Recology
Hay Road
WASTE ZERO

July 30, 2012

Ms. Mary Boyd
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Re: Transmittal Letter for First Semi-Annual 2012 Monitoring Report, Recology Hay Road, Solano County, California

Dear Ms. Boyd:

Enclosed is the above-referenced report. This transmittal letter includes the information required by Section E.2 *Reporting Requirements* of WDR/MRP Order R5-2008-0118.

No violations have been noted since the last report was submitted. However, there are results of note and these will be investigated further (see text below).

Wells G-8 and G-9 continue to exhibit barium above the concentration limits. The installation of landfill gas extraction in DM-1 is expected to reduce the barium in groundwater.

One VOC (dichlorodifluoromethane) was detected at estimated trace concentrations in well G-9. Because this is a single trace VOC detection, no further action is necessary at this time.

No VOCs were detected in any other western area well.

There were two eastern landfill area background monitoring wells that had an exceedance of an inorganic monitoring parameter, nitrate/nitrite as N in wells G-4R and G-18. These exceedances were noted in the previous monitoring reports. Improvements were made to the site surface water drainages in the area of each of these wells and the western half of the LTU has been clean closed. The drainage improvements and LTU closure are anticipated to reduce nitrate concentrations in runoff and reduce the opportunity for surface water to infiltrate in the area of these wells and result in increased nitrate concentrations.

Well G-19R had an ammonia concentration of 0.97 mg/l, which is slightly higher than the concentration limit of 0.9 mg/l. The well will be resampled during third quarter 2012.No other inorganic concentration limits were exceeded in eastern area wells. No VOCs were detected in eastern area wells.

Methane was not detected in any of the perimeter monitoring probes. Methane was detected at some interior probes.

Methane was detected above 1 percent in LD-3.2, PL-5.2, and PL-11.2, but no locations had organic vapor concentration greater than 1 ppm; TO-15 analyses were performed and several VOCs were detected. Adjustments will be made to the landfill gas extraction system in the area.

DM-11 Corrective Action Evaluation

The leachate levels in S-11.1 and S-11.2 were below 1 foot throughout the monitoring period. The water levels in PL-11.1 and PL-11.2 were at minimum levels throughout the monitoring period.

No VOCs were detected in PL-11.1. The concentrations of inorganic monitoring parameters are similar to previous monitoring results and the chloride concentration is the lowest to date, indicating improving water quality. To date there is no evidence that the VOCs detected in the pan lysimeters underlying DM-11 have reached groundwater.

WP-9.1 Corrective Action Monitoring Evaluation

Throughout 2011, the leachate levels in S-9.1A and S-9.1B were maintained at levels below 1 foot. The water levels in the pan lysimeters remained at minimum levels throughout the monitoring period. Therefore, no water was removed from the pan lysimeters.

Approximately 592,500 gallons of groundwater were extracted using well G-22. The average groundwater extraction rate was 2.3 gallons per minute, which is slightly higher than the design extraction rate for the corrective action well. The nitrate concentration in adjacent monitoring well G-21 has been below the concentration limit since the second quarter of 2011, which indicates that the corrective actions have been effective at reducing the nitrate concentrations in well G-21.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,
Recology Hay Road

Greg Pryor
Regional Landfill Manager

FIRST SEMI-ANNUAL 2012 MONITORING REPORT

RECOLOGY HAY ROAD

First Semi-annual 2012 Monitoring Report, Solano County, California

Submitted To: Recology Hay Road
6426 Hay Road
Vacaville, CA 95687

Submitted By: Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085

Distribution:

(1) Copy – Mary Boyd, RWQCB Central Valley Region
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(1) Copy – Amy Dietz, Recology
(1) Copy – Greg Pryor, Recology Hay Road
(1) Copy – Ed Padilla, Solano County
(1) Copy – Golder Associates Inc.

July 30, 2012 **Project No. 053-7444-12**

A world of capabilities delivered locally

Golder Associates

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GOLDER ASSOCIATES INC.

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Senior Consultant

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1.0 INTRODUCTION

On behalf of Recology Hay Road, Golder Associates Inc. is submitting this report, which presents the results of groundwater, vadose zone, surface water, leak detection, and landfill gas monitoring conducted at the Landfill (Figure 1) during the first and second quarter 2012 monitoring period. Results of the monitoring program, including groundwater flow and elevation data, sampling methods, analytical data, waste monitoring, and standard observations are included. The sampling and analysis program (Table 1) was performed in accordance with the Waste Discharge Requirements (WDRs) Order No. R5-2008-0188, adopted by the Regional Water Quality Control Board (RWQCB) Central Valley Region in December 2008.

2.0 SITE BACKGROUND

The Landfill consists of two Class III Landfills (Landfill 1 [LF-1] and Landfill 2 [LF-2]) and one Class II Landfill (Landfill 3 [LF-3]). LF-1 and LF-2 have one disposal module (DM) each (DM-1 and DM-2.1, respectively). LF-3 will have a total of 15 disposal modules when completed. Currently, DM-2.2, DM-3, DM-4, DM-5, and DM-11 are the only active disposal modules in LF-3. DM-9.1 (referred to as WP-9.1 in the WDR), comprised of 9.1A and 9.1B, is used for storing sludge. A Land Treatment Unit (LTU) is used for drying the sludge prior to re-use on site. Figure 2 shows the locations of these disposal modules.

The sediments beneath the site consist of sandy clay and silt, hundreds of feet thick, which locally contain zones of fine sand. Hydraulically, the sediments behave as one low-permeability groundwater body. The top of the groundwater body (i.e., the water table) occurs at a depth ranging from 5 to 15 feet beneath most of the site. Generally, groundwater flows slowly from the northwest to the southeast, following the regional direction of groundwater flow. Horizontal groundwater flow is more dominant than vertical flow, due to the clayey interbedded nature of the sediments, and is demonstrated by the similar water levels exhibited by wells that monitor different depth ranges.[1] Operation of a groundwater drain and dewatering of the borrow pit have significantly altered the movement of shallow groundwater beneath most of the site. Extraction of groundwater has created a cone of depression nearly one-quarter of a mile in diameter. Figures 2 and 3, groundwater contour maps based on first and second quarter groundwater elevations, shows the altered pattern of groundwater movement, and the locations of the groundwater drain and the borrow pit.

Groundwater monitoring has been conducted at the site since 1986. High concentrations of inorganic constituents in groundwater in the eastern area of the site were evaluated in 1995.[2] The conclusion of the groundwater quality evaluation was that high concentrations of dissolved inorganic constituents occur naturally in groundwater in the eastern area of the Landfill, and are generally coincident with the occurrence of Younger alluvium at the ground surface.

2.1 Corrective Action Monitoring Programs

There are two areas of the landfill that are currently operating under a corrective action monitoring program (CAP). These two areas are DM-11 and WP-9.1. In addition, two other areas of the landfill, DM-5.1 and DM-2.2A, were investigated for indications of a release. Each area is summarized below.

The Landfill has a targeted landfill gas (LFG) collection and control system that began operation on March 4, 2009. The LFG system consists of an enclosed flare, thirty eight (38) LFG extraction wells and ten (10) leachate sump risers outfitted for LFG extraction (see Figure 2 for LFG extraction well locations).

[1] Einarson Geoscience, Inc. *Geology and Hydrogeology, B&J Drop Box Sanitary Landfill, Solano County*. February 1995.

[2] Einarson Geoscience, Inc. *Spatial Variability of Inorganic Constituents in Groundwater, B&J Drop Box Sanitary Landfill*. November 1995.

2.1.1 DM-11 Corrective Action Monitoring

Water was observed in pan lysimeter PL-11.1 (located beneath DM-11) in July 1999 and several VOCs were detected. An initial EFS was submitted to the RWQCB in August 2000.[3] Water was first detected in PL-11.2 (located beneath DM-11.2) in April 2000 and several VOCs were also detected in pan lysimeter PL-11.2. An EMP was submitted in August 2000.[4]

The extent of impact from the water and VOCs detected in PL-11.1 and PL-11.2 was evaluated.[5] Soil gas sampling showed that landfill gas was detected in one location along the southern edge of DM-2.1. In addition, VOCs were detected in a gas sample collected from within the PL-11.1 riser. The water levels in each pan lysimeter showed increases with seasonal rain events. No water appeared to be entering the pan lysimeters during relatively dry months.

Corrective action measures were implemented, including covering the exposed edges of the landfill module liner system with plastic sheeting to reduce the possibility of surface water from entering the capillary break layer. A change to the water quality monitoring program was proposed, making PL-11.1 and PL-11.2 part of the corrective action monitoring program. It was proposed that when water with VOCs is no longer entering the pan lysimeters, PL-11.1 and PL-11.2 would return to the detection monitoring program.

Additional information has been provided to the RWQCB regarding the release to PL-11.1 and PL-11.2.[6,7] To address concerns regarding landfill gas migration from the landfill based on the presence of landfill gas found in the pan lysimeters and soil adjacent to DM-2.1, a revised landfill gas monitoring plan was developed for the site.[8]

In 2003, the Landfill evaluated the occurrence of landfill gas and assessed if gas constituents could migrate to waters of the State and cause a condition of nuisance, degradation, contamination or pollution, consistent with the requirements in the Landfill WDRs.[9] The conclusions of the assessment report showed that gas constituents would not be expected to cause a condition of nuisance, degradation, contamination, or pollution in groundwater. A report to further explore landfill gas constituents was submitted on October 29, 2004 to the RWQCB that addressed the VOCs detected in the gas probes and pan lysimeters.[10] A corrective action plan to address the landfill gas issues was submitted at the end of May 2005.[11] The LFG collection system was installed, partially, to control the landfill gas in the DM-11 area.

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3 Conor Pacific/EFW. *Engineering Feasibility Study for Pan Lysimeter PL-11.1, B&J Drop Box Sanitary Landfill, Solano County, California*. August 11, 2000.

4 Conor Pacific/EFW. *Amendment to Report of Waste Discharge and Establishment of Evaluation Monitoring Program. Pan Lysimeter PL-11.2, B&J Drop Box Sanitary Landfill, Solano County, California*. August 8, 2000.

5 Conor Pacific, *Engineering Feasibility Study for Disposal Modules 11.1 and 11.2, B&J Drop Box Sanitary Landfill, Solano County, California*, May 30, 2001.

6 Conor Pacific, *Revised Engineering Feasibility Study for Disposal Modules 11.1 and 11.2, Hay Road Landfill, Solano County, California*, February 8, 2002.

