --- | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| 1,1-DCA | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | |
| 1,1-DCE | 7 | <1.3 | <1.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | |
| 1,2-DCA | 5 | <0.7 | <0.7 | <1 | <1 | <1 | 0.8(J) | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| bromomethane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| chloromethane | --- | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| chloroform | --- | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| dib ̄ bromochloromethane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| bromoform | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| carbon disulfide | --- | --- | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | |
| styrene | --- | <0.4 | <0.4 | <1 | < | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SUMMARY OF HISTORICAL GROUND WATER QUALITY DATA WELL SB-D2(D)

Well SB-D2(D)
[50-60 feet BGS]

**DOWNGRADIENT WELL
SCREENED INTERVAL - 50 - 60 FEET BGS**

| constituent (ppb) | ICL | Apr-93 | Jul-93 | Oct-93 | May-94 | Oct-94 | May-95 | Dec-95 | Jun-96 | Dec-96 | May-97 | Dec-97 | May-98 | Nov-98 | May-99 | Dec-99 | Aug-00 | Dec-00 | Jul-01 | Nov-01 | May-02 | Dec-02 | May-03 | Nov-03 | May-04 | Dec-04 | Jun-05 | Oct-05 | Jun-06 | Oct-06 | Jun-07 | Oct-07 | Jun-08 | Nov-08 | Apr-09 | May-09 |
|---------------------------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| benzene | 5 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| ethylbenzene | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| toluene | 1,000 | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.7(JB) | <1 | <1 | 0.6(J) | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| xylene | --- | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.6(J) | <1 | 0.9(J) | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | 0.5(J) | <10 | <1 | <3 | <3 | <3 | <3 | <3 | <3 | <3 | <3 | <3 | | |
| PCE | 5 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.8(J) | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| TCE | 5 | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 2(B) | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,2-DCE | 70 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| vinyl chloride | 2 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| acetone | 700 | --- | <5 | <5 | <5 | 5(R) | 12 | <5 | <5 | 1(JB) | <5 | 10 | <5 | <5 | <5 | <5 | <5 | --- | <5 | <5 | 14(B) | <5 | <5 | <10 | <1 | 2(J) | <5 | <5 | <5 | 3(J) | <5 | <5 | <5 | 4(J) | | |
| tetrahydrofuran | 154 | 7 | <5 | <5 | <5 | 1(R) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | --- | <5 | 14 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | |
| 2-butanone | 200 | --- | <5 | <5 | <5 | 5(R) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | --- | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | |
| 4-methyl 2-pentanone | 350 | --- | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | --- | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 1(JB) | | |
| methylene chloride | 5 | <1 | <1 | <1 | <1 | <1 | 0.7(JB) | <1 | 1(B) | <1 | 7(B) | 6(B) | 5(B) | 1(B) | 1(B) | 0.8(JB) | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <2 | <1 | <5 | <5 | <5 | 1(JB) | <5 | | | | | |
| 1,1,1-TCA | --- | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,1-DCA | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,1-DCE | 7 | <1.3 | <1.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,2-DCA | 5 | <0.7 | <0.7 | <1 | <1 | <1 | 0.8(J) | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| bromomethane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| chloromethane | --- | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | | |
| chloroform | --- | <0.7 | <0.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| dibromochloromethane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| bromoform | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| carbon disulfide | --- | --- | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| styrene | --- | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| chloroethane | 14,000 | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| chlorobenzene | --- | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 0.5(J) | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,2-dichloropropane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,1,2-trichloroethane | --- | <0.2 | <0.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| cis-1,3-dichloropropene | --- | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| trans-1,3-dichloropropene | --- | <0.4 | <0.4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 1,1,2,2-tetrachloroethane | --- | <0.3 | <0.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | --- | <1 | <1 | <1 | <1 | <10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | |
| 2-hexanone | --- | --- | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | --- | <5 | <5 | <5 | <5 | <10 | <1 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | |
| arsenic (dissolved) | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 28.2 | --- | 26.2 | 26.9 | 28 | 27.5 | 31.5 | 29.6(E) | 29.7 | 31.6 | 28.5 | 29.2 | 30 | 22.5 | 18.5 | 23.7 | 16.5 | 27.4 | 16.2 | --- |
| arsenic (total) | --- | 64.5 | 53.1 | 34.4 | 34.8 | 31.7 | 32.3 | 34.2 | 33.5 | 30 | 29 | 30 | 30.4 | 31.7 | 29.5 | 29.2 | --- | 35 | 28.7 | 26.2 | 28 | 30.8 | 28.6 | 28.6 | 31.4 | 33.5 | 27.7 | 28.4 | 26.5 | 16.5 | 23.2 | 16.5 | 27.1 | 17.6 | --- | |
| calcium | 46,200 | 20,700 | 10,200 | 9,190 | 8,180 | 8,980 | 8,110 | 8,080 | 9,160 | 9,020 | 8,420 | 7,810 | 8,380 | 8,550 | 8,820 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| iron (dissolved) | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4,050 | --- | 4,320 | 4,530 | 4,250 | 4,480 | 4,630 | 3,440 | 3,890 | 4,420 | 4,250 | 4,290 | 4,420 | 4,400 | 3,200 | 3,980 | 2,660 | 4,450 | 2,750 | --- | | | |
| iron (total) | --- | 93,800 | 83,500 | 4,730 | 4,970 | 4,290 | 4,520 | 4,050 | 4,550 | 4,830 | 4,490 | 4,420 | 4,330 | 4,720 | 4,950 | 4,140 | --- | 30,100 | 4,730 | 4,300 | 4,560 | 4,960 | | | | | | | | | | | | | | |

SUMMARY OF GROUND WATER ANALYTICAL DATA
SB-D3(I)
SCREENED INTERVAL - 35 45 FEET BGS

SOUTHERN PLUME PDI
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Nov-07 | Apr-09 | May-09 |
|---------------------------|--------|--------------|--------------|--------------|
| benzene | 5 | <1 | <1 | <1 |
| ethylbenzene | --- | <1 | <1 | <1 |
| toluene | 1,000 | <1 | <1 | <1 |
| xylenes (total) | --- | <3 | <3 | <3 |
| PCE | 5 | <1 | <1 | <1 |
| TCE | 5 | <1 | <1 | <1 |
| cis-1,2-DCE | 70 | <1 | <1 | <1 |
| vinyl chloride | 2 | <2 | <2 | <1 |
| acetone | 700 | <5 | <5 | <5 |
| tetrahydrofuran | 154 | <5 | <5 | <5 |
| 2-butanone | 200 | <5 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 | <5 |
| methylene chloride | 5 | <5 | <5 | <5 |
| 1,1,1-TCA | --- | <1 | <1 | <1 |
| 1,1-DCA | --- | <1 | <1 | <1 |
| 1,1-DCE | 7 | <1 | <1 | <1 |
| 1,2-DCA | 5 | <1 | <1 | <1 |
| bromomethane | --- | <2 | <2 | <1 |
| chloromethane | --- | <2 | <2 | <1 |
| chloroform | --- | <1 | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 | <1 |
| bromoform | --- | <1 | <1 | <1 |
| carbon disulfide | --- | <1 | <1 | <1 |
| styrene | --- | <1 | <1 | <1 |
| chloroethane | 14,000 | <2 | <2 | <1 |
| chlorobenzene | --- | <1 | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 | <1 |
| 2-hexanone | --- | <5 | <5 | <5 |
| arsenic (dissolved) | 10 | 63.9 | 47.8 | 56 |
| arsenic (total) | --- | 68.6 | 47.1 | 58 |
| calcium | --- | --- | --- | --- |
| iron (dissolved) | --- | 2,690 | 3,570 | 298 |
| iron (total) | --- | 3,290 | 3,690 | 2,990 |
| magnesium | --- | --- | --- | --- |
| manganese (dissolved) | --- | 504 | --- | 424 |
| manganese (total) | --- | 498 | --- | 430 |
| potassium | --- | --- | --- | --- |
| sodium | --- | --- | --- | --- |
| pH (SU) | --- | 9.09 | 6.94 | 7.03 |
| SC (mS/cm) | --- | 0.128 | 0.118 | 0.122 |
| Turb (NTU) | --- | 92.1 | 57.7 | 0.61 |
| DO (mg/l) | --- | 0.15 | 0.29 | 0.41 |
| ORP (mv) | --- | -65 | -83 | -94.9 |
| Temp (°C) | --- | 9.88 | 12.49 | 8.29 |
| Water Level Elevation | NA | 144.78 | 145.08 | --- |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-204(IA)
SCREENED INTERVAL - 17 - 27 FEET BGS

SOUTHERN PLUME PDI
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Nov-07 | Apr-09 |
|---------------------------|--------|----------------|----------------|
| benzene | 5 | 0.6 (J) | 0.4(J) |
| ethylbenzene | --- | <1 | <1 |
| toluene | 1,000 | <1 | <1 |
| xylenes (total) | --- | <3 | <3 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | <1 | <1 |
| vinyl chloride | 2 | <2 | <2 |
| acetone | 700 | <5 | <5 |
| tetrahydrofuran | 154 | <5 | <5 |
| 2-butanone | 200 | <5 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 |
| methylene chloride | 5 | <5 | 0.9(JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | <1 | 0.3(J) |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | <1 | <1 |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | <2 | <2 |
| chlorobenzene | --- | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | <5 |
| arsenic (dissolved) | 10 | 6.9 B | <1.2 |
| arsenic (total) | --- | 7.6 B | <1.2 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 30,600 | 23,000 |
| iron (total) | --- | 31,300 | 22,600 |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | 605 | --- |
| manganese (total) | --- | 606 | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 6.02 | 7.46 |
| SC (mS/cm) | --- | 0.380 | 0.315 |
| Turb (NTU) | --- | 118 | 2.4 |
| DO (mg/l) | --- | 0.15 | 0.31 |
| ORP (mv) | --- | -51 | -23 |
| Temp (°C) | --- | 5.42 | 11.63 |
| Water Level Elevation | NA | 142.75 | 142.92 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-206(S)
SCREENED INTERVAL - 3 - 13 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Apr-09 |
|---------------------------|--------|----------------|
| benzene | 5 | 1 (J) |
| ethylbenzene | --- | <1 |
| toluene | 1,000 | <1 |
| xylenes (total) | --- | <3 |
| PCE | 5 | <1 |
| TCE | 5 | <1 |
| cis-1,2-DCE | 70 | 0.7 (J) |
| vinyl chloride | 2 | <2 |
| acetone | 700 | 2.0 (J) |
| tetrahydrofuran | 154 | <5 |
| 2-butanone | 200 | <5 |
| 4-methyl 2-pentanone | 350 | <5 |
| methylene chloride | 5 | <5 |
| 1,1,1-TCA | --- | <1 |
| 1,1-DCA | --- | 0.6 (J) |
| 1,1-DCE | 7 | <1 |
| 1,2-DCA | 5 | 0.8 (J) |
| bromomethane | --- | <2 |
| chloromethane | --- | <2 |
| chloroform | --- | <1 |
| dibromochloromethane | --- | <1 |
| bromoform | --- | <1 |
| carbon disulfide | --- | <1 |
| styrene | --- | <1 |
| chloroethane | 14,000 | <2 |
| chlorobenzene | --- | <1 |
| 1,2-dichloropropane | --- | <1 |
| 1,1,2-trichloroethane | --- | <1 |
| cis-1,3-dichloropropene | --- | <1 |
| trans-1,3-dichloropropene | --- | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 |
| 2-hexanone | --- | <5 |
| arsenic (dissolved) | 10 | 3.2 (B) |
| arsenic (total) | --- | 3.3 (B) |
| calcium | --- | --- |
| iron (dissolved) | --- | 22,400 |
| iron (total) | --- | 24,300 |
| magnesium | --- | --- |
| manganese (dissolved) | --- | --- |
| manganese (total) | --- | --- |
| potassium | --- | --- |
| sodium | --- | --- |
| pH (SU) | --- | 6.02 |
| SC (mS/cm) | --- | 0.479 |
| Turb (NTU) | --- | 123 |
| DO (mg/l) | --- | 0.43 |
| ORP (mv) | --- | -54 |
| Temp (°C) | --- | 9.04 |
| Water Level Elevation | NA | 144.02 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-207(I)
SCREENED INTERVAL - 35 - 45 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Apr-09 | Jul-09 |
|---------------------------|--------|----------------|----------------|
| benzene | 5 | 21 | 20 |
| ethylbenzene | --- | 7 | 6 |
| toluene | 1,000 | 3 | 2 |
| xylenes (total) | --- | 13 | 11 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | 2 | 2 |
| vinyl chloride | 2 | <2 | 0.4 (J) |
| acetone | 700 | 17 | 10 |
| tetrahydrofuran | 154 | 1400 | 870 |
| 2-butanone | 200 | 8 | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 |
| methylene chloride | 5 | 2 (JB) | 2 (JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | 3 | 3 |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | 0.8 (J) | 0.9 (J) |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | 5 | 5 |
| chlorobenzene | --- | 1 (J) | 0.8 (J) |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | <5 |
| arsenic (dissolved) | 10 | 17.8 | 20.8 |
| arsenic (total) | --- | 17.5 | 21.0 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 87,100 | --- |
| iron (total) | --- | 85,800 | --- |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | --- | --- |
| manganese (total) | --- | --- | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 7.55 | 6.23 |
| SC (mS/cm) | --- | 4.18 | 3.60 |
| Turb (NTU) | --- | 24.0 | --- |
| DO (mg/l) | --- | 0.20 | 0.18 |
| ORP (mv) | --- | -19 | 37 |
| Temp (°C) | --- | 12.56 | 10.91 |
| Water Level Elevation | NA | 149.34 | 148.60 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "c" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-208(S)
SCREENED INTERVAL - 2 - 12 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Apr-09 |
|---------------------------|--------|----------------|
| benzene | 5 | 0.3(J) |
| ethylbenzene | --- | <1 |
| toluene | 1,000 | <1 |
| xlenes (total) | --- | <3 |
| PCE | 5 | <1 |
| TCE | 5 | <1 |
| cis-1,2-DCE | 70 | 0.8(J) |
| vinyl chloride | 2 | 0.3(J) |
| acetone | 700 | <5 |
| tetrahydrofuran | 154 | <5 |
| 2-butanone | 200 | <5 |
| 4-methyl 2-pentanone | 350 | <5 |
| methylene chloride | 5 | <5 |
| 1,1,1-TCA | --- | <1 |
| 1,1-DCA | --- | 0.3(J) |
| 1,1-DCE | 7 | <1 |
| 1,2-DCA | 5 | 0.6(J) |
| bromomethane | --- | <2 |
| chloromethane | --- | <2 |
| chloroform | --- | <1 |
| dibromochloromethane | --- | <1 |
| bromoform | --- | <1 |
| carbon disulfide | --- | <1 |
| styrene | --- | <1 |
| chloroethane | 14,000 | <2 |
| chlorobenzene | --- | <1 |
| 1,2-dichloropropane | --- | <1 |
| 1,1,2-trichloroethane | --- | <1 |
| cis-1,3-dichloropropene | --- | <1 |
| trans-1,3-dichloropropene | --- | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 |
| 2-hexanone | --- | <5 |
| arsenic (dissolved) | 10 | 2.5 (B) |
| arsenic (total) | --- | 3.0 (B) |
| calcium | --- | --- |
| iron (dissolved) | --- | 33,200 |
| iron (total) | --- | 34,700 |
| magnesium | --- | --- |
| manganese (dissolved) | --- | --- |
| manganese (total) | --- | --- |
| potassium | --- | --- |
| sodium | --- | --- |
| pH (SU) | --- | 5.84 |
| SC (mS/cm) | --- | 0.448 |
| Turb (NTU) | --- | 61.7 |
| DO (mg/l) | --- | 0.15 |
| ORP (mv) | --- | -50 |
| Temp (°C) | --- | 9.78 |
| Water Level Elevation | NA | 144.74 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-208(I)
SCREENED INTERVAL - 35 - 45 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Apr-09 | Jul-09 |
|---------------------------|--------|----------------|----------------|
| benzene | 5 | 16 | 4 |
| ethylbenzene | --- | 7 | 2 |
| toluene | 1,000 | 2 | 0.5 (J) |
| xylenes (total) | --- | 6 | <3 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | 2 | 0.4 (J) |
| vinyl chloride | 2 | <2 | 0.5 (J) |
| acetone | 700 | 14 | 3 (J) |
| tetrahydrofuran | 154 | 960 | 40 |
| 2-butanone | 200 | <5 | 2 (J) |
| 4-methyl 2-pentanone | 350 | 6 | <5 |
| methylene chloride | 5 | 0.9(JB) | 0.6(JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | 2 | 0.5 (J) |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | 2 | 0.6 (J) |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | 3 | <2 |
| chlorobenzene | --- | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | <5 |
| arsenic (dissolved) | 10 | 18.7 | 11.2 |
| arsenic (total) | --- | 18.3 | 12.9 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 170,000 | --- |
| iron (total) | --- | 160,000 | --- |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | --- | --- |
| manganese (total) | --- | --- | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 5.59 | 6.31 |
| SC (mS/cm) | --- | 3.45 | 1.16 |
| Turb (NTU) | --- | 88.1 | --- |
| DO (mg/l) | --- | 0.25 | 0.22 |
| ORP (mv) | --- | -32 | -95 |
| Temp (°C) | --- | 9.87 | 10.91 |
| Water Level Elevation | NA | 146.66 | 145.89 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

SUMMARY OF GROUND WATER ANALYTICAL DATA
MW-209(I)
SCREENED INTERVAL - 35 - 45 FEET BGS

SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| constituent (ppb) | ICL | Apr-09 | Jul-09 |
|---------------------------|--------|----------------|-----------------|
| benzene | 5 | 14 | 8 |
| ethylbenzene | --- | 7 | 5 |
| toluene | 1,000 | 2 | 2 |
| xylenes (total) | --- | 12 | 5 |
| PCE | 5 | <1 | <1 |
| TCE | 5 | <1 | <1 |
| cis-1,2-DCE | 70 | 0.7(J) | 0.7(J) |
| vinyl chloride | 2 | <2 | 0.7 (J) |
| acetone | 700 | 10 | 4 (J) |
| tetrahydrofuran | 154 | 340 | 70 |
| 2-butanone | 200 | 3(J) | <5 |
| 4-methyl 2-pentanone | 350 | <5 | <5 |
| methylene chloride | 5 | <5 | 0.8 (JB) |
| 1,1,1-TCA | --- | <1 | <1 |
| 1,1-DCA | --- | 3 | 1 |
| 1,1-DCE | 7 | <1 | <1 |
| 1,2-DCA | 5 | 1(J) | 1 |
| bromomethane | --- | <2 | <2 |
| chloromethane | --- | <2 | <2 |
| chloroform | --- | <1 | <1 |
| dibromochloromethane | --- | <1 | <1 |
| bromoform | --- | <1 | <1 |
| carbon disulfide | --- | <1 | <1 |
| styrene | --- | <1 | <1 |
| chloroethane | 14,000 | 2 | 0.7 (J) |
| chlorobenzene | --- | <1 | <1 |
| 1,2-dichloropropane | --- | <1 | <1 |
| 1,1,2-trichloroethane | --- | <1 | <1 |
| cis-1,3-dichloropropene | --- | <1 | <1 |
| trans-1,3-dichloropropene | --- | <1 | <1 |
| 1,1,2,2-tetrachloroethane | --- | <1 | <1 |
| 2-hexanone | --- | <5 | <5 |
| arsenic (dissolved) | 10 | 19.6 | 20.6 |
| arsenic (total) | --- | 18.8 | 20.4 |
| calcium | --- | --- | --- |
| iron (dissolved) | --- | 135,000 | --- |
| iron (total) | --- | 133,000 | --- |
| magnesium | --- | --- | --- |
| manganese (dissolved) | --- | --- | --- |
| manganese (total) | --- | --- | --- |
| potassium | --- | --- | --- |
| sodium | --- | --- | --- |
| pH (SU) | --- | 6.13 | 6.20 |
| SC (mS/cm) | --- | 2.27 | 1.57 |
| Turb (NTU) | --- | 146 | --- |
| DO (mg/l) | --- | 0.26 | 0.38 |
| ORP (mv) | --- | -73 | -65 |
| Temp (°C) | --- | 10.49 | 10.87 |
| Water Level Elevation | NA | 146.7 | 146.15 |

NOTES:

1. Laboratory analytical results are reported in ug/L (micrograms per liter).
2. DCE = Dichloroethene; DCA = Dichloroethane; MEK = Methyl Ethyl Ketone (2-butanone); MIBK = Methyl Isobutyl Ketone (4-methyl 2-pentanone); TCA = Trichloroethane; PCE = Tetrachloroethene; TCE = Tetrachloroethene.
3. ICL = Interim Cleanup Level.
4. NA = Not Applicable.
5. pH measured in SU (standard units); SC (specific conductivity) measured in mS/cm (millisiemens per centimeter); DO (dissolved oxygen) measured in mg/L (milligrams per liter); ORP = Oxidation Reduction Potential measured in mv (millivolts).
6. J = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL).
7. UJ = Indicates an estimated quantitation limit.
8. E = Result exceeded calibration range - estimated value.
9. D = Listed value obtained from second (diluted) analytical run.
10. B = Denotes an estimated value; constituent detected at a concentration below the Practical Quantitation Limit (PQL) for metals.
11. --- = Constituent was not analyzed or ICL has not been established for constituent.
12. "<" = Not detected above reported PQL.
13. BGS = Below Ground Surface.

APPENDIX D-1
TARGET FLOW RATE ANALYSIS
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| b = 16 (10' Well Screen) | | | | | |
|---|-----|--------|-------|----------------|----------------|
| K | w | factor | i | Q (gal/day) | Q (gal/min) |
| 8 | 200 | 1 | 0.003 | 574 | 0.399 |
| | 200 | 1.5 | 0.003 | 862 | 0.598 |
| | 200 | 2 | 0.003 | 1,149 | 0.798 |
| | 250 | 1 | 0.003 | 718 | 0.499 |
| | 250 | 1.5 | 0.003 | 1,077 | 0.748 |
| | 250 | 2 | 0.003 | 1,436 | 0.997 |
| | 300 | 1 | 0.003 | 862 | 0.598 |
| | 300 | 1.5 | 0.003 | 1,293 | 0.898 |
| | 300 | 2 | 0.003 | 1,723 | 1.197 |
| 9.3 | 200 | 1 | 0.003 | 668 | 0.464 |
| | 200 | 1.5 | 0.003 | 1,002 | 0.696 |
| | 200 | 2 | 0.003 | 1,336 | 0.928 |
| | 250 | 1 | 0.003 | 835 | 0.580 |
| | 250 | 1.5 | 0.003 | 1,252 | 0.870 |
| | 250 | 2 | 0.003 | 1,670 | 1.159 |
| | 300 | 1 | 0.003 | 1,002 | 0.696 |
| | 300 | 1.5 | 0.003 | 1,503 | 1.043 |
| | 300 | 2 | 0.003 | 2,003 | 1.391 |
| 12 | 200 | 1 | 0.003 | 862 | 0.598 |
| | 200 | 1.5 | 0.003 | 1,293 | 0.898 |
| | 200 | 2 | 0.003 | 1,723 | 1.197 |
| | 250 | 1 | 0.003 | 1,077 | 0.748 |
| | 250 | 1.5 | 0.003 | 1,616 | 1.122 |
| | 250 | 2 | 0.003 | 2,154 | 1.496 |
| | 300 | 1 | 0.003 | 1,293 | 0.898 |
| | 300 | 1.5 | 0.003 | 1,939 | 1.346 |
| | 300 | 2 | 0.003 | 2,585 | 1.795 |

EQUATION

$$Q = K * (b * w) * i * \text{factor}$$

Q extraction rate (calculated)

K 8 to 12

b 16 (but up to 20)

w estimated from ground water concentrations

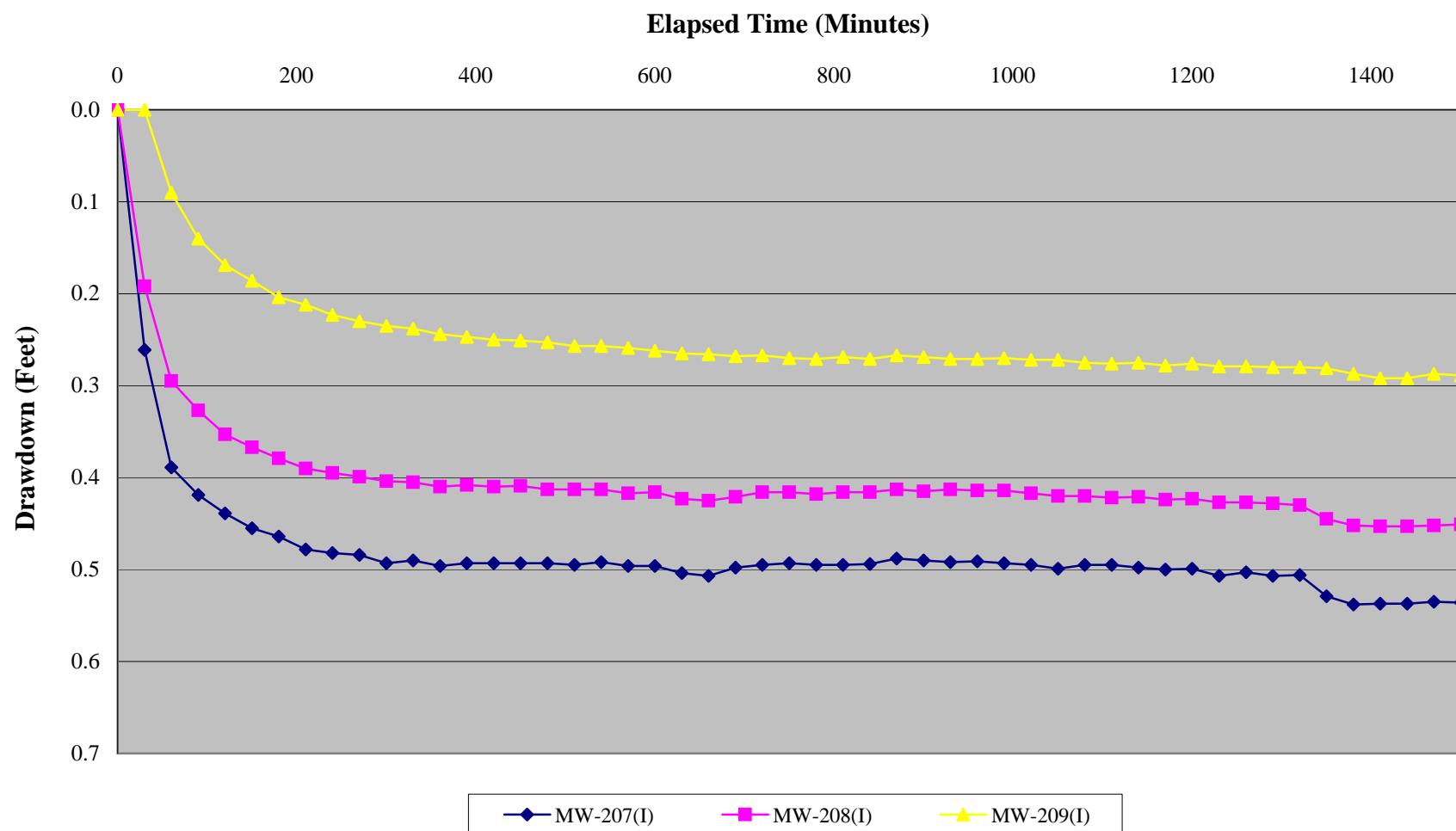
i estimated from figures

factor "rule of thumb" is 1.5 to 2.0

1. Q = constant pumping rate in gallons per minute (gal/min).
2. K = hydraulic conductivity (ft/day).
3. b = aquifer thickness (ft).
4. w = plume width (ft).
5. i = regional hydraulic gradient (feet/foot); i.e., without remedy pumping.
6. factor = "rule of thumb" factor is intended to account for other contributions to pumping well such as flux from a surface water body or induced vertical flow from other stratigraphic units.
7. Equation from "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Final Project Report," USEPA January 2008 Report (EPA600/R-08/003).

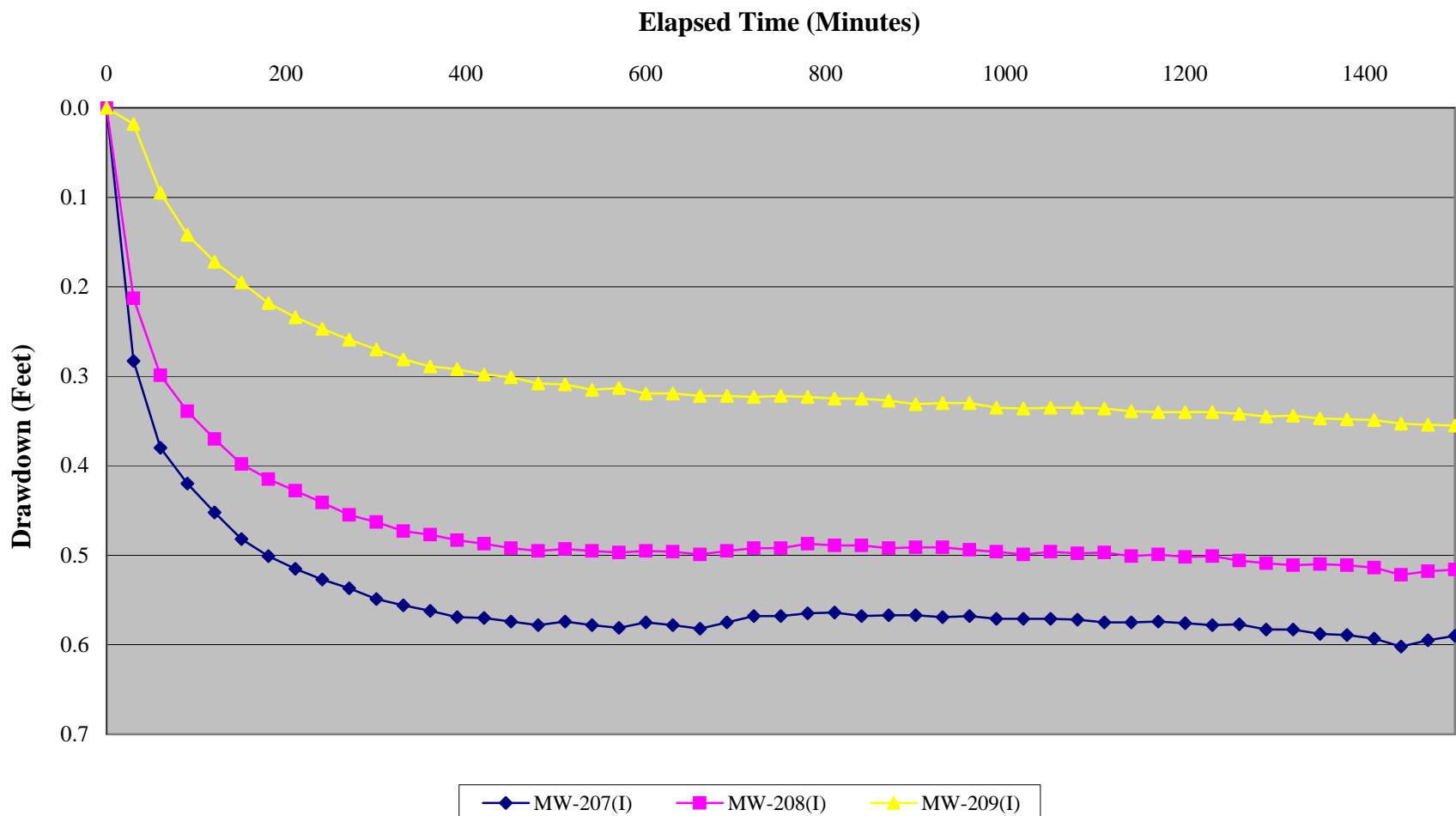
APPENDIX D-2A1
DRAWDOWN VERSUS TIME - TEST PERIOD 1
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

TEST PERIOD STARTED:
April 29, 2009



APPENDIX D-2A2
DRAWDOWN VERSUS TIME - TEST PERIOD 2
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

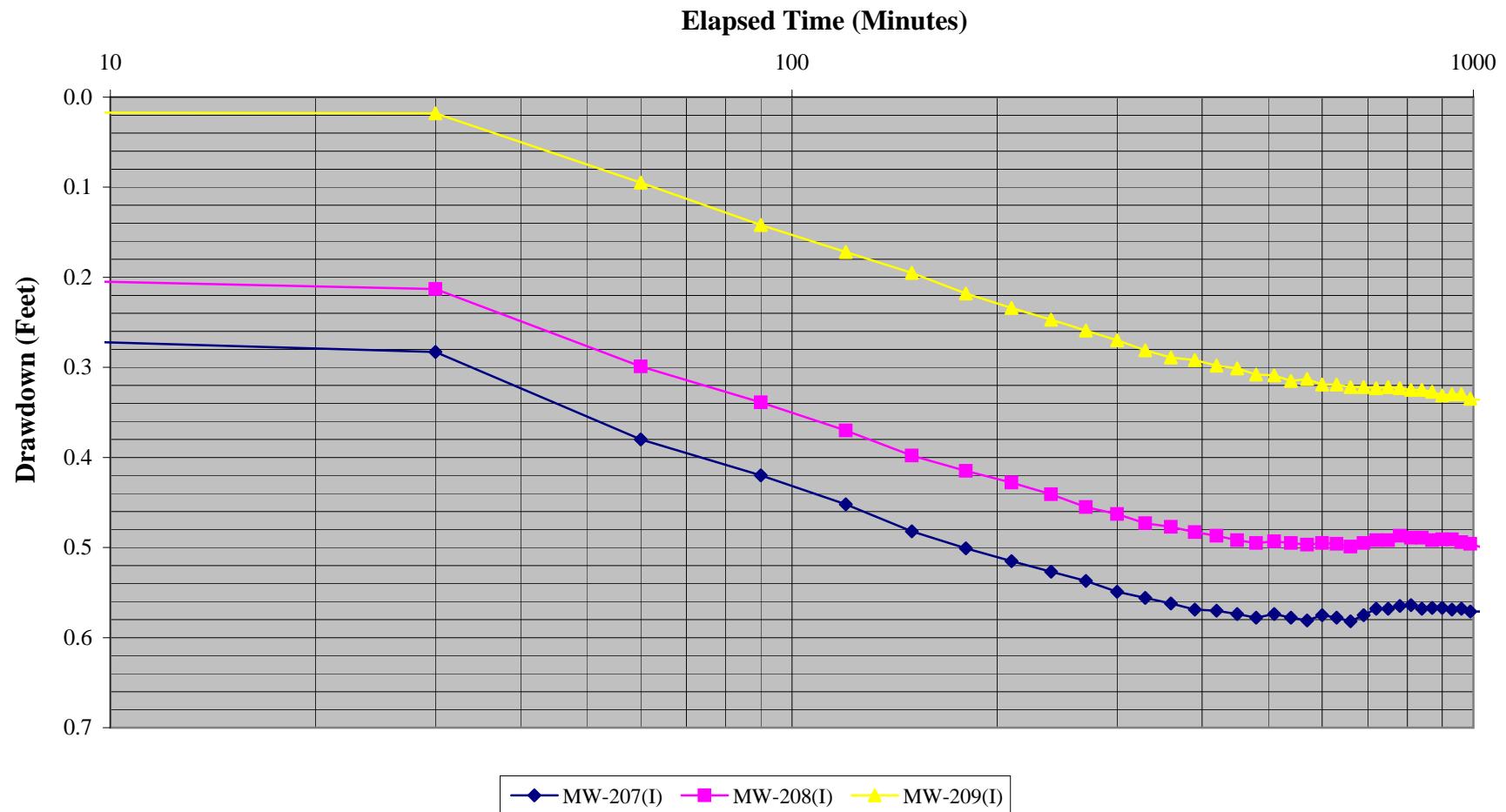
TEST PERIOD STARTED:
May 12, 2009



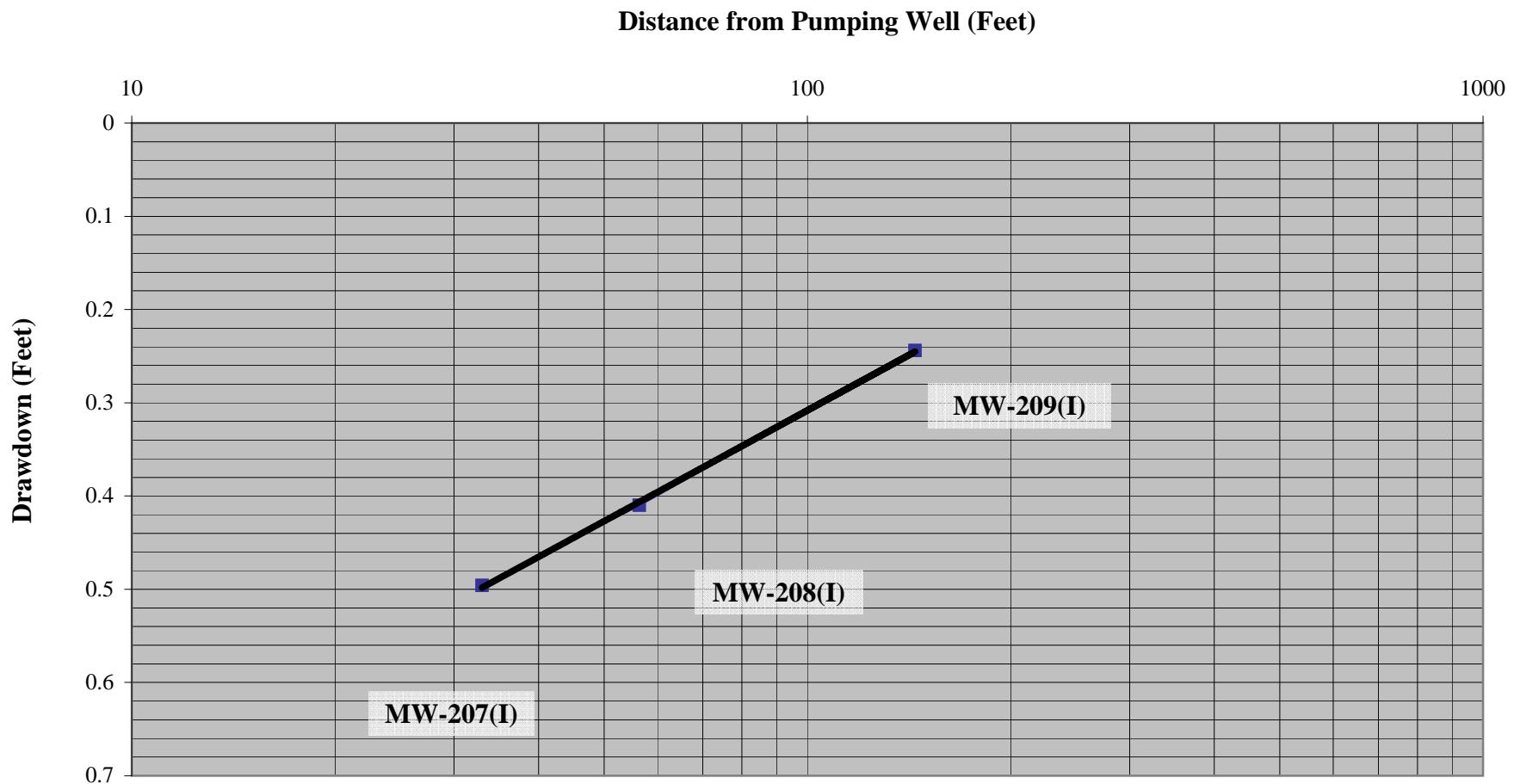
APPENDIX D-2B1
DRAWDOWN VERSUS LOG-TIME - TEST PERIOD 1
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



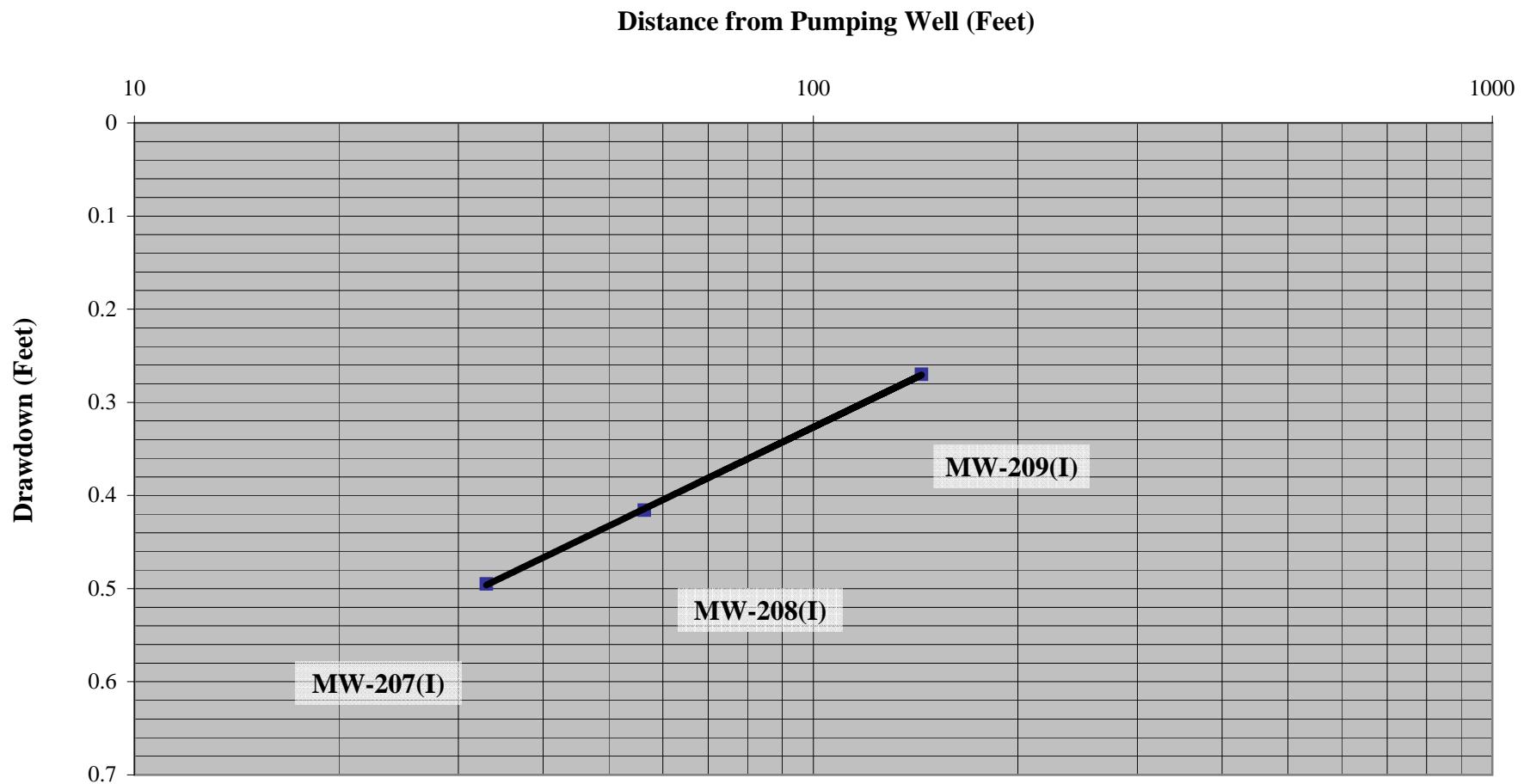
APPENDIX D-2B2
DRAWDOWN VERSUS LOG-TIME - TEST PERIOD 2
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



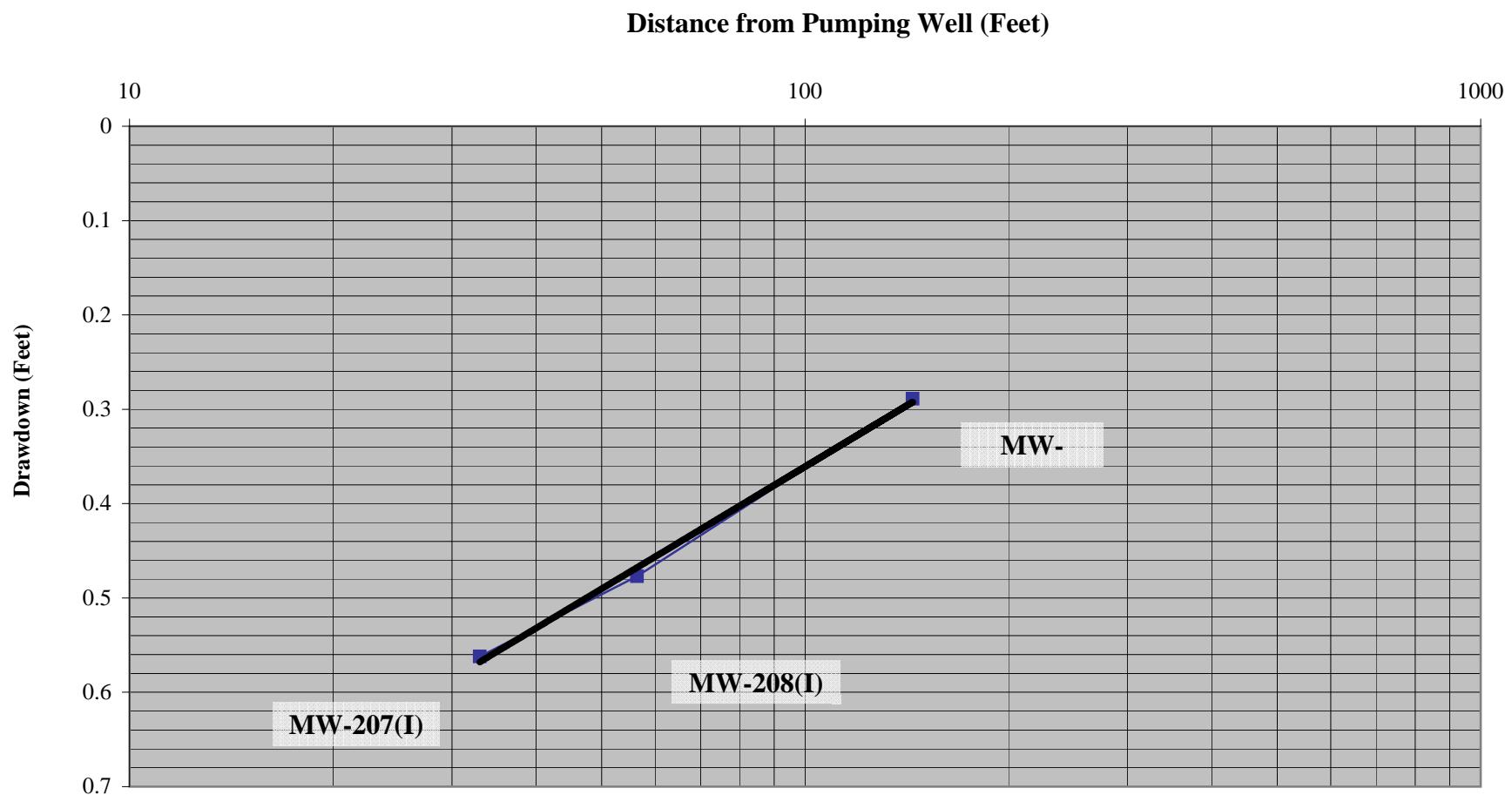
APPENDIX D-3A1
6-HOUR DRAWDOWN VERSUS LOG-DISTANCE - TEST PERIOD 1
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



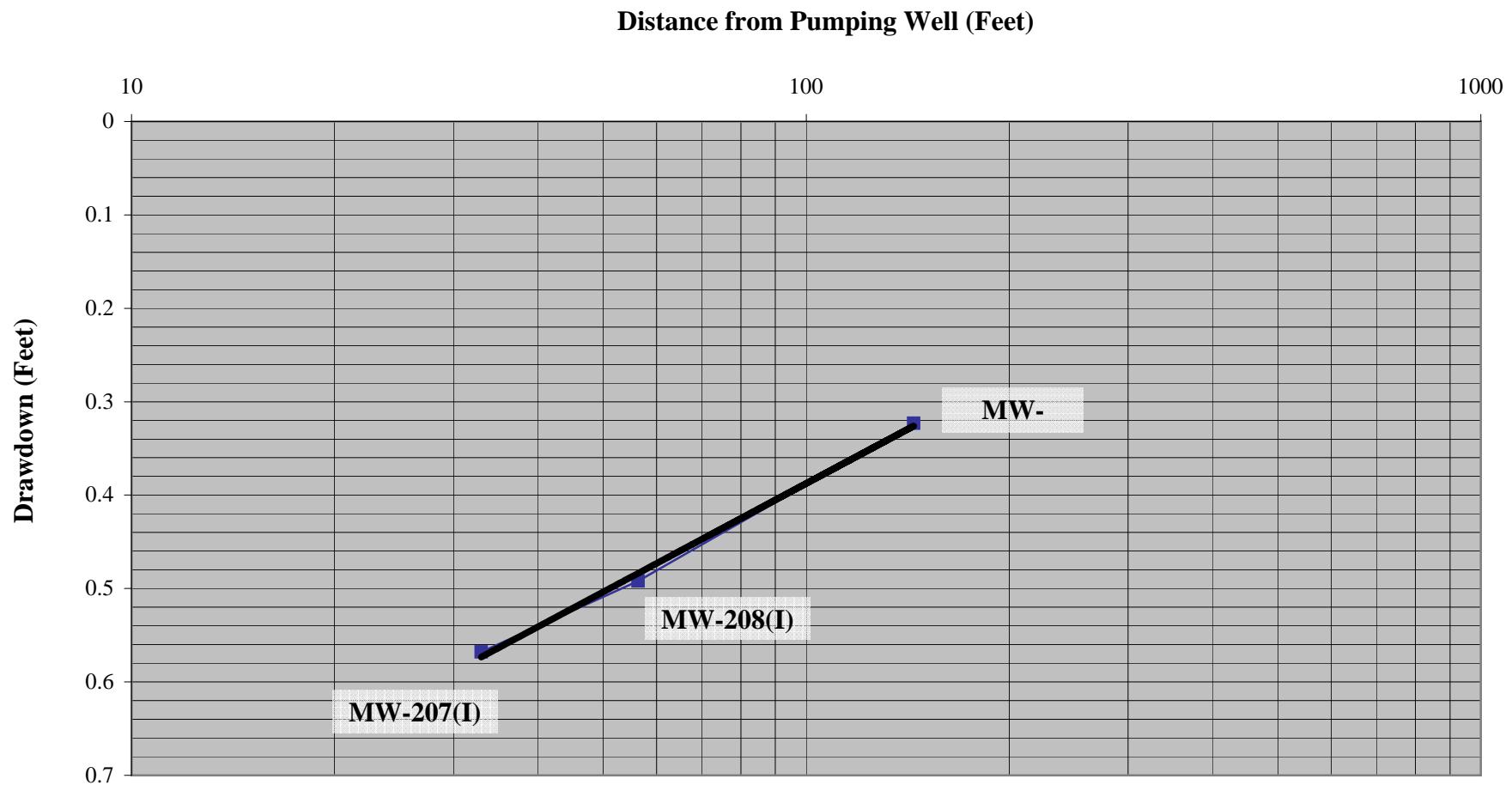
APPENDIX D-3A2
12-HOUR DRAWDOWN VERSUS LOG-DISTANCE - TEST PERIOD 1
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



APPENDIX D-3B1
6-HOUR DRAWDOWN VERSUS LOG-DISTANCE - TEST PERIOD 2
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



APPENDIX D-3B2
12-HOUR DRAWDOWN VERSUS LOG-DISTANCE - TEST PERIOD 2
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE



APPENDIX D-4
TIME-DRAWDOWN ANALYSIS
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVERMUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| TIME-DRAWDOWN | | | | | | | | | | |
|----------------|--------------------------------|------------|----------------|-----|------|-------|-----|--------|----|----|
| | WELL ID | Δs | Δs AVG | Q | T | t_0 | r | S | b | K |
| TEST PERIOD #1 | (April 29, 2009 - May 1, 2009) | | | | | | | | | |
| | MW-207(I) | 0.17 | 0.17 | 0.9 | 1382 | 0.4 | 33 | 0.0001 | 16 | 12 |
| | MW-208(I) | 0.17 | | | | 1.4 | 56 | | | |
| | MW-209(I) | 0.18 | | | | 15 | 144 | | | |
| TEST PERIOD #2 | (May 12, 2009 - May 14, 2009) | | | | | | | | | |
| | MW-207(I) | 0.245 | 0.25 | 0.9 | 961 | 1.7 | 33 | 0.0003 | 16 | 8 |
| | MW-208(I) | 0.245 | | | | 4 | 56 | | | |
| | MW-209(I) | 0.25 | | | | 26 | 144 | | | |

NOTES:

1. Δs = change in drawdown for one log cycle in feet (ft).
2. Δs AVG = average Δs (ft).
3. Q = constant pumping rate in gallons per minute (gal/min).
4. r = distance from pumping well (ft).
5. T = transmissivity in gallons per day per foot (gal/day*ft).
6. t_0 = zero drawdown intercept (min).
7. S = storativity.
8. b = aquifer thickness (ft).
9. K = hydraulic conductivity (ft/day).
10. Shaded values used to identify ranges and calculate averages.
11. Straight-Line Time-Drawdown Method (Cooper and Jacob, 1946).
12. Equations from *Aquifer Testing* (Dawson and Istok, 1991).

EQUATIONS

| | |
|----------------|--|
| Δs | estimated from graph |
| Δs AVG | average Δs |
| t_0 | estimated from graph |
| T | $((0.183 * Q) / \Delta s) * 1440$ |
| S | $(2.25 * T * t * (1/7.48) * (1/1440)) / (r^2)$ |
| b | 16 (constant) |
| K | $T / b / 7.48$ |

APPENDIX D-5
DISTANCE-DRAWDOWN ANALYSIS
SOUTHERN PLUMEMANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| DISTANCE-DRAWDOWN | | | | | | | |
|---|--------------------------|-------------------|--------------------|-------------------|----------------------------|--------------------|-----------------------------|
| TIME (Days) | 0.25 | 0.5 | 0.25 | 0.5 | | | |
| TIME (Minutes) | 360 | 720 | 360 | 720 | | | |
| WELL ID | DISTANCE TO 206I (ft) | DRAWDOWN (6HR) | DRAWDOWN (12HR) | Δs (6-hr) | r_o (6-hr) | Δs (12-hr) | r_o (12-hr) |
| TEST PERIOD #1 (April 29, 2009 - May 1, 2009) | | | | | | | |
| MW-207(I) | 33 | 0.496 | 0.495 | 0.395 | 600 | 0.350 | 850 |
| MW-208(I) | 56 | 0.410 | 0.416 | | | | |
| MW-209(I) | 144 | 0.244 | 0.27 | | | | |
| TIME | 4/29/2009 17:00 | 4/29/2009 23:00 | | T S b K | 1,067 0.0002 16 9 | | 1,205 0.0003 16 10 |
| TEST #2 (May 12, 2009 - May 14, 2009) | | | | Δs (6-hr) | r_o (6-hr) | Δs (12-hr) | r_o (12-hr) |
| MW-207(I) | 33 | 0.562 | 0.568 | 0.430 | 700 | 0.390 | 1000 |
| MW-208(I) | 56 | 0.477 | 0.492 | | | | |
| MW-209(I) | 144 | 0.289 | 0.323 | T S b K | 981 0.0002 16 8 | T S b K | 1,081 0.0002 16 9 |
| TIME | 5/12/2009 13:00 | 5/12/2009 19:00 | | | | | |

NOTES:

1. Δs = change in drawdown for one log cycle in feet (ft).
2. r_o = zero drawdown intercept.
3. T = transmissivity in gallons per day per foot (gal/day*ft).
4. S = storativity.
5. b = aquifer thickness (ft).
6. K = hydraulic conductivity (ft/day).
7. Straight-Line Distance-Drawdown Method (Cooper and Jacob, 1946).
8. Equations from *Aquifer Testing* (Dawson and Istok, 1991).
9. Shaded values used to identify ranges and calculate averages.

EQUATIONS

$$\begin{aligned}\Delta s & \text{ estimated from graph} \\ r_o & \text{ estimated from graph} \\ T & (0.366 * 0.8 * 1440) / \Delta s \\ S & (2.25 * T * t * (1/7.48) * (1/1440)) / (r_o^2) \\ b & 16 \text{ (constant)} \\ K & T / b / 7.48\end{aligned}$$

APPENDIX D-6
CAPTURE ZONE ANALYSIS
SOUTHERN PLUME MANAGEMENT OF MIGRATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

| SUMMARY OF PUMP TEST RESULTS | | | | | |
|------------------------------|--------------------|-------------------------------|------------|---------------------------|--------------|
| TEST | T (gal/ft*day) | T _{Avg} (gal/ft*day) | K (ft/day) | K _{Avg} (ft/day) | Q (gal/day) |
| 1 | 1,067, 1205, 1,382 | 1,218 | 9 to 12 | 10.3 | 1,296 |
| 2 | 961, 981, 1,081 | 1,008 | 8 to 9 | 8.3 | 1,296 |
| AVERAGE | --- | 1,113 | --- | 9.3 | 1,296 |

| CAPTURE ZONE CALCULATIONS | | | | | | | |
|---------------------------------------|-------|-------|-------|--------------------------------------|------------------|-------------------|----------------|
| | T | Q | i | Total Width (2*Y _{MAX}) | Y _{MAX} | Y _{WELL} | X _o |
| CALCULATED FROM AVERAGE VALUES | | | | | | | |
| | 1,113 | 1,296 | 0.003 | 388 | 194 | 97 | -62 |
| 2008 ANALYSIS | | | | | | | |
| | 705 | 1,172 | 0.003 | 554 | 277 | 139 | -88 |

NOTES:

1. T = transmissivity in gallons per day per foot (gal/day*ft).
2. Q = constant pumping rate (gal/day).
3. i = initial uniform hydraulic gradient (feet/foot).
4. Y = distance along the Y-axis (ft).
5. X = distance along the X-axis (ft).
6. X_o = stagnation point (ft).
7. K = hydraulic conductivity (ft/day).
8. Equations from "A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Final Project Report," USEPA January 2008 Report (EPA600/R-08/003).

EQUATIONS

| | |
|------------------------------------|---------|
| Total Width | Q/Ti |
| Y _{MAX} | Q/2Ti |
| Y _{WELL} | Q/4Ti |
| Stagnation Point (X _o) | -Q/2ITi |

SUMMARY AND STATUS OF ACTIVITIES – Q3 – OCTOBER 10, 2009
NORTHWEST LANDFILL HOTSPOT REMEDIAL DESIGN AND REMEDIAL ACTION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

1. Summary of Activities

Baseline Data Reports – 2008/2009

- Tables 1 through 3 summarize soil vapor, ground water, and ambient air baseline sampling results, respectively.
- No data was collected for inclusion in Tables 1 and 2 during Q3, but the tables have been provided for informational purposes.

2009 Field Work – Q3

- System operation and well adjustments: Figures 1 and 2 present the air sparge (AS) and soil vapor extraction (SVE) system layout with respect to the volatile organic compound treatment area (VOCTA) and the perimeter treatment curtain (PTC). Tables 4 and 5 present a summary of AS and SVE well air flow data, respectively.
- Collection of ambient air sample along Tolend Road: Table 3 presents a summary of ambient air baseline sample results for this location. The corresponding laboratory report has been provided in Attachment A.
- Weekly system checks: Table 6 presents a summary of system status check data.
- Monthly Operations and Management Field Event – August 21 and 24, 2009: Tables 4 and 5 present a summary of AS and SVE well air flow data, respectively. Table 7 presents a summary of laboratory results collected from the SVE discharge. Table 8 presents a summary of vapor probe data. The corresponding laboratory reports have been provided in Attachment A.
- Monthly Operations and Management Field Event – September 25, 2009: Table 7 is a summary of laboratory results collected from the SVE discharge. Table 8 presents a summary of vapor probe data. Table 9 for a summary of aqueous sample analytical results collected prior to and after activated carbon treatment. The corresponding laboratory reports have been provided in Attachment A.

Mass Removal Calculation

- Table 10 presents the mass removed at the site during operation of the AS and SVE system.
- Approximately 11,200 pounds of volatile organic compounds (primarily cis-1,2-dichloroethene, tetrachloroethene, and toluene) have been removed through September 25, 2009.

2. Deliverables and Correspondence

None.

3. Schedule for Next Quarter

During the next quarter the following activities are anticipated to be performed:

- Monthly Operations and Management Field Events – October and November* 2009 (*pending weather/freezing conditions that would affect the system operation and shut down date)
- Ambient air sample collection along Tolend Road (estimated to occur late October 2009)
- System shut down activities (estimated to occur mid November 2009)
- Baseline groundwater and soil vapor sampling activities (estimated to occur mid December 2009)

4. Status of Activities

Performance and regulatory monitoring data will be submitted with the Quarterly Progress Reports as these data become available.

Remedy Design: Complete.
Remedy Construction: Complete.
Remedy Implementation: Active.

5. Modifications

None.

TABLES

Table 1
SVE Soil Gas Static VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Sample ID | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride |
|---------------------------------------|-------------|-----------|---------|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|
| (Concentrations are reported in ppbv) | | | | | | | | | | | | | | | | | |
| SVE-05 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 65 | 32 U | 140 | 280 | 32 U | 810 | 32 U | 2,000 | 32 U | 32 U | 32 U | 32 U | 32 U | 32 U | 32 U | 32 U |
| | 4/1/2009 | 30 U | 37 | 53 | 360 | 62 | 240 | 30 U | 10,000 | 30 U | 30 U | 30 U | 30 U | 52 | 30 U | 30 U | 30 U |
| SVE-07 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 530 | 1,100 | 7,300 | 7,800 | 88 U | 5,700 | 88 U | 6,000 | 100 | 92 | 400 | 1,300 | 17,000 | 2,100 | 650 | 230 |
| | 4/1/2009 | 46 | 35 | 430 | 1,300 | 15 U | 760 | 16 | 2,000 | 120 | 120 J | 90 | 610 | 5,400 | 1,400 | 480 | 40 |
| SVE-09 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 500 | 200 U | 220 | 2,000 | 200 U | 3,700 | 200 U | 9,000 | 200 U | 200 U | 200 U | 1,400 | 7,000 | 7,900 | 1,800 | 510 |
| | 4/1/2009 | 1,100 | 3,300 | 22,000 | 34,000 | 4,900 | 290,000 | 1,100 | 560,000 | 560 U | 560 U | 590 | 25,000 | 460,000 | 30,000 | 4,000 | 14,000 |
| SVE-12 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 1,600 | 850 | 3,000 | 13,000 | 380 | 42,000 | 320 | 120,000 | 210 U | 210 U | 340 | 210 U | 3,600 | 350 | 210 U | 210 U |
| | 4/1/2009 | 300 U | 300 U | 1,100 | 6,700 | 300 U | 16,000 | 300 U | 150,000 | 300 U | 300 U | 300 U | 300 U | 16,000 | 570 | 300 U | 300 U |
| SVE-12 (Duplicate) | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 1,500 | 880 | 3,400 | 14,000 | 460 | 47,000 | 340 | 140,000 | 200 U | 200 U | 280 | 200 U | 5,400 | 660 | 210 | 200 U |
| SVE-16 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 1,000,000 | 520,000 | 84,000 | 120,000 | 18,000 | 2,600,000 | 20,000 | 920,000 | 4,000 U | 4,000 U | 4,000 U | 20,000 | 540,000 | 45,000 | 10,000 | 1,300,000 |
| | 4/1/2009 | 120,000 | 54,000 | 5,400 | 46,000 | 11,000 | 2,300,000 | 9,000 | 550,000 | 2,700 U | 2,700 U | 2,700 U | 7,900 | 290,000 | 15,000 | 2,900 | 350,000 |
| SVE-16 (Duplicate) | | | | | | | | | | | | | | | | | |
| | 4/1/2009 | 160,000 | 68,000 | 6,400 | 47,000 | 11,000 | 2,300,000 | 9,000 | 580,000 | 3,000 U | 3,000 U | 3,000 U | 11,000 | 340,000 | 21,000 | 4,200 | 340,000 |
| SVE-18 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 750 | 1,100 | 140 U | 910 | 170 | 52,000 | 140 U | 34,000 | 140 U | 140 U | 1,400 | 16,000 | 140,000 | 35,000 | 9,600 | 890 |
| | 4/1/2009 | 310 | 340 | 110 U | 490 | 110 U | 20,000 | 110 U | 21,000 | 170 | 160 | 710 | 9,200 | 58,000 | 21,000 | 6,000 | 380 |
| SVE-26 | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 1,700 | 4,400 | 300 U | 300 U | 300 U | 22,000 | 300 U | 6,200 | 300 U | 300 U | 370 | 300 U | 1,800 | 300 U | 300 U | 300 U |
| | 4/1/2009 | 3 | 1 U | 1 U | 3 | 1 U | 230 | 1 U | 80 | 1 U | 1 U | 18 | 6 | 79 | 11 | 2 | 1 |

Notes:

SVE = soil vapor extraction

VOC = volatile organic compound

ppbv = parts per billion by volume

U = compound was not detected at the indicated concentration

PCE = Tetrachloroethene

TCE = Trichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

Table 2
Groundwater VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Monitoring Well | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride |
|---------------------------------------|-------------|---------|--------|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|
| (Concentrations are presented in ppb) | | | | | | | | | | | | | | | | | |
| AS-01A | 9/03/08 G | 75 | 13 | 150 | 290 | 5 U | 1,900 | 13 | 1,000 | 150 | 57 | 10 U | 110 | 1,900 | 360 | 110 | 25 U |
| AS-02E | 9/03/08 G | 100 U | 100 U | 100 U | 100 U | 50 U | 390 | 100 U | 210 | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 250 U |
| | 4/01/09 S | 100 U | 100 U | 100 U | 100 U | 50 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 100 U | 250 U |
| AS-04C | 9/02/08 S | 140,000 | 16,000 | 50,000 | 5,000 | 720 | 35,000 | 400 U | 2,900 | 400 U | 400 U | 400 U | 1,700 | 16,000 | 4,300 | 1,200 | 38,000 |
| | 4/01/09 S | 120,000 | 15,000 | 32,000 | 2,000 | 500 U | 83,000 | 1,000 U | 2,600 | 1,000 U | 1,000 U | 1,000 U | 1,800 | 14,000 | 5,200 | 1,300 | 14,000 |
| AS-06C | 3/31/09 S | 40 U | 40 U | 88 | 470 | 20 U | 8,200 | 66 | 5,600 | 550 | 210 | 40 U | 400 | 9,700 | 1,300 | 400 | 100 U |
| AS-07E | 9/03/08 G | 20 U | 20 U | 41 | 580 | 10 U | 15,000 | 23 | 7,100 | 180 | 53 | 25 | 400 | 4,000 | 1,100 | 370 | 50 U |
| | 3/31/09 S | 21 | 10 U | 10 U | 290 | 5 U | 36 | 10 U | 930 | 200 | 60 | 35 | 440 | 3,000 | 1,300 | 430 | 25 U |
| AS-13B | 9/03/08 G | 200 U | 200 U | 220 | 1,600 | 100 U | 4,200 | 200 U | 890 | 250 | 200 U | 200 U | 300 | 9,100 | 810 | 280 | 500 U |
| | 4/01/09 G | 40 U | 40 U | 40 U | 97 | 20 U | 40 U | 40 U | 40 U | 220 | 61 | 40 U | 300 | 7,800 | 770 | 280 | 100 U |
| AS-14A | 9/03/08 S | 2,300 | 400 U | 2,000 | 6,500 | 200 U | 25,000 | 400 U | 850 | 460 | 400 U | 400 U | 1,400 | 81,000 | 4,000 | 1,100 | 25,000 |
| | 3/31/09 S | 400 U | 400 U | 3,100 | 9,200 | 200 U | 39,000 | 400 U | 850 | 430 | 400 U | 400 U | 1,600 | 100,000 | 4,600 | 1,300 | 51,000 |
| AS-14A (Duplicate) | 3/31/09 S | 400 U | 400 U | 3,000 | 9,200 | 200 U | 39,000 | 400 U | 820 | 420 | 400 U | 400 U | 1,500 | 100,000 | 4,500 | 1,200 | 51,000 |
| AS-15A | 9/03/08 G | 1,700 | 660 | 1,900 | 4,200 | 100 U | 35,000 | 200 U | 1,200 | 200 U | 200 U | 200 U | 300 | 17,000 | 880 | 290 | 38,000 |
| | 4/01/09 G | 200 U | 200 U | 2,600 B | 7,200 | 100 U | 40,000 | 200 U | 1,300 | 200 U | 200 U | 200 U | 310 | 28,000 | 910 | 300 | 61,000 B |
| AS-15D | 9/03/08 G | 23,000 | 2,300 | 2,100 | 4,200 | 110 | 180,000 | 200 U | 2,000 | 200 U | 200 U | 200 U | 800 | 2,000 | 2,300 | 720 | 27,000 |
| | 4/01/09 G | 130,000 | 6,900 | 9,600 | 7,000 | 500 U | 220,000 | 1,000 U | 3,200 | 1,000 U | 1,000 U | 1,000 U | 2,700 | 47,000 | 8,100 | 2,300 | 41,000 |
| AS-16A | 3/31/09 S | 54,000 | 5,500 | 2,000 U | 7,600 | 1,000 U | 230,000 | 2,000 U | 3,100 | 2,000 U | 2,000 U | 2,000 U | 2,800 | 64,000 | 9,200 | 2,700 | 34,000 |
| AS-16C | 9/03/08 G | 28,000 | 3,500 | 4,600 | 3,900 | 120 | 160,000 | 200 U | 2,500 | 200 U | 200 U | 200 U | 880 | 21,000 | 2,600 | 810 | 14,000 |
| | 4/01/09 G | 110,000 | 6,400 | 8,900 | 6,300 | 500 U | 210,000 | 1,000 U | 3,500 | 1,000 U | 1,000 U | 1,000 U | 2,800 | 48,000 | 9,000 | 2,500 | 29,000 |
| AS-24A | 9/03/08 S | 570 | 370 | 7,400 | 6,500 | 160 | 55,000 | 200 U | 980 | 390 | 200 U | 200 U | 860 | 44,000 | 2,200 | 760 | 52,000 |