7 Conor Pacific, *Addendum to Revised Engineering Feasibility Study for Disposal Modules 11.1 and 11.2, Hay Road Landfill*, May 9, 2002.

8 Conor Pacific, *Proposed Modifications to Perimeter Landfill Gas Monitoring System, Norcal Waste Systems Hay Road Landfill Inc., Solano County, California*, January 10, 2003.

9 Geomatrix Consultants, Inc. *VOC Migration Assessment for Disposal Modules DM-11.1 and DM-11.2, Norcal Waste Systems Hay Road Landfill, Inc.* September 15, 2003.

10 Geomatrix Consultants, October 29, 2004, *Amended Report of Waste Discharge for an Evaluation Monitoring Program for the Hay Road Landfill.*

11 Geomatrix Consultants, May 31, 2005, *Amended Report of Waste Discharge Proposing Corrective Action*, *Hay Road Landfill, Vacaville, California*

2.1.2 WP-9.1 Corrective Action Monitoring

Water was detected in the pan lysimeters (PL-9.1A and B) located beneath WP-9.1 in July 2000 and elevated concentrations of nitrate/nitrite as nitrogen (as N) were detected in water samples from both pan lysimeters.[12] An EMP was submitted to the RWQCB in July 2001.[13] The results of the EMP were presented in an EFS, resulting in corrective actions to prevent surface water and leachate leakage from entering the Module 9.1 capillary break and pan lysimeters.[14] These corrective actions included: (1) repair of the landfill liner hole found during a leak detection survey, and (2) covering the exposed edges of the landfill module liner system with plastic sheeting to reduce the possibility of surface water entering the capillary break layer.

As a result of elevated nitrate concentrations in detection monitoring well G-21, additional work was performed to investigate both the nature and extent of the release to the unsaturated zone and groundwater.[15] Investigations were performed to complete the definition of the impact to groundwater and corrective actions were recommended.[16] An addendum to the EFS for WP-9.1 was prepared to address RWQCB comments on the EFS.[17] The corrective actions for WP-9.1 included excavation of nitrate-impacted soil, installation of a liner on the perimeter berm that was connected to the base liner to prevent water infiltration into the capillary break layer, the operations layer was retrofitted to enhance leachate movement through the operations layer, and ongoing groundwater extraction to control the nitrate-impacts to groundwater. The groundwater extraction well (G-22) and two additional monitoring wells (G-23 and G-24) were installed June 2003 to evaluate the effectiveness of the groundwater extraction in the next deeper sand layer and the downgradient edge of the plume.[18] Well G-24 was properly destroyed in 2011 due to construction of DM-6. Approximately 1,500 cu. yds. of nitrate-impacted soil was excavated and removed in October 2002.

2.1.3 Disposal Module 2.2A and Pan Lysimeter PL-2.2A

Water was detected in PL-2.2A in April 2004 and four VOCs were detected at trace concentrations. The concentrations of inorganic parameters in the pan lysimeter water were much lower than the leachate concentrations, and the ionic character of the water in the pan lysimeter differed from the overlying leachate sump, indicating that the source of the water in the pan lysimeter was not likely leachate.[19] As a continued corrective action measure, any water that enters the pan lysimeters is pumped out immediately. In addition, the targeted LFG collection system has reduced VOCs within the pan lysimeters.

2.1.4 Disposal Module 5.1A and Pan Lysimeter PL-5.1A

Water was detected in PL-5.1A in January 2005 and VOCs were detected in the water sample from PL-5.1A. The concentrations of inorganic parameters in the pan lysimeter water are much lower than the leachate concentrations, and the ionic character of the water in the pan lysimeter differed from the overlying leachate sump, indicating that the source of the water in the pan lysimeter is not likely

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12 Conor Pacific/EFW. *Third Quarter 2000 Monitoring Report, B&J Drop Box Sanitary Landfill, Solano County, California*. October 2000.

13 Conor Pacific/EFW, *Amendment to Report of Waste Discharge and Establishment of Evaluation Monitoring Program, Pan Lysimeters PL-9.1A and PL-9.1B, B&J Drop Box Sanitary Landfill, Solano County, California.* June 7, 2001.

14 Conor Pacific, *Engineering Feasibility Study for Disposal Module 9.1, B&J Drop Box Sanitary Landfill, Solano County, California*, September 7, 2001.

15 Conor Pacific, *Revised Engineering Feasibility Study for Disposal Module 9.1, Norcal Waste Systems, Inc. Hay Road Landfill, Solano County, California*, May 9, 2002.

16 Conor Pacific, *Revised Engineering Feasibility Study for Waste Pile 9.1, Norcal Waste Systems Hay Road Landfill Inc., Solano County, California,* November 14, 2002

17 Conor Pacific, *Addendum to Revised Engineering Feasibility Study for Waste Pile 9.1, Norcal Waste Systems Hay Road Landfill Inc., Solano County, California,* January 15, 2003.

18 Conor Pacific, *Installation of Corrective Action Wells G-22, G-23, and G-24 for Waste Pile 9.1, Norcal Waste Systems Hay Road Landfill Inc., Solano County, California,* July 30, 2003.

19 Golder Associates Inc., *Investigation For Pan Lysimeters PL-2.2A, PL-5.1A, and PL-5.1B, Norcal Waste Systems Hay Road Landfill Inc., Solano County*, California, July 18, 2005.

leachate.[20] As a continued corrective action measure, any water that enters the pan lysimeters is pumped out immediately. The LFG collection system was installed, partially, to control the landfill gas in the DM-11 area and has reduced VOCs within the pan lysimeters.

2.1.5 Disposal Module 5.1B and Pan Lysimeter PL-5.1B

Water was detected in PL-5.1B in April 2004 and VOCs were detected in the water sample from PL-5.1B. With the exception of tetrachloroethene, the VOCs detected in PL-5.1B were detected in the overlying leachate sump, S-5.1B. Concentrations detected in the PL-5.1B sample were roughly one-half of those detected in the leachate sample. The concentrations of inorganic parameters in the pan lysimeter water are also much lower than the leachate concentrations and the ionic character of the water in the pan lysimeter differed from the overlying leachate sump, indicating that the source of the water in the pan lysimeter is not likely leachate.[21] As a continued corrective action measure, any water that enters the pan lysimeters is pumped out immediately. In addition, the targeted LFG collection system has reduced VOCs within the pan lysimeters.

3.0 GROUNDWATER ELEVATION AND FLOW

During first and second quarters, groundwater elevations were measured on January 18 and May 1, 2012. Water levels were measured in all site wells according to the general protocol described in Golder's Groundwater Sampling and Laboratory Procedures, and were recorded with the time of measurement on a water level data sheet (Appendix A). The water level in well D-3 could not be measured, because the well was damaged by a vehicle and the above ground casing was broken off. Well D-3 was properly destroyed on June 13 to 14, 2012. To calculate groundwater elevations, the water levels were subtracted from the top-of-casing elevations, which have been surveyed to mean sea level (MSL) (Table 2). Groundwater elevations are lower than the same period last year. Historical hydrographs are included in Appendix C.

Groundwater elevations, flow direction, gradient, and velocity are in accordance with historical observations. Groundwater elevation contours are shown on Figures 2 and 3. The steepest gradient is in the western portion of the landfill, where groundwater movement is influenced by the borrow pit and groundwater drain, and is calculated to be 0.01. In the eastern portion of the site, where the effects of groundwater extraction are less significant, the gradient is calculated to be approximately 0.002. The gradient in the eastern portion of the site is generally representative of the regional groundwater gradient.

3.1 Groundwater Velocity

Using the calculated gradients, the hydraulic conductivity, and the estimated effective porosity of the water-bearing zone, the approximate groundwater seepage velocity can be calculated using Darcy's Law. Based on results of field hydraulic testing in previous investigations, an average hydraulic conductivity of 5×10^{-3} centimeters per second (cm/s) is used for calculating groundwater velocity in the sandy sediments beneath the site. An effective porosity value of 0.15 for the sandy zones is assumed. Groundwater seepage velocity for the sandy sediments near the borrow pit is calculated to be 3×10^{-4} cm/s (340 feet per year [ft/yr]). At the eastern portion of the site, where the gradient is more natural, groundwater seepage velocity in sandy sediments is calculated to be 6×10^{-5} cm/s (60 ft/yr).

For estimating the groundwater seepage velocity for the fine-grained sediments beneath the site (sandy silts and clays), a conductivity value of 4.7×10^{-5} cm/s is taken from published literature about the site's regional hydrogeology. An effective porosity value of 0.3 for the fine-grained zones is assumed. Groundwater seepage velocity for the fine-grained sediments in the area near the active extraction is

[20] Golder Associates Inc., *Investigation For Pan Lysimeters PL-2.2A, PL-5.1A, and PL-5.1B, Norcal Waste Systems Hay Road Landfill Inc., Solano County*, California, July 18, 2005.

[21] Golder Associates Inc., *Investigation For Pan Lysimeters PL-2.2A, PL-5.1A, and PL-5.1B, Norcal Waste Systems Hay Road Landfill Inc., Solano County*, California, July 18, 2005.

calculated to be 1.6 x 10^{-6} cm/s (2 ft/yr). At the eastern portion of the site, where the gradient is more natural, groundwater seepage velocity is calculated to be 2.7 x 10^{-7} cm/s (less than one ft/yr).

3.2 Disposal Module/Groundwater Separation

Reporting of the separation between groundwater and the lowest point of each disposal module is required in WDR R5-2003-0118. The lowest point of each disposal module is the leachate sump. Table 3 presents each module sump elevation, the estimated groundwater elevation at each sump interpolated from the groundwater contour maps, and the elevation differences between the sump and groundwater. Note that the groundwater elevations represent piezometric elevations and the actual separation between the sump and where groundwater would be encountered below the sump may be greater.

4.0 SAMPLING AND ANALYSIS PROGRAM

A summary of the current sampling and analysis program, based on MRP R5-2008-0188, is presented in Table 1; all monitoring points are shown on Figure 2. The monitoring program consists of groundwater detection monitoring, unsaturated zone monitoring, landfill gas monitoring, leachate monitoring, leak detection monitoring, and surface water monitoring.

4.1 Groundwater Monitoring

The groundwater detection monitoring network wells are sampled semi-annually. The wells are divided by the area of the landfill they monitor, western and eastern areas. In addition, there are three corrective action wells (G-21, G-22, and G-23) that are monitored quarterly. Note that detection monitoring well 4B was properly destroyed in June 2012 under Solano County Department of Resource Management permit; a replacement well (4BR) was installed north of DM-11. In addition, a new detection monitoring well (G-31) was installed south of new disposal module DM-6 to replace well G-14, which was destroyed in 2011.