Table 2
Groundwater VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Monitoring Well | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride |
|---------------------------------------|-------------|--------|-------|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|
| (Concentrations are presented in ppb) | | | | | | | | | | | | | | | | | |
| AS-24C | | | | | | | | | | | | | | | | | |
| | 9/02/08 G | 2,500 | 250 | 450 | 2,300 | 150 | 160,000 | 240 | 7,400 | 890 | 260 | 100 U | 2,700 | 20,000 | 7,800 | 2,500 | 1,800 |
| AS-25A | | | | | | | | | | | | | | | | | |
| | 4/01/09 G | 200 U | 200 U | 200 U | 350 | 100 U | 8,700 | 200 U | 830 | 200 U | 200 U | 200 U | 200 U | 2,100 | 210 | 200 U | 500 U |
| AS-27B | | | | | | | | | | | | | | | | | |
| | 9/03/08 S | 820 | 120 | 100 U | 1,300 | 55 | 88,000 | 100 U | 6,900 | 370 | 120 | 100 U | 950 | 11,000 | 2,700 | 860 | 250 U |
| | 3/31/09 S | 400 U | 400 U | 400 U | 1,500 | 200 U | 83,000 | 400 U | 4,500 | 400 U | 400 U | 400 U | 870 | 14,000 | 2,600 | 850 | 1,000 U |
| AS-28B | | | | | | | | | | | | | | | | | |
| | 9/03/08 S | 12,000 | 470 | 1,700 | 5,400 | 120 | 71,000 | 200 U | 2,000 | 770 | 220 | 200 U | 1,700 | 35,000 | 4,600 | 1,400 | 12,000 |
| AS-28B (Duplicate) | | | | | | | | | | | | | | | | | |
| | 9/03/08 S | 9,700 | 390 | 1,500 | 4,200 | 100 U | 59,000 | 200 U | 1,500 | 570 | 200 U | 200 U | 1,400 | 28,000 | 3,800 | 1,100 | 11,000 |
| GW-01 | | | | | | | | | | | | | | | | | |
| | 9/02/08 S | 390 | 94 | 140 | 500 | 5 U | 1,000 | 12 | 240 | 280 | 100 | 10 U | 280 | 3,100 | 1,000 | 380 | 45 |
| | 4/01/09 S | 36 | 20 U | 75 B | 600 | 10 U | 2,600 | 21 | 1,400 | 270 | 96 | 20 U | 410 | 5,500 | 1,500 | 540 | 180 B |
| GW-02 | | | | | | | | | | | | | | | | | |
| | 9/02/08 S | 300 | 200 U | 2,200 | 5,500 | 100 U | 35,000 | 200 U | 2,200 | 820 | 220 | 200 U | 1,300 | 36,000 | 3,000 | 940 | 5,600 |
| | 3/31/09 S | 100 U | 100 U | 200 | 3,600 | 50 U | 19,000 | 100 U | 2,200 | 550 | 130 | 100 U | 950 | 23,000 | 2,500 | 740 | 2,100 |
| GW-03 | | | | | | | | | | | | | | | | | |
| | 9/02/08 S | 22,000 | 3,400 | 14,000 | 3,400 | 170 | 120,000 | 200 U | 2,300 | 510 | 200 U | 200 U | 1,700 | 29,000 | 5,000 | 1,600 | 14,000 |
| | 3/31/09 S | 33,000 | 8,000 | 20,000 | 6,900 | 500 U | 150,000 | 1,000 U | 2,900 | 1,000 U | 1,000 U | 1,000 U | 2,300 | 44,000 | 7,700 | 2,300 | 9,600 |
| GW-04 | | | | | | | | | | | | | | | | | |
| | 9/02/08 S | 3,400 | 1,500 | 20 U | 460 | 11 | 21,000 | 34 | 3,700 | 180 | 51 | 38 | 1,100 | 6,200 | 2,900 | 910 | 50 U |
| | 3/31/09 S | 20 U | 20 U | 20 U | 1,100 | 20 | 72,000 | 190 | 7,300 | 140 | 43 | 52 | 1,300 | 8,200 | 3,500 | 1,000 | 50 U |
| Trip Blank | | | | | | | | | | | | | | | | | |
| | 9/03/08 | 2 U | 2 U | 2 U | 2 U | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U |
| | 4/01/09 | 2 U | 2 U | 2 U | 2 U | 1 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 5 U |

Table 2
Groundwater VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Monitoring Well | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride |
|---------------------------------------|-------------|-----|-----|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|
| (Concentrations are presented in ppb) | | | | | | | | | | | | | | | | | |

Notes:

VOC = volatile organic compound

ppb = parts per billion

U = compound was not detected at the indicated concentration

J = estimated concentration

PCE = Tetrachloroethene

TCE = Trichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

G = grab sample was collected after attempting EPA low flow sampling procedures; the well was purged until dry and allowed to recharge before the sample was collected.

S = sample collected via EPA low flow methodology

Table 3
Ambient Air Exposure Monitoring VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Sample ID | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride |
|--|-------------|-------|--------|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|
| (Concentrations are presented in ppbv) | | | | | | | | | | | | | | | | | |
| Annual AAL Criteria | | 59.71 | 119.09 | 833.45 | 335.49 | 50.44 | 1984.20 | 1984.20 | 2.43 | 83.81 | 83.81 | 1.19 | 230.31 | 106.15 | 23.03 | 23.03 | 119.17 |
| TR-Base | | | | | | | | | | | | | | | | | |
| | 9/3/2008 | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U | 12 U |
| | 4/1/2009 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 7/13/2009 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

Notes:

VOC = volatile organic compounds

ppbv = parts per billion by volume

AAL = New Hampshire Ambient Air Limit

U = compound was not detected at the indicated concentration

PCE = Tetrachloroethene

TCE = Trichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

Sample collected along Tolend Road, north of the soil vapor extraction discharge stack.

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 7/14/2009 | | | |
| AS-01A | 6.0 | 8.0 | 11.1 |
| AS-02A | 6.0 | 7.5 | 10.4 |
| AS-03A | 7.0 | 4.0 | 5.8 |
| AS-04A | 7.0 | 4.5 | 6.5 |
| AS-05A | 5.0 | 8.0 | 10.5 |
| AS-06A | 5.0 | 10.0 | 13.1 |
| AS-07A | 5.5 | 8.0 | 10.8 |
| AS-08A | 7.0 | 5.5 | 8.0 |
| AS-09A | 7.0 | 6.0 | 8.7 |
| AS-10A | 5.0 | 8.5 | 11.2 |
| AS-11A | 7.0 | 4.5 | 6.5 |
| AS-12A | 8.0 | 4.5 | 6.8 |
| AS-13A | 4.5 | 9.5 | 12.2 |
| AS-14A | 2.0 | 10.0 | 11.1 |
| AS-15A | 4.0 | 9.0 | 11.2 |
| AS-16A | 4.0 | 10.0 | 12.5 |
| AS-17A | 6.0 | 7.5 | 10.4 |
| AS-18A | 4.0 | 10.0 | 12.5 |
| AS-19A | 5.0 | 9.0 | 11.8 |
| AS-20A | 5.5 | 9.0 | 12.1 |
| AS-21A | 3.0 | 10.0 | 11.8 |
| AS-22A | 2.5 | 10.0 | 11.5 |
| AS-23A | 4.0 | 8.0 | 10.0 |
| AS-24A | 6.0 | 4.5 | 6.2 |
| AS-25A | 5.0 | 10.0 | 13.1 |
| AS-26A | 4.0 | 10.0 | 12.5 |
| AS-27A | 6.0 | 8.5 | 11.7 |
| AS-28A | 3.0 | 10.0 | 11.8 |
| AS-29A | 7.0 | 4.0 | 5.8 |
| AS-30A | 4.5 | 10.0 | 12.8 |
| AS-31A | 2.0 | 10.0 | 11.1 |
| AS-01C | 7.5 | 0.0 | 0.0 |
| AS-02C | 8.0 | 0.0 | 0.0 |
| AS-03C | 5.5 | 9.0 | 12.1 |
| AS-04C | 5.0 | 7.5 | 9.9 |
| AS-05C | 5.0 | 10.0 | 13.1 |
| AS-06C | 4.0 | 8.0 | 10.0 |
| AS-07C | 7.0 | 0.0 | 0.0 |
| AS-08C | 4.0 | 7.5 | 9.4 |
| AS-09C | 7.0 | 7.5 | 10.9 |
| AS-10C | 4.0 | 9.5 | 11.9 |
| AS-11C | 5.0 | 7.5 | 9.9 |
| AS-12C | 5.5 | 5.5 | 7.4 |
| AS-13C | 8.0 | 7.5 | 11.4 |
| AS-14C | 4.0 | 10.0 | 12.5 |
| AS-15C | 4.0 | 10.0 | 12.5 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 7/14/2009 | | | |
| AS-16C | 4.0 | 9.0 | 11.2 |
| AS-17C | 8.0 | 5.0 | 7.6 |
| AS-18C | 3.5 | 9.0 | 10.9 |
| AS-19C | 5.5 | 6.5 | 8.8 |
| AS-20C | 4.0 | 10.0 | 12.5 |
| AS-21C | 9.0 | 5.0 | 7.9 |
| AS-22C | 4.5 | 10.0 | 12.8 |
| AS-23C | 3.5 | 10.0 | 12.1 |
| AS-24C | 4.5 | 10.0 | 12.8 |
| AS-25C | 9.0 | 3.0 | 4.7 |
| AS-26C | 3.5 | 10.0 | 12.1 |
| AS-27C | 4.5 | 10.0 | 12.8 |
| AS-28C | 7.5 | 6.0 | 8.9 |
| AS-29C | 7.0 | 6.0 | 8.7 |
| AS-30C | 4.0 | 10.0 | 12.5 |
| AS-31C | 5.5 | 9.5 | 12.8 |
| 7/15/2009 | | | |
| AS-01B | 2.0 | 9.0 | 10.0 |
| AS-02B | 8.0 | 0.0 | 0.0 |
| AS-03B | 8.0 | 4.0 | 6.1 |
| AS-04B | 8.0 | 4.0 | 6.1 |
| AS-05B | 2.0 | 9.5 | 10.6 |
| AS-06B | 5.0 | 9.5 | 12.5 |
| AS-07B | 2.0 | 8.0 | 8.9 |
| AS-08B | 8.0 | 3.0 | 4.5 |
| AS-09B | 6.0 | 3.0 | 4.1 |
| AS-10B | 4.5 | 10.0 | 12.8 |
| AS-11B | 8.0 | 4.5 | 6.8 |
| AS-12B | 8.0 | 3.0 | 4.5 |
| AS-13B | 2.0 | 10.0 | 11.1 |
| AS-14B | 3.5 | 8.0 | 9.7 |
| AS-15B | 3.5 | 9.5 | 11.5 |
| AS-16B | 2.5 | 9.0 | 10.3 |
| AS-17B | 4.0 | 7.5 | 9.4 |
| AS-18B | 4.0 | 10.0 | 12.5 |
| AS-19B | 2.0 | 9.5 | 10.6 |
| AS-20B | 3.0 | 9.0 | 10.6 |
| AS-21B | 4.0 | 8.0 | 10.0 |
| AS-22B | 4.5 | 10.0 | 12.8 |
| AS-23B | 5.0 | 10.0 | 13.1 |
| AS-24B | 3.0 | 9.0 | 10.6 |
| AS-25B | 4.5 | 10.0 | 12.8 |
| AS-26B | 5.0 | 8.5 | 11.2 |
| AS-27B | 4.0 | 10.0 | 12.5 |
| AS-28B | 1.0 | 10.0 | 10.5 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 7/15/2009 | | | |
| AS-29B | 2.5 | 8.0 | 9.2 |
| AS-30B | 7.5 | 6.0 | 8.9 |
| AS-31B | 3.0 | 10.0 | 11.8 |
| AS-01D | NR | NR | NR |
| AS-02D | 3.5 | 7.5 | 9.1 |
| AS-03D | 7.0 | 3.0 | 4.3 |
| AS-04D | 7.0 | 5.0 | 7.2 |
| AS-05D | 3.0 | 8.0 | 9.5 |
| AS-06D | 5.5 | 7.0 | 9.4 |
| AS-07D | 7.0 | 5.5 | 8.0 |
| AS-08D | 4.0 | 8.5 | 10.6 |
| AS-09D | 3.5 | 10.0 | 12.1 |
| AS-10D | 4.0 | 10.0 | 12.5 |
| AS-11D | 8.0 | 0.0 | 0.0 |
| AS-12D | 5.5 | 9.0 | 12.1 |
| AS-13D | 4.5 | 10.0 | 12.8 |
| AS-14D | 4.0 | 10.0 | 12.5 |
| AS-15D | 4.0 | 10.0 | 12.5 |
| AS-16D | 6.0 | 7.0 | 9.7 |
| AS-17D | 4.0 | 8.5 | 10.6 |
| AS-18D | 3.0 | 10.0 | 11.8 |
| AS-19D | 5.0 | 10.0 | 13.1 |
| AS-20D | 4.5 | 10.0 | 12.8 |
| AS-21D | 6.0 | 6.5 | 9.0 |
| AS-22D | 3.0 | 10.0 | 11.8 |
| AS-23D | 4.5 | 9.0 | 11.5 |
| AS-24D | 6.5 | 6.0 | 8.5 |
| AS-25D | 4.0 | 8.5 | 10.6 |
| AS-26D | 5.0 | 9.0 | 11.8 |
| AS-27D | 5.5 | 8.0 | 10.8 |
| AS-28D | 4.0 | 8.0 | 10.0 |
| AS-29D | 5.0 | 8.0 | 10.5 |
| AS-30D | 5.0 | 8.0 | 10.5 |
| AS-31D | 3.5 | 9.5 | 11.5 |
| <hr/> | | | |
| 7/27/2009 | | | |
| AS-01E | 3.0 | 9.8 | 11.5 |
| AS-02E | 7.0 | 5.5 | 8.0 |
| AS-03E | 2.0 | 10.0 | 11.1 |
| AS-04E | 8.0 | 5.0 | 7.6 |
| AS-05E | 10.0 | 3.0 | 4.9 |
| AS-06E | 8.0 | 9.0 | 13.6 |
| AS-07E | 7.5 | 8.5 | 12.6 |
| AS-08E | 6.0 | 8.5 | 11.7 |
| <hr/> | | | |
| 8/24/2009 | | | |
| AS-01A | 9.0 | 3.0 | 4.7 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 8/24/2009 | | | |
| AS-02A | 11.0 | 2.5 | 4.3 |
| AS-03A | 10.0 | 3.0 | 4.9 |
| AS-04A | 9.0 | 7.5 | 11.9 |
| AS-05A | 11.0 | 0.0 | 0.0 |
| AS-06A | 9.0 | 8.0 | 12.7 |
| AS-07A | 9.0 | 7.0 | 11.1 |
| AS-08A | 11.0 | 0.0 | 0.0 |
| AS-09A | 10.0 | 6.0 | 9.9 |
| AS-10A | 7.0 | 10.0 | 14.5 |
| AS-11A | 11.0 | 0.0 | 0.0 |
| AS-12A | 11.0 | 2.5 | 4.3 |
| AS-13A | 3.0 | 10.0 | 11.8 |
| AS-14A | 4.0 | 10.0 | 12.5 |
| AS-15A | 4.0 | 10.0 | 12.5 |
| AS-16A | 3.0 | 10.0 | 11.8 |
| AS-17A | 10.0 | 5.0 | 8.2 |
| AS-18A | 3.0 | 10.0 | 11.8 |
| AS-19A | 4.0 | 10.0 | 12.5 |
| AS-20A | 8.0 | 9.0 | 13.6 |
| AS-21A | 7.0 | 10.0 | 14.5 |
| AS-22A | 4.0 | 10.0 | 12.5 |
| AS-23A | 7.0 | 10.0 | 14.5 |
| AS-24A | 11.0 | 0.0 | 0.0 |
| AS-25A | 6.5 | 10.0 | 14.1 |
| AS-26A | 6.0 | 10.0 | 13.8 |
| AS-27A | 10.0 | 5.0 | 8.2 |
| AS-28A | 6.0 | 9.0 | 12.4 |
| AS-29A | 10.0 | 5.0 | 8.2 |
| AS-30A | 9.0 | 7.0 | 11.1 |
| AS-31A | 5.0 | 10.0 | 13.1 |
| AS-01B | 10.0 | 0.0 | 0.0 |
| AS-02B | 11.0 | 0.0 | 0.0 |
| AS-03B | 10.0 | 2.5 | 4.1 |
| AS-04B | 4.0 | 10.0 | 12.5 |
| AS-05B | 5.0 | 10.0 | 13.1 |
| AS-06B | 8.0 | 9.0 | 13.6 |
| AS-07B | 9.5 | 5.5 | 8.9 |
| AS-08B | 10.5 | 3.0 | 5.0 |
| AS-09B | 4.0 | 10.0 | 12.5 |
| AS-10B | 5.0 | 10.0 | 13.1 |
| AS-11B | 9.5 | 7.0 | 11.3 |
| AS-12B | 10.0 | 4.0 | 6.6 |
| AS-13B | 7.0 | 5.0 | 7.2 |
| AS-14B | 6.0 | 10.3 | 14.2 |
| AS-15B | 4.0 | 10.0 | 12.5 |
| AS-16B | 10.5 | 3.5 | 5.9 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 8/24/2009 | | | |
| AS-17B | 10.5 | 0.0 | 0.0 |
| AS-18B | 3.0 | 10.0 | 11.8 |
| AS-19B | 2.0 | 10.0 | 11.1 |
| AS-20B | 5.0 | 10.0 | 13.1 |
| AS-21B | 9.0 | 5.5 | 8.7 |
| AS-22B | 10.0 | 4.0 | 6.6 |
| AS-23B | 4.0 | 10.0 | 12.5 |
| AS-24B | 8.0 | 10.0 | 15.2 |
| AS-25B | 10.0 | 5.0 | 8.2 |
| AS-26B | 11.0 | 4.0 | 6.9 |
| AS-27B | 2.5 | 10.0 | 11.5 |
| AS-28B | 2.0 | 10.0 | 11.1 |
| AS-29B | 6.0 | 10.0 | 13.8 |
| AS-30B | NR | NR | NR |
| AS-31B | 6.0 | 10.0 | 13.8 |
| AS-01C | 13.0 | 0.0 | 0.0 |
| AS-02C | 13.0 | 0.0 | 0.0 |
| AS-03C | 11.0 | 7.0 | 12.0 |
| AS-04C | 12.0 | 6.0 | 10.7 |
| AS-05C | 4.5 | 10.0 | 12.8 |
| AS-06C | 5.0 | 5.0 | 6.6 |
| AS-07C | 6.0 | 0.0 | 0.0 |
| AS-08C | 6.0 | 0.0 | 0.0 |
| AS-09C | 10.0 | 6.5 | 10.7 |
| AS-10C | 10.0 | 4.0 | 6.6 |
| AS-11C | 10.0 | 5.5 | 9.1 |
| AS-12C | 8.0 | 9.0 | 13.6 |
| AS-13C | 5.0 | 4.0 | 5.3 |
| AS-14C | 3.0 | 5.5 | 6.5 |
| AS-15C | 4.0 | 9.5 | 11.9 |
| AS-16C | 5.5 | 9.5 | 12.8 |
| AS-17C | 9.5 | 8.0 | 12.9 |
| AS-18C | 4.0 | 10.0 | 12.5 |
| AS-19C | 7.5 | 10.0 | 14.8 |
| AS-20C | 11.0 | 5.5 | 9.4 |
| AS-21C | 10.0 | 6.5 | 10.7 |
| AS-22C | 4.0 | 10.0 | 12.5 |
| AS-23C | 4.0 | 10.0 | 12.5 |
| AS-24C | 6.0 | 10.0 | 13.8 |
| AS-25C | 13.0 | 0.0 | 0.0 |
| AS-26C | 6.0 | 10.0 | 13.8 |
| AS-27C | 6.5 | 7.0 | 9.9 |
| AS-28C | 10.0 | 7.0 | 11.5 |
| AS-29C | 8.5 | 8.5 | 13.2 |
| AS-30C | 8.0 | 8.0 | 12.1 |
| AS-31C | 6.0 | 8.0 | 11.1 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 8/24/2009 | | | |
| AS-01D | 9.0 | 7.0 | 11.1 |
| AS-02D | 10.5 | 0.0 | 0.0 |
| AS-03D | 7.0 | 8.0 | 11.6 |
| AS-04D | 11.0 | 0.0 | 0.0 |
| AS-05D | 6.0 | 9.0 | 12.4 |
| AS-06D | 8.0 | 8.5 | 12.9 |
| AS-07D | 10.0 | 3.0 | 4.9 |
| AS-08D | 9.5 | 5.5 | 8.9 |
| AS-09D | 4.0 | 11.8 | 14.7 |
| AS-10D | 8.0 | 8.0 | 12.1 |
| AS-11D | 11.0 | 0.0 | 0.0 |
| AS-12D | 9.0 | 7.0 | 11.1 |
| AS-13D | 2.0 | 10.0 | 11.1 |
| AS-14D | 3.0 | 10.0 | 11.8 |
| AS-15D | 9.0 | 7.0 | 11.1 |
| AS-16D | 10.0 | 3.0 | 4.9 |
| AS-17D | 7.0 | 8.0 | 11.6 |
| AS-18D | 5.0 | 10.0 | 13.1 |
| AS-19D | 3.0 | 10.0 | 11.8 |
| AS-20D | 7.0 | 10.0 | 14.5 |
| AS-21D | 10.5 | 0.0 | 0.0 |
| AS-22D | 3.0 | 10.0 | 11.8 |
| AS-23D | 8.0 | 10.0 | 15.2 |
| AS-24D | 9.5 | 6.0 | 9.7 |
| AS-25D | 5.0 | 10.0 | 13.1 |
| AS-26D | 7.0 | 9.5 | 13.8 |
| AS-27D | 8.5 | 3.0 | 4.6 |
| AS-28D | 9.0 | 7.0 | 11.1 |
| AS-29D | 7.0 | 9.8 | 14.1 |
| AS-30D | 6.0 | 10.0 | 13.8 |
| AS-31D | 5.0 | 10.0 | 13.1 |
| AS-01E | 5.0 | 10.0 | 13.1 |
| AS-02E | 10.0 | 0.0 | 0.0 |
| AS-03E | 4.0 | 8.0 | 10.0 |
| AS-04E | 10.0 | 4.5 | 7.4 |
| AS-05E | 10.0 | 4.5 | 7.4 |
| AS-06E | 8.0 | 6.5 | 9.8 |
| AS-07E | 5.0 | 10.0 | 13.1 |
| AS-08E | 4.0 | 10.0 | 12.5 |
| <hr/> | | | |
| 9/2/2009 | | | |
| AS-01A | 12.0 | 4.5 | 8.0 |
| AS-02A | 10.0 | 6.5 | 10.7 |
| AS-03A | 11.0 | 6.5 | 11.1 |
| AS-04A | 6.5 | 9.0 | 12.7 |
| AS-05A | 13.0 | 0.0 | 0.0 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| 9/2/2009 | | | |
| AS-06A | 8.0 | 8.0 | 12.1 |
| AS-07A | 10.0 | 7.5 | 12.4 |
| AS-08A | 14.0 | 0.0 | 0.0 |
| AS-09A | 11.0 | 6.0 | 10.3 |
| AS-10A | 5.0 | 9.0 | 11.8 |
| AS-11A | 11.0 | 7.0 | 12.0 |
| AS-12A | 11.0 | 5.5 | 9.4 |
| AS-13A | NR | NR | NR |
| AS-14A | 4.0 | 9.0 | 11.2 |
| AS-15A | 3.0 | 9.5 | 11.2 |
| AS-16A | 5.0 | 9.0 | 11.8 |
| AS-17A | 12.0 | 4.0 | 7.1 |
| AS-18A | 4.0 | 9.5 | 11.9 |
| AS-19A | 4.0 | 10.0 | 12.5 |
| AS-20A | 12.0 | 3.5 | 6.2 |
| AS-21A | 10.0 | 7.0 | 11.5 |
| AS-22A | 4.0 | 9.0 | 11.2 |
| AS-23A | 6.0 | 9.0 | 12.4 |
| AS-24A | 11.5 | 4.5 | 7.9 |
| AS-25A | 10.0 | 7.0 | 11.5 |
| AS-26A | 6.0 | 9.0 | 12.4 |
| AS-27A | 8.0 | 8.0 | 12.1 |
| AS-28A | 10.0 | 6.0 | 9.9 |
| AS-29A | 8.5 | 6.0 | 9.3 |
| AS-30A | 6.0 | 9.0 | 12.4 |
| AS-31A | 8.0 | 7.0 | 10.6 |
| AS-01B | 14.0 | 3.0 | 5.7 |
| AS-02B | 11.5 | 7.0 | 12.2 |
| AS-03B | 13.0 | 4.5 | 8.3 |
| AS-04B | 11.0 | 6.5 | 11.1 |
| AS-05B | 3.0 | 10.0 | 11.8 |
| AS-06B | 8.0 | 8.0 | 12.1 |
| AS-07B | 13.0 | 3.0 | 5.5 |
| AS-08B | 12.0 | 5.0 | 8.9 |
| AS-09B | 4.0 | 10.0 | 12.5 |
| AS-10B | 4.5 | 9.0 | 11.5 |
| AS-11B | 11.0 | 7.0 | 12.0 |
| AS-12B | 10.0 | 6.0 | 9.9 |
| AS-13B | 8.5 | 7.5 | 11.6 |
| AS-14B | 8.0 | 8.0 | 12.1 |
| AS-15B | 4.0 | 10.0 | 12.5 |
| AS-16B | 13.0 | 4.5 | 8.3 |
| AS-17B | 13.0 | 3.0 | 5.5 |
| AS-18B | 6.0 | 9.0 | 12.4 |
| AS-19B | 4.5 | 10.0 | 12.8 |
| AS-20B | 8.0 | 8.0 | 12.1 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| 9/2/2009 | | | |
| AS-21B | 12.5 | 3.0 | 5.4 |
| AS-22B | 12.5 | 3.5 | 6.4 |
| AS-23B | 4.5 | 9.0 | 11.5 |
| AS-24B | 8.0 | 8.0 | 12.1 |
| AS-25B | 13.0 | 4.0 | 7.4 |
| AS-26B | 11.0 | 7.5 | 12.9 |
| AS-27B | 4.0 | 10.0 | 12.5 |
| AS-28B | 3.0 | 10.0 | 11.8 |
| AS-29B | 8.5 | 7.0 | 10.8 |
| AS-30B | 13.0 | 3.0 | 5.5 |
| AS-31B | 5.0 | 8.0 | 10.5 |
| AS-01C | 15.0 | 3.0 | 5.9 |
| AS-02C | 16.0 | 3.0 | 6.1 |
| AS-03C | 8.0 | 10.0 | 15.2 |
| AS-04C | 15.0 | 5.0 | 9.9 |
| AS-05C | 5.0 | 10.0 | 13.1 |
| AS-06C | 8.0 | 8.0 | 12.1 |
| AS-07C | 16.0 | 0.0 | 0.0 |
| AS-08C | 12.0 | 7.0 | 12.5 |
| AS-09C | 10.0 | 7.0 | 11.5 |
| AS-10C | 13.5 | 6.5 | 12.2 |
| AS-11C | 8.0 | 8.0 | 12.1 |
| AS-12C | 7.0 | 9.0 | 13.0 |
| AS-13C | 13.0 | 6.5 | 12.0 |
| AS-14C | 3.0 | 6.0 | 7.1 |
| AS-15C | 4.0 | 9.0 | 11.2 |
| AS-16C | 10.0 | 7.0 | 11.5 |
| AS-17C | 8.0 | 8.0 | 12.1 |
| AS-18C | 4.5 | 9.0 | 11.5 |
| AS-19C | 7.0 | 8.0 | 11.6 |
| AS-20C | 15.0 | 4.0 | 7.9 |
| AS-21C | 15.0 | 4.0 | 7.9 |
| AS-22C | 4.0 | 9.0 | 11.2 |
| AS-23C | 4.5 | 9.0 | 11.5 |
| AS-24C | 8.0 | 8.0 | 12.1 |
| AS-25C | 15.0 | 3.0 | 5.9 |
| AS-26C | 14.0 | 6.0 | 11.5 |
| AS-27C | 15.0 | 3.5 | 6.9 |
| AS-28C | 15.0 | 3.0 | 5.9 |
| AS-29C | 10.0 | 7.0 | 11.5 |
| AS-30C | 8.0 | 8.0 | 12.1 |
| AS-31C | 14.0 | 4.0 | 7.7 |
| AS-01D | 9.0 | 6.5 | 10.3 |
| AS-02D | 16.0 | 0.0 | 0.0 |
| AS-03D | 13.0 | 8.0 | 14.8 |
| AS-04D | 14.0 | 8.0 | 15.3 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| <hr/> | | | |
| 9/2/2009 | | | |
| AS-05D | 4.0 | 10.0 | 12.5 |
| AS-06D | 6.5 | 9.0 | 12.7 |
| AS-07D | 10.0 | 6.0 | 9.9 |
| AS-08D | 8.0 | 6.5 | 9.8 |
| AS-09D | NR | NR | NR |
| AS-10D | 5.0 | 8.0 | 10.5 |
| AS-11D | 15.5 | 0.0 | 0.0 |
| AS-12D | 5.0 | 7.5 | 9.9 |
| AS-13D | 4.0 | 8.0 | 10.0 |
| AS-14D | 3.5 | 8.0 | 9.7 |
| AS-15D | 5.0 | 8.0 | 10.5 |
| AS-16D | 10.0 | 6.0 | 9.9 |
| AS-17D | 13.0 | 4.5 | 8.3 |
| AS-18D | 4.0 | 8.0 | 10.0 |
| AS-19D | 3.0 | 8.5 | 10.0 |
| AS-20D | 6.5 | 7.0 | 9.9 |
| AS-21D | 12.0 | 5.5 | 9.8 |
| AS-22D | 3.0 | 9.0 | 10.6 |
| AS-23D | 7.0 | 5.5 | 8.0 |
| AS-24D | 8.0 | 7.0 | 10.6 |
| AS-25D | 6.0 | 10.0 | 13.8 |
| AS-26D | 5.5 | 7.5 | 10.1 |
| AS-27D | 10.5 | 6.0 | 10.1 |
| AS-28D | 8.0 | 7.0 | 10.6 |
| AS-29D | 7.0 | 7.0 | 10.1 |
| AS-30D | 8.0 | 7.0 | 10.6 |
| AS-31D | 5.0 | 8.0 | 10.5 |
| AS-01E | 5.0 | 8.0 | 10.5 |
| AS-02E | 11.0 | 4.0 | 6.9 |
| AS-03E | 6.0 | 7.0 | 9.7 |
| AS-04E | 10.0 | 6.0 | 9.9 |
| AS-05E | 9.0 | 6.0 | 9.5 |
| AS-06E | 10.0 | 7.0 | 11.5 |
| AS-07E | 8.0 | 8.0 | 12.1 |
| AS-08E | 4.0 | 10.0 | 12.5 |
| <hr/> | | | |
| 9/11/2009 | | | |
| AS-01D | 10.0 | 5.5 | 9.1 |
| AS-02D | 15.0 | 0.0 | 0.0 |
| AS-03D | 9.0 | 5.0 | 7.9 |
| AS-04D | 13.0 | 5.0 | 9.2 |
| AS-05D | 6.0 | 9.5 | 13.1 |
| AS-06D | 6.0 | 8.5 | 11.7 |
| AS-07D | 10.0 | 5.0 | 8.2 |
| AS-08D | 11.5 | 7.0 | 12.2 |
| AS-09D | 3.0 | 9.5 | 11.2 |

Table 4
Air Sparge Well Air Flow Data

Dover Municipal Landfill Superfund Site, Dover, NH

| AS Well ID | Pressure (psi) | Flow (acf m) | Flow (scfm) |
|------------|-------------------|-----------------|----------------|
| 9/11/2009 | | | |
| AS-10D | 7.0 | 7.0 | 10.1 |
| AS-11D | 15.0 | 0.0 | 0.0 |
| AS-12D | 15.0 | 0.0 | 0.0 |
| AS-13D | 5.0 | 9.0 | 11.8 |
| AS-14D | 5.0 | 8.0 | 10.5 |
| AS-15D | 5.0 | 8.0 | 10.5 |
| AS-16D | 11.0 | 8.0 | 13.7 |
| AS-17D | 15.0 | 4.0 | 7.9 |
| AS-18D | 5.0 | 10.0 | 13.1 |
| AS-19D | 3.0 | 9.0 | 10.6 |
| AS-20D | 12.0 | 7.5 | 13.4 |
| AS-21D | 12.0 | 7.0 | 12.5 |
| AS-22D | 2.5 | 10.0 | 11.5 |
| AS-23D | 14.0 | 3.0 | 5.7 |
| AS-24D | 11.5 | 7.5 | 13.1 |
| AS-25D | 3.0 | 10.0 | 11.8 |
| AS-26D | 5.0 | 10.0 | 13.1 |
| AS-27D | 12.0 | 7.0 | 12.5 |
| AS-28D | 10.0 | 7.0 | 11.5 |
| AS-29D | 12.5 | 5.5 | 10.0 |
| AS-30D | 14.0 | 3.3 | 6.2 |
| AS-31D | 13.0 | 6.0 | 11.1 |

Notes:

psi = pounds per square inch.

acf m = actual cubic feet per minute.

scfm = standard cubic feet per minute.