Wells in the western area of the Landfill (G-1, G-2, G-6, G-8, G-9, G-10M or G-10R, G-11, G-11M or G-11R, G-12, G-13, G-17, G-27, 4B [replaced by well 4BR for future monitoring], MW-4, and P-1 are used for monitoring modules in the western part of the site (DM-1, DM-2.1, DM-2.2, DM-11.1, and DM-11.2).

The following sampling decision protocol was established in the *Amended ROWD Proposing Changes to the Detection Monitoring Program*[22] to identify and sample the monitoring well with the best possibility of identifying a potential release from the landfill in the well G-10 and G-11 areas. The well sampling protocol is outlined below:

- Well G-27 will be sampled in place of well G-10, because the well will monitor the same depth zone, but inside the slurry wall.
- Well G-10M will be sampled in place of well G-10R, because the well will be screened in a shallower permeable layer.
- Well G-10R will only be sampled if well G-10M is dry as a result of low groundwater levels.
- The two shallowest wells with groundwater in the multiple depth wells G-11, G-11M, and G-11R will be sampled. Therefore, if wells G-11 and G-11M have sufficient groundwater to sample, then well G-11R will not be sampled.

Due to the spatial variability of groundwater beneath the site and the influence of the borrow pit dewatering, intrawell comparisons are used for statistical evaluation of monitoring data. Three methods are used to evaluate the analytical results: statistical, non-statistical, and graphical. The monitoring parameters are evaluated using statistical methods (nitrate/nitrite as nitrogen, arsenic, and chromium) or

[22] Golder Associates Inc., *Amended ROWD Proposing Changes to the Detection Monitoring Program, Norcal Waste Systems Hay Road Landfill Inc.* May 31, 2005.

non-statistical methods (volatile organic compounds). Field parameters and supplemental parameters (chloride, sulfate, total dissolved solids, and the remaining major anions and cations [calcium, magnesium, potassium, sodium, and alkalinity]) are evaluated using graphical methods for water quality trends and ion balance (annual Piper diagram).

Wells in the eastern area of the Landfill (G-4R, G-6, G-16, G-17, G-18, G-19R, G-20, G-25, G-26, G-28, G-29, and G-30 [new well G-31 will be monitored in the future]) are used for monitoring the eastern part of the site (DM-3.1, DM-4.1, DM-5.1, DM-5.2, DM-9.1[WP-9.1], and LTU).

Because the groundwater flow in the eastern area of the site is influenced by the regional gradient, interwell comparisons are used for statistical evaluation of monitoring data. For the eastern area, wells G-4R, G-6, G-17, and G-18 are used as background wells. Statistical data evaluation methods (nitrate/nitrite as nitrogen, arsenic, and chromium) are used in the eastern area, with lead and biosolids parameters added to the statistical evaluations. Field parameters and supplemental parameters (chloride, sulfate, total dissolved solids, and the remaining major anions and cations) are evaluated annually using graphical methods for water quality trends and ion balance (annual Piper diagram).

4.2 Unsaturated Zone Monitoring

Suction lysimeter VZ-2.1, the unsaturated zone monitoring point for LF-2, is sampled semi-annually. Pan lysimeters PL-2.2A, PL-2.2B, PL-5.1A, PL-5.1B, PL-9.1A, PL-9.1B, PL-11.1 and PL-11.2 provide monitoring access to the secondary drainage layer (capillary break) under the corresponding disposal modules. Pan lysimeters PL-3.1, PL-3.2, PL-3.3, PL-4.1, and PL-5.2 provide monitoring access below the leak detection sumps. According to the MRP, most pan lysimeters, which are installed beneath leachate sumps, are checked for liquid semi-annually, and sampled if sufficient liquid is present. Landfill staff check the pan lysimeters for liquid monthly. As part of corrective action monitoring, liquid levels in pan lysimeters PL-9.1A, PL-9.1B, PL-11.1, and PL-11.2 are measured weekly. Pressure transducers, which can measure the height of water above the transducer, are installed in all pan lysimeters to provide a more reliable measurement of the amount of water in each pan lysimeter.

LTU unsaturated zone monitoring is conducted by obtaining one soil sample per acre of LTU used. Soil samples are obtained at a depth of 5- to 6-feet below ground surface. Background soil samples are obtained at the beginning of the sludge drying season, prior to the start of sludge application in May or June. Detection soil samples are obtained at approximately the same locations at the end of the drying season, after sludge is removed in October. If sufficient moisture is present in the soil samples, pore water is extracted for laboratory analyses of monitoring parameters. If sufficient moisture is not present, then the soil samples undergo soluble threshold limit concentration (STLC) extraction prior to laboratory analyses for monitoring parameters. The eastern LTU area (located between WP-9.1 and DM-5.2) was clean closed during 2011 in preparation for construction of DM-6.[23] Therefore, only the remaining western LTU area (located south of WP-9.1) was sampled during second quarter 2012.

4.3 Landfill Gas Monitoring

Landfill gas probes and all pan lysimeters and leak detection sumps are monitored semi-annually for methane, carbon dioxide, oxygen, and for organic vapors using field instruments. If, during the semiannual monitoring, greater than 1 percent methane or organic vapors are detected (concentration >1 ppm on field instrument) a gas sample is obtained and submitted for laboratory analysis of VOCs using EPA Method TO-15. Note that the perimeter landfill gas probes are monitored quarterly for landfill gas migration.

[23] Golder Associates Inc., Land Treatment Unit Clean Closure in Disposal Module DM-6 Footprint, Recology Hay Road, Vacaville, California, September 8, 2011.

4.4 Leachate Monitoring

Leachate is sampled annually at each disposal module sump (S-1, S-2.1, S-2.2A, S-2.2B, S-3.1, S-3.2, S-3.3, S-4.1, S-5.1A, S-5.1B, S-5.2, S-9.1A, S-9.1B, S-11.1, and S-11.2). In addition, leachate wells (and now combined landfill gas extraction wells) LW-1, LW-2, and LW-3, located in DM-1, are checked for leachate and sampled if sufficient leachate is available. Landfill staff check the sump levels at least monthly. As part of corrective action monitoring, liquid levels in sumps S-9.1A, S-9.1B, S-11.1, and S-11.2 are measured at least weekly by Landfill staff. Pressure transducers, which can measure the height of water above the transducer, are installed in all sumps to provide a more reliable measurement of the amount of leachate in each sump.

4.5 Surface Water Monitoring

Background monitoring point SW-4 is located in the A-1 Channel approximately 600 feet upstream of the Landfill drainage discharge point (Figure 2). Former background surface water monitoring point SW-3 was moved further upstream to the south side of the culvert that carries the A-1 Channel under Hay Road (Figure 2) and has been added to the monitoring program to provide a better background monitoring point upstream of SW-4. Location SW-5 monitors the bird sanctuary pond, which is primarily made up of surface water run-off from the site and discharge from the borrow pit dewatering. Location SW-7 monitors the A-1 Channel after the site discharge point.

Surface water locations are sampled semi-annually. The list of parameters and the laboratory method used for each analysis is included in Table 1.

4.5.1 Compost Area Pond

The compost area pond is located east of the compost area and south of WP-9.1 (Figure 2). The pond is sampled twice during the wet season for the parameters listed in Table 1.

4.6 Methods

Samples were collected according to the protocol described in the Groundwater Sampling and Laboratory Procedures[24] and the Site Specific Sampling and Analysis Plan,[25] with one exception regarding the collection of groundwater well samples, which is further described below. Details of well purging method, field parameter measurement, and sample collection at each sampling point are included on the water sample field data sheets in Appendix A. Field measurements of pH, specific conductance, temperature, and turbidity were taken and recorded on water sample field data sheets.

An alternative sampling procedure, utilizing dedicated tubing and a peristaltic pump, was proposed to reduce the turbidity of groundwater samples.[26] A combination of peristaltic pump (for low-flow purging and sampling for inorganic parameters) and disposable bailer (for VOC samples) were used to obtain water samples from the majority of the monitoring wells. Monitoring wells located near the borrow pit with water levels too deep to utilize a peristaltic pump were purged using a portable electric submersible pump. As a result of using this alternate sampling procedure, the turbidity values for the groundwater well samples were reduced significantly. Continued use of the peristaltic pump for groundwater well purging is recommended to maintain low turbidity values. Note that the depth to water in some wells (G-9, G-10M, G-11M, and G-11R) is too deep to use the peristaltic pump. Well 4B has insufficient water to use the peristaltic pump and was sampled using a disposable bailer.

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[24] Conor Pacific, *Second Semi-Annual and 2001 Annual Monitoring Report, Hay Road Landfill, Solano County, California*, January 30, 2002.

[25] Conor Pacific, *Revised Site Specific Sampling and Analysis Plan, Hay Road Landfill, Solano County, California*, April 2002.

[26] Golder Associates Inc., February 12, 2010, *RWQCB Comments On Monitoring Reports, Recology Hay Road, Solano County, California.*

Samples were properly preserved and stored on the day of sampling. Chain-of-custody documentation accompanied the samples through collection and delivery to the analytical laboratory. Analyses were performed by BC Laboratories of Bakersfield, CA, a California state-certified analytical laboratory (CA ELAP Certificate Number 1186). Certified analytical reports are located in Appendix B.

4.7 Quality Control

As a field QA/QC measure, an equipment blank was collected during the sampling event using organic-free water supplied by the laboratory. The equipment blank was analyzed for VOCs by EPA Method 8260. Two VOCs were found in the equipment blank, but were not detected in any of the groundwater samples; chloroform was detected at a concentration of 5.5 µg/l and acetone was detected at a trace concentration of 5.5 µg/l.

Laboratory analyses occurred within recommended holding times and within laboratory quality control standards. Method blanks are expected to be non-detect, and the detection of an analyte in a method blank indicates laboratory sample contamination. Acetone was detected in a laboratory method blank that was not associated with the equipment blank batch. No other VOCs were detected in the laboratory method blanks. Trace concentrations of some inorganic parameters were detected in laboratory method blanks, but did not affect any site sample results.

5.0 MONITORING RESULTS

5.1 Groundwater Monitoring

Groundwater analytical results from first and second quarter 2012 are summarized in Tables 4, 6, 7 and 8. To evaluate groundwater quality, concentration limits for the monitoring parameters are compared to the analytical results. The concentration limits have been calculated using analytical data through fourth quarter 2011 for the western area (Table 4) and second quarter 2012 for the eastern area (Tables 6 and 7). The concentration limits were calculated using intrawell (western area) or interwell (eastern area) tolerance limits at 95% confidence and 95% coverage. Analytical results for this quarter with respect to the concentration limits are discussed below for the two landfill areas.

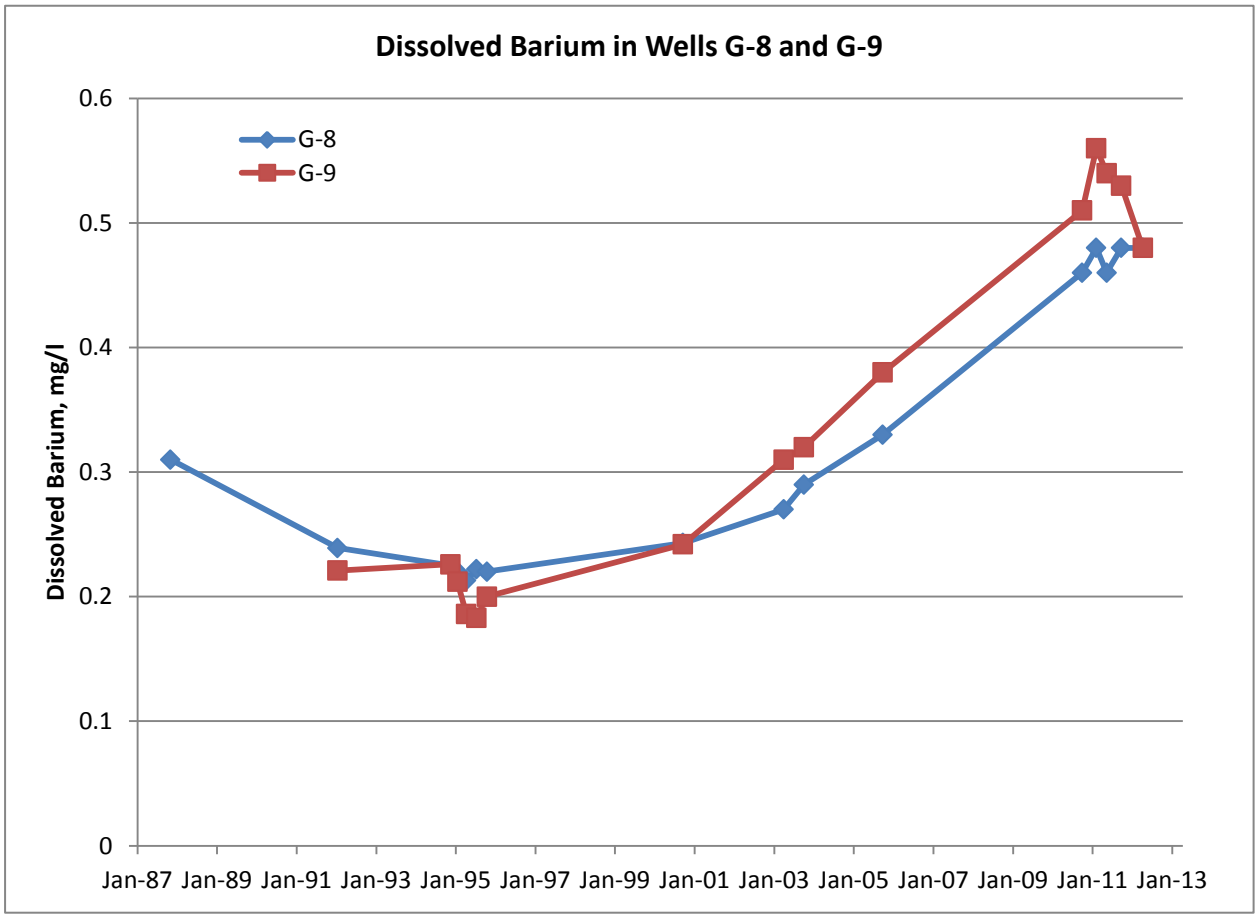
5.1.1 Western Landfill Area

Western area monitoring wells were sampled in May 2012. The disposal modules monitored in the western area include DM-1, DM-2.1, DM-2.2, DM-11.1 and DM-11.2. Samples from all wells were analyzed for routine monitoring parameters.

One VOC (dichlorodifluoromethane) was detected at an estimated trace concentration in well G-9. Because this is a single trace VOC detection, no further action is necessary at this time. No other VOCs were detected in any other western area well. However, dichlorodifluoromethane is a common landfill gas constituent and the well G-9 area is suspected to be influenced by landfill gas (see barium discussion below).

Barium was analyzed for in wells G-8 and G-9 to track the previous detections above the concentration limits. An EMP for wells G-8 and G-9 was submitted in June 2011 that concluded the increased barium concentrations were the result of landfill gas migration from DM-1. [27] The second quarter 2012 barium concentrations were similar to previous results for well G-8 and show a decreasing trend for recent results in well G-9 (see chart below). The installation of landfill gas extraction wells in DM-1 is anticipated to reduce the barium concentrations.

[27] Golder Associates Inc., June 21, 2011, *Amendment to Report of Waste Discharge and Establishment of Evaluation Monitoring Program for Dissolved Barium Detections in Monitoring Wells G-8 and G-9, Recology Hay Road, Vacaville, California.*



No other inorganic parameters were detected above their respective concentration limits.

Both increasing and decreasing trends were observed for inorganic constituents in several of the western area wells (Table 5). Most of the increasing trends can be attributed to the flow of groundwater with higher dissolved concentrations toward the area of borrow pit dewatering. As stated in previous monitoring reports, the higher concentrations of inorganic constituents in groundwater in the eastern area of the site are believed to be a result of spatial variability. Operation of the groundwater drain and dewatering of the borrow pit have significantly altered the movement of shallow groundwater beneath most of the site, causing groundwater to flow from the east (area of higher dissolved inorganics) toward the west. Note that there are increasing trends for bicarbonate alkalinity in two wells adjacent to DM-1; wells 4B and G-8. Landfill gas is often associated with increases in bicarbonate alkalinity in groundwater. As stated above, landfill gas extraction wells were installed in DM-1 at the end of May 2011 and should reduce the impact from landfill gas migration.

5.1.2 Eastern Landfill Area

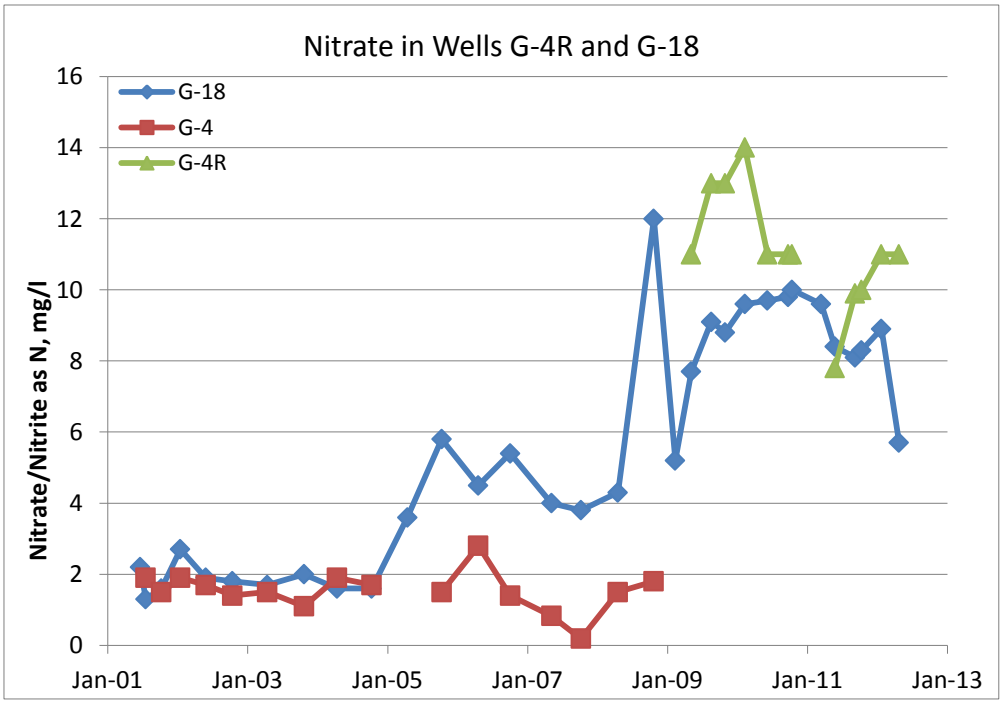
Eastern area corrective action monitoring wells were sampled in January 2012 and May 2012 and the detection monitoring wells were sampled in May 2012. The disposal modules monitored in the eastern area include DM-3, DM-4, DM-5, and WP-9.1. Samples from all wells were analyzed for routine monitoring parameters.

5.1.2.1 Background Wells

Background wells G-4R, G-6, G-17, and G-18 were sampled in May 2012 for routine monitoring parameters. Wells G-4R and G-18 were also sampled in January 2012 as part of the EMP[28] for nitrate/nitrite as N concentration limit exceedances detected during second quarter 2009 (Table 6). The sample results are discussed below. In general, the composition of the groundwater from the eastern area background wells is typical of the high TDS groundwater defined in the 1995 *Spatial Variability Report*.[29]

Interwell concentration limits were then calculated using pooled data from the four background wells. To minimize the influence of the abundant historical data from well G-6, only recent data (2001 - 2012) was used. In addition, elevated nitrate data from wells G-4R and G-18 were not used. Concentration limits are presented on Tables 6 and 7.

The groundwater samples obtained from wells G-4R and G-18 had nitrate/nitrite as N concentrations above the concentration limit of 5 mg/l. EMPs were previously prepared for each well, and recommendations were made to monitor each well quarterly for nitrate/nitrite as N, unless the nitrate/nitrite as N concentration drops below the concentration limit.[30] Then, the well(s) should return to routine semi-annual monitoring. If the nitrate/nitrite concentrations as N remain elevated or increase, then a schedule to complete an EFS will be submitted to the RWQCB. The recent nitrate results in both wells G-4R and G-18 are lower than the nitrate concentrations from 2010 (see chart below). Note that improvements were made to the site surface water drainages in the area of each of these wells and the western half of the LTU has been clean closed. The drainage improvements and LTU closure are anticipated to reduce nitrate concentrations in runoff and reduce the opportunity for surface water to infiltrate in the area of these wells and result in increased nitrate concentrations.