Equation for conversion of acfm to scfm = (flow [in acfm]) * [(14.7 + pressure [in psi]) / 14.7] * [520 / (460 + 70 deg. F)]

NR = Data not recorded.

System start date was 8/10/2009 and all data was collected prior to 8/10/09 was a component of either startup/shake down or compliance sampling.

Initial Design Flow Rate = 10 scfm.

Suffix A,B,C,D = each leg of system in the volatile organic compound treatment area.

Suffix E = E leg of system in the perimeter treatment curtain.

Table 5
Soil Vapor Extraction Well Air Flow Data
Dover Municipal Landfill Superfund Site, Dover, NH

| SVE Well ID | Vacuum (in. H ₂ O) | Differential Pressure (in. H ₂ O) | Flow (scfm) | Total VOCs (ppmv) |
|-------------|----------------------------------|--|----------------|----------------------|
| 6/23/2009 | | | | |
| SVE-01 | 3.4 | 0.94 | 53.02 | 7.0 |
| SVE-02 | 2.8 | 0.88 | 51.34 | 10.5 |
| SVE-03 | 2.2 | 0.65 | 44.15 | 19.8 |
| SVE-04 | 2.2 | 0.22 | 25.69 | 19.3 |
| SVE-05 | 2.2 | 0.04 | 10.95 | 9.4 |
| SVE-06 | 1.4 | 0.14 | 20.51 | 5.5 |
| SVE-07 | 4.6 | 2.00 | 77.22 | 12.2 |
| SVE-08 | 3.8 | 0.20 | 24.44 | 54.8 |
| SVE-09 | 3 | 0.10 | 17.30 | 909.0 |
| SVE-10 | 2.2 | 0.12 | 18.97 | 2,875.0 |
| SVE-11 | 1.6 | 0.26 | 27.95 | 178.0 |
| SVE-12 | 1.2 | 0.18 | 23.26 | 76.2 |
| SVE-13 | 7.8 | 0.20 | 24.32 | 507.0 |
| SVE-14 | 5.8 | 0.70 | 45.62 | 631.0 |
| SVE-15 | 5.8 | 0.22 | 25.57 | 525.0 |
| SVE-16 | 5.4 | 0.26 | 27.81 | 4,221.0 |
| SVE-16 | 5.4 | 0.16 | 21.82 | 4,221.0 |
| SVE-17 | 4.8 | 0.30 | 29.90 | 3,306.0 |
| SVE-18 | 5 | 0.38 | 33.64 | 35.0 |
| SVE-19 | 5.8 | 0.08 | 15.42 | 118.0 |
| SVE-20 | 4.8 | 0.24 | 26.74 | 100.0 |
| SVE-21 | 1.2 | 0.14 | 20.52 | 7.3 |
| SVE-22 | 1.6 | 0.04 | 10.96 | 10.3 |
| SVE-23 | 1.4 | 0.08 | 15.51 | 36.2 |
| 7/6/2009 | | | | |
| SVE-01 | 1.4 | 0.30 | 30.03 | nm |
| SVE-02 | 1.2 | 0.28 | 29.01 | nm |
| SVE-03 | 1.3 | 0.30 | 30.03 | nm |
| SVE-04 | 1.4 | 0.26 | 27.95 | nm |
| SVE-05 | 6.8 | 0.02 | 7.70 | nm |

Table 5
Soil Vapor Extraction Well Air Flow Data
Dover Municipal Landfill Superfund Site, Dover, NH

| SVE Well ID | Vacuum (in. H ₂ O) | Differential Pressure (in. H ₂ O) | Flow (scfm) | Total VOCs (ppmv) |
|------------------|----------------------------------|--|----------------|----------------------|
| 7/6/2009 | | | | |
| SVE-06 | 2 | 0.30 | 30.00 | nm |
| SVE-07 | 1 | 0.26 | 27.97 | nm |
| SVE-08 | 5 | 0.32 | 30.87 | nm |
| SVE-09 | 8.2 | 0.34 | 31.70 | nm |
| SVE-10 | 2.5 | 0.20 | 24.48 | nm |
| SVE-11 | 1.4 | 0.30 | 30.03 | nm |
| SVE-12 | 1.6 | 0.24 | 26.85 | nm |
| SVE-13 | 0.1 | 0.30 | 30.07 | nm |
| SVE-14 | 3.2 | 0.27 | 28.42 | nm |
| SVE-15 | 6 | 0.24 | 26.70 | nm |
| SVE-16 | 6 | 0.24 | 26.70 | nm |
| SVE-17 | 3.4 | 0.22 | 25.65 | nm |
| SVE-18 | 3.8 | 0.26 | 27.87 | nm |
| SVE-19 | 9 | 0.20 | 24.29 | nm |
| SVE-20 | 5.8 | 0.36 | 32.71 | nm |
| SVE-21 | 1 | 0.20 | 24.53 | nm |
| SVE-22 | 5 | 0.16 | 21.83 | nm |
| SVE-23 | 4.4 | 0.24 | 26.76 | nm |
| SVE-24 | 5 | 0.02 | 7.72 | nm |
| SVE-25 | 4.8 | 0.06 | 13.37 | nm |
| SVE-26 | 4.8 | 0.02 | 7.72 | nm |
| SVE-27 | 4.7 | 0.06 | 13.37 | nm |
| SVE-28 | 5 | 0.04 | 10.91 | nm |
| SVE-29 | 5 | 0.06 | 13.37 | nm |
| SVE-30 | 4.8 | 0.06 | 13.37 | nm |
| SVE-31 | 4.6 | 0.08 | 15.44 | nm |
| 8/21/2009 | | | | |
| SVE-01 | 1.65 | 0.25 | 27.40 | 42.6 |
| SVE-02 | 1.05 | 0.25 | 27.42 | 203.0 |
| SVE-03 | 1.15 | 0.25 | 27.42 | 499.0 |

Table 5
Soil Vapor Extraction Well Air Flow Data
Dover Municipal Landfill Superfund Site, Dover, NH

| SVE Well ID | Vacuum (in. H2O) | Differential Pressure (in. H2O) | Flow (scfm) | Total VOCs (ppmv) |
|-------------|---------------------|---------------------------------------|----------------|----------------------|
| 8/21/2009 | | | | |
| SVE-04 | 1.25 | 0.25 | 27.41 | 54.6 |
| SVE-05 | 4.75 | 0.15 | 21.14 | 231.0 |
| SVE-06 | 1.6 | 0.25 | 27.40 | 26.0 |
| SVE-07 | 1 | 0.30 | 30.04 | 268.0 |
| SVE-08 | 6 | 0.25 | 27.25 | 1,020.0 |
| SVE-09 | 5.8 | 0.30 | 29.86 | 1,650.0 |
| SVE-10 | 3 | 0.30 | 29.97 | 3,450.0 |
| SVE-11 | 1.05 | 0.25 | 27.42 | 1,030.0 |
| SVE-12 | 0.9 | 0.20 | 24.53 | 611.0 |
| SVE-13 | 10 | 0.25 | 27.12 | 1,040.0 |
| SVE-14 | 2 | 0.25 | 27.39 | 1,370.0 |
| SVE-15 | 6.5 | 0.30 | 29.84 | 4,000.0 |
| SVE-16 | 4 | 0.25 | 27.32 | 4,000.0 |
| SVE-17 | 3 | 0.17 | 22.56 | 2,480.0 |
| SVE-18 | 5 | 0.30 | 29.89 | 547.0 |
| SVE-19 | 8.5 | 0.28 | 28.75 | 320.0 |
| SVE-20 | 7 | 0.26 | 27.76 | 204.0 |
| SVE-21 | 1.1 | 0.30 | 30.04 | 29.0 |
| SVE-22 | 4.5 | 0.22 | 25.61 | 59.2 |
| SVE-23 | 2 | 0.30 | 30.00 | 69.4 |
| SVE-24 | 4.5 | 0.05 | 12.21 | 15.5 |
| SVE-25 | 4.5 | 0.05 | 12.21 | 10.3 |
| SVE-26 | 4.5 | 0.05 | 12.21 | 163.0 |
| SVE-27 | 4.5 | 0.05 | 12.21 | 6.5 |
| SVE-28 | 4.5 | 0.05 | 12.21 | 13.3 |
| SVE-29 | 2 | 0.05 | 12.25 | 55.4 |
| SVE-30 | 4.5 | 0.05 | 12.21 | 8.2 |
| SVE-31 | 4.5 | 0.05 | 12.21 | 6.1 |

Table 5
Soil Vapor Extraction Well Air Flow Data
Dover Municipal Landfill Superfund Site, Dover, NH

| SVE Well ID | Vacuum (in. H ₂ O) | Differential Pressure (in. H ₂ O) | Flow (scfm) | Total VOCs (ppmv) |
|-------------|----------------------------------|--|----------------|----------------------|
|-------------|----------------------------------|--|----------------|----------------------|

Notes:

SVE = Soil Vapor Extraction
VOCs = Volatile Organic Compounds
in. H₂O = inches of water
scfm = standard cubic feet per minute
ppmv = parts per million by volume

1. Vacuum and differential pressure measured in the field using a Dwyer DS-300 for a 2-inch-diameter pipe . Flow was calculated from the field measurements.
2. Total VOCs were measured in the field using a photoionization detector.
3. During June 2009 field event, total VOCs were measured on June 26, 2009 due to weather conditions/equipment malfunction.

SVE-01 through SVE-23 Design Flow Rate per the Workplan = 25 scfm.
SVE-24 through SVE-31 Design Flow Rate per the Workplan = 12.5 scfm.
Start date for the system is 8/10/2009

Table 6
Process Monitoring

Dover Municipal Landfill Superfund Site, Dover, NH

| Date | Event Type | SVE Total Air Flow (scfm) | SVE Vacuum (in. Hg) | SVE Disc. Temp. (deg. F) | SVE Total Runtime (hrs) | Air Sparge PTC-Total Air Flow (scfm) | Air Sparge PTC-Pressure (psi) | Air Sparge PTC-Disc. Temp. (deg. F) | Air Sparge PTC-Total Runtime (scfm) | Air Sparge VOCTA- Total Air Flow (scfm) | Air Sparge VOCTA-Pressure (psi) | Air Sparge VOCTA-Disc. Temp. (deg. F) | Air Sparge VOCTA-Total Runtime* (hrs) | Transfer Pump - Total Runtime^ (hrs) |
|-----------|------------|---------------------------|---------------------|--------------------------|-------------------------|--------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|---|---------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| 7/7/2009 | A | 753 | 5 | 113 | 238 | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| 7/10/2009 | A | 743 | 6 | 84 | 315 | NR | NR | NR | NR | NR | NR | NR | NR | 4 |
| 7/13/2009 | A | 740 | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| 7/14/2009 | A | 750 | NR | 130 | NR | NR | NR | NR | NR | 440 | 7 | 92 | NR | NR |
| 7/17/2009 | A | 738 | 6 | 139 | 428 | NR | NR | NR | 21 | NR | NR | NR | 40 | 9 |
| 7/21/2009 | A | 767 | 6 | 107 | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| 7/22/2009 | A | 759 | 6 | 144 | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| 7/23/2009 | A | 761 | 5 | 82 | NR | NR | NR | NR | NR | NR | NR | NR | NR | NR |
| 7/31/2009 | A | 745 | 6 | 125 | 584 | NR | NR | NR | NR | 454 | 9 | 92 | 53 | 9 |
| 8/4/2009 | A | 742 | 5 | 128 | NR | NR | NR | NR | NR | 430 | 11 | 93 | NR | NR |
| 8/10/2009 | B | 730 | 47 | 140 | 762 | 100 | 10 | 140 | 125 | 380 | 10 | 110 | 288 | 6 |
| 8/21/2009 | B | 725 | 45 | 150 | 993 | 100 | 11 | 145 | 194 | 420 | 9 | 114 | 675 | 6 |
| 8/31/2009 | A | 725 | 3 | 134 | 1,162 | 100 | 12 | 120 | 236 | 421 | 12 | 101 | 998 | 9 |
| 9/4/2009 | A | 733 | 3 | 132 | 1,242 | 100 | 13 | 115 | 262 | 404 | 13 | 99 | 1,155 | 9 |
| 9/11/2009 | B | 730 | 50 | 125 | 1,405 | 105 | 13 | 130 | 308 | 380 | 18 | 94 | 1,488 | 6 |
| 9/18/2009 | A | 722 | 3 | 130 | 1,562 | 100 | 12 | 120 | 400 | 397 | 15 | 95 | 1,789 | 10 |
| 9/25/2009 | B | 730 | 49 | 135 | 1,675 | 100 | 13 | 120 | 427 | 380 | 18 | 83 | 2,025 | 7 |
| 10/2/2009 | A | 746 | 3 | 122 | 1,699 | 100 | 13 | 116 | 1,035 | 442 | 18 | 90 | 2,071 | 7 |

Table 6
Process Monitoring

Dover Municipal Landfill Superfund Site, Dover, NH

| Date | Event Type | SVE Total Air Flow (scfm) | SVE Vacuum (in. Hg) | SVE Disc. Temp. (deg. F) | SVE Total Runtime (hrs) | Air Sparge PTC-Total Air Flow (scfm) | Air Sparge PTC-Pressure (psi) | Air Sparge PTC-Disc. Temp. (deg. F) | Air Sparge PTC-Total Runtime (scfm) | Air Sparge VOCTA- Total Air Flow (scfm) | Air Sparge VOCTA-Pressure (psi) | Air Sparge VOCTA-Disc. Temp. (deg. F) | Air Sparge VOCTA-Total Runtime* (hrs) | Transfer Pump - Total Runtime^ (hrs) |
|------|------------|---------------------------|---------------------|--------------------------|-------------------------|--------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|---|---------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
|------|------------|---------------------------|---------------------|--------------------------|-------------------------|--------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|---|---------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|

Notes:

SVE = Soil Vapor Extraction

in. Hg = inches of mercury

deg. F = degrees Fahrenheit

hrs = hours

scfm = standard cubic feet per minute

psi = pounds per square inch

ppmv = parts per million by volume

PTC = Perimeter Treatment Curtain

VOCTA = Volatile Organic Carbon Treatment Area

NR = Not recorded due to data available for event type.

Disc. Temp. = Discharge Temperature

A = Recorded during site visit

B = Recorded during telemetry status check

The flow rate readings for the VOCTA recorded via telemetry in August and September 2009 [Event Type A] are biased high due to the unit's calibration. More accurate flow rates were recorded during site visits [Event Type B].

Start date for system was 8/10/09.

* = Two air compressors provide sparge air to the VOCTA. The air sparge runtime for the VOCTA is an average value of the two air compressors.

^ = Total runtime hours for the transfer pump differ between the site visit readings and telemetry readings; site visit readings are assumed to be more accurate.

Table 7
SVE Discharge VOC Concentrations
Dover Municipal Landfill Superfund Site, Dover, NH

| Sample Event | Sample Date | PCE | TCE | 1,1,1-TCA | 1,1-DCA | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethyl-benzene | Toluene | m&p-Xylenes | o-Xylene | Methylene chloride | |
|---------------------------------------|-------------|-------|--------|-----------|---------|---------|-------------|---------------|----------------|-------------------------|-------------------------|---------|---------------|---------|-------------|----------|--------------------|------|
| (Concentrations are reported in ppmv) | | | | | | | | | | | | | | | | | | |
| Maximum Allowable Stack Concentration | | 7,829 | 15,644 | 109,359 | 44,031 | 4,413 | 364,517 | 364,554 | 318 | 11,017 | 11,017 | 156 | 20,726 | 15,579 | 31,232 | 31,232 | 234 | |
| SVE | 6/19/2009 | | 43.0 | 9.2 | 5.9 | 14.0 | 1.4 | 410.0 | 0.8 | 71.0 | 1.5 | 0.7 | 0.6 U | 9.4 | 140.0 | 25.0 | 6.2 | 84.0 |
| SVE | 7/6/2009 | | 58.0 | 8.5 | 4.0 | 7.4 | 0.5 | 210.0 | 0.5 | 13.0 | 3.7 | 1.4 | 0.3 U | 11.0 | 120.0 | 31.0 | 8.4 | 40.0 |
| AS/SVE (Line A) | 7/14/2009 | | 76.0 | 10.0 | 10.0 | 9.3 | 0.6 | 200.0 | 0.5 | 21.0 | 4.1 | 1.7 | 0.3 | 14.0 | 140.0 | 38.0 | 10.0 | 46.0 |
| AS/SVE (Line C) | 7/14/2009 | | 84.0 | 11.0 | 16.0 | 10.0 | 0.8 | 230.0 | 0.6 | 21.0 | 4.2 | 1.8 | 0.5 U | 15.0 | 160.0 | 42.0 | 11.0 | 52.0 |
| AS/SVE (Line B) | 7/15/2009 | | 72.0 | 9.4 | 14.0 | 8.4 | 0.6 | 180.0 | 0.5 | 18.0 | 3.7 | 1.5 | 0.3 U | 13.0 | 130.0 | 35.0 | 9.8 | 39.0 |
| AS/SVE (Line D) | 7/15/2009 | | 76.0 | 9.9 | 12.0 | 9.2 | 0.6 | 190.0 | 0.5 | 21.0 | 3.9 | 1.6 | 0.3 U | 13.0 | 140.0 | 36.0 | 10.0 | 43.0 |
| AS/SVE (Line E) | 7/27/2009 | | 40.0 J | 8.1 | 4.0 | 5.4 | 0.3 | 130.0 | 0.4 | 6.2 | 3.8 | 1.4 | 0.2 U | 11.0 | 110.0 | 32.0 | 9.0 | 28.0 |
| SVE | 8/14/2009 | | 68.0 | 8.9 | 13.0 | 7.6 | 0.4 U | 130.0 | 0.4 | 6.0 | 2.2 | 1.1 | 0.4 U | 8.6 | 100.0 | 25.0 | 7.2 | 36.0 |
| AS/SVE (Line D) | 8/21/2009 | | 140.0 | 12.0 | 26.0 | 13.0 | 1.1 U | 200.0 | 1.1 U | 6.6 | 6.3 | 3.0 | 1.1 U | 17.0 | 190.0 | 53.0 | 16.0 | 65.0 |
| AS/SVE (Line B) | 9/25/2009 | | 140.0 | 11.0 | 14.0 | 6.5 | 1.0 U | 110.0 | 1.0 U | 3.9 | 4.9 | 2.6 | 1.0 U | 11.0 | 140.0 | 40.0 | 12.0 | 30.0 |

Notes:

Sample Event Designation SVE = Sample collected during operation of soil vapor extraction system only

Sample Event Designation AS/SVE(Line x) = Sample collected during operation of both the soil vapor extraction and air sparging systems (applicable air sparging system leg indicated in parentheses)

SVE = soil vapor extraction

VOC = volatile organic compound

ppmv = parts per million by volume

U = compound was not detected at the indicated concentration

PCE = Tetrachloroethene

TCE = Trichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

J = Estimated value

Table 8
Vapor Probe Data

Dover Municipal Superfund Site, Dover, NH

| Vapor Probe ID | Vacuum (in. H ₂ O) | Total VOCs (ppmv) | Methane (%) |
|----------------|-------------------------------|-------------------|-------------|
| <hr/> | | | |
| 8/21/2009 | | | |
| VP-01 | 0.04 | - | - |
| VP-02 | 0 | - | - |
| VP-03 | 0.18 | - | - |
| VP-04 | 0.4 | - | - |
| VP-05 | 0.1 | 14.2 | 0.4 |
| VP-06 | 0.02 | 0.7 | 0.4 |
| <hr/> | | | |
| 9/25/2009 | | | |
| VP-01 | 0.04 | - | - |
| VP-02 | 0 | - | - |
| VP-03 | 0.18 | - | - |
| VP-04 | 0.38 | - | - |
| <hr/> | | | |
| 10/8/2009 | | | |
| VP-05 | 0.08 | 2 | 0 |
| VP-06 | 0.1 | 18.6 | 0.1 |

Notes:

VOCs = Volatile Organic Compounds

in. H₂O = inches of water

ppmv = parts per million by volume

% = percentage

Total VOCs were measured in the field using a photoionization detector.

- = per the work plan, parameter was not recorded.

TABLE 9
Aqueous Results from Activated Carbon Influent and Effluent
Dover Municipal Landfill Superfund Site
Dover, New Hampshire

| Date | Sample ID | Unit | PCE | TCE | cDCE | tDCE | VC | 1,1-DCE | 1,1-DCA | 1,1,1-TCA | Chloroethane | MEK | MIBK | Freon 12 | Freon 11 | Freon 113 |
|-----------|-----------|------|-------|-----|-------|------|------|---------|---------|-----------|--------------|-------|-------|----------|----------|-----------|
| 9/25/2009 | Influent | ug/L | 1,600 | 190 | 3,500 | 20 U | 20 U | 10 U | 150 | 120 | 20 U | 1,800 | 1,100 | 20 U | 20 U | NA |
| | Effluent | | | 2 U | 2 U | 2 U | 2 U | 1 U | 2 U | 2 U | 2 U | 10 U | 10 U | 2 U | 2 U | NA |

| Date | Sample ID | Unit | Benzene | Toluene | Ethylbenzene | Total Xylenes | Isopropyl Benzene | 1,3,5-Trimethylbenzene | 1,2,4-Trimethylbenzene | Hexane | Cyclohexane | Heptane | Ethanol | Acetone | Methylene Chloride | THF | 2-Hexanone |
|-----------|-----------|------|---------|---------|--------------|---------------|-------------------|------------------------|------------------------|--------|-------------|---------|---------|---------|--------------------|------|------------|
| 9/25/2009 | Influent | ug/L | 20 U | 2,400 | 61 | 1,180 | 20 U | 78 | 140 | NA | NA | NA | NA | 820 | 1,300 | 240 | 150 |
| | Effluent | | | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | NA | NA | NA | NA | 50 U | 5 U | 10 U | 2 U |

Notes:

The 9/25/09 aqueous sample was collected as part of the September O&M event. No sample was collected during the August O&M event because insufficient volume of water was removed by the soil vapor extraction system air moister separator.

NA = compound was not analyzed

PCE = tetrachloroethene

DCA = dichloroethane

Freon 113 = 1,1,2-trichlorotrifluoroethane

TCE = trichloroethene

TCA = trichloroethane

THF = tetrahydrofuran

cDCE = cis-1,2-dichloroethene

MEK = 2-butanone

tDCE = trans-1,2-dichloroethene

MIBK = 4-methyl-2-pentanone

VC = vinyl chloride

Freon 12 = dichlorodifluoromethane

DCE = dichloroethene

Freon 11 = trichlorofluoromethane

U = compound was not detected at the reported concentration

Table 10
Mass Removal Total
Dover Municipal Landfill Superfund Site, Dover, NH

| Sample ID | Operational System Component | Sample Date | Cumulative Run Time | Flow Rate | Tetrachloroethene | | | Trichloroethene | | | 1,1,1-Trichloroethane | | | 1,1-Dichloroethane | | | 1,1-Dichloroethene | | | cis-1,2-Dichloroethene | | |
|----------------------------|------------------------------|-------------|---------------------|-----------|-------------------|-------|--------------|-----------------|-----------|------------|-----------------------|-----------|------------|--------------------|-----------|------------|--------------------|-----------|----------|------------------------|-----------|--------------|
| | | | | | hours | scfm | ppmv | lb/hr | total lbs | ppmv | lb/hr | total lbs | ppmv | lb/hr | total lbs | ppmv | lb/hr | Total lbs | ppmv | lb/hr | total lbs | |
| Stack-061909-A | SVE - Startup | 6/23/2009 | 15 | 750 | 43 | 0.819 | NC | 9.2 | 0.139 | NC | 5.9 | 0.090 | NC | 14 | 0.159 | NC | 1.4 | 0.016 | NC | 410 | 4.561 | NC |
| Stack-070609-A | SVE - Startup | 7/6/2009 | 214 | 750 | 58 | 1.105 | 192 | 8.5 | 0.128 | 27 | 4 | 0.061 | 15 | 7.4 | 0.084 | 24 | 0.46 | 0.005 | 2 | 210 | 2.336 | 687 |
| Stack-081409 | SVE | 8/14/2009 | 816 | 750 | 68 | 1.295 | 722 | 8.9 | 0.134 | 79 | 13 | 0.199 | 78 | 7.6 | 0.086 | 51 | 0 | 0.000 | 2 | 130 | 1.446 | 1,139 |
| Stack-082109 | AS | 8/21/2009 | 993 | 725 | 140 | 2.578 | 457 | 12 | 0.175 | 31 | 26 | 0.386 | 68 | 13 | 0.143 | 25 | 0 | 0.000 | 0 | 200 | 2.151 | 382 |
| Stack-092509 | AS | 9/25/2009 | 1675 | 730 | 140 | 2.595 | 1,770 | 11 | 0.162 | 110 | 14 | 0.209 | 143 | 6.5 | 0.072 | 49 | 0 | 0.000 | 0 | 110 | 1.191 | 812 |
| Total Mass Removed: | | | | | | | 3,141 | | | 247 | | | 305 | | | 150 | | | 4 | | | 3,019 |

| Sample ID | Operational System Component | Sample Date | Cumulative Run Time | Flow Rate | trans-1,2-Dichloroethene | | | Vinyl Chloride | | | 1,2,4-Trimethylbenzene | | | 1,3,5-Trimethylbenzene | | | Benzene | | | Ethylbenzene | | |
|----------------------------|------------------------------|-------------|---------------------|-----------|--------------------------|-------|----------|----------------|-----------|------------|------------------------|-----------|-----------|------------------------|-----------|-----------|---------|-----------|----------|--------------|-----------|------------|
| | | | | | hours | scfm | ppmv | lb/hr | total lbs | ppmv | lb/hr | Total lbs | ppmv | lb/hr | total lbs | ppmv | lb/hr | total lbs | ppmv | lb/hr | total lbs | ppmv |
| Stack-061909-A | SVE - Startup | 6/23/2009 | 15 | 750 | 0.75 | 0.008 | NC | 71 | 0.511 | NC | 1.5 | 0.021 | NC | 0.74 | 0.010 | NC | 0 | 0.000 | NC | 9.4 | 0.115 | NC |
| Stack-070609-A | SVE - Startup | 7/6/2009 | 214 | 750 | 0.49 | 0.005 | 1 | 13 | 0.093 | 60 | 3.7 | 0.051 | 7 | 1.4 | 0.019 | 3 | 0 | 0.000 | 0 | 11 | 0.134 | 25 |
| Stack-081409 | SVE | 8/14/2009 | 816 | 750 | 0.4 | 0.004 | 3 | 6 | 0.043 | 41 | 2.2 | 0.030 | 25 | 1.1 | 0.015 | 10 | 0 | 0.000 | 0 | 8.6 | 0.105 | 72 |
| Stack-082109 | AS | 8/21/2009 | 993 | 725 | 0 | 0.000 | 0 | 6.6 | 0.046 | 8 | 6.3 | 0.084 | 15 | 3 | 0.040 | 7 | 0 | 0.000 | 0 | 17 | 0.200 | 36 |
| Stack-092509 | AS | 9/25/2009 | 1675 | 730 | 0 | 0.000 | 0 | 3.9 | 0.027 | 19 | 4.9 | 0.066 | 45 | 2.6 | 0.035 | 24 | 0 | 0.000 | 0 | 11 | 0.131 | 89 |
| Total Mass Removed: | | | | | | | 4 | | | 128 | | | 92 | | | 44 | | | 0 | | | 221 |

| Sample ID | Operational System Component | Sample Date | Cumulative Run Time | Flow Rate | Toluene | | | m&p-Xylenes | | | o-Xylene | | | Methylene Chloride | | | Total VOCs | | |
|----------------------------|------------------------------|-------------|---------------------|-----------|---------|-------|--------------|-------------|-----------|------------|----------|-----------|------------|--------------------|-----------|------------|------------|-----------|---------------|
| | | | | | hours | scfm | ppmv | lb/hr | total lbs | ppmv | lb/hr | Total lbs | ppmv | lb/hr | Total lbs | ppmv | lb/day | total lbs | |
| Stack-061909-A | SVE - Startup | 6/23/2009 | 15 | 750 | 140 | 1.483 | NC | 25 | 0.305 | NC | 6.2 | 0.076 | NC | 84 | 0.819 | NC | 822 | 219.1 | NC |
| Stack-070609-A | SVE - Startup | 7/6/2009 | 214 | 750 | 120 | 1.271 | 274 | 31 | 0.378 | 68 | 8.4 | 0.102 | 18 | 40 | 0.390 | 120 | 517 | 147.9 | 1,523 |
| Stack-081409 | SVE | 8/14/2009 | 816 | 750 | 100 | 1.059 | 701 | 25 | 0.305 | 206 | 7.2 | 0.088 | 57 | 36 | 0.351 | 223 | 414 | 123.9 | 3,409 |
| Stack-082109 | AS | 8/21/2009 | 993 | 725 | 190 | 1.945 | 345 | 53 | 0.625 | 111 | 16 | 0.189 | 33 | 65 | 0.613 | 109 | 748 | 220.2 | 1,627 |
| Stack-092509 | AS | 9/25/2009 | 1675 | 730 | 140 | 1.443 | 984 | 40 | 0.475 | 324 | 12 | 0.142 | 97 | 30 | 0.285 | 194 | 526 | 164.0 | 4,660 |
| Total Mass Removed: | | | | | | | 2,305 | | | 708 | | | 206 | | | 646 | | | 11,220 |

Notes:

scfm = standard cubic feet per minute

ppmv = parts per million by volume

hr = hour

NC = not calculated

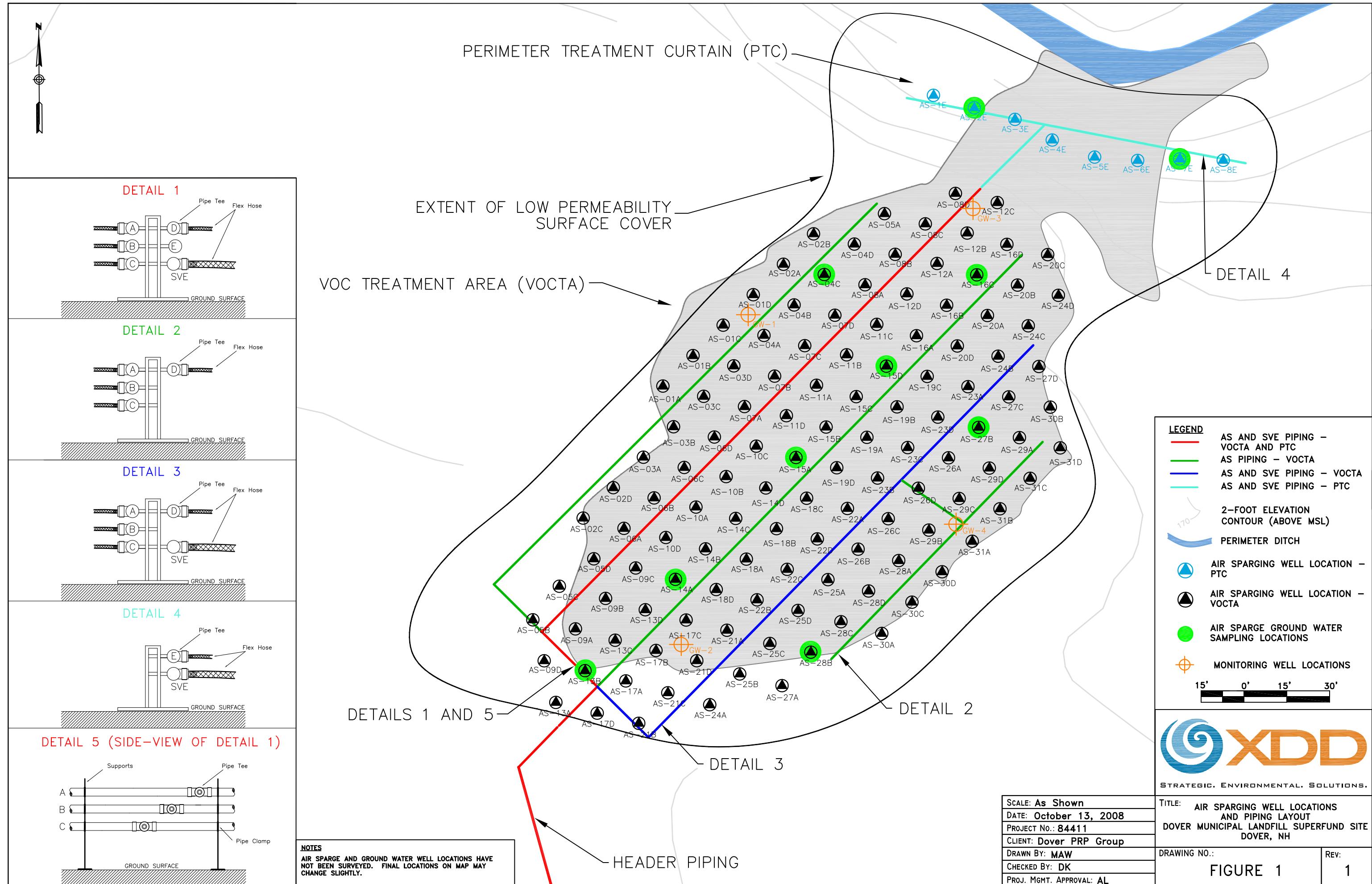
lb = pound

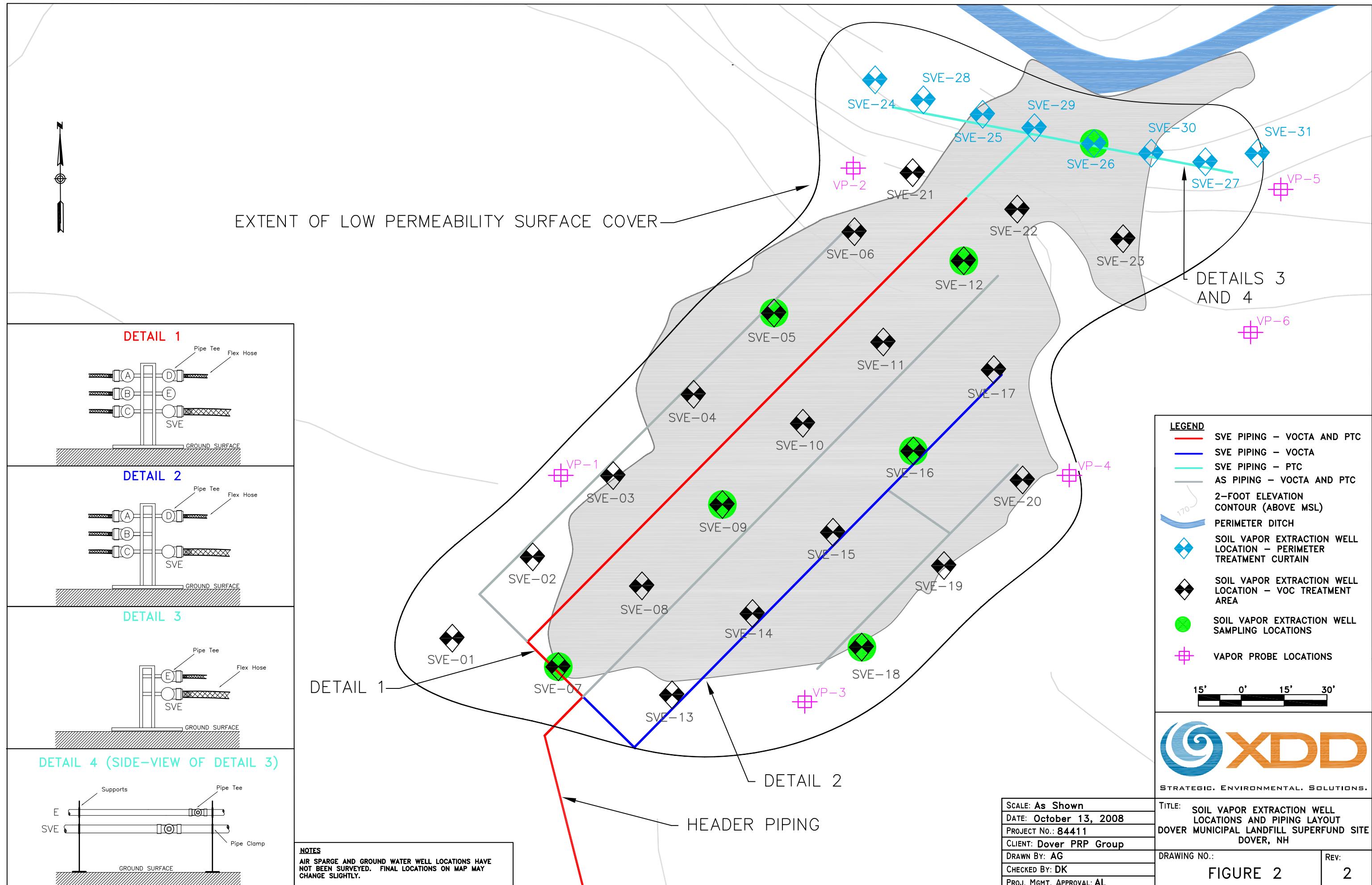
SVE = system operating in soil vapor extraction mode only

AS = system operating in air sparging and soil vapor extraction mode

VOCs = volatile organic compounds

FIGURES





ATTACHMENT A

8/4/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Municipal Landfill

Project #:

Workorder #: 0907583

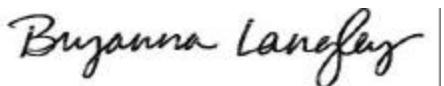
Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 7/28/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

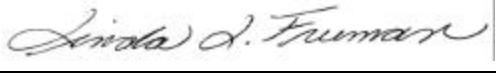
WORK ORDER #: 0907583

Work Order Summary

| | | | |
|------------------------|--|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1411 |
| FAX: | 603-778-2121 | PROJECT # | Dover Municipal Landfill |
| DATE RECEIVED: | 07/28/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 08/04/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|---------------------|----------------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | Line Stack E 072709 | Modified TO-15 (5&20 ppbv) | Tedlar Bag | Tedlar Bag |
| 02A | Lab Blank | Modified TO-15 (5&20 ppbv) | NA | NA |
| 03A | CCV | Modified TO-15 (5&20 ppbv) | NA | NA |
| 04A | LCS | Modified TO-15 (5&20 ppbv) | NA | NA |

CERTIFIED BY:



DATE: 08/04/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15 Soil Gas
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0907583**

One 1 Liter Tedlar Bag sample was received on July 28, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | + 30% Difference | </= 30% Difference with two allowed out up to </=40%; flag and narrate outliers |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Sample Line Stack E 072709 was transferred from a Tedlar bag into a summa canister to extend the hold time from 72 hours to 14 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no

performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: Line Stack E 072709

Lab ID#: 0907583-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Freon 12 | 210 | 240 | 1000 | 1200 |
| Vinyl Chloride | 210 | 6200 | 530 | 16000 |
| Chloroethane | 210 | 310 | 550 | 830 |
| Freon 11 | 210 | 1400 | 1200 | 7800 |
| Freon 113 | 210 | 470 | 1600 | 3600 |
| 1,1-Dichloroethene | 210 | 250 | 830 | 1000 |
| Acetone | 840 | 2800 | 2000 | 6800 |
| Methylene Chloride | 210 | 28000 | 730 | 98000 |
| trans-1,2-Dichloroethene | 210 | 350 | 830 | 1400 |
| Hexane | 210 | 1200 | 740 | 4300 |
| 1,1-Dichloroethane | 210 | 5400 | 850 | 22000 |
| 2-Butanone (Methyl Ethyl Ketone) | 210 | 8200 | 620 | 24000 |
| cis-1,2-Dichloroethene | 210 | 130000 | 830 | 520000 |
| 1,1,1-Trichloroethane | 210 | 4000 | 1100 | 22000 |
| Cyclohexane | 210 | 780 | 720 | 2700 |
| Heptane | 210 | 2100 | 860 | 8600 |
| Trichloroethene | 210 | 8100 | 1100 | 44000 |
| 4-Methyl-2-pentanone | 210 | 2200 | 860 | 9200 |
| Toluene | 210 | 110000 | 790 | 410000 |
| Tetrachloroethene | 210 | 40000 J | 1400 | 270000 J |
| Ethyl Benzene | 210 | 11000 | 910 | 48000 |
| m,p-Xylene | 210 | 32000 | 910 | 140000 |
| o-Xylene | 210 | 9000 | 910 | 39000 |
| Cumene | 210 | 660 | 1000 | 3300 |
| Propylbenzene | 210 | 1000 | 1000 | 4900 |
| 4-Ethyltoluene | 210 | 4400 | 1000 | 22000 |
| 1,3,5-Trimethylbenzene | 210 | 1400 | 1000 | 7000 |
| 1,2,4-Trimethylbenzene | 210 | 3800 | 1000 | 18000 |



Client Sample ID: Line Stack E 072709

Lab ID#: 0907583-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b080311 | Date of Collection: 7/27/09 2:08:00 PM | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 41.8 | Date of Analysis: 8/3/09 04:37 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 210 | 240 | 1000 | 1200 |
| Freon 114 | 210 | Not Detected | 1500 | Not Detected |
| Chloromethane | 840 | Not Detected | 1700 | Not Detected |
| Vinyl Chloride | 210 | 6200 | 530 | 16000 |
| 1,3-Butadiene | 210 | Not Detected | 460 | Not Detected |
| Bromomethane | 210 | Not Detected | 810 | Not Detected |
| Chloroethane | 210 | 310 | 550 | 830 |
| Freon 11 | 210 | 1400 | 1200 | 7800 |
| Ethanol | 840 | Not Detected | 1600 | Not Detected |
| Freon 113 | 210 | 470 | 1600 | 3600 |
| 1,1-Dichloroethene | 210 | 250 | 830 | 1000 |
| Acetone | 840 | 2800 | 2000 | 6800 |
| 2-Propanol | 840 | Not Detected | 2000 | Not Detected |
| Carbon Disulfide | 210 | Not Detected | 650 | Not Detected |
| 3-Chloropropene | 840 | Not Detected | 2600 | Not Detected |
| Methylene Chloride | 210 | 28000 | 730 | 98000 |
| Methyl tert-butyl ether | 210 | Not Detected | 750 | Not Detected |
| trans-1,2-Dichloroethene | 210 | 350 | 830 | 1400 |
| Hexane | 210 | 1200 | 740 | 4300 |
| 1,1-Dichloroethane | 210 | 5400 | 850 | 22000 |
| 2-Butanone (Methyl Ethyl Ketone) | 210 | 8200 | 620 | 24000 |
| cis-1,2-Dichloroethene | 210 | 130000 | 830 | 520000 |
| Tetrahydrofuran | 210 | Not Detected | 620 | Not Detected |
| Chloroform | 210 | Not Detected | 1000 | Not Detected |
| 1,1,1-Trichloroethane | 210 | 4000 | 1100 | 22000 |
| Cyclohexane | 210 | 780 | 720 | 2700 |
| Carbon Tetrachloride | 210 | Not Detected | 1300 | Not Detected |
| 2,2,4-Trimethylpentane | 210 | Not Detected | 980 | Not Detected |
| Benzene | 210 | Not Detected | 670 | Not Detected |
| 1,2-Dichloroethane | 210 | Not Detected | 840 | Not Detected |
| Heptane | 210 | 2100 | 860 | 8600 |
| Trichloroethene | 210 | 8100 | 1100 | 44000 |
| 1,2-Dichloropropane | 210 | Not Detected | 960 | Not Detected |
| 1,4-Dioxane | 840 | Not Detected | 3000 | Not Detected |
| Bromodichloromethane | 210 | Not Detected | 1400 | Not Detected |
| cis-1,3-Dichloropropene | 210 | Not Detected | 950 | Not Detected |
| 4-Methyl-2-pentanone | 210 | 2200 | 860 | 9200 |
| Toluene | 210 | 110000 | 790 | 410000 |
| trans-1,3-Dichloropropene | 210 | Not Detected | 950 | Not Detected |



Client Sample ID: Line Stack E 072709

Lab ID#: 0907583-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b080311 | Date of Collection: 7/27/09 2:08:00 PM | | |
|---------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 41.8 | Date of Analysis: 8/3/09 04:37 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 210 | Not Detected | 1100 | Not Detected |
| Tetrachloroethene | 210 | 40000 J | 1400 | 270000 J |
| 2-Hexanone | 840 | Not Detected | 3400 | Not Detected |
| Dibromochloromethane | 210 | Not Detected | 1800 | Not Detected |
| 1,2-Dibromoethane (EDB) | 210 | Not Detected | 1600 | Not Detected |
| Chlorobenzene | 210 | Not Detected | 960 | Not Detected |
| Ethyl Benzene | 210 | 11000 | 910 | 48000 |
| m,p-Xylene | 210 | 32000 | 910 | 140000 |
| o-Xylene | 210 | 9000 | 910 | 39000 |
| Styrene | 210 | Not Detected | 890 | Not Detected |
| Bromoform | 210 | Not Detected | 2200 | Not Detected |
| Cumene | 210 | 660 | 1000 | 3300 |
| 1,1,2,2-Tetrachloroethane | 210 | Not Detected | 1400 | Not Detected |
| Propylbenzene | 210 | 1000 | 1000 | 4900 |
| 4-Ethyltoluene | 210 | 4400 | 1000 | 22000 |
| 1,3,5-Trimethylbenzene | 210 | 1400 | 1000 | 7000 |
| 1,2,4-Trimethylbenzene | 210 | 3800 | 1000 | 18000 |
| 1,3-Dichlorobenzene | 210 | Not Detected | 1200 | Not Detected |
| 1,4-Dichlorobenzene | 210 | Not Detected | 1200 | Not Detected |
| alpha-Chlorotoluene | 210 | Not Detected | 1100 | Not Detected |
| 1,2-Dichlorobenzene | 210 | Not Detected | 1200 | Not Detected |
| 1,2,4-Trichlorobenzene | 840 | Not Detected | 6200 | Not Detected |
| Hexachlorobutadiene | 840 | Not Detected | 8900 | Not Detected |

J = Estimated value due to bias in the CCV.

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0907583-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b080307 | Date of Collection: NA | | |
|----------------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 02:26 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 5.0 | Not Detected | 13 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.0 | Not Detected | 15 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0907583-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b080307 | Date of Collection: NA | | |
|---------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 02:26 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected U J | 34 | Not Detected U J |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0907583-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b080305 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 01:27 PM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 92 |
| Freon 114 | 92 |
| Chloromethane | 89 |
| Vinyl Chloride | 97 |
| 1,3-Butadiene | 97 |
| Bromomethane | 95 |
| Chloroethane | 97 |
| Freon 11 | 88 |
| Ethanol | 108 |
| Freon 113 | 101 |
| 1,1-Dichloroethene | 97 |
| Acetone | 97 |
| 2-Propanol | 83 |
| Carbon Disulfide | 102 |
| 3-Chloropropene | 103 |
| Methylene Chloride | 95 |
| Methyl tert-butyl ether | 107 |
| trans-1,2-Dichloroethene | 103 |
| Hexane | 102 |
| 1,1-Dichloroethane | 96 |
| 2-Butanone (Methyl Ethyl Ketone) | 104 |
| cis-1,2-Dichloroethene | 93 |
| Tetrahydrofuran | 90 |
| Chloroform | 94 |
| 1,1,1-Trichloroethane | 90 |
| Cyclohexane | 103 |
| Carbon Tetrachloride | 88 |
| 2,2,4-Trimethylpentane | 103 |
| Benzene | 97 |
| 1,2-Dichloroethane | 86 |
| Heptane | 105 |
| Trichloroethene | 94 |
| 1,2-Dichloropropane | 97 |
| 1,4-Dioxane | 96 |
| Bromodichloromethane | 99 |
| cis-1,3-Dichloropropene | 94 |
| 4-Methyl-2-pentanone | 105 |
| Toluene | 101 |
| trans-1,3-Dichloropropene | 92 |



Client Sample ID: CCV

Lab ID#: 0907583-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b080305 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 01:27 PM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 127 |
| Tetrachloroethene | 62 Q |
| 2-Hexanone | 102 |
| Dibromochloromethane | 105 |
| <u>1,2-Dibromoethane (EDB)</u> | 95 |
| Chlorobenzene | 97 |
| Ethyl Benzene | 95 |
| m,p-Xylene | 99 |
| o-Xylene | 101 |
| Styrene | 104 |
| Bromoform | 113 |
| Cumene | 99 |
| 1,1,2,2-Tetrachloroethane | 103 |
| Propylbenzene | 112 |
| <u>4-Ethyltoluene</u> | 122 |
| 1,3,5-Trimethylbenzene | 93 |
| 1,2,4-Trimethylbenzene | 112 |
| 1,3-Dichlorobenzene | 107 |
| 1,4-Dichlorobenzene | 108 |
| <u>alpha-Chlorotoluene</u> | 106 |
| 1,2-Dichlorobenzene | 106 |
| 1,2,4-Trichlorobenzene | 122 |
| Hexachlorobutadiene | 126 |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0907583-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b080306 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 01:55 PM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 85 |
| Freon 114 | 89 |
| Chloromethane | 83 |
| Vinyl Chloride | 95 |
| 1,3-Butadiene | 89 |
| Bromomethane | 95 |
| Chloroethane | 95 |
| Freon 11 | 86 |
| Ethanol | 63 |
| Freon 113 | 101 |
| 1,1-Dichloroethene | 96 |
| Acetone | 94 |
| 2-Propanol | 90 |
| Carbon Disulfide | 95 |
| 3-Chloropropene | 92 |
| Methylene Chloride | 93 |
| Methyl tert-butyl ether | 99 |
| trans-1,2-Dichloroethene | 93 |
| Hexane | 92 |
| 1,1-Dichloroethane | 95 |
| 2-Butanone (Methyl Ethyl Ketone) | 94 |
| cis-1,2-Dichloroethene | 93 |
| Tetrahydrofuran | 81 |
| Chloroform | 93 |
| 1,1,1-Trichloroethane | 90 |
| Cyclohexane | 92 |
| Carbon Tetrachloride | 87 |
| 2,2,4-Trimethylpentane | 91 |
| Benzene | 96 |
| 1,2-Dichloroethane | 85 |
| Heptane | 93 |
| Trichloroethene | 94 |
| 1,2-Dichloropropane | 96 |
| 1,4-Dioxane | 92 |
| Bromodichloromethane | 92 |
| cis-1,3-Dichloropropene | 98 |
| 4-Methyl-2-pentanone | 96 |
| Toluene | 102 |
| trans-1,3-Dichloropropene | 96 |



Client Sample ID: LCS

Lab ID#: 0907583-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b080306 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/3/09 01:55 PM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 124 |
| Tetrachloroethene | 64 Q |
| 2-Hexanone | 94 |
| Dibromochloromethane | 95 |
| <u>1,2-Dibromoethane (EDB)</u> | 93 |
| Chlorobenzene | 95 |
| Ethyl Benzene | 93 |
| m,p-Xylene | 96 |
| o-Xylene | 99 |
| Styrene | 107 |
| Bromoform | 103 |
| Cumene | 98 |
| 1,1,2,2-Tetrachloroethane | 103 |
| Propylbenzene | 96 |
| <u>4-Ethyltoluene</u> | 112 |
| 1,3,5-Trimethylbenzene | 88 |
| 1,2,4-Trimethylbenzene | 108 |
| 1,3-Dichlorobenzene | 103 |
| 1,4-Dichlorobenzene | 102 |
| <u>alpha-Chlorotoluene</u> | 122 |
| 1,2-Dichlorobenzene | 104 |
| 1,2,4-Trichlorobenzene | 131 Q |
| Hexachlorobutadiene | 139 Q |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 87 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

9/30/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Landfill

Project #: 84411

Workorder #: 0909582

Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 9/26/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

WORK ORDER #: 0909582

Work Order Summary

| | | | |
|------------------------|---|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1501 |
| FAX: | 603-778-2121 | PROJECT # | 84411 Dover Landfill |
| DATE RECEIVED: | 09/26/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 09/30/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|--------------------|---------------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | SVESTACK092509 | Modified TO-15 (5&20 ppbv | Tedlar Bag | Tedlar Bag |
| 02A | Lab Blank | Modified TO-15 (5&20 ppbv | NA | NA |
| 03A | CCV | Modified TO-15 (5&20 ppbv | NA | NA |
| 04A | LCS | Modified TO-15 (5&20 ppbv | NA | NA |

CERTIFIED BY:



DATE: 09/30/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15 Soil Gas
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0909582**

One 1 Liter Tedlar Bag sample was received on September 26, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | +/- 30% Difference | </= 30% Difference with two allowed out up to </=40%; flag and narrate outliers |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: SVESTACK092509

Lab ID#: 0909582-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 1000 | 3900 | 2600 | 10000 |
| Freon 11 | 1000 | 1600 | 5600 | 8800 |
| Methylene Chloride | 1000 | 30000 | 3500 | 100000 |
| Hexane | 1000 | 1000 | 3500 | 3700 |
| 1,1-Dichloroethane | 1000 | 6500 | 4000 | 26000 |
| 2-Butanone (Methyl Ethyl Ketone) | 1000 | 1100 | 2900 | 3200 |
| cis-1,2-Dichloroethene | 1000 | 110000 | 4000 | 420000 |
| 1,1,1-Trichloroethane | 1000 | 14000 | 5400 | 77000 |
| Heptane | 1000 | 2300 | 4100 | 9600 |
| Trichloroethene | 1000 | 11000 | 5400 | 57000 |
| Toluene | 1000 | 140000 | 3800 | 530000 |
| Tetrachloroethene | 1000 | 140000 | 6800 | 930000 |
| Ethyl Benzene | 1000 | 11000 | 4300 | 48000 |
| m,p-Xylene | 1000 | 40000 | 4300 | 180000 |
| o-Xylene | 1000 | 12000 | 4300 | 54000 |
| Propylbenzene | 1000 | 1100 | 4900 | 5600 |
| 4-Ethyltoluene | 1000 | 6300 | 4900 | 31000 |
| 1,3,5-Trimethylbenzene | 1000 | 2600 | 4900 | 13000 |
| 1,2,4-Trimethylbenzene | 1000 | 4900 | 4900 | 24000 |



Client Sample ID: SVESTACK092509

Lab ID#: 0909582-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b092808 | Date of Collection: | 9/25/09 10:26:00 AM | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 200 | Date of Analysis: | 9/28/09 02:42 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 1000 | Not Detected | 4900 | Not Detected |
| Freon 114 | 1000 | Not Detected | 7000 | Not Detected |
| Chloromethane | 4000 | Not Detected | 8300 | Not Detected |
| Vinyl Chloride | 1000 | 3900 | 2600 | 10000 |
| 1,3-Butadiene | 1000 | Not Detected | 2200 | Not Detected |
| Bromomethane | 1000 | Not Detected | 3900 | Not Detected |
| Chloroethane | 1000 | Not Detected | 2600 | Not Detected |
| Freon 11 | 1000 | 1600 | 5600 | 8800 |
| Ethanol | 4000 | Not Detected | 7500 | Not Detected |
| Freon 113 | 1000 | Not Detected | 7700 | Not Detected |
| 1,1-Dichloroethene | 1000 | Not Detected | 4000 | Not Detected |
| Acetone | 4000 | Not Detected | 9500 | Not Detected |
| 2-Propanol | 4000 | Not Detected | 9800 | Not Detected |
| Carbon Disulfide | 1000 | Not Detected | 3100 | Not Detected |
| 3-Chloropropene | 4000 | Not Detected | 12000 | Not Detected |
| Methylene Chloride | 1000 | 30000 | 3500 | 100000 |
| Methyl tert-butyl ether | 1000 | Not Detected | 3600 | Not Detected |
| trans-1,2-Dichloroethene | 1000 | Not Detected | 4000 | Not Detected |
| Hexane | 1000 | 1000 | 3500 | 3700 |
| 1,1-Dichloroethane | 1000 | 6500 | 4000 | 26000 |
| 2-Butanone (Methyl Ethyl Ketone) | 1000 | 1100 | 2900 | 3200 |
| cis-1,2-Dichloroethene | 1000 | 110000 | 4000 | 420000 |
| Tetrahydrofuran | 1000 | Not Detected | 2900 | Not Detected |
| Chloroform | 1000 | Not Detected | 4900 | Not Detected |
| 1,1,1-Trichloroethane | 1000 | 14000 | 5400 | 77000 |
| Cyclohexane | 1000 | Not Detected | 3400 | Not Detected |
| Carbon Tetrachloride | 1000 | Not Detected | 6300 | Not Detected |
| 2,2,4-Trimethylpentane | 1000 | Not Detected | 4700 | Not Detected |
| Benzene | 1000 | Not Detected | 3200 | Not Detected |
| 1,2-Dichloroethane | 1000 | Not Detected | 4000 | Not Detected |
| Heptane | 1000 | 2300 | 4100 | 9600 |
| Trichloroethene | 1000 | 11000 | 5400 | 57000 |
| 1,2-Dichloropropane | 1000 | Not Detected | 4600 | Not Detected |
| 1,4-Dioxane | 4000 | Not Detected | 14000 | Not Detected |
| Bromodichloromethane | 1000 | Not Detected | 6700 | Not Detected |
| cis-1,3-Dichloropropene | 1000 | Not Detected | 4500 | Not Detected |
| 4-Methyl-2-pentanone | 1000 | Not Detected | 4100 | Not Detected |
| Toluene | 1000 | 140000 | 3800 | 530000 |
| trans-1,3-Dichloropropene | 1000 | Not Detected | 4500 | Not Detected |



Client Sample ID: SVESTACK092509

Lab ID#: 0909582-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b092808 | Date of Collection: | 9/25/09 10:26:00 AM | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 200 | Date of Analysis: | 9/28/09 02:42 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 1000 | Not Detected | 5400 | Not Detected |
| Tetrachloroethene | 1000 | 140000 | 6800 | 930000 |
| 2-Hexanone | 4000 | Not Detected | 16000 | Not Detected |
| Dibromochloromethane | 1000 | Not Detected | 8500 | Not Detected |
| 1,2-Dibromoethane (EDB) | 1000 | Not Detected | 7700 | Not Detected |
| Chlorobenzene | 1000 | Not Detected | 4600 | Not Detected |
| Ethyl Benzene | 1000 | 11000 | 4300 | 48000 |
| m,p-Xylene | 1000 | 40000 | 4300 | 180000 |
| o-Xylene | 1000 | 12000 | 4300 | 54000 |
| Styrene | 1000 | Not Detected | 4200 | Not Detected |
| Bromoform | 1000 | Not Detected | 10000 | Not Detected |
| Cumene | 1000 | Not Detected | 4900 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 1000 | Not Detected | 6900 | Not Detected |
| Propylbenzene | 1000 | 1100 | 4900 | 5600 |
| 4-Ethyltoluene | 1000 | 6300 | 4900 | 31000 |
| 1,3,5-Trimethylbenzene | 1000 | 2600 | 4900 | 13000 |
| 1,2,4-Trimethylbenzene | 1000 | 4900 | 4900 | 24000 |
| 1,3-Dichlorobenzene | 1000 | Not Detected | 6000 | Not Detected |
| 1,4-Dichlorobenzene | 1000 | Not Detected | 6000 | Not Detected |
| alpha-Chlorotoluene | 1000 | Not Detected | 5200 | Not Detected |
| 1,2-Dichlorobenzene | 1000 | Not Detected | 6000 | Not Detected |
| 1,2,4-Trichlorobenzene | 4000 | Not Detected | 30000 | Not Detected |
| Hexachlorobutadiene | 4000 | Not Detected | 43000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0909582-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b092807 | Date of Collection: | NA | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 12:38 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 5.0 | Not Detected | 13 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.0 | Not Detected | 15 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0909582-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b092807 | Date of Collection: | NA | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 12:38 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|------------------|
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0909582-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b092802 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 10:01 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 107 |
| Freon 114 | 110 |
| Chloromethane | 102 |
| Vinyl Chloride | 107 |
| 1,3-Butadiene | 107 |
| Bromomethane | 102 |
| Chloroethane | 117 |
| Freon 11 | 103 |
| Ethanol | 110 |
| Freon 113 | 109 |
| 1,1-Dichloroethene | 104 |
| Acetone | 107 |
| 2-Propanol | 105 |
| Carbon Disulfide | 109 |
| 3-Chloropropene | 115 |
| Methylene Chloride | 103 |
| Methyl tert-butyl ether | 139 Q |
| trans-1,2-Dichloroethene | 108 |
| Hexane | 107 |
| 1,1-Dichloroethane | 107 |
| 2-Butanone (Methyl Ethyl Ketone) | 107 |
| cis-1,2-Dichloroethene | 104 |
| Tetrahydrofuran | 106 |
| Chloroform | 103 |
| 1,1,1-Trichloroethane | 105 |
| Cyclohexane | 105 |
| Carbon Tetrachloride | 106 |
| 2,2,4-Trimethylpentane | 106 |
| Benzene | 111 |
| 1,2-Dichloroethane | 106 |
| Heptane | 108 |
| Trichloroethene | 104 |
| 1,2-Dichloropropane | 106 |
| 1,4-Dioxane | 107 |
| Bromodichloromethane | 108 |
| cis-1,3-Dichloropropene | 110 |
| 4-Methyl-2-pentanone | 108 |
| Toluene | 104 |
| trans-1,3-Dichloropropene | 111 |



Client Sample ID: CCV

Lab ID#: 0909582-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b092802 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 10:01 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 107 |
| Tetrachloroethene | 107 |
| 2-Hexanone | 107 |
| Dibromochloromethane | 112 |
| 1,2-Dibromoethane (EDB) | 107 |
| Chlorobenzene | 106 |
| Ethyl Benzene | 107 |
| m,p-Xylene | 106 |
| o-Xylene | 105 |
| Styrene | 110 |
| Bromoform | 113 |
| Cumene | 105 |
| 1,1,2,2-Tetrachloroethane | 104 |
| Propylbenzene | 102 |
| 4-Ethyltoluene | 100 |
| 1,3,5-Trimethylbenzene | 100 |
| 1,2,4-Trimethylbenzene | 98 |
| 1,3-Dichlorobenzene | 95 |
| 1,4-Dichlorobenzene | 94 |
| alpha-Chlorotoluene | 109 |
| 1,2-Dichlorobenzene | 95 |
| 1,2,4-Trichlorobenzene | 76 |
| Hexachlorobutadiene | 77 |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 93 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0909582-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b092803 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 10:30 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 103 |
| Freon 114 | 105 |
| Chloromethane | 101 |
| Vinyl Chloride | 106 |
| 1,3-Butadiene | 98 |
| Bromomethane | 101 |
| Chloroethane | 112 |
| Freon 11 | 98 |
| Ethanol | 82 |
| Freon 113 | 120 |
| 1,1-Dichloroethene | 112 |
| Acetone | 124 |
| 2-Propanol | 101 |
| Carbon Disulfide | 106 |
| 3-Chloropropene | 112 |
| Methylene Chloride | 110 |
| Methyl tert-butyl ether | 124 |
| trans-1,2-Dichloroethene | 107 |
| Hexane | 105 |
| 1,1-Dichloroethane | 108 |
| 2-Butanone (Methyl Ethyl Ketone) | 104 |
| cis-1,2-Dichloroethene | 105 |
| Tetrahydrofuran | 102 |
| Chloroform | 106 |
| 1,1,1-Trichloroethane | 104 |
| Cyclohexane | 104 |
| Carbon Tetrachloride | 106 |
| 2,2,4-Trimethylpentane | 104 |
| Benzene | 108 |
| 1,2-Dichloroethane | 104 |
| Heptane | 106 |
| Trichloroethene | 104 |
| 1,2-Dichloropropane | 104 |
| 1,4-Dioxane | 102 |
| Bromodichloromethane | 103 |
| cis-1,3-Dichloropropene | 102 |
| 4-Methyl-2-pentanone | 103 |
| Toluene | 107 |
| trans-1,3-Dichloropropene | 104 |



Client Sample ID: LCS

Lab ID#: 0909582-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b092803 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 9/28/09 10:30 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 105 |
| Tetrachloroethene | 106 |
| 2-Hexanone | 89 |
| Dibromochloromethane | 106 |
| 1,2-Dibromoethane (EDB) | 100 |
| Chlorobenzene | 102 |
| Ethyl Benzene | 102 |
| m,p-Xylene | 102 |
| o-Xylene | 102 |
| Styrene | 98 |
| Bromoform | 108 |
| Cumene | 104 |
| 1,1,2,2-Tetrachloroethane | 101 |
| Propylbenzene | 102 |
| 4-Ethyltoluene | 96 |
| 1,3,5-Trimethylbenzene | 91 |
| 1,2,4-Trimethylbenzene | 94 |
| 1,3-Dichlorobenzene | 96 |
| 1,4-Dichlorobenzene | 96 |
| alpha-Chlorotoluene | 98 |
| 1,2-Dichlorobenzene | 95 |
| 1,2,4-Trichlorobenzene | 86 |
| Hexachlorobutadiene | 83 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 95 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

7/23/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Landfil
Project #: 84411
Workorder #: 0907320

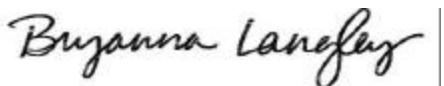
Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 7/16/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

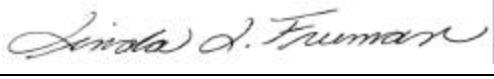
WORK ORDER #: 0907320

Work Order Summary

| | | | |
|------------------------|--|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1368 |
| FAX: | 603-778-2121 | PROJECT # | 84411 Dover Landfil |
| DATE RECEIVED: | 07/16/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 07/23/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|--------------------|--------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | LineC-Stack-071409 | Modified TO-15 | Tedlar Bag | Tedlar Bag |
| 02A | LineA-Stack-071409 | Modified TO-15 | Tedlar Bag | Tedlar Bag |
| 03A | LineB-Stack-071509 | Modified TO-15 | Tedlar Bag | Tedlar Bag |
| 04A | LineD-Stack-071509 | Modified TO-15 | Tedlar Bag | Tedlar Bag |
| 05A | Lab Blank | Modified TO-15 | NA | NA |
| 06A | CCV | Modified TO-15 | NA | NA |
| 07A | LCS | Modified TO-15 | NA | NA |

CERTIFIED BY:



DATE: 07/23/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0907320**

Four 1 Liter Tedlar Bag samples were received on July 16, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | </= 30% Difference | </= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated. |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported results for 2-Butanone in sample LineD-Stack-071509 and Cyclohexane in all of the samples may be biased high due to co-elution with a non target compound with similar characteristic ions.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: LineC-Stack-071409