[28] Golder Associates Inc., *Amendment to Report of Waste Discharge and Establishment of Evaluation Monitoring Program for Nitrate Detections in Monitoring Wells G-4R and G-18, Recology Hay Road, Solano County, California*, October 12, 2009.

[29] Einarson Geoscience, Inc. November 1995.

[30] Golder Associates Inc., *Amendment to Report of Waste Discharge and Establishment of Evaluation Monitoring Program for Nitrate Detections in Monitoring Wells G-4R and G-18, Recology Hay Road, Solano County, California*, October 12, 2009.

No other inorganic concentration limits were exceeded. No VOCs were detected in any of the eastern area background wells.

5.1.2.2 Detection Monitoring Wells

The eastern area detection wells were sampled in May 2012, and samples were analyzed for routine monitoring parameters (Table 7).

One inorganic concentration limit was exceeded during the monitoring period. The ammonia concentration in well G-19R was 0.97 mg/l, which is slightly higher than the concentration limit of 0.9 mg/l. The historical ammonia concentrations in well G-19R do not exhibit a trend. The ammonia in well G-19R may be the result of migration of nitrogen from WP-9.1 or the previous leakage from the compost area pond. Well G-19R will be re-sampled during third quarter and analyzed for nitrogen compounds, ammonia, nitrate, and TKN. Well G-26, which is located downgradient from well G-19R, had a trace ammonia concentration of 0.041 mg/l.

There were no VOC detections in eastern area wells and no other inorganic concentration limits were exceeded.

The eastern portion of the LTU was clean closed during the summer of 2011, which included excavation of LTU-impacted soil and removal of the sludge storage stockpile. Disposal module DM-6 will be constructed in the former LTU footprint. Monitoring well G-14 was properly destroyed in July 2011, because the well is in the DM-6 footprint. New monitoring well G-31, constructed along the southern edge of DM-6, was installed in June 2012 to replace well G-14.

5.1.2.3 Corrective Action Monitoring Wells

Corrective action wells G-21, G-22, and G-23 were sampled quarterly. The nature and extent of elevated nitrate concentrations in groundwater downgradient of WP-9.1 and well G-21 was previously defined and corrective actions were implemented.[31] A groundwater extraction well (G-22) was installed adjacent to well G-21 in June 2003 to control the migration of nitrate-impacted groundwater. In addition, a deeper corrective action monitoring well (G-23) and a downgradient corrective action monitoring well (G-24) were installed in June 2003. Monitoring well G-24 was properly destroyed in July 2011, because the well is in the DM-6 footprint.

Analytical results from these wells are presented in Table 8. Well G-21 had nitrate concentrations of 3.0 and 3.9 mg/l during first and second quarters, respectively. These nitrate concentrations in well G-21 are below the concentration limit, indicating that the corrective actions have effectively reduced nitrate concentrations in well G-21. The extraction well (G-22) had nitrate concentrations of 17 and 21 mg/l, substantially lower than historical results. The deeper well (G-23) had low nitrate concentrations (2 mg/l during each quarter), indicating that the nitrate contamination has remained shallow. These wells will continue to be sampled quarterly to monitor the effectiveness of the corrective actions.

During January through June 2012, approximately 592,500 gallons of groundwater were extracted from well G-22. The groundwater extraction rate was approximately 2.3 gallons per minute, which is slightly higher than the design extraction rate for the corrective action well. The water was transported to the City of Vacaville's waste water treatment plant for disposal.

5.2 Vadose Zone and Leak Detection Sump Monitoring

Vadose zone monitoring points were sampled in May 2012, if water was present. Analytical results are summarized in Table 9.

[31] Conor Pacific, November 14, 2002 and Conor Pacific, *Addendum to Revised Engineering Feasibility Study for Waste Pile 9.1, Norcal Waste Systems Hay Road Landfill Inc., Solano County, California,* January 15, 2003.

5.2.1 Suction Lysimeter Monitoring

Suction lysimeter VZ-2.1, which monitors the unsaturated zone beneath DM-2.1, was dry and no sample was obtained.

5.2.2 Pan Lysimeter and Leak Detection Sump Monitoring

Pan lysimeters, which are installed beneath leachate sumps, provide monitoring access to the secondary drainage layer (capillary break) under the disposal modules, with the exception of PL-3.1, PL-3.2, PL-3.3, PL-4.1, and PL-5.2, which were constructed to provide monitoring access below the leak detection sumps. The liquid level is checked semi-annually by Golder Associates, and sampled if sufficient liquid is present. Landfill staff check the pan lysimeters for liquid at least monthly, and as part of corrective action monitoring, liquid levels in pan lysimeters PL-9.1A, PL-9.1B, PL-11.1, and PL-11.2 are measured at least weekly by Landfill staff. In addition to routine monitoring, if increases in water levels are observed in a previously dry pan lysimeter, then the water in the pan lysimeter is sampled and analyzed for routine monitoring parameters. Any liquid that is pumped from the pan lysimeters is recorded by Landfill staff. A field log of depth to liquid measurements or height of water above the transducers, and pumping data is provided in Appendix A.

5.2.2.1 PL-2.2A and PL-2.2B

Pan lysimeters PL-2.2A and PL-2.2B had insufficient water to obtain samples. The water levels in PL-2.2A and PL-2.2B remained at minimum levels throughout the monitoring period.

5.2.2.2 PL-3.1, PL-3.2, PL-3.3, LD-3.1, LD-3.2, and LD-3.3

PL-3.1, PL-3.2, PL-3.3, LD-3.1, and LD-3.3 had insufficient water to obtain a sample. The water levels remained at minimum levels throughout the monitoring period. LD-3.2 was sampled for routine monitoring parameters. The chloride concentration in LD-3.2 was 68 mg/l, the bicarbonate alkalinity concentration was 440 mg/l, and the TDS concentration was 620 mg/l. This water sample obtained from LD-3.2 is likely consolidation water from the weight of the newly placed waste in the module.

5.2.2.3 PL-4.1 and LD-4.1

PL-4.1 had insufficient water to obtain a sample. LD-4.1 was sampled on May 8, 2012. The water level in PL-4.1 and LD-4.1 remained at minimum levels throughout the monitoring period. The chloride concentration in LD-4.1 was 94 mg/l, the bicarbonate alkalinity concentration was 390 mg/l, and the TDS concentration was 1,400 mg/l. This water sample obtained from LD-4.1 is likely consolidation water from the weight of the newly placed waste in the module.

5.2.2.4 PL-5.1A and PL-5.1B

PL-5.1B was dry and no sample was obtained. PL-5.1A was sampled for routine monitoring parameters on May 8, 2012. The water in PL-5.1A and PL-5.1B remained at minimum levels throughout the monitoring period. No VOCs were detected in PL-5.1A. The concentrations of most inorganic parameters in PL-5.1A are much lower than the leachate concentrations in the overlying sumps (S-5.1A and S-5.1B), indicating that the source of the water in the pan lysimeter is not likely leachate.

5.2.2.5 PL-5.2 and LD-5.2

Throughout the monitoring period, PL-5.2 and LD-5.2 were dry and no samples were collected. The water levels in PL-5.2 remained at minimum levels throughout the monitoring period.

5.2.2.6 PL-9.1A and PL-9.1B

Pan lysimeter PL-9.1A was sampled and PL-9.1B was dry and no sample was obtained. The water levels in PL-9.1A and PL-9.1B remained minimal throughout the monitoring period. Results are summarized on Table 9.

The total nitrogen (ammonia, nitrate, or TKN) concentrations in the PL-9.1A water sample are lower than historical concentrations. All inorganic compounds in PL-9.1A have downward trends or no trend, except for arsenic (see trend analysis results in Appendix C). Note that an upward trend was calculated for arsenic, but this is due to older detections and arsenic has not been detected in PL-9.1A since 2009.

5.2.2.7 PL-11.1 and PL-11.2

PL-11.2 was dry and no sample was collected. PL-11.1 was sampled on May 8, 2012. The water levels in PL-11.1 and PL-11.2 remained at minimum levels throughout the monitoring period (Appendix A). No VOCs were detected in the PL-11.1 water sample. The concentrations of inorganic monitoring parameters are similar to previous monitoring results and the chloride concentration is the lowest to date, indicating improving water quality.

5.2.3 Land Treatment Unit

Unsaturated zone monitoring was conducted for the LTU in May 2012. Background borings were drilled and soil samples were collected prior to the drying season (prior to sludge application). Soil samples were obtained at a depth of 5.5 to 6 feet at four post-drying locations beneath the current western portion of the LTU area; soil sample locations are shown on Figure 4. The other six locations are now covered by the future DM-6 construction area, which was clean-closed in 2011. Soil samples were analyzed for routine monitoring parameters. Because there was insufficient moisture in the samples to perform pore water extraction, analyses were performed on the soil samples using the STLC extraction method (soluble threshold limit concentration extraction).

Concentration limits for routine monitoring parameters were calculated using pooled data from all of the background samples obtained in May 2012 (Table 10). Post-drying soil sample analytical results will be compared to the calculated concentration limits.

5.3 Landfill Gas Monitoring

Landfill gas probes and all pan lysimeters and leak detection sumps were monitored in second quarter for methane, carbon dioxide, oxygen, and organic vapors using field instruments (see field sheets in Appendix A). Results are summarized in Table 11. Perimeter landfill gas probes were monitored in both first and second quarters.

During the first and second quarter monitoring periods, methane was not detected in any of the perimeter monitoring probes. Methane was detected at low levels in some of the interior probes (GP-2, GP-3, and GP-4). No VOCs were detected in the perimeter monitoring probes.

LD-3.2, PL-5.2, and PL-11.2 had methane concentrations greater than 1 percent, but none of the vadose zone monitoring points had organic vapor concentration greater than 1 ppm. As a result of these methane measurements, samples were obtained at each location for quantification of VOCs using EPA Method TO-15 (Table 11). Several VOCs were detected in each sample. Adjustments will be made to the landfill gas extraction system to address these measurements.

5.4 Surface Water Monitoring

Surface water monitoring locations, SW-3, SW-4, SW-5, and SW-7, were sampled in May 2012. Analytical results are summarized in Table 12. Concentration limits have been calculated as interpoint tolerance limits at 95% confidence and 95% coverage using historical data from upstream location SW-4 through second quarter 2012 (Table 12). Due to a laboratory error, the sample from SW-7 was not analyzed for TSS.