Lab ID#: 0907320-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 500 | 21000 | 1300 | 54000 |
| Chloroethane | 500 | 2100 | 1300 | 5600 |
| Freon 11 | 500 | 7900 | 2800 | 44000 |
| Freon 113 | 500 | 4300 | 3800 | 33000 |
| 1,1-Dichloroethene | 500 | 790 | 2000 | 3100 |
| Acetone | 2000 | 2800 | 4800 | 6800 |
| Methylene Chloride | 500 | 52000 | 1700 | 180000 |
| trans-1,2-Dichloroethene | 500 | 630 | 2000 | 2500 |
| Hexane | 500 | 2300 | 1800 | 8200 |
| 1,1-Dichloroethane | 500 | 10000 | 2000 | 42000 |
| 2-Butanone (Methyl Ethyl Ketone) | 500 | 8600 | 1500 | 25000 |
| cis-1,2-Dichloroethene | 500 | 230000 | 2000 | 900000 |
| 1,1,1-Trichloroethane | 500 | 16000 | 2700 | 86000 |
| Cyclohexane | 500 | 1500 | 1700 | 5100 |
| Heptane | 500 | 4100 | 2000 | 17000 |
| Trichloroethene | 500 | 11000 | 2700 | 59000 |
| 4-Methyl-2-pentanone | 500 | 2600 | 2000 | 11000 |
| Toluene | 500 | 160000 | 1900 | 620000 |
| Tetrachloroethene | 500 | 84000 | 3400 | 570000 |
| Ethyl Benzene | 500 | 15000 | 2200 | 66000 |
| m,p-Xylene | 500 | 42000 | 2200 | 180000 |
| o-Xylene | 500 | 11000 | 2200 | 49000 |
| Cumene | 500 | 860 | 2400 | 4200 |
| Propylbenzene | 500 | 1200 | 2400 | 5900 |
| 4-Ethyltoluene | 500 | 5100 | 2400 | 25000 |
| 1,3,5-Trimethylbenzene | 500 | 1800 | 2400 | 8600 |
| 1,2,4-Trimethylbenzene | 500 | 4200 | 2400 | 21000 |

Client Sample ID: LineA-Stack-071409

Lab ID#: 0907320-02A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 250 | 21000 | 640 | 53000 |
| Chloroethane | 250 | 2400 | 660 | 6400 |
| Freon 11 | 250 | 6300 | 1400 | 36000 |
| Freon 113 | 250 | 2100 | 1900 | 16000 |



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: LineA-Stack-071409

Lab ID#: 0907320-02A

| | | | | |
|----------------------------------|------------|--------------|-------------|--------------|
| 1,1-Dichloroethene | 250 | 620 | 990 | 2500 |
| Acetone | 1000 | 2700 | 2400 | 6400 |
| 2-Propanol | 1000 | 980 J | 2400 | 2400 J |
| Methylene Chloride | 250 | 46000 | 870 | 160000 |
| <u>trans-1,2-Dichloroethene</u> | <u>250</u> | <u>540</u> | <u>990</u> | <u>2200</u> |
| Hexane | 250 | 2500 | 880 | 8900 |
| 1,1-Dichloroethane | 250 | 9300 | 1000 | 38000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 8400 | 740 | 25000 |
| cis-1,2-Dichloroethene | 250 | 200000 | 990 | 790000 |
| <u>1,1,1-Trichloroethane</u> | <u>250</u> | <u>10000</u> | <u>1400</u> | <u>57000</u> |
| Cyclohexane | 250 | 1300 | 860 | 4500 |
| Benzene | 250 | 250 | 800 | 810 |
| Heptane | 250 | 3900 | 1000 | 16000 |
| Trichloroethene | 250 | 10000 | 1300 | 53000 |
| <u>4-Methyl-2-pentanone</u> | <u>250</u> | <u>2800</u> | <u>1000</u> | <u>11000</u> |
| Toluene | 250 | 140000 | 940 | 530000 |
| Tetrachloroethene | 250 | 76000 | 1700 | 520000 |
| Ethyl Benzene | 250 | 14000 | 1100 | 61000 |
| m,p-Xylene | 250 | 38000 | 1100 | 160000 |
| <u>o-Xylene</u> | <u>250</u> | <u>10000</u> | <u>1100</u> | <u>45000</u> |
| Cumene | 250 | 810 | 1200 | 4000 |
| Propylbenzene | 250 | 1200 | 1200 | 5700 |
| 4-Ethyltoluene | 250 | 4800 | 1200 | 24000 |
| 1,3,5-Trimethylbenzene | 250 | 1700 | 1200 | 8300 |
| <u>1,2,4-Trimethylbenzene</u> | <u>250</u> | <u>4100</u> | <u>1200</u> | <u>20000</u> |

Client Sample ID: LineB-Stack-071509

Lab ID#: 0907320-03A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m ³) | Amount (ug/m ³) |
|---------------------------------|----------------------|------------------|------------------------------------|--------------------------------|
| Vinyl Chloride | 250 | 18000 | 640 | 47000 |
| Chloroethane | 250 | 2000 | 660 | 5400 |
| Freon 11 | 250 | 4700 | 1400 | 26000 |
| Freon 113 | 250 | 8000 | 1900 | 61000 |
| <u>1,1-Dichloroethene</u> | <u>250</u> | <u>600</u> | <u>990</u> | <u>2400</u> |
| Acetone | 1000 | 2600 | 2400 | 6100 |
| Methylene Chloride | 250 | 39000 | 870 | 140000 |
| <u>trans-1,2-Dichloroethene</u> | <u>250</u> | <u>500</u> | <u>990</u> | <u>2000</u> |



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: LineB-Stack-071509

Lab ID#: 0907320-03A

| | | | | |
|----------------------------------|------------|--------------|-------------|--------------|
| Hexane | 250 | 2100 | 880 | 7500 |
| 1,1-Dichloroethane | 250 | 8400 | 1000 | 34000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 9200 | 740 | 27000 |
| cis-1,2-Dichloroethene | 250 | 180000 | 990 | 720000 |
| <u>1,1,1-Trichloroethane</u> | <u>250</u> | <u>14000</u> | <u>1400</u> | <u>78000</u> |
| Cyclohexane | 250 | 1300 | 860 | 4300 |
| Heptane | 250 | 3400 | 1000 | 14000 |
| Trichloroethene | 250 | 9400 | 1300 | 51000 |
| 4-Methyl-2-pentanone | 250 | 2600 | 1000 | 11000 |
| Toluene | 250 | 130000 | 940 | 500000 |
| Tetrachloroethene | 250 | 72000 | 1700 | 490000 |
| Ethyl Benzene | 250 | 13000 | 1100 | 57000 |
| m,p-Xylene | 250 | 35000 | 1100 | 150000 |
| o-Xylene | 250 | 9800 | 1100 | 42000 |
| Cumene | 250 | 770 | 1200 | 3800 |
| Propylbenzene | 250 | 1100 | 1200 | 5300 |
| 4-Ethyltoluene | 250 | 4400 | 1200 | 22000 |
| 1,3,5-Trimethylbenzene | 250 | 1500 | 1200 | 7600 |
| 1,2,4-Trimethylbenzene | 250 | 3700 | 1200 | 18000 |

Client Sample ID: LineD-Stack-071509

Lab ID#: 0907320-04A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 250 | 21000 | 640 | 54000 |
| Chloroethane | 250 | 1800 | 660 | 4900 |
| Freon 11 | 250 | 6700 | 1400 | 38000 |
| Freon 113 | 250 | 6300 | 1900 | 48000 |
| <u>1,1-Dichloroethene</u> | <u>250</u> | <u>620</u> | <u>990</u> | <u>2500</u> |
| Acetone | 1000 | 2600 | 2400 | 6300 |
| 2-Propanol | 1000 | 980 J | 2400 | 2400 J |
| Methylene Chloride | 250 | 43000 | 870 | 150000 |
| trans-1,2-Dichloroethene | 250 | 500 | 990 | 2000 |
| Hexane | 250 | 2500 | 880 | 8900 |
| <u>1,1-Dichloroethane</u> | <u>250</u> | <u>9200</u> | <u>1000</u> | <u>37000</u> |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 10000 | 740 | 29000 |
| cis-1,2-Dichloroethene | 250 | 190000 | 990 | 740000 |
| <u>1,1,1-Trichloroethane</u> | <u>250</u> | <u>12000</u> | <u>1400</u> | <u>66000</u> |



Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: LineD-Stack-071509

Lab ID#: 0907320-04A

| | | | | |
|------------------------|-----|--------|------|--------|
| Cyclohexane | 250 | 1200 | 860 | 4300 |
| Heptane | 250 | 3500 | 1000 | 14000 |
| Trichloroethene | 250 | 9900 | 1300 | 53000 |
| 4-Methyl-2-pentanone | 250 | 2700 | 1000 | 11000 |
| Toluene | 250 | 140000 | 940 | 510000 |
| Tetrachloroethene | 250 | 76000 | 1700 | 520000 |
| Ethyl Benzene | 250 | 13000 | 1100 | 58000 |
| m,p-Xylene | 250 | 36000 | 1100 | 160000 |
| o-Xylene | 250 | 10000 | 1100 | 43000 |
| Cumene | 250 | 750 | 1200 | 3700 |
| Propylbenzene | 250 | 1100 | 1200 | 5500 |
| 4-Ethyltoluene | 250 | 4500 | 1200 | 22000 |
| 1,3,5-Trimethylbenzene | 250 | 1600 | 1200 | 7700 |
| 1,2,4-Trimethylbenzene | 250 | 3900 | 1200 | 19000 |



Client Sample ID: LineC-Stack-071409

Lab ID#: 0907320-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071709 | Date of Collection: 7/14/09 12:00:00 PM | | |
|----------------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 100 | Date of Analysis: 7/17/09 01:03 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 500 | Not Detected | 2500 | Not Detected |
| Freon 114 | 500 | Not Detected | 3500 | Not Detected |
| Chloromethane | 2000 | Not Detected | 4100 | Not Detected |
| Vinyl Chloride | 500 | 21000 | 1300 | 54000 |
| 1,3-Butadiene | 500 | Not Detected | 1100 | Not Detected |
| Bromomethane | 500 | Not Detected | 1900 | Not Detected |
| Chloroethane | 500 | 2100 | 1300 | 5600 |
| Freon 11 | 500 | 7900 | 2800 | 44000 |
| Ethanol | 2000 | Not Detected | 3800 | Not Detected |
| Freon 113 | 500 | 4300 | 3800 | 33000 |
| 1,1-Dichloroethene | 500 | 790 | 2000 | 3100 |
| Acetone | 2000 | 2800 | 4800 | 6800 |
| 2-Propanol | 2000 | Not Detected | 4900 | Not Detected |
| Carbon Disulfide | 500 | Not Detected | 1600 | Not Detected |
| 3-Chloropropene | 2000 | Not Detected | 6300 | Not Detected |
| Methylene Chloride | 500 | 52000 | 1700 | 180000 |
| Methyl tert-butyl ether | 500 | Not Detected | 1800 | Not Detected |
| trans-1,2-Dichloroethene | 500 | 630 | 2000 | 2500 |
| Hexane | 500 | 2300 | 1800 | 8200 |
| 1,1-Dichloroethane | 500 | 10000 | 2000 | 42000 |
| 2-Butanone (Methyl Ethyl Ketone) | 500 | 8600 | 1500 | 25000 |
| cis-1,2-Dichloroethene | 500 | 230000 | 2000 | 900000 |
| Tetrahydrofuran | 500 | Not Detected | 1500 | Not Detected |
| Chloroform | 500 | Not Detected | 2400 | Not Detected |
| 1,1,1-Trichloroethane | 500 | 16000 | 2700 | 86000 |
| Cyclohexane | 500 | 1500 | 1700 | 5100 |
| Carbon Tetrachloride | 500 | Not Detected | 3100 | Not Detected |
| 2,2,4-Trimethylpentane | 500 | Not Detected | 2300 | Not Detected |
| Benzene | 500 | Not Detected | 1600 | Not Detected |
| 1,2-Dichloroethane | 500 | Not Detected | 2000 | Not Detected |
| Heptane | 500 | 4100 | 2000 | 17000 |
| Trichloroethene | 500 | 11000 | 2700 | 59000 |
| 1,2-Dichloropropane | 500 | Not Detected | 2300 | Not Detected |
| 1,4-Dioxane | 2000 | Not Detected | 7200 | Not Detected |
| Bromodichloromethane | 500 | Not Detected | 3400 | Not Detected |
| cis-1,3-Dichloropropene | 500 | Not Detected | 2300 | Not Detected |
| 4-Methyl-2-pentanone | 500 | 2600 | 2000 | 11000 |
| Toluene | 500 | 160000 | 1900 | 620000 |
| trans-1,3-Dichloropropene | 500 | Not Detected | 2300 | Not Detected |



Client Sample ID: LineC-Stack-071409

Lab ID#: 0907320-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071709 | Date of Collection: | 7/14/09 12:00:00 PM | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 100 | Date of Analysis: | 7/17/09 01:03 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 500 | Not Detected | 2700 | Not Detected |
| Tetrachloroethene | 500 | 84000 | 3400 | 570000 |
| 2-Hexanone | 2000 | Not Detected | 8200 | Not Detected |
| Dibromochloromethane | 500 | Not Detected | 4200 | Not Detected |
| 1,2-Dibromoethane (EDB) | 500 | Not Detected | 3800 | Not Detected |
| Chlorobenzene | 500 | Not Detected | 2300 | Not Detected |
| Ethyl Benzene | 500 | 15000 | 2200 | 66000 |
| m,p-Xylene | 500 | 42000 | 2200 | 180000 |
| o-Xylene | 500 | 11000 | 2200 | 49000 |
| Styrene | 500 | Not Detected | 2100 | Not Detected |
| Bromoform | 500 | Not Detected | 5200 | Not Detected |
| Cumene | 500 | 860 | 2400 | 4200 |
| 1,1,2,2-Tetrachloroethane | 500 | Not Detected | 3400 | Not Detected |
| Propylbenzene | 500 | 1200 | 2400 | 5900 |
| 4-Ethyltoluene | 500 | 5100 | 2400 | 25000 |
| 1,3,5-Trimethylbenzene | 500 | 1800 | 2400 | 8600 |
| 1,2,4-Trimethylbenzene | 500 | 4200 | 2400 | 21000 |
| 1,3-Dichlorobenzene | 500 | Not Detected | 3000 | Not Detected |
| 1,4-Dichlorobenzene | 500 | Not Detected | 3000 | Not Detected |
| alpha-Chlorotoluene | 500 | Not Detected | 2600 | Not Detected |
| 1,2-Dichlorobenzene | 500 | Not Detected | 3000 | Not Detected |
| 1,2,4-Trichlorobenzene | 2000 | Not Detected | 15000 | Not Detected |
| Hexachlorobutadiene | 2000 | Not Detected | 21000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Client Sample ID: LineA-Stack-071409

Lab ID#: 0907320-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071710 | Date of Collection: 7/14/09 4:00:00 PM | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 01:35 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 250 | Not Detected | 1200 | Not Detected |
| Freon 114 | 250 | Not Detected | 1700 | Not Detected |
| Chloromethane | 1000 | Not Detected | 2100 | Not Detected |
| Vinyl Chloride | 250 | 21000 | 640 | 53000 |
| 1,3-Butadiene | 250 | Not Detected | 550 | Not Detected |
| Bromomethane | 250 | Not Detected | 970 | Not Detected |
| Chloroethane | 250 | 2400 | 660 | 6400 |
| Freon 11 | 250 | 6300 | 1400 | 36000 |
| Ethanol | 1000 | Not Detected | 1900 | Not Detected |
| Freon 113 | 250 | 2100 | 1900 | 16000 |
| 1,1-Dichloroethene | 250 | 620 | 990 | 2500 |
| Acetone | 1000 | 2700 | 2400 | 6400 |
| 2-Propanol | 1000 | 980 J | 2400 | 2400 J |
| Carbon Disulfide | 250 | Not Detected | 780 | Not Detected |
| 3-Chloropropene | 1000 | Not Detected | 3100 | Not Detected |
| Methylene Chloride | 250 | 46000 | 870 | 160000 |
| Methyl tert-butyl ether | 250 | Not Detected | 900 | Not Detected |
| trans-1,2-Dichloroethene | 250 | 540 | 990 | 2200 |
| Hexane | 250 | 2500 | 880 | 8900 |
| 1,1-Dichloroethane | 250 | 9300 | 1000 | 38000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 8400 | 740 | 25000 |
| cis-1,2-Dichloroethene | 250 | 200000 | 990 | 790000 |
| Tetrahydrofuran | 250 | Not Detected | 740 | Not Detected |
| Chloroform | 250 | Not Detected | 1200 | Not Detected |
| 1,1,1-Trichloroethane | 250 | 10000 | 1400 | 57000 |
| Cyclohexane | 250 | 1300 | 860 | 4500 |
| Carbon Tetrachloride | 250 | Not Detected | 1600 | Not Detected |
| 2,2,4-Trimethylpentane | 250 | Not Detected | 1200 | Not Detected |
| Benzene | 250 | 250 | 800 | 810 |
| 1,2-Dichloroethane | 250 | Not Detected | 1000 | Not Detected |
| Heptane | 250 | 3900 | 1000 | 16000 |
| Trichloroethene | 250 | 10000 | 1300 | 53000 |
| 1,2-Dichloropropane | 250 | Not Detected | 1200 | Not Detected |
| 1,4-Dioxane | 1000 | Not Detected | 3600 | Not Detected |
| Bromodichloromethane | 250 | Not Detected | 1700 | Not Detected |
| cis-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |
| 4-Methyl-2-pentanone | 250 | 2800 | 1000 | 11000 |
| Toluene | 250 | 140000 | 940 | 530000 |
| trans-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |



Client Sample ID: LineA-Stack-071409

Lab ID#: 0907320-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071710 | Date of Collection: 7/14/09 4:00:00 PM | | |
|---------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 01:35 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 250 | Not Detected | 1400 | Not Detected |
| Tetrachloroethene | 250 | 76000 | 1700 | 520000 |
| 2-Hexanone | 1000 | Not Detected | 4100 | Not Detected |
| Dibromochloromethane | 250 | Not Detected | 2100 | Not Detected |
| 1,2-Dibromoethane (EDB) | 250 | Not Detected | 1900 | Not Detected |
| Chlorobenzene | 250 | Not Detected | 1200 | Not Detected |
| Ethyl Benzene | 250 | 14000 | 1100 | 61000 |
| m,p-Xylene | 250 | 38000 | 1100 | 160000 |
| o-Xylene | 250 | 10000 | 1100 | 45000 |
| Styrene | 250 | Not Detected | 1100 | Not Detected |
| Bromoform | 250 | Not Detected | 2600 | Not Detected |
| Cumene | 250 | 810 | 1200 | 4000 |
| 1,1,2,2-Tetrachloroethane | 250 | Not Detected | 1700 | Not Detected |
| Propylbenzene | 250 | 1200 | 1200 | 5700 |
| 4-Ethyltoluene | 250 | 4800 | 1200 | 24000 |
| 1,3,5-Trimethylbenzene | 250 | 1700 | 1200 | 8300 |
| 1,2,4-Trimethylbenzene | 250 | 4100 | 1200 | 20000 |
| 1,3-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,4-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| alpha-Chlorotoluene | 250 | Not Detected | 1300 | Not Detected |
| 1,2-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,2,4-Trichlorobenzene | 1000 | Not Detected | 7400 | Not Detected |
| Hexachlorobutadiene | 1000 | Not Detected | 11000 | Not Detected |

J = Estimated value.

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 95 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: LineB-Stack-071509

Lab ID#: 0907320-03A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071711 | Date of Collection: 7/15/09 12:10:00 PM | | |
|----------------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 02:24 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 250 | Not Detected | 1200 | Not Detected |
| Freon 114 | 250 | Not Detected | 1700 | Not Detected |
| Chloromethane | 1000 | Not Detected | 2100 | Not Detected |
| Vinyl Chloride | 250 | 18000 | 640 | 47000 |
| 1,3-Butadiene | 250 | Not Detected | 550 | Not Detected |
| Bromomethane | 250 | Not Detected | 970 | Not Detected |
| Chloroethane | 250 | 2000 | 660 | 5400 |
| Freon 11 | 250 | 4700 | 1400 | 26000 |
| Ethanol | 1000 | Not Detected | 1900 | Not Detected |
| Freon 113 | 250 | 8000 | 1900 | 61000 |
| 1,1-Dichloroethene | 250 | 600 | 990 | 2400 |
| Acetone | 1000 | 2600 | 2400 | 6100 |
| 2-Propanol | 1000 | Not Detected | 2400 | Not Detected |
| Carbon Disulfide | 250 | Not Detected | 780 | Not Detected |
| 3-Chloropropene | 1000 | Not Detected | 3100 | Not Detected |
| Methylene Chloride | 250 | 39000 | 870 | 140000 |
| Methyl tert-butyl ether | 250 | Not Detected | 900 | Not Detected |
| trans-1,2-Dichloroethene | 250 | 500 | 990 | 2000 |
| Hexane | 250 | 2100 | 880 | 7500 |
| 1,1-Dichloroethane | 250 | 8400 | 1000 | 34000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 9200 | 740 | 27000 |
| cis-1,2-Dichloroethene | 250 | 180000 | 990 | 720000 |
| Tetrahydrofuran | 250 | Not Detected | 740 | Not Detected |
| Chloroform | 250 | Not Detected | 1200 | Not Detected |
| 1,1,1-Trichloroethane | 250 | 14000 | 1400 | 78000 |
| Cyclohexane | 250 | 1300 | 860 | 4300 |
| Carbon Tetrachloride | 250 | Not Detected | 1600 | Not Detected |
| 2,2,4-Trimethylpentane | 250 | Not Detected | 1200 | Not Detected |
| Benzene | 250 | Not Detected | 800 | Not Detected |
| 1,2-Dichloroethane | 250 | Not Detected | 1000 | Not Detected |
| Heptane | 250 | 3400 | 1000 | 14000 |
| Trichloroethene | 250 | 9400 | 1300 | 51000 |
| 1,2-Dichloropropane | 250 | Not Detected | 1200 | Not Detected |
| 1,4-Dioxane | 1000 | Not Detected | 3600 | Not Detected |
| Bromodichloromethane | 250 | Not Detected | 1700 | Not Detected |
| cis-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |
| 4-Methyl-2-pentanone | 250 | 2600 | 1000 | 11000 |
| Toluene | 250 | 130000 | 940 | 500000 |
| trans-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |



Client Sample ID: LineB-Stack-071509

Lab ID#: 0907320-03A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071711 | Date of Collection: 7/15/09 12:10:00 PM | | |
|---------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 02:24 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 250 | Not Detected | 1400 | Not Detected |
| Tetrachloroethene | 250 | 72000 | 1700 | 490000 |
| 2-Hexanone | 1000 | Not Detected | 4100 | Not Detected |
| Dibromochloromethane | 250 | Not Detected | 2100 | Not Detected |
| 1,2-Dibromoethane (EDB) | 250 | Not Detected | 1900 | Not Detected |
| Chlorobenzene | 250 | Not Detected | 1200 | Not Detected |
| Ethyl Benzene | 250 | 13000 | 1100 | 57000 |
| m,p-Xylene | 250 | 35000 | 1100 | 150000 |
| o-Xylene | 250 | 9800 | 1100 | 42000 |
| Styrene | 250 | Not Detected | 1100 | Not Detected |
| Bromoform | 250 | Not Detected | 2600 | Not Detected |
| Cumene | 250 | 770 | 1200 | 3800 |
| 1,1,2,2-Tetrachloroethane | 250 | Not Detected | 1700 | Not Detected |
| Propylbenzene | 250 | 1100 | 1200 | 5300 |
| 4-Ethyltoluene | 250 | 4400 | 1200 | 22000 |
| 1,3,5-Trimethylbenzene | 250 | 1500 | 1200 | 7600 |
| 1,2,4-Trimethylbenzene | 250 | 3700 | 1200 | 18000 |
| 1,3-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,4-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| alpha-Chlorotoluene | 250 | Not Detected | 1300 | Not Detected |
| 1,2-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,2,4-Trichlorobenzene | 1000 | Not Detected | 7400 | Not Detected |
| Hexachlorobutadiene | 1000 | Not Detected | 11000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 93 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Client Sample ID: LineD-Stack-071509

Lab ID#: 0907320-04A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071712 | Date of Collection: 7/15/09 2:55:00 PM | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 02:49 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 250 | Not Detected | 1200 | Not Detected |
| Freon 114 | 250 | Not Detected | 1700 | Not Detected |
| Chloromethane | 1000 | Not Detected | 2100 | Not Detected |
| Vinyl Chloride | 250 | 21000 | 640 | 54000 |
| 1,3-Butadiene | 250 | Not Detected | 550 | Not Detected |
| Bromomethane | 250 | Not Detected | 970 | Not Detected |
| Chloroethane | 250 | 1800 | 660 | 4900 |
| Freon 11 | 250 | 6700 | 1400 | 38000 |
| Ethanol | 1000 | Not Detected | 1900 | Not Detected |
| Freon 113 | 250 | 6300 | 1900 | 48000 |
| 1,1-Dichloroethene | 250 | 620 | 990 | 2500 |
| Acetone | 1000 | 2600 | 2400 | 6300 |
| 2-Propanol | 1000 | 980 J | 2400 | 2400 J |
| Carbon Disulfide | 250 | Not Detected | 780 | Not Detected |
| 3-Chloropropene | 1000 | Not Detected | 3100 | Not Detected |
| Methylene Chloride | 250 | 43000 | 870 | 150000 |
| Methyl tert-butyl ether | 250 | Not Detected | 900 | Not Detected |
| trans-1,2-Dichloroethene | 250 | 500 | 990 | 2000 |
| Hexane | 250 | 2500 | 880 | 8900 |
| 1,1-Dichloroethane | 250 | 9200 | 1000 | 37000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 10000 | 740 | 29000 |
| cis-1,2-Dichloroethene | 250 | 190000 | 990 | 740000 |
| Tetrahydrofuran | 250 | Not Detected | 740 | Not Detected |
| Chloroform | 250 | Not Detected | 1200 | Not Detected |
| 1,1,1-Trichloroethane | 250 | 12000 | 1400 | 66000 |
| Cyclohexane | 250 | 1200 | 860 | 4300 |
| Carbon Tetrachloride | 250 | Not Detected | 1600 | Not Detected |
| 2,2,4-Trimethylpentane | 250 | Not Detected | 1200 | Not Detected |
| Benzene | 250 | Not Detected | 800 | Not Detected |
| 1,2-Dichloroethane | 250 | Not Detected | 1000 | Not Detected |
| Heptane | 250 | 3500 | 1000 | 14000 |
| Trichloroethene | 250 | 9900 | 1300 | 53000 |
| 1,2-Dichloropropane | 250 | Not Detected | 1200 | Not Detected |
| 1,4-Dioxane | 1000 | Not Detected | 3600 | Not Detected |
| Bromodichloromethane | 250 | Not Detected | 1700 | Not Detected |
| cis-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |
| 4-Methyl-2-pentanone | 250 | 2700 | 1000 | 11000 |
| Toluene | 250 | 140000 | 940 | 510000 |
| trans-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |



Client Sample ID: LineD-Stack-071509

Lab ID#: 0907320-04A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071712 | Date of Collection: 7/15/09 2:55:00 PM | | |
|---------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: 7/17/09 02:49 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 250 | Not Detected | 1400 | Not Detected |
| Tetrachloroethene | 250 | 76000 | 1700 | 520000 |
| 2-Hexanone | 1000 | Not Detected | 4100 | Not Detected |
| Dibromochloromethane | 250 | Not Detected | 2100 | Not Detected |
| 1,2-Dibromoethane (EDB) | 250 | Not Detected | 1900 | Not Detected |
| Chlorobenzene | 250 | Not Detected | 1200 | Not Detected |
| Ethyl Benzene | 250 | 13000 | 1100 | 58000 |
| m,p-Xylene | 250 | 36000 | 1100 | 160000 |
| o-Xylene | 250 | 10000 | 1100 | 43000 |
| Styrene | 250 | Not Detected | 1100 | Not Detected |
| Bromoform | 250 | Not Detected | 2600 | Not Detected |
| Cumene | 250 | 750 | 1200 | 3700 |
| 1,1,2,2-Tetrachloroethane | 250 | Not Detected | 1700 | Not Detected |
| Propylbenzene | 250 | 1100 | 1200 | 5500 |
| 4-Ethyltoluene | 250 | 4500 | 1200 | 22000 |
| 1,3,5-Trimethylbenzene | 250 | 1600 | 1200 | 7700 |
| 1,2,4-Trimethylbenzene | 250 | 3900 | 1200 | 19000 |
| 1,3-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,4-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| alpha-Chlorotoluene | 250 | Not Detected | 1300 | Not Detected |
| 1,2-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,2,4-Trichlorobenzene | 1000 | Not Detected | 7400 | Not Detected |
| Hexachlorobutadiene | 1000 | Not Detected | 11000 | Not Detected |

J = Estimated value.

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 92 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0907320-05A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071705 | Date of Collection: NA | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 7/17/09 10:28 AM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 5.0 | Not Detected | 13 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.0 | Not Detected | 15 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0907320-05A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b071705 | Date of Collection: NA | | |
|--------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 7/17/09 10:28 AM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| <u>1,2-Dibromoethane (EDB)</u> | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| <u>4-Ethyltoluene</u> | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| <u>alpha-Chlorotoluene</u> | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0907320-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b071702 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 7/17/09 08:37 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 93 |
| Freon 114 | 100 |
| Chloromethane | 96 |
| Vinyl Chloride | 100 |
| 1,3-Butadiene | 102 |
| Bromomethane | 100 |
| Chloroethane | 102 |
| Freon 11 | 96 |
| Ethanol | 114 |
| Freon 113 | 108 |
| 1,1-Dichloroethene | 104 |
| Acetone | 102 |
| 2-Propanol | 91 |
| Carbon Disulfide | 106 |
| 3-Chloropropene | 105 |
| Methylene Chloride | 104 |
| Methyl tert-butyl ether | 122 |
| trans-1,2-Dichloroethene | 108 |
| Hexane | 109 |
| 1,1-Dichloroethane | 102 |
| 2-Butanone (Methyl Ethyl Ketone) | 106 |
| cis-1,2-Dichloroethene | 99 |
| Tetrahydrofuran | 102 |
| Chloroform | 100 |
| 1,1,1-Trichloroethane | 95 |
| Cyclohexane | 107 |
| Carbon Tetrachloride | 92 |
| 2,2,4-Trimethylpentane | 109 |
| Benzene | 102 |
| 1,2-Dichloroethane | 97 |
| Heptane | 110 |
| Trichloroethene | 100 |
| 1,2-Dichloropropane | 102 |
| 1,4-Dioxane | 102 |
| Bromodichloromethane | 106 |
| cis-1,3-Dichloropropene | 97 |
| 4-Methyl-2-pentanone | 109 |
| Toluene | 106 |
| trans-1,3-Dichloropropene | 95 |



Client Sample ID: CCV

Lab ID#: 0907320-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b071702 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 7/17/09 08:37 AM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 100 |
| Tetrachloroethene | 102 |
| 2-Hexanone | 103 |
| Dibromochloromethane | 107 |
| <u>1,2-Dibromoethane (EDB)</u> | 98 |
| Chlorobenzene | 99 |
| Ethyl Benzene | 98 |
| m,p-Xylene | 100 |
| o-Xylene | 101 |
| Styrene | 105 |
| Bromoform | 108 |
| Cumene | 101 |
| 1,1,2,2-Tetrachloroethane | 101 |
| Propylbenzene | 111 |
| <u>4-Ethyltoluene</u> | 112 |
| 1,3,5-Trimethylbenzene | 96 |
| 1,2,4-Trimethylbenzene | 104 |
| 1,3-Dichlorobenzene | 102 |
| 1,4-Dichlorobenzene | 98 |
| <u>alpha-Chlorotoluene</u> | 102 |
| 1,2-Dichlorobenzene | 97 |
| 1,2,4-Trichlorobenzene | 85 |
| Hexachlorobutadiene | 100 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 91 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0907320-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | | |
|--------------|---------|---------------------|------------------|
| File Name: | b071704 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 7/17/09 10:05 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 92 |
| Freon 114 | 99 |
| Chloromethane | 94 |
| Vinyl Chloride | 102 |
| 1,3-Butadiene | 99 |
| Bromomethane | 103 |
| Chloroethane | 103 |
| Freon 11 | 95 |
| Ethanol | 70 |
| Freon 113 | 109 |
| 1,1-Dichloroethene | 108 |
| Acetone | 103 |
| 2-Propanol | 102 |
| Carbon Disulfide | 102 |
| 3-Chloropropene | 98 |
| Methylene Chloride | 105 |
| Methyl tert-butyl ether | 111 |
| trans-1,2-Dichloroethene | 100 |
| Hexane | 100 |
| 1,1-Dichloroethane | 104 |
| 2-Butanone (Methyl Ethyl Ketone) | 99 |
| cis-1,2-Dichloroethene | 102 |
| Tetrahydrofuran | 93 |
| Chloroform | 101 |
| 1,1,1-Trichloroethane | 98 |
| Cyclohexane | 98 |
| Carbon Tetrachloride | 96 |
| 2,2,4-Trimethylpentane | 99 |
| Benzene | 104 |
| 1,2-Dichloroethane | 99 |
| Heptane | 101 |
| Trichloroethene | 103 |
| 1,2-Dichloropropane | 105 |
| 1,4-Dioxane | 97 |
| Bromodichloromethane | 100 |
| cis-1,3-Dichloropropene | 105 |
| 4-Methyl-2-pentanone | 103 |
| Toluene | 108 |
| trans-1,3-Dichloropropene | 103 |



Client Sample ID: LCS

Lab ID#: 0907320-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | b071704 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 7/17/09 10:05 AM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 104 |
| Tetrachloroethene | 103 |
| 2-Hexanone | 103 |
| Dibromochloromethane | 102 |
| <u>1,2-Dibromoethane (EDB)</u> | 100 |
| Chlorobenzene | 101 |
| Ethyl Benzene | 102 |
| m,p-Xylene | 103 |
| o-Xylene | 104 |
| Styrene | 112 |
| Bromoform | 103 |
| Cumene | 102 |
| 1,1,2,2-Tetrachloroethane | 106 |
| Propylbenzene | 101 |
| <u>4-Ethyltoluene</u> | 101 |
| 1,3,5-Trimethylbenzene | 97 |
| 1,2,4-Trimethylbenzene | 106 |
| 1,3-Dichlorobenzene | 103 |
| 1,4-Dichlorobenzene | 101 |
| <u>alpha-Chlorotoluene</u> | 122 |
| 1,2-Dichlorobenzene | 102 |
| 1,2,4-Trichlorobenzene | 107 |
| Hexachlorobutadiene | 112 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 90 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

7/7/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Landfill
Project #: 84411
Workorder #: 0907120

Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 7/7/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Bryanna Langley

Bryanna Langley
Project Manager

WORK ORDER #: 0907120

Work Order Summary

| | | | |
|------------------------|--|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1368 |
| FAX: | 603-778-2121 | PROJECT # | 84411 Dover Landfill |
| DATE RECEIVED: | 07/07/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 07/07/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|--------------------|--------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | Stack 070609 | Modified TO-15 | Tedlar Bag | Tedlar Bag |
| 02A | Lab Blank | Modified TO-15 | NA | NA |
| 03A | CCV | Modified TO-15 | NA | NA |
| 04A | LCS | Modified TO-15 | NA | NA |

CERTIFIED BY:



DATE: 07/07/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0907120**

One 1 Liter Tedlar Bag sample was received on July 07, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | </= 30% Difference | </= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated. |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: Stack 070609

Lab ID#: 0907120-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 250 | 13000 | 640 | 32000 |
| Chloroethane | 250 | 670 | 660 | 1800 |
| Freon 11 | 250 | 1500 | 1400 | 8400 |
| Freon 113 | 250 | 700 | 1900 | 5400 |
| 1,1-Dichloroethene | 250 | 460 | 990 | 1800 |
| Acetone | 1000 | 1800 | 2400 | 4300 |
| Methylene Chloride | 250 | 40000 | 870 | 140000 |
| trans-1,2-Dichloroethene | 250 | 490 | 990 | 2000 |
| Hexane | 250 | 1800 | 880 | 6200 |
| 1,1-Dichloroethane | 250 | 7400 | 1000 | 30000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 7100 | 740 | 21000 |
| cis-1,2-Dichloroethene | 250 | 210000 | 990 | 830000 |
| 1,1,1-Trichloroethane | 250 | 4000 | 1400 | 22000 |
| Cyclohexane | 250 | 960 | 860 | 3300 |
| Heptane | 250 | 2700 | 1000 | 11000 |
| Trichloroethene | 250 | 8500 | 1300 | 46000 |
| 4-Methyl-2-pentanone | 250 | 2200 | 1000 | 9100 |
| Toluene | 250 | 120000 | 940 | 470000 |
| Tetrachloroethene | 250 | 58000 | 1700 | 390000 |
| Ethyl Benzene | 250 | 11000 | 1100 | 50000 |
| m,p-Xylene | 250 | 31000 | 1100 | 140000 |
| o-Xylene | 250 | 8400 | 1100 | 37000 |
| Cumene | 250 | 650 | 1200 | 3200 |
| Propylbenzene | 250 | 970 | 1200 | 4800 |
| 4-Ethyltoluene | 250 | 4200 | 1200 | 20000 |
| 1,3,5-Trimethylbenzene | 250 | 1400 | 1200 | 7200 |
| 1,2,4-Trimethylbenzene | 250 | 3700 | 1200 | 18000 |



Client Sample ID: Stack 070609

Lab ID#: 0907120-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b070717 | Date of Collection: | 7/6/09 5:55:00 PM | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: | 7/7/09 09:57 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 250 | Not Detected | 1200 | Not Detected |
| Freon 114 | 250 | Not Detected | 1700 | Not Detected |
| Chloromethane | 1000 | Not Detected | 2100 | Not Detected |
| Vinyl Chloride | 250 | 13000 | 640 | 32000 |
| 1,3-Butadiene | 250 | Not Detected | 550 | Not Detected |
| Bromomethane | 250 | Not Detected | 970 | Not Detected |
| Chloroethane | 250 | 670 | 660 | 1800 |
| Freon 11 | 250 | 1500 | 1400 | 8400 |
| Ethanol | 1000 | Not Detected | 1900 | Not Detected |
| Freon 113 | 250 | 700 | 1900 | 5400 |
| 1,1-Dichloroethene | 250 | 460 | 990 | 1800 |
| Acetone | 1000 | 1800 | 2400 | 4300 |
| 2-Propanol | 1000 | Not Detected | 2400 | Not Detected |
| Carbon Disulfide | 250 | Not Detected | 780 | Not Detected |
| 3-Chloropropene | 1000 | Not Detected | 3100 | Not Detected |
| Methylene Chloride | 250 | 40000 | 870 | 140000 |
| Methyl tert-butyl ether | 250 | Not Detected | 900 | Not Detected |
| trans-1,2-Dichloroethene | 250 | 490 | 990 | 2000 |
| Hexane | 250 | 1800 | 880 | 6200 |
| 1,1-Dichloroethane | 250 | 7400 | 1000 | 30000 |
| 2-Butanone (Methyl Ethyl Ketone) | 250 | 7100 | 740 | 21000 |
| cis-1,2-Dichloroethene | 250 | 210000 | 990 | 830000 |
| Tetrahydrofuran | 250 | Not Detected | 740 | Not Detected |
| Chloroform | 250 | Not Detected | 1200 | Not Detected |
| 1,1,1-Trichloroethane | 250 | 4000 | 1400 | 22000 |
| Cyclohexane | 250 | 960 | 860 | 3300 |
| Carbon Tetrachloride | 250 | Not Detected | 1600 | Not Detected |
| 2,2,4-Trimethylpentane | 250 | Not Detected | 1200 | Not Detected |
| Benzene | 250 | Not Detected | 800 | Not Detected |
| 1,2-Dichloroethane | 250 | Not Detected | 1000 | Not Detected |
| Heptane | 250 | 2700 | 1000 | 11000 |
| Trichloroethene | 250 | 8500 | 1300 | 46000 |
| 1,2-Dichloropropane | 250 | Not Detected | 1200 | Not Detected |
| 1,4-Dioxane | 1000 | Not Detected | 3600 | Not Detected |
| Bromodichloromethane | 250 | Not Detected | 1700 | Not Detected |
| cis-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |
| 4-Methyl-2-pentanone | 250 | 2200 | 1000 | 9100 |
| Toluene | 250 | 120000 | 940 | 470000 |
| trans-1,3-Dichloropropene | 250 | Not Detected | 1100 | Not Detected |



Client Sample ID: Stack 070609

Lab ID#: 0907120-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b070717 | Date of Collection: | 7/6/09 5:55:00 PM | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 50.0 | Date of Analysis: | 7/7/09 09:57 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 250 | Not Detected | 1400 | Not Detected |
| Tetrachloroethene | 250 | 58000 | 1700 | 390000 |
| 2-Hexanone | 1000 | Not Detected | 4100 | Not Detected |
| Dibromochloromethane | 250 | Not Detected | 2100 | Not Detected |
| 1,2-Dibromoethane (EDB) | 250 | Not Detected | 1900 | Not Detected |
| Chlorobenzene | 250 | Not Detected | 1200 | Not Detected |
| Ethyl Benzene | 250 | 11000 | 1100 | 50000 |
| m,p-Xylene | 250 | 31000 | 1100 | 140000 |
| o-Xylene | 250 | 8400 | 1100 | 37000 |
| Styrene | 250 | Not Detected | 1100 | Not Detected |
| Bromoform | 250 | Not Detected | 2600 | Not Detected |
| Cumene | 250 | 650 | 1200 | 3200 |
| 1,1,2,2-Tetrachloroethane | 250 | Not Detected | 1700 | Not Detected |
| Propylbenzene | 250 | 970 | 1200 | 4800 |
| 4-Ethyltoluene | 250 | 4200 | 1200 | 20000 |
| 1,3,5-Trimethylbenzene | 250 | 1400 | 1200 | 7200 |
| 1,2,4-Trimethylbenzene | 250 | 3700 | 1200 | 18000 |
| 1,3-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,4-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| alpha-Chlorotoluene | 250 | Not Detected | 1300 | Not Detected |
| 1,2-Dichlorobenzene | 250 | Not Detected | 1500 | Not Detected |
| 1,2,4-Trichlorobenzene | 1000 | Not Detected | 7400 | Not Detected |
| Hexachlorobutadiene | 1000 | Not Detected | 11000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 95 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0907120-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b070707 | Date of Collection: | NA | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 7/7/09 01:43 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 5.0 | Not Detected | 13 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.0 | Not Detected | 15 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0907120-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b070707 | Date of Collection: | NA | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 7/7/09 01:43 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|------------------|
| 1,2-Dichloroethane-d4 | 96 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0907120-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b070703 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 7/7/09 11:35 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 103 |
| Freon 114 | 101 |
| Chloromethane | 100 |
| Vinyl Chloride | 105 |
| 1,3-Butadiene | 104 |
| Bromomethane | 100 |
| Chloroethane | 104 |
| Freon 11 | 98 |
| Ethanol | 117 |
| Freon 113 | 110 |
| 1,1-Dichloroethene | 107 |
| Acetone | 104 |
| 2-Propanol | 96 |
| Carbon Disulfide | 108 |
| 3-Chloropropene | 110 |
| Methylene Chloride | 108 |
| Methyl tert-butyl ether | 130 |
| trans-1,2-Dichloroethene | 107 |
| Hexane | 113 |
| 1,1-Dichloroethane | 106 |
| 2-Butanone (Methyl Ethyl Ketone) | 110 |
| cis-1,2-Dichloroethene | 100 |
| Tetrahydrofuran | 106 |
| Chloroform | 102 |
| 1,1,1-Trichloroethane | 99 |
| Cyclohexane | 110 |
| Carbon Tetrachloride | 95 |
| 2,2,4-Trimethylpentane | 114 |
| Benzene | 103 |
| 1,2-Dichloroethane | 98 |
| Heptane | 111 |
| Trichloroethene | 102 |
| 1,2-Dichloropropane | 104 |
| 1,4-Dioxane | 106 |
| Bromodichloromethane | 108 |
| cis-1,3-Dichloropropene | 101 |
| 4-Methyl-2-pentanone | 111 |
| Toluene | 109 |
| trans-1,3-Dichloropropene | 101 |



Client Sample ID: CCV

Lab ID#: 0907120-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b070703 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 7/7/09 11:35 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 106 |
| Tetrachloroethene | 106 |
| 2-Hexanone | 114 |
| Dibromochloromethane | 112 |
| 1,2-Dibromoethane (EDB) | 103 |
| Chlorobenzene | 104 |
| Ethyl Benzene | 105 |
| m,p-Xylene | 107 |
| o-Xylene | 108 |
| Styrene | 113 |
| Bromoform | 116 |
| Cumene | 108 |
| 1,1,2,2-Tetrachloroethane | 110 |
| Propylbenzene | 121 |
| 4-Ethyltoluene | 124 |
| 1,3,5-Trimethylbenzene | 110 |
| 1,2,4-Trimethylbenzene | 117 |
| 1,3-Dichlorobenzene | 113 |
| 1,4-Dichlorobenzene | 110 |
| alpha-Chlorotoluene | 118 |
| 1,2-Dichlorobenzene | 113 |
| 1,2,4-Trichlorobenzene | 122 |
| Hexachlorobutadiene | 122 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 95 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0907120-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b070705 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 7/7/09 12:32 PM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 85 |
| Freon 114 | 89 |
| Chloromethane | 86 |
| Vinyl Chloride | 92 |
| 1,3-Butadiene | 90 |
| Bromomethane | 91 |
| Chloroethane | 93 |
| Freon 11 | 87 |
| Ethanol | 63 |
| Freon 113 | 98 |
| 1,1-Dichloroethene | 98 |
| Acetone | 93 |
| 2-Propanol | 93 |
| Carbon Disulfide | 91 |
| 3-Chloropropene | 86 |
| Methylene Chloride | 95 |
| Methyl tert-butyl ether | 104 |
| trans-1,2-Dichloroethene | 90 |
| Hexane | 91 |
| 1,1-Dichloroethane | 94 |
| 2-Butanone (Methyl Ethyl Ketone) | 91 |
| cis-1,2-Dichloroethene | 92 |
| Tetrahydrofuran | 84 |
| Chloroform | 91 |
| 1,1,1-Trichloroethane | 89 |
| Cyclohexane | 88 |
| Carbon Tetrachloride | 78 |
| 2,2,4-Trimethylpentane | 90 |
| Benzene | 92 |
| 1,2-Dichloroethane | 89 |
| Heptane | 89 |
| Trichloroethene | 91 |
| 1,2-Dichloropropane | 93 |
| 1,4-Dioxane | 86 |
| Bromodichloromethane | 88 |
| cis-1,3-Dichloropropene | 94 |
| 4-Methyl-2-pentanone | 92 |
| Toluene | 96 |
| trans-1,3-Dichloropropene | 93 |



Client Sample ID: LCS

Lab ID#: 0907120-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b070705 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 7/7/09 12:32 PM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 93 |
| Tetrachloroethene | 92 |
| 2-Hexanone | 93 |
| Dibromochloromethane | 90 |
| 1,2-Dibromoethane (EDB) | 91 |
| Chlorobenzene | 92 |
| Ethyl Benzene | 91 |
| m,p-Xylene | 94 |
| o-Xylene | 96 |
| Styrene | 103 |
| Bromoform | 94 |
| Cumene | 96 |
| 1,1,2,2-Tetrachloroethane | 99 |
| Propylbenzene | 96 |
| 4-Ethyltoluene | 96 |
| 1,3,5-Trimethylbenzene | 96 |
| 1,2,4-Trimethylbenzene | 104 |
| 1,3-Dichlorobenzene | 103 |
| 1,4-Dichlorobenzene | 101 |
| alpha-Chlorotoluene | 118 |
| 1,2-Dichlorobenzene | 103 |
| 1,2,4-Trichlorobenzene | 136 Q |
| Hexachlorobutadiene | 141 Q |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |

9/10/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Landfill
Project #: 84411
Workorder #: 0908497

Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 8/24/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

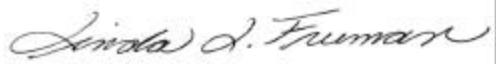
WORK ORDER #: 0908497

Work Order Summary

| | | | |
|------------------------|--|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1448 |
| FAX: | 603-778-2121 | PROJECT # | 84411 Dover Landfill |
| DATE RECEIVED: | 08/24/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 09/10/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|----------------------------|----------------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | SVE Discharge Stack-082109 | Modified TO-15 (5&20 ppbv) | Tedlar Bag | Tedlar Bag |
| 02A | Lab Blank | Modified TO-15 (5&20 ppbv) | NA | NA |
| 03A | CCV | Modified TO-15 (5&20 ppbv) | NA | NA |
| 04A | LCS | Modified TO-15 (5&20 ppbv) | NA | NA |

CERTIFIED BY:



DATE: 09/10/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15 Soil Gas
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0908497**

One 1 Liter Tedlar Bag sample was received on August 24, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | + 30% Difference | </= 30% Difference with two allowed out up to </=40%; flag and narrate outliers |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Sample SVE Discharge Stack-082109 was transferred from a Tedlar bag into a summa canister to extend the hold time from 3 days to 14 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no

performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS

Client Sample ID: SVE Discharge Stack-082109

Lab ID#: 0908497-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 1100 | 6600 | 2800 | 17000 |
| Freon 11 | 1100 | 3400 | 6100 | 19000 |
| Freon 113 | 1100 | 1600 | 8300 | 12000 |
| Methylene Chloride | 1100 | 65000 | 3800 | 220000 |
| Hexane | 1100 | 2300 | 3800 | 8100 |
| 1,1-Dichloroethane | 1100 | 13000 | 4400 | 54000 |
| 2-Butanone (Methyl Ethyl Ketone) | 1100 | 7300 | 3200 | 21000 |
| cis-1,2-Dichloroethene | 1100 | 200000 | 4300 | 790000 |
| 1,1,1-Trichloroethane | 1100 | 26000 | 5900 | 140000 |
| Heptane | 1100 | 3700 | 4400 | 15000 |
| Trichloroethene | 1100 | 12000 | 5800 | 68000 |
| 4-Methyl-2-pentanone | 1100 | 2300 | 4400 | 9400 |
| Toluene | 1100 | 190000 | 4100 | 730000 |
| Tetrachloroethene | 1100 | 140000 | 7300 | 930000 |
| Ethyl Benzene | 1100 | 17000 | 4700 | 73000 |
| m,p-Xylene | 1100 | 53000 | 4700 | 230000 |
| o-Xylene | 1100 | 16000 | 4700 | 68000 |
| Cumene | 1100 | 1200 | 5300 | 5800 |
| Propylbenzene | 1100 | 1900 | 5300 | 9200 |
| 4-Ethyltoluene | 1100 | 8000 | 5300 | 39000 |
| 1,3,5-Trimethylbenzene | 1100 | 3000 | 5300 | 15000 |
| 1,2,4-Trimethylbenzene | 1100 | 6300 | 5300 | 31000 |



Client Sample ID: SVE Discharge Stack-082109

Lab ID#: 0908497-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b090317 | Date of Collection: | 8/21/09 3:21:00 PM | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 216 | Date of Analysis: | 9/3/09 08:04 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 1100 | Not Detected | 5300 | Not Detected |
| Freon 114 | 1100 | Not Detected | 7600 | Not Detected |
| Chloromethane | 4300 | Not Detected | 8900 | Not Detected |
| Vinyl Chloride | 1100 | 6600 | 2800 | 17000 |
| 1,3-Butadiene | 1100 | Not Detected | 2400 | Not Detected |
| Bromomethane | 1100 | Not Detected | 4200 | Not Detected |
| Chloroethane | 1100 | Not Detected | 2800 | Not Detected |
| Freon 11 | 1100 | 3400 | 6100 | 19000 |
| Ethanol | 4300 | Not Detected | 8100 | Not Detected |
| Freon 113 | 1100 | 1600 | 8300 | 12000 |
| 1,1-Dichloroethene | 1100 | Not Detected | 4300 | Not Detected |
| Acetone | 4300 | Not Detected | 10000 | Not Detected |
| 2-Propanol | 4300 | Not Detected | 11000 | Not Detected |
| Carbon Disulfide | 1100 | Not Detected | 3400 | Not Detected |
| 3-Chloropropene | 4300 | Not Detected | 14000 | Not Detected |
| Methylene Chloride | 1100 | 65000 | 3800 | 220000 |
| Methyl tert-butyl ether | 1100 | Not Detected | 3900 | Not Detected |
| trans-1,2-Dichloroethene | 1100 | Not Detected | 4300 | Not Detected |
| Hexane | 1100 | 2300 | 3800 | 8100 |
| 1,1-Dichloroethane | 1100 | 13000 | 4400 | 54000 |
| 2-Butanone (Methyl Ethyl Ketone) | 1100 | 7300 | 3200 | 21000 |
| cis-1,2-Dichloroethene | 1100 | 200000 | 4300 | 790000 |
| Tetrahydrofuran | 1100 | Not Detected | 3200 | Not Detected |
| Chloroform | 1100 | Not Detected | 5300 | Not Detected |
| 1,1,1-Trichloroethane | 1100 | 26000 | 5900 | 140000 |
| Cyclohexane | 1100 | Not Detected | 3700 | Not Detected |
| Carbon Tetrachloride | 1100 | Not Detected | 6800 | Not Detected |
| 2,2,4-Trimethylpentane | 1100 | Not Detected | 5000 | Not Detected |
| Benzene | 1100 | Not Detected | 3400 | Not Detected |
| 1,2-Dichloroethane | 1100 | Not Detected | 4400 | Not Detected |
| Heptane | 1100 | 3700 | 4400 | 15000 |
| Trichloroethene | 1100 | 12000 | 5800 | 68000 |
| 1,2-Dichloropropane | 1100 | Not Detected | 5000 | Not Detected |
| 1,4-Dioxane | 4300 | Not Detected | 16000 | Not Detected |
| Bromodichloromethane | 1100 | Not Detected | 7200 | Not Detected |
| cis-1,3-Dichloropropene | 1100 | Not Detected | 4900 | Not Detected |
| 4-Methyl-2-pentanone | 1100 | 2300 | 4400 | 9400 |
| Toluene | 1100 | 190000 | 4100 | 730000 |
| trans-1,3-Dichloropropene | 1100 | Not Detected | 4900 | Not Detected |



Client Sample ID: SVE Discharge Stack-082109

Lab ID#: 0908497-01A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b090317 | Date of Collection: | 8/21/09 3:21:00 PM | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 216 | Date of Analysis: | 9/3/09 08:04 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 1100 | Not Detected | 5900 | Not Detected |
| Tetrachloroethene | 1100 | 140000 | 7300 | 930000 |
| 2-Hexanone | 4300 | Not Detected | 18000 | Not Detected |
| Dibromochloromethane | 1100 | Not Detected | 9200 | Not Detected |
| 1,2-Dibromoethane (EDB) | 1100 | Not Detected | 8300 | Not Detected |
| Chlorobenzene | 1100 | Not Detected | 5000 | Not Detected |
| Ethyl Benzene | 1100 | 17000 | 4700 | 73000 |
| m,p-Xylene | 1100 | 53000 | 4700 | 230000 |
| o-Xylene | 1100 | 16000 | 4700 | 68000 |
| Styrene | 1100 | Not Detected | 4600 | Not Detected |
| Bromoform | 1100 | Not Detected | 11000 | Not Detected |
| Cumene | 1100 | 1200 | 5300 | 5800 |
| 1,1,2,2-Tetrachloroethane | 1100 | Not Detected | 7400 | Not Detected |
| Propylbenzene | 1100 | 1900 | 5300 | 9200 |
| 4-Ethyltoluene | 1100 | 8000 | 5300 | 39000 |
| 1,3,5-Trimethylbenzene | 1100 | 3000 | 5300 | 15000 |
| 1,2,4-Trimethylbenzene | 1100 | 6300 | 5300 | 31000 |
| 1,3-Dichlorobenzene | 1100 | Not Detected | 6500 | Not Detected |
| 1,4-Dichlorobenzene | 1100 | Not Detected | 6500 | Not Detected |
| alpha-Chlorotoluene | 1100 | Not Detected | 5600 | Not Detected |
| 1,2-Dichlorobenzene | 1100 | Not Detected | 6500 | Not Detected |
| 1,2,4-Trichlorobenzene | 4300 | Not Detected | 32000 | Not Detected |
| Hexachlorobutadiene | 4300 | Not Detected | 46000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0908497-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b090307 | Date of Collection: | NA | |
|----------------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 9/3/09 12:41 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 5.0 | Not Detected | 25 | Not Detected |
| Freon 114 | 5.0 | Not Detected | 35 | Not Detected |
| Chloromethane | 20 | Not Detected | 41 | Not Detected |
| Vinyl Chloride | 5.0 | Not Detected | 13 | Not Detected |
| 1,3-Butadiene | 5.0 | Not Detected | 11 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 5.0 | Not Detected | 13 | Not Detected |
| Freon 11 | 5.0 | Not Detected | 28 | Not Detected |
| Ethanol | 20 | Not Detected | 38 | Not Detected |
| Freon 113 | 5.0 | Not Detected | 38 | Not Detected |
| 1,1-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Acetone | 20 | Not Detected | 48 | Not Detected |
| 2-Propanol | 20 | Not Detected | 49 | Not Detected |
| Carbon Disulfide | 5.0 | Not Detected | 16 | Not Detected |
| 3-Chloropropene | 20 | Not Detected | 63 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |
| trans-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Hexane | 5.0 | Not Detected | 18 | Not Detected |
| 1,1-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 5.0 | Not Detected | 15 | Not Detected |
| cis-1,2-Dichloroethene | 5.0 | Not Detected | 20 | Not Detected |
| Tetrahydrofuran | 5.0 | Not Detected | 15 | Not Detected |
| Chloroform | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,1-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Cyclohexane | 5.0 | Not Detected | 17 | Not Detected |
| Carbon Tetrachloride | 5.0 | Not Detected | 31 | Not Detected |
| 2,2,4-Trimethylpentane | 5.0 | Not Detected | 23 | Not Detected |
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| 1,2-Dichloroethane | 5.0 | Not Detected | 20 | Not Detected |
| Heptane | 5.0 | Not Detected | 20 | Not Detected |
| Trichloroethene | 5.0 | Not Detected | 27 | Not Detected |
| 1,2-Dichloropropane | 5.0 | Not Detected | 23 | Not Detected |
| 1,4-Dioxane | 20 | Not Detected | 72 | Not Detected |
| Bromodichloromethane | 5.0 | Not Detected | 34 | Not Detected |
| cis-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |
| 4-Methyl-2-pentanone | 5.0 | Not Detected | 20 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| trans-1,3-Dichloropropene | 5.0 | Not Detected | 23 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0908497-02A

MODIFIED EPA METHOD TO-15 GC/MS

| File Name: | b090307 | Date of Collection: | NA | |
|---------------------------|----------------------|---------------------|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: | 9/3/09 12:41 PM | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 5.0 | Not Detected | 27 | Not Detected |
| Tetrachloroethene | 5.0 | Not Detected | 34 | Not Detected |
| 2-Hexanone | 20 | Not Detected | 82 | Not Detected |
| Dibromochloromethane | 5.0 | Not Detected | 42 | Not Detected |
| 1,2-Dibromoethane (EDB) | 5.0 | Not Detected | 38 | Not Detected |
| Chlorobenzene | 5.0 | Not Detected | 23 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Styrene | 5.0 | Not Detected | 21 | Not Detected |
| Bromoform | 5.0 | Not Detected | 52 | Not Detected |
| Cumene | 5.0 | Not Detected | 24 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 5.0 | Not Detected | 34 | Not Detected |
| Propylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 4-Ethyltoluene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3,5-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,2,4-Trimethylbenzene | 5.0 | Not Detected | 24 | Not Detected |
| 1,3-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,4-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| alpha-Chlorotoluene | 5.0 | Not Detected | 26 | Not Detected |
| 1,2-Dichlorobenzene | 5.0 | Not Detected | 30 | Not Detected |
| 1,2,4-Trichlorobenzene | 20 | Not Detected | 150 | Not Detected |
| Hexachlorobutadiene | 20 | Not Detected | 210 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|------------------|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0908497-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b090304 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 9/3/09 11:02 AM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 101 |
| Freon 114 | 100 |
| Chloromethane | 96 |
| Vinyl Chloride | 100 |
| 1,3-Butadiene | 99 |
| Bromomethane | 102 |
| Chloroethane | 106 |
| Freon 11 | 101 |
| Ethanol | 107 |
| Freon 113 | 103 |
| 1,1-Dichloroethene | 102 |
| Acetone | 96 |
| 2-Propanol | 101 |
| Carbon Disulfide | 100 |
| 3-Chloropropene | 107 |
| Methylene Chloride | 100 |
| Methyl tert-butyl ether | 133 Q |
| trans-1,2-Dichloroethene | 99 |
| Hexane | 99 |
| 1,1-Dichloroethane | 102 |
| 2-Butanone (Methyl Ethyl Ketone) | 99 |
| cis-1,2-Dichloroethene | 100 |
| Tetrahydrofuran | 97 |
| Chloroform | 101 |
| 1,1,1-Trichloroethane | 102 |
| Cyclohexane | 100 |
| Carbon Tetrachloride | 104 |
| 2,2,4-Trimethylpentane | 102 |
| Benzene | 103 |
| 1,2-Dichloroethane | 106 |
| Heptane | 102 |
| Trichloroethene | 99 |
| 1,2-Dichloropropane | 102 |
| 1,4-Dioxane | 98 |
| Bromodichloromethane | 104 |
| cis-1,3-Dichloropropene | 105 |
| 4-Methyl-2-pentanone | 102 |
| Toluene | 100 |
| trans-1,3-Dichloropropene | 106 |



Client Sample ID: CCV

Lab ID#: 0908497-03A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b090304 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 9/3/09 11:02 AM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 100 |
| Tetrachloroethene | 100 |
| 2-Hexanone | 100 |
| Dibromochloromethane | 105 |
| 1,2-Dibromoethane (EDB) | 101 |
| Chlorobenzene | 99 |
| Ethyl Benzene | 99 |
| m,p-Xylene | 100 |
| o-Xylene | 99 |
| Styrene | 104 |
| Bromoform | 106 |
| Cumene | 100 |
| 1,1,2,2-Tetrachloroethane | 98 |
| Propylbenzene | 98 |
| 4-Ethyltoluene | 94 |
| 1,3,5-Trimethylbenzene | 95 |
| 1,2,4-Trimethylbenzene | 96 |
| 1,3-Dichlorobenzene | 91 |
| 1,4-Dichlorobenzene | 91 |
| alpha-Chlorotoluene | 103 |
| 1,2-Dichlorobenzene | 88 |
| 1,2,4-Trichlorobenzene | 74 |
| Hexachlorobutadiene | 74 |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0908497-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b090306 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 9/3/09 12:01 PM |

| Compound | %Recovery |
|----------------------------------|-----------|
| Freon 12 | 114 |
| Freon 114 | 111 |
| Chloromethane | 113 |
| Vinyl Chloride | 111 |
| 1,3-Butadiene | 110 |
| Bromomethane | 115 |
| Chloroethane | 114 |
| Freon 11 | 112 |
| Ethanol | 91 |
| Freon 113 | 128 |
| 1,1-Dichloroethene | 125 |
| Acetone | 124 |
| 2-Propanol | 118 |
| Carbon Disulfide | 113 |
| 3-Chloropropene | 125 |
| Methylene Chloride | 118 |
| Methyl tert-butyl ether | 143 Q |
| trans-1,2-Dichloroethene | 115 |
| Hexane | 114 |
| 1,1-Dichloroethane | 119 |
| 2-Butanone (Methyl Ethyl Ketone) | 115 |
| cis-1,2-Dichloroethene | 117 |
| Tetrahydrofuran | 110 |
| Chloroform | 115 |
| 1,1,1-Trichloroethane | 117 |
| Cyclohexane | 112 |
| Carbon Tetrachloride | 118 |
| 2,2,4-Trimethylpentane | 115 |
| Benzene | 117 |
| 1,2-Dichloroethane | 117 |
| Heptane | 112 |
| Trichloroethene | 110 |
| 1,2-Dichloropropane | 112 |
| 1,4-Dioxane | 111 |
| Bromodichloromethane | 113 |
| cis-1,3-Dichloropropene | 112 |
| 4-Methyl-2-pentanone | 111 |
| Toluene | 116 |
| trans-1,3-Dichloropropene | 113 |



Client Sample ID: LCS

Lab ID#: 0908497-04A

MODIFIED EPA METHOD TO-15 GC/MS

| | | |
|--------------|---------|-----------------------------------|
| File Name: | b090306 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 9/3/09 12:01 PM |

| Compound | %Recovery |
|---------------------------|-----------|
| 1,1,2-Trichloroethane | 110 |
| Tetrachloroethene | 113 |
| 2-Hexanone | 106 |
| Dibromochloromethane | 116 |
| 1,2-Dibromoethane (EDB) | 109 |
| Chlorobenzene | 111 |
| Ethyl Benzene | 110 |
| m,p-Xylene | 111 |
| o-Xylene | 111 |
| Styrene | 111 |
| Bromoform | 115 |
| Cumene | 115 |
| 1,1,2,2-Tetrachloroethane | 108 |
| Propylbenzene | 112 |
| 4-Ethyltoluene | 108 |
| 1,3,5-Trimethylbenzene | 106 |
| 1,2,4-Trimethylbenzene | 106 |
| 1,3-Dichlorobenzene | 104 |
| 1,4-Dichlorobenzene | 101 |
| alpha-Chlorotoluene | 112 |
| 1,2-Dichlorobenzene | 101 |
| 1,2,4-Trichlorobenzene | 64 Q |
| Hexachlorobutadiene | 64 Q |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

8/18/2009

Ms. Amy Gibney
XDD (Xpert Design & Diagnostics, LLP)
22 Marin Way
Suite 3
Stratham NH 03885

Project Name: Dover Landfill
Project #: 84411
Workorder #: 0908316

Dear Ms. Amy Gibney

The following report includes the data for the above referenced project for sample(s) received on 8/15/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Bryanna Langley at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Bryanna Langley
Project Manager

WORK ORDER #: 0908316

Work Order Summary

| | | | |
|------------------------|--|------------------|--|
| CLIENT: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 | BILL TO: | Ms. Amy Gibney XDD (Xpert Design & Diagnostics, LLP) 22 Marin Way Suite 3 Stratham, NH 03885 |
| PHONE: | 603-778-1100 | P.O. # | 1368 |
| FAX: | 603-778-2121 | PROJECT # | 84411 Dover Landfill |
| DATE RECEIVED: | 08/15/2009 | CONTACT: | Bryanna Langley |
| DATE COMPLETED: | 08/18/2009 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT</u> | <u>FINAL</u> |
|--------------------------|--------------------|----------------------------|--------------------------|------------------------|
| | | | <u>VAC./PRES.</u> | <u>PRESSURE</u> |
| 01A | Stack-081409 | Modified TO-15 (5&20 ppbv) | Tedlar Bag | Tedlar Bag |
| 02A | Lab Blank | Modified TO-15 (5&20 ppbv) | NA | NA |
| 03A | CCV | Modified TO-15 (5&20 ppbv) | NA | NA |
| 04A | LCS | Modified TO-15 (5&20 ppbv) | NA | NA |

CERTIFIED BY:



DATE: 08/18/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-15
XDD (Xpert Design & Diagnostics, LLP)
Workorder# 0908316**

One 1 Liter Tedlar Bag sample was received on August 15, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

| Requirement | TO-15 | ATL Modifications |
|-------------------------|----------------------------|---|
| Daily CCV | </= 30% Difference | </= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated. |
| Sample collection media | Summa canister | ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Stack-081409