No inorganic monitoring parameters were detected above their respective concentration limits. One trace VOC was detected in the background surface water sample location; SW-4 had chloroform at 0.15 µg/l. No VOCs were detected in any of the downstream surface water samples.

5.4.1 Compost Area Pond

The compost area pond was sampled twice during the monitoring period, on January 30 and May 8, 2012. The analytical results are summarized in Table 12. Due to a sampling error, the compost water sample was not analyzed for nitrite during second quarter. The water in the pond has elevated concentrations of inorganic parameters

5.5 Leachate Monitoring

Leachate monitoring is conducted annually during the second semi-annual monitoring event. Transducers are installed in all site leachate sumps and the height of water above the transducer (approximate sump bottom) for leachate sumps are collected at least monthly (at least weekly in sumps overlying pan lysimeters in corrective action) by Landfill staff (Appendix A). Measurements taken by Landfill staff are recorded on field logs, copies of which are included in Appendix A. Maximum monthly measurements are included in Table 13. Table 13 and the field logs include the height (feet) of leachate above the pressure transducer.

5.5.1 Leachate Extraction

The leachate sumps (S-1, S-2.1, S-2.2A, S-2.2B, S-3.1, S-3.2, S-3.3, S-4.1, S-5.1A, S-5.1B, S-5.2, S-9.1A, S-9.1B, S-11.1, and S-11.2) are equipped with pumping systems that require ten inches of fluid to operate. When present, liquid is extracted from the leachate sumps and is either used as dust control on the lined portions of the Landfill or is transported to the City of Vacaville's wastewater treatment plant.

Leachate extraction volumes, rates, and leachate levels in each sump are summarized in Table 13. Leachate volume measurements are recorded when leachate is removed from the leachate storage tanks and therefore the values on Table 13 do not necessarily correspond to when the leachate was pumped out of a specific sump. Approximately 1,119,600 gallons of leachate were removed from the Landfill during the first half of 2012. The leachate was discharged to the Vacaville Wastewater Treatment Facility.

5.5.2 Effectiveness of the Leachate Monitoring and Control Facilities

To evaluate the effectiveness of leachate removal, leachate levels in the sumps are monitored by landfill personnel using pressure transducers. Measurements are recorded on field logs, copies of which are included in Appendix A. The field logs include the maximum allowable depth of leachate in accordance with the WDR specifications. Leachate measurements indicate that the leachate levels in the sumps were in compliance during first and second quarters. No evidence of a leachate release or leachate seeps were identified.

As the leachate depths were maintained at appropriate levels, the drainage layers are not clogged, and no leachate releases or seeps were identified, the leachate control facilities appear to have been functioning properly and effectively.

5.5.3 Effectiveness of the Run-off/run-on Control Facilities

Surface water run-on does not occur at the landfill, as the site is located on flat topography. Precipitation or run-off that comes in contact with an active area of the landfill containing waste is directed to the leachate collection recovery system (LCRS) using earthen berms and drains constructed in the operations layer.

Surface water run-off that results from precipitation on covered portions of the Landfill and around the Landfill is routed via drainage ditches to the bird sanctuary pond. Standard observation logs provided by Landfill personnel indicate that no impacts to receiving waters were observed, and no evidence of liquid leaving or entering the perimeter of the waste unit was recorded. Therefore, run-off controls were effective during this monitoring period.

6.0 OPERATIONS MONITORING

The following operations monitoring data have been provided by Landfill staff. The annual storm water monitoring report is included in Appendix D.

6.1 Landfill

During first and second quarter 2012, weekly standard observations were conducted by Landfill staff for the waste management unit (WMU), perimeter of the WMU, and receiving waters. Standard observation records are included in Appendix A. No issues were reported on the observation forms. Run-off control facilities throughout the landfill were effectively conveying storm water to designated discharge points.

Based on daily scale readings, a total of 125,165 tons of refuse (not including diverted materials) were disposed of at a minimum elevation of 43 feet MSL. The refuse was placed in DM-3. In addition, 10,767.53 tons of asbestos were placed in DM-1. The annual waste placement area maps are updated annually in the Spring. The Spring 2012 waste placement maps that cover the period from April 2011 to May 2012 are included in Appendix A.

6.2 Waste Pile (DM-9.1 [WP-9.1])

In the waste pile (DM-9.1 [WP-9.1]), 33,670 wet tons of de-watered sewage sludge were placed. The moisture content was 80% to 85%. At the end of June 2012, the waste pile had 5% capacity remaining.

6.3 Land Treatment Unit

The following monitoring information was recorded by Landfill staff regarding sludge placement in the LTU during January through June 2012.

- Sludge depth: 8 to 12 inches
- Quantity discharged: 15,495 wet tons, or 17,216 cubic yards
- Location: western portion of LTU and top of DM-5 and DM-3.3
- Quantity removed: 3,646 tons, or 4,051 cubic yards
- Moisture content: approximately 10 - 15 percent
- Disposition: stockpiled
- Final sludge depth: 0 inches
- Total drying cycles: 3 cycles
- Cumulative LTU area covered: 2 acres

6.4 Borrow Pit

From January through June 2012 approximately 75,718,200 gallons of groundwater were extracted from the borrow pit. The extracted groundwater was used for dust control, composting operations and discharged to the A-1 Channel under NPDES permit R5-2008-0082-019 that was issued on May 19, 2011. Quarterly NPDES monitoring reports are submitted to the RWQCB, separately.

7.0 SUMMARY

A summary of key monitoring results obtained in first half of 2012 is presented below.

7.1 Routine Monitoring Summary

The following were noted for routine monitoring locations:

- Wells G-8 and G-9 continued to have dissolved barium above the concentrations limit. These barium detections are thought to be a result of landfill gas migration. Landfill gas

extraction wells were recently installed in DM-1 and the barium concentrations are expected to decline as the gas extraction becomes effective.

- The groundwater samples obtained from background wells G-4R and G-18 continued to have nitrate/nitrite as N concentrations above the concentration limit. The recent nitrate results in both wells G-4R and G-18 are lower than the nitrate concentrations from 2010. Corrective actions to improve surface water drainage in the area of these wells have been implemented.
- Well G-19R had an ammonia concentration of 0.97 mg/l, which is slightly higher than the concentration limit of 0.9 mg/l. The well will be resampled during third quarter 2012.
- Wells 4B and D-3 were properly destroyed. New wells 4BR and G-31 were installed to replace wells 4B and G-14.
- There were no other concentration limit exceedances in the monitoring wells.
- No VOCs were detected above the reporting limit in the monitoring wells.
- Methane was not detected in any of the perimeter monitoring probes. Methane was detected at some interior probes.
- Methane was detected above 1 percent in LD-3.2, PL-5.2, and PL-11.2, but no locations had organic vapor concentration greater than 1 ppm; TO-15 analyses were performed and several VOCs were detected.

7.2 Corrective Action Monitoring Summary

Corrective actions have been implemented at DM-11 and WP-9.1 to prevent water (leachate and/or surface water) from entering the capillary break layer and pan lysimeters. Groundwater extraction downgradient of WP-9.1 began in June 2003. The following evaluates the monitoring data with respect to the effectiveness of the corrective actions to control releases from the landfill.

7.2.1 DM-11 Corrective Action Evaluation

- The leachate levels in S-11.1 and S-11.2 were below 1 foot throughout the monitoring period.
- The water levels in PL-11.1 and PL-11.2 were at minimum levels throughout the monitoring period.
- No VOCs were detected in PL-11.1. The concentrations of inorganic monitoring parameters are similar to previous monitoring results and the chloride concentration is the lowest to date, indicating improving water quality.

7.2.2 WP-9.1 Corrective Action Monitoring Evaluation

- Throughout the monitoring period, the leachate levels in S-9.1A and S-9.1B were maintained below 1 foot
- The water levels in the pan lysimeters remained at minimum levels throughout the monitoring period. Therefore, no water was removed from the pan lysimeters.
- Approximately 592,500 gallons of groundwater were extracted during this monitoring period using well G-22. The average groundwater extraction rate was 2.3 gallons per minute, which is slightly higher than the design extraction rate for the corrective action well.

7.2.3 Landfill Gas Collection System

The landfill gas (LFG) collection and control system is designed and operated to control landfill gas migration. The system began operation in March 2009 and was expanded into DM-1 in May 2011. The LFG system consists of an enclosed flare, thirty eight (38) extraction wells, and ten (10) leachate sump risers (see Figure 2 for LFG extraction well locations).

TABLES

Table 1
Sampling and Analysis Program Summary
Recology Hay Road WDR/MRP R5-2008-0188