Lab ID#: 0908316-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|----------------------------------|----------------------|------------------|-----------------------|-------------------|
| Vinyl Chloride | 400 | 6000 | 1000 | 15000 |
| Chloroethane | 400 | 460 | 1000 | 1200 |
| Freon 11 | 400 | 3500 | 2200 | 20000 |
| Freon 113 | 400 | 1400 | 3100 | 10000 |
| Acetone | 1600 | 1700 | 3800 | 4200 |
| Methylene Chloride | 400 | 36000 | 1400 | 120000 |
| trans-1,2-Dichloroethene | 400 | 400 | 1600 | 1600 |
| Hexane | 400 | 1500 | 1400 | 5200 |
| 1,1-Dichloroethane | 400 | 7600 | 1600 | 31000 |
| 2-Butanone (Methyl Ethyl Ketone) | 400 | 7600 | 1200 | 22000 |
| cis-1,2-Dichloroethene | 400 | 130000 | 1600 | 500000 |
| 1,1,1-Trichloroethane | 400 | 13000 | 2200 | 69000 |
| Cyclohexane | 400 | 760 | 1400 | 2600 |
| Heptane | 400 | 2400 | 1600 | 9900 |
| Trichloroethene | 400 | 8900 | 2100 | 48000 |
| 4-Methyl-2-pentanone | 400 | 1900 | 1600 | 7800 |
| Toluene | 400 | 100000 | 1500 | 400000 |
| Tetrachloroethene | 400 | 68000 | 2700 | 460000 |
| Ethyl Benzene | 400 | 8600 | 1700 | 37000 |
| m,p-Xylene | 400 | 25000 | 1700 | 110000 |
| o-Xylene | 400 | 7200 | 1700 | 31000 |
| Cumene | 400 | 550 | 2000 | 2700 |
| Propylbenzene | 400 | 680 | 2000 | 3400 |
| 4-Ethyltoluene | 400 | 2800 | 2000 | 14000 |
| 1,3,5-Trimethylbenzene | 400 | 1100 | 2000 | 5400 |
| 1,2,4-Trimethylbenzene | 400 | 2200 | 2000 | 11000 |



Client Sample ID: Stack-081409

Lab ID#: 0908316-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081710a | Date of Collection: 8/14/09 4:00:00 PM | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 800 | Date of Analysis: 8/17/09 02:12 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 400 | Not Detected | 2000 | Not Detected |
| Freon 114 | 400 | Not Detected | 2800 | Not Detected |
| Chloromethane | 1600 | Not Detected | 3300 | Not Detected |
| Vinyl Chloride | 400 | 6000 | 1000 | 15000 |
| 1,3-Butadiene | 400 | Not Detected | 880 | Not Detected |
| Bromomethane | 400 | Not Detected | 1600 | Not Detected |
| Chloroethane | 400 | 460 | 1000 | 1200 |
| Freon 11 | 400 | 3500 | 2200 | 20000 |
| Ethanol | 1600 | Not Detected | 3000 | Not Detected |
| Freon 113 | 400 | 1400 | 3100 | 10000 |
| 1,1-Dichloroethene | 400 | Not Detected | 1600 | Not Detected |
| Acetone | 1600 | 1700 | 3800 | 4200 |
| 2-Propanol | 1600 | Not Detected | 3900 | Not Detected |
| Carbon Disulfide | 400 | Not Detected | 1200 | Not Detected |
| 3-Chloropropene | 1600 | Not Detected | 5000 | Not Detected |
| Methylene Chloride | 400 | 36000 | 1400 | 120000 |
| Methyl tert-butyl ether | 400 | Not Detected | 1400 | Not Detected |
| trans-1,2-Dichloroethene | 400 | 400 | 1600 | 1600 |
| Hexane | 400 | 1500 | 1400 | 5200 |
| 1,1-Dichloroethane | 400 | 7600 | 1600 | 31000 |
| 2-Butanone (Methyl Ethyl Ketone) | 400 | 7600 | 1200 | 22000 |
| cis-1,2-Dichloroethene | 400 | 130000 | 1600 | 500000 |
| Tetrahydrofuran | 400 | Not Detected | 1200 | Not Detected |
| Chloroform | 400 | Not Detected | 2000 | Not Detected |
| 1,1,1-Trichloroethane | 400 | 13000 | 2200 | 69000 |
| Cyclohexane | 400 | 760 | 1400 | 2600 |
| Carbon Tetrachloride | 400 | Not Detected | 2500 | Not Detected |
| 2,2,4-Trimethylpentane | 400 | Not Detected | 1900 | Not Detected |
| Benzene | 400 | Not Detected | 1300 | Not Detected |
| 1,2-Dichloroethane | 400 | Not Detected | 1600 | Not Detected |
| Heptane | 400 | 2400 | 1600 | 9900 |
| Trichloroethene | 400 | 8900 | 2100 | 48000 |
| 1,2-Dichloropropane | 400 | Not Detected | 1800 | Not Detected |
| 1,4-Dioxane | 1600 | Not Detected | 5800 | Not Detected |
| Bromodichloromethane | 400 | Not Detected | 2700 | Not Detected |
| cis-1,3-Dichloropropene | 400 | Not Detected | 1800 | Not Detected |
| 4-Methyl-2-pentanone | 400 | 1900 | 1600 | 7800 |
| Toluene | 400 | 100000 | 1500 | 400000 |
| trans-1,3-Dichloropropene | 400 | Not Detected | 1800 | Not Detected |



Client Sample ID: Stack-081409

Lab ID#: 0908316-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081710a | Date of Collection: 8/14/09 4:00:00 PM | | |
|--------------------------------|----------------------|--|-----------------------|-------------------|
| Dil. Factor: | 800 | Date of Analysis: 8/17/09 02:12 PM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 400 | Not Detected | 2200 | Not Detected |
| Tetrachloroethene | 400 | 68000 | 2700 | 460000 |
| 2-Hexanone | 1600 | Not Detected | 6600 | Not Detected |
| Dibromochloromethane | 400 | Not Detected | 3400 | Not Detected |
| <u>1,2-Dibromoethane (EDB)</u> | 400 | Not Detected | 3100 | Not Detected |
| Chlorobenzene | 400 | Not Detected | 1800 | Not Detected |
| Ethyl Benzene | 400 | 8600 | 1700 | 37000 |
| m,p-Xylene | 400 | 25000 | 1700 | 110000 |
| o-Xylene | 400 | 7200 | 1700 | 31000 |
| Styrene | 400 | Not Detected | 1700 | Not Detected |
| Bromoform | 400 | Not Detected | 4100 | Not Detected |
| Cumene | 400 | 550 | 2000 | 2700 |
| 1,1,2,2-Tetrachloroethane | 400 | Not Detected | 2700 | Not Detected |
| Propylbenzene | 400 | 680 | 2000 | 3400 |
| <u>4-Ethyltoluene</u> | 400 | 2800 | 2000 | 14000 |
| 1,3,5-Trimethylbenzene | 400 | 1100 | 2000 | 5400 |
| 1,2,4-Trimethylbenzene | 400 | 2200 | 2000 | 11000 |
| 1,3-Dichlorobenzene | 400 | Not Detected | 2400 | Not Detected |
| 1,4-Dichlorobenzene | 400 | Not Detected | 2400 | Not Detected |
| <u>alpha-Chlorotoluene</u> | 400 | Not Detected | 2100 | Not Detected |
| 1,2-Dichlorobenzene | 400 | Not Detected | 2400 | Not Detected |
| 1,2,4-Trichlorobenzene | 1600 | Not Detected | 12000 | Not Detected |
| Hexachlorobutadiene | 1600 | Not Detected | 17000 | Not Detected |

Container Type: 1 Liter Tedlar Bag

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 96 | 70-130 |
| 1,2-Dichloroethane-d4 | 111 | 70-130 |
| 4-Bromofluorobenzene | 116 | 70-130 |



Client Sample ID: Lab Blank

Lab ID#: 0908316-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081705 | Date of Collection: NA | | |
|----------------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 10:15 AM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| Freon 12 | 0.50 | Not Detected | 2.5 | Not Detected |
| Freon 114 | 0.50 | Not Detected | 3.5 | Not Detected |
| Chloromethane | 2.0 | Not Detected | 4.1 | Not Detected |
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| 1,3-Butadiene | 0.50 | Not Detected | 1.1 | Not Detected |
| Bromomethane | 0.50 | Not Detected | 1.9 | Not Detected |
| Chloroethane | 0.50 | Not Detected | 1.3 | Not Detected |
| Freon 11 | 0.50 | Not Detected | 2.8 | Not Detected |
| Ethanol | 2.0 | Not Detected | 3.8 | Not Detected |
| Freon 113 | 0.50 | Not Detected | 3.8 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 2.0 | Not Detected | 4.8 | Not Detected |
| 2-Propanol | 2.0 | Not Detected | 4.9 | Not Detected |
| Carbon Disulfide | 0.50 | Not Detected | 1.6 | Not Detected |
| 3-Chloropropene | 2.0 | Not Detected | 6.3 | Not Detected |
| Methylene Chloride | 0.50 | Not Detected | 1.7 | Not Detected |
| Methyl tert-butyl ether | 0.50 | Not Detected | 1.8 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Hexane | 0.50 | Not Detected | 1.8 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 0.50 | Not Detected | 1.5 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Tetrahydrofuran | 0.50 | Not Detected | 1.5 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Cyclohexane | 0.50 | Not Detected | 1.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| 2,2,4-Trimethylpentane | 0.50 | Not Detected | 2.3 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Heptane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloropropane | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,4-Dioxane | 2.0 | Not Detected | 7.2 | Not Detected |
| Bromodichloromethane | 0.50 | Not Detected | 3.4 | Not Detected |
| cis-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 4-Methyl-2-pentanone | 0.50 | Not Detected | 2.0 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| trans-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |



Client Sample ID: Lab Blank

Lab ID#: 0908316-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081705 | Date of Collection: NA | | |
|---------------------------|----------------------|---|-----------------------|-------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 10:15 AM | | |
| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| 2-Hexanone | 2.0 | Not Detected | 8.2 | Not Detected |
| Dibromochloromethane | 0.50 | Not Detected | 4.2 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.50 | Not Detected | 3.8 | Not Detected |
| Chlorobenzene | 0.50 | Not Detected | 2.3 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Styrene | 0.50 | Not Detected | 2.1 | Not Detected |
| Bromoform | 0.50 | Not Detected | 5.2 | Not Detected |
| Cumene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.50 | Not Detected | 3.4 | Not Detected |
| Propylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 4-Ethyltoluene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,4-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| alpha-Chlorotoluene | 0.50 | Not Detected | 2.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 2.0 | Not Detected | 15 | Not Detected |
| Hexachlorobutadiene | 2.0 | Not Detected | 21 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | 115 | 70-130 |
| 4-Bromofluorobenzene | 114 | 70-130 |



Client Sample ID: CCV

Lab ID#: 0908316-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081702 | Date of Collection: NA |
|----------------------------------|---------|------------------------------------|
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 07:40 AM |
| <hr/> | | |
| <hr/> | | |
| Compound | | %Recovery |
| Freon 12 | | 108 |
| Freon 114 | | 90 |
| Chloromethane | | 87 |
| Vinyl Chloride | | 84 |
| 1,3-Butadiene | | 86 |
| Bromomethane | | 89 |
| Chloroethane | | 80 |
| Freon 11 | | 110 |
| Ethanol | | 85 |
| Freon 113 | | 99 |
| 1,1-Dichloroethene | | 88 |
| Acetone | | 81 |
| 2-Propanol | | 95 |
| Carbon Disulfide | | 79 |
| 3-Chloropropene | | 81 |
| Methylene Chloride | | 77 |
| Methyl tert-butyl ether | | 103 |
| trans-1,2-Dichloroethene | | 90 |
| Hexane | | 87 |
| 1,1-Dichloroethane | | 93 |
| 2-Butanone (Methyl Ethyl Ketone) | | 88 |
| cis-1,2-Dichloroethene | | 91 |
| Tetrahydrofuran | | 84 |
| Chloroform | | 103 |
| 1,1,1-Trichloroethane | | 114 |
| Cyclohexane | | 88 |
| Carbon Tetrachloride | | 119 |
| 2,2,4-Trimethylpentane | | 88 |
| Benzene | | 87 |
| 1,2-Dichloroethane | | 117 |
| Heptane | | 92 |
| Trichloroethene | | 97 |
| 1,2-Dichloropropane | | 85 |
| 1,4-Dioxane | | 87 |
| Bromodichloromethane | | 110 |
| cis-1,3-Dichloropropene | | 98 |
| 4-Methyl-2-pentanone | | 103 |
| Toluene | | 91 |
| trans-1,3-Dichloropropene | | 106 |



Client Sample ID: CCV

Lab ID#: 0908316-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | t081702 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 07:40 AM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 90 |
| Tetrachloroethene | 101 |
| 2-Hexanone | 90 |
| Dibromochloromethane | 109 |
| <u>1,2-Dibromoethane (EDB)</u> | 100 |
| Chlorobenzene | 91 |
| Ethyl Benzene | 95 |
| m,p-Xylene | 96 |
| o-Xylene | 96 |
| Styrene | 101 |
| Bromoform | 115 |
| Cumene | 102 |
| 1,1,2,2-Tetrachloroethane | 89 |
| Propylbenzene | 100 |
| <u>4-Ethyltoluene</u> | 89 |
| 1,3,5-Trimethylbenzene | 123 |
| 1,2,4-Trimethylbenzene | 106 |
| 1,3-Dichlorobenzene | 101 |
| 1,4-Dichlorobenzene | 100 |
| <u>alpha-Chlorotoluene</u> | 104 |
| 1,2-Dichlorobenzene | 101 |
| 1,2,4-Trichlorobenzene | 83 |
| Hexachlorobutadiene | 83 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 97 | 70-130 |
| 1,2-Dichloroethane-d4 | 122 | 70-130 |
| 4-Bromofluorobenzene | 120 | 70-130 |



Client Sample ID: LCS

Lab ID#: 0908316-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| File Name: | t081703 | Date of Collection: NA |
|----------------------------------|----------------|---|
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 08:26 AM |
| <hr/> | | |
| <hr/> | | |
| Compound | | %Recovery |
| Freon 12 | | 87 |
| Freon 114 | | 83 |
| Chloromethane | | 75 |
| Vinyl Chloride | | 70 |
| 1,3-Butadiene | | 77 |
| Bromomethane | | 72 |
| Chloroethane | | 66 Q |
| Freon 11 | | 98 |
| Ethanol | | 57 Q |
| Freon 113 | | 96 |
| 1,1-Dichloroethene | | 89 |
| Acetone | | 77 |
| 2-Propanol | | 93 |
| Carbon Disulfide | | 75 |
| 3-Chloropropene | | 75 |
| Methylene Chloride | | 82 |
| Methyl tert-butyl ether | | 92 |
| trans-1,2-Dichloroethene | | 82 |
| Hexane | | 81 |
| 1,1-Dichloroethane | | 90 |
| 2-Butanone (Methyl Ethyl Ketone) | | 82 |
| cis-1,2-Dichloroethene | | 83 |
| Tetrahydrofuran | | 78 |
| Chloroform | | 95 |
| 1,1,1-Trichloroethane | | 103 |
| Cyclohexane | | 80 |
| Carbon Tetrachloride | | 105 |
| 2,2,4-Trimethylpentane | | 81 |
| Benzene | | 83 |
| 1,2-Dichloroethane | | 110 |
| Heptane | | 88 |
| Trichloroethene | | 89 |
| 1,2-Dichloropropane | | 79 |
| 1,4-Dioxane | | 84 |
| Bromodichloromethane | | 101 |
| cis-1,3-Dichloropropene | | 89 |
| 4-Methyl-2-pentanone | | 100 |
| Toluene | | 86 |
| trans-1,3-Dichloropropene | | 96 |



Client Sample ID: LCS

Lab ID#: 0908316-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

| | | |
|--------------|---------|------------------------------------|
| File Name: | t081703 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/17/09 08:26 AM |

| Compound | %Recovery |
|--------------------------------|-----------|
| 1,1,2-Trichloroethane | 82 |
| Tetrachloroethene | 92 |
| 2-Hexanone | 88 |
| Dibromochloromethane | 100 |
| <u>1,2-Dibromoethane (EDB)</u> | 88 |
| Chlorobenzene | 82 |
| Ethyl Benzene | 83 |
| m,p-Xylene | 84 |
| o-Xylene | 86 |
| Styrene | 90 |
| Bromoform | 102 |
| Cumene | 92 |
| 1,1,2,2-Tetrachloroethane | 77 |
| Propylbenzene | 88 |
| <u>4-Ethyltoluene</u> | 78 |
| 1,3,5-Trimethylbenzene | 107 |
| 1,2,4-Trimethylbenzene | 91 |
| 1,3-Dichlorobenzene | 86 |
| 1,4-Dichlorobenzene | 85 |
| <u>alpha-Chlorotoluene</u> | 91 |
| 1,2-Dichlorobenzene | 85 |
| 1,2,4-Trichlorobenzene | 57 Q |
| Hexachlorobutadiene | 58 Q |

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| Toluene-d8 | 97 | 70-130 |
| 1,2-Dichloroethane-d4 | 120 | 70-130 |
| 4-Bromofluorobenzene | 112 | 70-130 |

Laboratory Report

RECEIVED
OCT 08 2009

Resource Laboratories, LLC

124 Heritage Avenue #10 Portsmouth, NH 03801

BY:

Dennis Keane
Xpert Design & Diagnostics, LLC
22 Marin Way
Unit 3
Stratham, NH 03885

PO Number: 1500

LabID: 17713

Date Received: 9/29/09

Project: Dover 84411

Validated
10/8/09 J.C.

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Resource Laboratories, LLC Quality Assurance Plan. The Standard Operating Procedures (SOP) are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Resource Laboratories, LLC maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Resource Laboratories, LLC

S. Sylvester (fr)
Susan Sylvester
Principal, General Manager

10/7/09
Date

Total number of pages 10

Resource Laboratories, LLC Certifications

New Hampshire 1732
Maine NH903

Massachusetts M-NH902

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-001

Sample ID: Carbon Inf

Matrix: Water

| Parameter | Sampled: | 9/25/09 13:30 | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Date | Time | Analysis Reference |
|-----------------------------|----------|---------------|-------------|-------|--------------------|---------|-----------|---------|-------|--------------|--------------------|
| dichlorodifluoromethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| chloromethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| vinyl chloride | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| bromomethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| chloroethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| trichlorofluoromethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| diethyl ether | | < 50 | 50 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| acetone | | 820 | 500 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1-dichloroethene | | < 10 | 10 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| methylene chloride | | 1300 | 50 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| carbon disulfide | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| methyl t-butyl ether (MTBE) | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| trans-1,2-dichloroethene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1-dichloroethane | | 150 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 2-butanone (MEK) | | 1800 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 2,2-dichloropropane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| cis-1,2-dichloroethene | | 3500 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| chloroform | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| bromochloromethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| tetrahydrofuran (THF) | | 240 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1,1-trichloroethane | | 120 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1-dichloropropene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| carbon tetrachloride | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2-dichloroethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| benzene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| trichloroethene | | 190 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2-dichloropropane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| bromodichloromethane | | < 6 | 6 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| dibromomethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 4-methyl-2-pentanone (MIBK) | | 1100 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| cis-1,3-dichloropropene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| toluene | | 2400 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| trans-1,3-dichloropropene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 2-hexanone | | 150 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1,2-trichloroethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,3-dichloropropane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| tetrachloroethene | | 1600 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| dibromochloromethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2-dibromoethane (EDB) | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| chlorobenzene | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1,1,2-tetrachloroethane | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| ethylbenzene | | 61 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| m&p-xylenes | | 700 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| o-xylene | | 480 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-001

Sample ID: Carbon Inf

Matrix: Water

| Parameter | Sampled: | 9/25/09 13:30 | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|------------------------------------|----------|---------------|-------------|-------|--------------------|---------|-----------|---------|---------------|--------------|-----------|
| styrene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| bromoform | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| isopropylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,1,2,2-tetrachloroethane | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2,3-trichloropropane | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| n-propylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| bromobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,3,5-trimethylbenzene | 78 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 2-chlorotoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 4-chlorotoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| tert-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2,4-trimethylbenzene | 140 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| sec-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,3-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 4-isopropyltoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,4-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| n-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2-dibromo-3-chloropropane (DBCP) | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2,4-trichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| hexachlorobutadiene | < 5.0 | 5.0 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| naphthalene | < 50 | 50 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 1,2,3-trichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| Surrogate Recovery | | | | | | | | | | | |
| dibromofluoromethane SUR | 93 | 78-114 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| toluene-D8 SUR | 98 | 88-110 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |
| 4-bromofluorobenzene SUR | 100 | 86-115 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:02 | SW5030B8260B | |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-002

Sample ID: Carbon Eff

Matrix: Water

| Parameter | Sampled: 9/25/09 13:40 | Result | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|-----------------------------|------------------------|--------|-------------|-------|--------------------|---------|-----------|-------|---------------|------|-----------|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| acetone | < 50 | 50 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| benzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| trichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| bromodichloromethane | < 1 | 1 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| toluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | | |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-002

Sample ID: Carbon Eff

Matrix: Water

Sampled: 9/25/09 13:40

| Parameter | Result | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Analysis | | | Reference |
|------------------------------------|--------|---------------|-------|--------------------|---------|-----------|----------|-------|--------------|-----------|
| | | | | | | | Batch | Date | Time | |
| styrene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| Surrogate Recovery | | Limits | | | | | | | | |
| dibromofluoromethane SUR | 96 | 78-114 | % | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| toluene-D8 SUR | 96 | 88-110 | % | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |
| 4-bromofluorobenzene SUR | 94 | 86-115 | % | 1 | LMM | 0902691 | 10/5/09 | 20:59 | SW5030B8260B | |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-003

Sample ID: DUP-1

Matrix: Water

| Parameter | Sampled: | 9/25/09 13:37 | Quant | Units | Instr Dil'n | Prep | Analysis | | | | |
|-----------------------------|----------|---------------|--------|-------|-------------|---------|----------|---------|---------|-------|--------------|
| | | | Result | Limit | Factor | Analyst | Date | Batch | Date | Time | Reference |
| dichlorodifluoromethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| chloromethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| vinyl chloride | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| bromomethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| chloroethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| trichlorofluoromethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| diethyl ether | | | < 50 | 50 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| acetone | | | 820 | 500 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1-dichloroethene | | | < 10 | 10 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| methylene chloride | | | 1300 | 50 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| carbon disulfide | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| methyl t-butyl ether (MTBE) | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| trans-1,2-dichloroethene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1-dichloroethane | | | 140 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 2-butanone (MEK) | | | 1800 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 2,2-dichloropropane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| cis-1,2-dichloroethene | | | 3500 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| chloroform | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| bromochloromethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| tetrahydrofuran (THF) | | | 240 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1,1-trichloroethane | | | 120 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1-dichloropropene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| carbon tetrachloride | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,2-dichloroethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| benzene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| trichloroethene | | | 190 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,2-dichloropropane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| bromodichloromethane | | | < 6 | 6 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| dibromomethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 4-methyl-2-pentanone (MIBK) | | | 1100 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| cis-1,3-dichloropropene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| toluene | | | 2400 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| trans-1,3-dichloropropene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 2-hexanone | | | 150 | 100 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1,2-trichloroethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,3-dichloropropane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| tetrachloroethene | | | 1500 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| dibromochloromethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,2-dibromoethane (EDB) | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| chlorobenzene | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| 1,1,1,2-tetrachloroethane | | | < 20 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| ethylbenzene | | | 54 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| m&p-xylenes | | | 630 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |
| c-xylene | | | 430 | 20 | ug/L | 10 | LMM | 0902700 | 10/6/09 | 11:36 | SW5030B8260B |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-003

Sample ID: DUP-1

Matrix: Water

| Parameter | Sampled: 9/25/09 13:37 | | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Analysis | | | Reference |
|------------------------------------|------------------------|---------------|-------------|-------|--------------------|---------|-----------|----------|-------|------|--------------|
| | Result | | | | | | | Batch | Date | Time | |
| styrene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| bromoform | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| isopropylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,1,2,2-tetrachloroethane | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2,3-trichloropropane | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| n-propylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| bromobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,3,5-trimethylbenzene | 76 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 2-chlorotoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 4-chlorotoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| tert-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2,4-trimethylbenzene | 120 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| sec-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,3-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 4-isopropyltoluene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,4-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2-dichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| n-butylbenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2-dibromo-3-chloropropane (DBCP) | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2,4-trichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| hexachlorobutadiene | < 5.0 | 5.0 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| naphthalene | < 50 | 50 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 1,2,3-trichlorobenzene | < 20 | 20 | ug/L | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| Surrogate Recovery | | Limits | | | | | | | | | |
| dibromofluoromethane SUR | 96 | 78-114 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| toluene-D8 SUR | 100 | 88-110 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |
| 4-bromofluorobenzene SUR | 94 | 86-115 | % | 10 | LMM | | 0902700 | 10/6/09 | 11:36 | | SW5030B8260B |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-004

Sample ID: Trip Blank

Matrix: Water

Sampled: 9/25/09

| Parameter | Result | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Analysis | | |
|-----------------------------|--------|-------------|-------|--------------------|---------|-----------|----------|-------|--------------|
| | | | | | | | Batch | Date | Time |
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| acetone | < 50 | 50 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| benzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| trichloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| bromodichloromethane | < 1 | 1 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| toluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B |

Project ID: Dover 84411

Lab ID: 17713

Lab Number: 17713-004

Sample ID: Trip Blank

Matrix: Water

Sampled: 9/25/09

| Parameter | Result | Quant Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Analysis | | | |
|------------------------------------|--------|---------------|-------|--------------------|---------|-----------|----------|-------|--------------|-----------|
| | | | | | | | Batch | Date | Time | Reference |
| styrene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| Surrogate Recovery | | Limits | | | | | | | | |
| dibromofluoromethane SUR | 101 | 78-114 | % | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| toluene-D8 SUR | 95 | 88-110 | % | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |
| 4-bromofluorobenzene SUR | 97 | 86-115 | % | 1 | LMM | 0902691 | 10/5/09 | 12:28 | SW5030B8260B | |

RL Resource Laboratories, LLC
124 Heritage Avenue • Portsmouth, NH 03801
Phone: 603-436-2001 • Fax: 603-430-2100

**CHAIN-OF-CUSTODY RECORD
AND ANALYSIS REQUEST**

17713

| | |
|---|---|
| Company Name: XDD, LLC | Project Name: <i>Dover</i> |
| Company Address: 22 Marin Way #3 stratham, NH C3285 | Project #: 84411 |
| Report To: Dennis Keane | Project Location: NH MA ME VT Other |
| Phone #: 603-778-1100 | Protocol: EPA SDWA NPDES MCP NHDES OTHER |
| Invoice To: Mary Scudieri | Reporting Limits: QAPP GW-1 S-1 EPA DW Other |
| | Quote # _____ PO # 1500 |

| Lab Sample ID (Lab Use Only) | Field ID | # CONTAINERS | Matrix | Preservation Method | Sampling | | | | | | |
|---------------------------------|----------|--------------|--------|--------------------------------|----------|-------|-------|---------|------|---------|---|
| | | | | | WATER | SOLID | OTHER | DATE | TIME | SAMPLER | |
| 17713-0 Carbon Int. | 2 | X | X | HCl | | | | 9-25-09 | 1330 | MW | X |
| ✓ 02 Carbon E&G | 2 | X | X | HNO ₃ | | | | 9-25-09 | 1340 | MW | X |
| ✓ 03 DUP-1 | 2 | X | X | H ₂ SO ₄ | | | | 9-25-09 | 1337 | MW | X |
| ✓ 04 trip Blank | 1 | X | X | NaOH | | | | | | | X |

ANALYSIS REQUEST

| | | | |
|--|--|--|--|
| <input checked="" type="checkbox"/> VOC 8260 | <input type="checkbox"/> VOC 8260 NINDES | <input type="checkbox"/> VOC 8260 MADEP | <input type="checkbox"/> VOC 8260 MADEP |
| <input type="checkbox"/> VOC 524 | <input type="checkbox"/> VOC BTEX | <input type="checkbox"/> MRE, only | <input type="checkbox"/> TPH Fingerprint |
| <input type="checkbox"/> VPH MADEP | <input type="checkbox"/> MEGRD | <input type="checkbox"/> GRD 8016 | <input type="checkbox"/> 6270PAH |
| <input type="checkbox"/> VOC 524.2 | <input type="checkbox"/> VOC 524.2 TH List | <input type="checkbox"/> 8082 PCB | <input type="checkbox"/> 8081 Pesticides |
| <input type="checkbox"/> TPH | <input type="checkbox"/> DOD 8015 | <input type="checkbox"/> MECRO | <input type="checkbox"/> EBB 504.1 |
| <input type="checkbox"/> 8081 | <input type="checkbox"/> 82270ABN | <input type="checkbox"/> 625 | <input type="checkbox"/> 8082 PCB |
| <input type="checkbox"/> D&G 6841 | <input type="checkbox"/> Mineral O&G SM5520F | <input type="checkbox"/> pH | <input type="checkbox"/> 800 |
| <input type="checkbox"/> Dissolved Metals-list | <input type="checkbox"/> Conductivity | <input type="checkbox"/> TSS | <input type="checkbox"/> TS |
| <input type="checkbox"/> Total Metals-list | <input type="checkbox"/> Turbidity | <input type="checkbox"/> TNS | <input type="checkbox"/> Alkalinity |
| <input type="checkbox"/> Ammonia | <input type="checkbox"/> Nitrate | <input type="checkbox"/> RCRA Metals | <input type="checkbox"/> Priority Pollutant Metals |
| <input type="checkbox"/> T-Phosphorus | <input type="checkbox"/> Nitrite | <input type="checkbox"/> TAL Metals | <input type="checkbox"/> TAL Metals |
| <input type="checkbox"/> Cyanide | <input type="checkbox"/> Sulfide | <input type="checkbox"/> Dissolved Metals-list | <input type="checkbox"/> TOC |
| <input type="checkbox"/> Nitrate | <input type="checkbox"/> Chloride | <input type="checkbox"/> Total Metals-list | <input type="checkbox"/> TOC |
| <input type="checkbox"/> Corrosivity | <input type="checkbox"/> Reactive CN | <input type="checkbox"/> Dissolved Metals-list | <input type="checkbox"/> Ignitability/FP |
| <input type="checkbox"/> TCP Metals | <input type="checkbox"/> TCP VOC | <input type="checkbox"/> Dissolved Metals-list | <input type="checkbox"/> TCP SVOC |
| <input type="checkbox"/> Subsampled: | <input type="checkbox"/> TOC | <input type="checkbox"/> Grain Size | <input type="checkbox"/> TCP Herbicides |

Grah (G) or Carriole (C)

| | | | | |
|--|---|--|---|---|
| TAT REQUESTED | * See www.reslabs.com for sample acceptance policy and current accreditation lists. | SPECIAL INSTRUCTIONS | | |
| Priority (24 hr)** | <input type="checkbox"/> | | | |
| Expedited (48 hr)** | <input type="checkbox"/> | | | |
| Standard (10 Business Days) | <input checked="" type="checkbox"/> | | | |
| **Date Needed | _____ | | | |
| REPORTING INSTRUCTIONS | | <input type="checkbox"/> NO HARD COPY REQUIRED | <input type="checkbox"/> FAX (FAX#) _____ | <input checked="" type="checkbox"/> EXCEL SPREADSHEET |
| <input checked="" type="checkbox"/> PDF (e-mail address) | | <i>Keene@xdd-llc.com</i> | <input type="checkbox"/> OTHER (specify) | RECEIVED ON ICE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |
| Relinquished by Sampler: | | Date <i>9/25/09</i> | Time <i>1500</i> | Temperature <i>5</i> °C |
| Relinquished by: <i>Cold Storage</i> | | Date <i>9/29/09</i> | Time <i>1605</i> | Date <i>9/29/09</i> Time <i>1500</i> |
| Relinquished by: | | Date | Time | Received by Laboratory: <i>Joanne King</i> |
| | | Way Bill#: | | Date <i>9/29/09</i> Time <i>11:05</i> |

CUSTODY RECORD

SUMMARY AND STATUS OF ACTIVITIES – Q3 – OCTOBER 10, 2009
ECOTOXICITY AND HUMAN HEALTH ASSESSMENT OF THE COCHECO RIVER
PRE-DESIGN INVESTIGATION
DOVER MUNICIPAL LANDFILL SUPERFUND SITE
DOVER, NEW HAMPSHIRE

1. Summary of Activities

Sediment sample laboratory analytical results for total arsenic were received from Katahdin Analytical Services, Inc. and Resource Laboratories on July 29 and 20, 2009. Concentrations of arsenic in several of the samples were above the screening criteria. On August 5, 2009, GeoInsight authorized EnviroSystems, Inc. (ESI) to initiate the bioassays on the sediment samples using the *Hyalella azteca* and *Chironomous dilutus* organisms. On August 26, 2009, GeoInsight received preliminary data from ESI indicating that the 10-day *Hyalella azteca* assay met method acceptability criteria. On September 3, 2009, ESI notified GeoInsight that the 20-day *Chironomous dilutus* assay did not meet method acceptability criteria. On September 4, 2009, GeoInsight notified the agencies of the preliminary test results and requested that the *Chironomous dilutus* assay be re-run. On September 8, 2009, USEPA authorized GeoInsight to have ESI re-run the 20-day *Chironomous dilutus* assay.

2. Deliverables and Correspondence

The following deliverables were submitted or received by the agencies:

- On or about August 7, 2009, the Group forwarded to the agencies a summary table of sediment sample analytical results for total arsenic.

3. Schedule for Next Quarter

GeoInsight will prepare a report describing the results of the supplementary ecotoxicity sediment sampling event.

4. Status of Activities

GeoInsight is awaiting the preliminary results of the *Chironomous dilutus* assay and corresponding with ESI.

Reporting Schedule – The Group will prepare a summary of the bioassay results as these data become available.

5. Modifications

None.