Parameters	Monitoring Points											
	Groundwater			Leachate[d]		Vadose Zone			Landfill Gas	Surface Water		Leak Det.
	Western Area	Eastern Area		S-1, S-2.1, S-2.2A, S-2.2B, S-3.1, S-3.2, S-3.3, S-4.1, S-5.1A,S-5.1B, S-5.2, S-11.1, S-11.2 LW-1, 2, 3[p]		PL-2.2A, 2.2B, PL-3.1, 3.2, 3.3 PL-4.1, PL-5.1A PL-5.1B, PL-5.2 PL-11.1, 11.2 VZ-2.1		LTU[f] UZ-7 to UZ-10	GP-1, 6, 7, GP-9 thru 21 PL's LD-3.1, -3.2 -3.3, -4.1 -5.2			
	G-1, 2, 6, 8, 9, 10(M&R)[l], 11(M&R)[l], 12, 13, 27, 4BR, P-1[i], MW-4	G-4R*, 6*, 16, 17*, 18*, 19R, 20, 21, 25, 26, 28, 29, 30, 31	Corrective Action G-21, 22, 23		S-9.1A S-9.1B[c]		PL-9.1A PL-9.1B			SW-3, SW-4, SW-5, SW-7	Compost Area Pond	LD-3.1 LD-3.2 LD-3.3 LD-4.1 LD-5.2
Field Parameters												
Depth to Water	Q	Q	Q	M	W	M	W	-	-	-	-	SA
Volume Pumped	-	-	-	M	M	M	W	-	-	-	-	-
Flow Rate	-	-	-	M	M	M	-	-	-	-	-	-
Turbidity	SA	SA	Q	-	-	-	-	-	-	SA	Twice[n]	-
pH	SA	SA	Q	A	A	SA	SA	Twice[e]	-	SA	Twice	-
Specific Conductance	SA	SA	Q	A	A	SA	SA	-	-	SA	Twice	-
Temperature	SA	SA	Q	-	-	-	-	-	-	SA	-	-
Methane, CO_2, oxygen, organic vapors	-	-	-	-	-	-	-	-	SA[j]	-	-	-
Monitoring Parameters												
Total Dissolved Solids (EPA 160.1)	SA	SA	-	A	A	SA	SA	-	-	SA	Twice	SA
Chloride (EPA 300.0)	SA	SA	-	A	A	SA	SA	NA	-	SA	Twice	SA
Sulfate (EPA 375.4)	SA	SA	-	A	A	SA	SA	Twice	-	SA	Twice	-
Nitrate + Nitrite as Nitrogen (EPA 353.2)	SA	SA	Q	A	A	SA	SA	Twice	-	SA	Twice	-
Arsenic (EPA 7061)	SA	SA	-	-	A	-	SA	A	-	SA	-	-
Chromium (EPA 6010)	SA	SA	-	-	A	-	SA	A	-	SA	-	-
Lead (EPA 7421)	-	SA	-	-	A	-	SA	A	-	SA	Twice	-
Calcium, dissolved (EPA 6010)	A	A	-	A	NA	A	A	-	-	5 years	-	-
Magnesium, dissolved (EPA 6010)	A	A	-	A	A	A	A	-	-	5 years	-	-
Potassium, dissolved (EPA 6010)	A	A	-	A	A	A	A	-	-	5 years	-	-
Sodium, dissolved (EPA 6010)	A	A	-	A	A	A	A	-	-	5 years	-	-
Bicarbonate Alkalinity (EPA 310)	SA	SA	-	A	A	SA	SA	-	-	5 years	-	SA
Carbonate Alkalinity (EPA 310)	SA	SA	-	A	A	SA	SA	-	-	5 years	-	-
Ammonia-Nitrogen (EPA 4500-NH_3)	5 years	SA	-	A	A	5 years	SA	Twice	-	SA	Twice	-
Nitrite-Nitrogen (EPA 300)	5 years	5 years	-	A	A	5 years	SA	Twice	-	SA	Twice	-
Total Kjeldahl Nitrogen (EPA 4500)	5 years	SA	-	A	A	5 years	SA	Twice	-	SA	Twice	-
Total Suspended Solids (EPA 160.2)	-	-	-	-	-	-	-	-	-	SA	-	-
Total Fixed Dissolved Solids	-	-	-	-	-	-	-	-	-	-	Twice	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	Twice	-
VOCs (EPA 8260, App. I)	SA	SA	-	A	A	SA	SA	-	-	SA	-	-
VOCs (TO-15)	-	-	-	-	-	SA	SA	-	SA[j]	-	-	-

See notes on page 2 of table.

Table 1
Sampling and Analysis Program Summary
Recology Hay Road WDR/MRP R5-2008-0188

Parameters	Monitoring Points											
	Groundwater			Leachate[d]		Vadose Zone			Landfill Gas	Surface Water		Leak Det.
	Western Area	Eastern Area		S-1, S-2.1, S-2.2A, S-2.2B, S-3.1, S-3.2, S-3.3, S-4.1, S-5.1A,S-5.1B, S-5.2, S-11.1, S-11.2 LW-1, 2, 3[b]		PL-2.2A, 2.2B, PL-3.1, 3.2, 3.3 PL-4.1, PL-5.1A PL-5.1B, PL-5.2 PL-11.1, 11.2 VZ-2.1		LTU[f] UZ-7 to UZ-10	GP-1, 6, 7, GP-9 thru 21 PL's LD-3.1, -3.2 -3.3, -4.1 -5.2			
	G-1, 2, 6, 8, 9, 10(M&R)[l], 11(M&R)[l], 12, 13, 27, 4BR, P-1[i], MW-4	G-4R*, 6*, 16, 17*, 18*, 19R, 20, 21, 25, 26, 28, 29, 30, 31	Corrective Action G-21, 22, 23		S-9.1A S-9.1B[c]		PL-9.1A PL-9.1B			SW-3, SW-4, SW-5, SW-7	Compost Area Pond	LD-3.1 LD-3.2 LD-3.3 LD-4.1 LD-5.2
(continued)												
Constituents of Concern												
General Minerals												
Bicarbonate & Carbonate(EPA 2310B)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Anions (Ca, Mg, K, Na) (EPA 200/300)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Phosphate (EPA 300)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Biosolids Parameters												
Fecal Coliform (EPA 9221B)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Total Alkalinity (EPA 2310B)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Total Organic Carbon (EPA 415.1)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Inorganics												
Metals (EPA 6010 or 7000 series)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Cyanide (EPA 9010)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Sulfide (EPA 9030)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Other Parameters												
Phosphorous (EPA 365.3)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
VOCs (EPA 8260, App. II)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
SVOCs (EPA 8270, App. II)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Organophosphorus Pesticides (EPA 8141)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
Chlorophenoxy Herbicides (EPA 8151)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		-
PCBs (EPA 8082)	5 years	5 years	-	5 years	5 years	5 years	5 years	5 years	-	5 years		

Program summary per Monitoring and Reporting Program No. R5-2008-0188
SA = Semi-annually; A = Annually; M = Monthly: W = Weekly; NA = Not Applicable; Twice = twice per year.
Semi-annual monitoring is conducted during second and fourth quarters. Annual monitoring is completed during the fourth quarter.
Metals include: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Mn, Ag, Sn, V, Zn, As, Pb, Hg, Ni, Se, Tl.
Next five-year COC sampling and analysis event scheduled for Fourth Quarter 2015.
Groundwater, vadose zone, and leachate samples for metals to be filtered and reported as dissolved concentrations.
* Eastern Area background wells
VOCs = volatile organic compounds
SVOCs = semi-volatile organic compounds

b. Attempt to sample any leachate in the leachate wells LW-1, LW-2, and LW-3.
d. Leachate detected in a previously dry sump or seep shall be sampled for COCs.
e. Soil samples taken before sludge drying season and after drying season.
f. Soil samples analyzed using WET extraction if soil pore water samples cannot be extracted from soil.
i. Well P-1 has replaced damaged well MW-3 as a detection monitoring point.
j. If >1ppm organic vapors detected, obtain gas sample for VOC analysis (TO-15).
k. If liquid present in leak detection sump, analyze for TDS, Cl, bicarbonate.
l. G-27 replaced G-10, G-10M replaced G-10R if water to sample,
two shallowest wells with water sampled for G-11, G-11M, and G-11R
m. Pan lysimeters for DM-11.1 and DM-11.2 are monitored weekly for depth and volumes pumped.
n. Twice annually duriny the wet season.

Table 2
Groundwater Elevations
First and Second Quarter 2012
Recology Hay Road

Well or Piezometer Number	Top of Casing Elevation (feet, MSL)	Depth to Groundwater (feet) January 18, 2012	Groundwater Elevation (feet, MSL) January 18, 2012	Depth to Groundwater (feet) May 1, 2012	Groundwater Elevation (feet, MSL) May 1, 2012
G-1	24.63	8.74	15.89	5.82	18.81
G-2	22.57	5.97	16.60	3.97	18.60
G-4R	27.53	9.18	18.35	8.06	19.47
G-5R	26.48	8.54	17.94	6.59	19.89
G-6	26.05	7.59	18.46	5.40	20.65
G-7	29.57	12.22	17.35	9.77	19.80
G-8	31.78	17.23	14.55	15.44	16.34
G-9	32.01	31.15	0.86	29.87	2.14
G-10	34.68	dry	-	dry	-
G-10R	33.49	33.86	-0.37	33.20	0.29
G-10M	34.82	34.96	-0.14	34.08	0.74
G-11	32.05	dry	-	dry	-
G-11R	32.15	33.16	-1.01	34.20	-2.05
G-11M	32.14	32.33	-0.19	32.16	-0.02
G-12	30.77	21.46	9.31	18.36	12.41
G-13	27.51	14.06	13.45	10.48	17.03
G-14*	26.44	NM	NM	NM	NM
G-16	22.23	7.91	14.32	7.29	14.94
G-17	25.95	8.69	17.26	8.33	17.62
G-18	25.65	9.79	15.86	9.62	NA
G-19R	25.57	8.61	16.96	7.75	17.82
G-20	23.72	9.41	14.31	8.84	14.88
G-21	25.47	9.03	16.44	8.36	17.11
G-22	27.05	12.28	14.77	11.69	15.36
G-23	26.80	9.78	17.02	9.12	17.68
G-24*	26.40	NM	NM	NM	NM
G-25	22.47	8.28	14.19	7.56	14.72
G-26	25.67	8.66	17.01	7.41	18.18
G-27	26.60	25.82	0.78	24.91	1.69
G-28	23.04	9.15	13.89	8.26	14.78
G-29	21.46	7.39	14.07	6.94	14.52
G-30	23.58	6.28	17.30	5.70	17.88
I-6	29.82	NM	NM	NM	NM
I-7	29.46	12.35	17.11	9.83	19.63
MW-4	21.15	11.15	10.00	9.50	11.65
MW-5	21.73	7.60	14.13	5.91	15.82
MW-6	22.08	7.97	14.11	6.31	15.77
MW-7	20.20	4.39	15.81	3.57	16.63
MW-8	19.93	3.99	15.94	3.21	16.72
MW-92-1	39.04	25.78	13.26	25.26	13.78
A-1	33.91	19.31	14.60	17.50	16.41
D-1	32.74	18.21	14.53	16.35	16.39
D-2	25.78	10.14	15.64	7.90	17.88
D-3**	25.63	NM	NM	NM	NM
D-4	20.11	10.09	10.02	8.34	11.77
D-5	21.94	7.75	14.19	6.07	15.87
D-6	21.51	5.81	15.70	4.97	16.54
D-7	26.04	10.58	15.46	9.72	16.32
4B	25.65	10.98	14.67	8.85	16.80
P-1	25.03	9.32	15.71	7.11	17.92

NM = Not measured, well not accessible.

* = well destroyed July 2011

** = well damaged, destroyed in June 2012

Table 3
Separation of Groundwater From Lowest Point of Landfill Modules
First and Second Quarter 2012
Recology Hay Road

Module	Sump Elevation (feet-MSL)	January 18, 2012 Groundwater Elevation (feet-MSL)	January 18, 2012 Approximate Separation (feet)	May 1, 2012 Groundwater Elevation (feet-MSL)	May 1, 2012 Approximate Separation (feet)	WDR Required Separation (feet)
1	7	0	7	1	6	5
2.1	24	12	12	14	10	3
2.2A	26	0	26	0	26	2.5
2.2B	26	9	17	12	14	2.5
3.1	22	14	8	15	7	2.5
3.2	20	14	6	15	5	2.5
3.3	21	17	4	18	3	2.5
4.1	20	14	6	15	5	2.5
5.1A	24	15	9	15	9	2.5
5.1B	24	14	10	15	9	2.5
5.2	22	16	6	16	6	2.5
9.1A	25	18	7	19	6	2.5
9.1B	25	17	8	18	7	2.5
11.1	25	14	11	17	8	2.5
11.2	25	15	10	18	7	2.5

Notes:
Sump and groundwater elevations rounded to nearest foot.
Groundwater elevations from Figures 2 and 3 of this report.
Groundwater elevations are piezometric heads, so actual separation may be greater.
Information required per section D.1. of MRP R5-2003-0118.

Table 4
Groundwater Analytical Results Western Detection Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation		G-1	*Conc.*	G-2	*Conc.*	G-6	*Conc.*	G-8	*Conc.*	G-9	*Conc.*	G-27	*Conc.*	G-10R	Conc.
Sampling Date		5/4/12	*Limits*	5/4/12	*Limits*	5/3/12	*Limits*	5/4/12	*Limits*	5/7/12	*Limits*	5/8/12	*Limits*	5/7/12	Limits
Field Parameters	*Units*														
pH	std. units	7.71	-	7.68	-	7.33	-	6.97	-	6.88	-	7.04	-	6.99	-
Specific Conductance	µmhos/cm	1507	-	3470	-	1656	-	1891	-	1712	-	1629	-	1035	-
Temperature	°C	17.4	-	16.5	-	17	-	19.4	-	21.5	-	23.2	-	18.8	-
Turbidity	NTU	1	-	1	-	1	-	1	-	9	-	4	-	8	-
Monitoring Parameters															
Arsenic, dissolved	mg/l	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*0.06*	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*ND*
Barium, dissolved	mg/l	NA	-	NA	-	NA	-	**0.48**	*0.37*	**0.48**	*0.44*	NA	-	NA	-
Bicarbonate Alkalinity	mg/l	420	-	960	-	590	-	650	-	620	-	350	-	350	-
Carbonate Alkalinity	mg/l	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<4.1	-
Chloride	mg/l	190	-	330	-	140	-	200	-	200	-	290	-	100	-
Chromium, dissolved	mg/l	0.0019 t	*0.02*	<0.0010	*ND*	<0.0010	*NE*	<0.0010	*NE*	<0.0010	*ND*	<0.0010	*0.01*	<0.0010	*NE*
Nitrate/Nitrite as N	mg/l	1	*24*	<0.010	*0.7*	0.12	*3.3*	0.059 t	*6.1*	<0.010	*3.9*	2.2	*4.0*	0.064 t	*1.7*
Sulfate as SO_4	mg/l	66	-	460	-	120	-	90	-	23	-	35	-	31	-
Total Dissolved Solids	mg/l	840	-	2300	-	1000	-	NA	-	980	-	970	-	430	-
Volatile Organic Compounds															
Dichlorodifluoromethane	µg/l	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	0.46 t	*ND*	<0.099	*ND*	<0.099	*ND*
All other compounds below method detection limits.															

mg/l - milligrams per liter (parts per million)
µg/l - micrograms per liter (parts per billion)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - nephelometric turbidity units
t - trace, estimated value between the method detection limit and the reporting limit.
NA - Not Analyzed
NE - None established; insufficient data or too few detections.
ND - Non-detect; there have been no previous detections of this parameter.
Bold values exceed concentration limits
Concentration limits calculated using historical data through fourth quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Table 4 (continued)
Groundwater Analytical Results Western Detection Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation		G-11M	*Conc.*	G-11R	*Conc.*	G-12	*Conc.*	G-13	*Conc.*	P-1	*Conc.*	MW-4	*Conc.*	4B	Conc.
Sampling Date		5/7/12	*Limits*	5/8/12	*Limits*	5/4/12	*Limits*	5/4/12	*Limits*	5/7/12	*Limits*	5/4/12	*Limits*	5/7/12	Limits
Field Parameters	*Units*														
pH	std. units	7.03	-	7.09	-	7.36	-	7.53	-	7	-	7.15	-	7.23	-
Specific Conductance	µmhos/cm	1151	-	952	-	1084	-	1106	-	2620	-	2595	-	1951	-
Temperature	°C	23.5	-	19.9	-	18.6	-	17.1	-	21.8	-	19.4	-	20	-
Turbidity	NTU	214	-	6	-	1	-	1	-	1	-	1	-	28	-
Monitoring Parameters															
Arsenic, dissolved	mg/l	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*0.09*	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*0.06*	<0.0075	*0.05*
Barium, dissolved	mg/l	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
Bicarbonate Alkalinity	mg/l	370	-	320	-	360	-	120	-	590	-	370	-	520	-
Carbonate Alkalinity	mg/l	<8.2	-	<4.1	-	<8.2	-	<4.1	-	<8.2	-	<8.2	-	<8.2	-
Chloride	mg/l	120	-	98	-	110	-	100	-	380	-	530	-	510	-
Chromium, dissolved	mg/l	0.0011 t	*NE*	<0.0010	*ND*	<0.0010	*NE*	<0.0010	*0.02*	<0.0010	*NE*	<0.0010	*NE*	<0.0010	*0.01*
Nitrate/Nitrite as N	mg/l	1.3	*26*	1.9	*2.3*	0.36	*5.0*	0.12	*4.4*	0.35	*1.4*	1.1	*8.2*	1.7	*5.3*
Sulfate as SO_4	mg/l	30	-	26	-	43	-	54	-	230	-	160	-	310	-
Total Dissolved Solids	mg/l	650	-	590	-	610	-	680	-	1600	-	1500	-	1800	-
Volatile Organic Compounds															
Dichlorodifluoromethane	µg/l	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*	<0.099	*ND*

All other compounds below method detection limits.

mg/l - milligrams per liter (parts per million)
µg/l - micrograms per liter (parts per billion)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - nephelometric turbidity units
t - trace, estimated value between the method detection limit and the reporting limit.
NA - Not Analyzed
NE - None established; insufficient data or too few detections.
ND - Non-detect; there have been no previous detections of this parameter.

Bold values exceed concentration limits

Concentration limits calculated using historical data through fourth quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Table 5
Groundwater Concentration Trends Western Detection Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation	G-1	G-2	G-6	G-8	G-9	G-27	G-10R
pH	-	-	-	-	-	-	NA
Specific Conductance	-	Down	-	Up	-	-	NA
Arsenic, Dissolved	NA	ND	NA	NA	NA	NA	ND
Bicarbonate Alkalinity	-	Up	Down	Up	-	Down	NA
Calcium, Dissolved	-	Down	-	Up	-	-	NA
Chloride	Down	-	Down	-	-	-	NA
Chromium, Dissolved	-	ND	NA	NA	ND	-	ND
Magnesium, Dissolved	-	Down	-	-	-	-	NA
Nitrate/Nitrite as N	Down	ND	-	-	NA	-	NA
Potassium, Dissolved	-	-	Up	Up	-	-	NA
Sodium, Dissolved	-	-	-	-	Down	Down	NA
Sulfate as SO4	-	Down	-	Up	Down	Down	NA
Total Dissolved Solids	-	Down	-	Up	-	-	NA

Sample Designation	G-11M	G-11R	G-12	G-13	MW-4	P-1	4B
pH	Down	-	-	-	-	Down	-
Specific Conductance	-	-	-	-	-	-	-
Arsenic, Dissolved	NA	NA	NA	ND	NA	NA	Down
Bicarbonate Alkalinity	Down	Down	-	-	Down	-	Up
Calcium, Dissolved	-	-	-	-	-	-	-
Chloride	-	Up	Down	-	-	Down	-
Chromium, Dissolved	NA	ND	NA	NA	NA	NA	-
Magnesium, Dissolved	-	-	-	-	-	-	-
Nitrate/Nitrite as N	-	Up	-	-	-	-	Up
Potassium, Dissolved	-	Up	Up	Up	Up	Up	Up
Sodium, Dissolved	-	-	-	-	Down	Down	-
Sulfate as SO4	-	Down	-	-	Up	-	Up
Total Dissolved Solids	-	Up	-	-	-	-	-

Trend analysis covering the previous 5 years (2008-2012).

Down: Statistically significant decreasing trend.

Up: Statistically significant increasing trend.

Dash indicates no significant trend.

NA - Not analyzed because less than 4 values have been obtained, or less than 4 detected values.

ND - Not detected during time period analyzed.

Table 6
Groundwater Analytical Results Eastern Background Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation		G-4R		G-6	G-17	G-18		*Concentration*
Sampling Date		1/30/12	5/3/12	5/3/12	5/1/12	1/30/12	5/1/12	*Limit*
Field Parameters	*Units*							
pH	std. units	7.87	7.36	7.33	7.37	7.48	7.3	-
Specific Conductance	µmhos/cm	3906	3771	1656	2654	3147	2568	-
Temperature	°C	19.2	17.5	17	18.1	17.1	17.9	-
Turbidity	NTU	1	1	1	1	3	1	-
Biosolids Parameters								
Ammonia as N	mg/l	NA	0.067	0.03 t	<0.025	NA	<4.6	*0.9*
Arsenic, dissolved	mg/l	NA	<0.0075	<0.0075	<4.6	NA	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	NA	630	590	510	NA	440	-
Carbonate Alkalinity	mg/l	NA	<8.2	<8.2	<8.2	NA	<8.2	-
Chloride	mg/l	NA	580	140	410	NA	510	-
Chromium, dissolved	mg/l	NA	<0.0010	<0.0010	<0.0010	NA	0.0026 t	*0.014*
Lead, dissolved	mg/l	NA	0.0075 t	0.0085 t	0.013 t	NA	0.0078 t	*NA*
Nitrate/Nitrite as N	mg/l	**11**	**11**	0.12	3.1	**8.9**	**5.7**	*5*
Sulfate as SO_4	mg/l	NA	530	120	330	NA	140	-
Total Dissolved Solids	mg/l	NA	2500	1000	1700	NA	1500	-
Total Kjeldahl Nitrogen	mg/l	NA	0.38	<0.056	0.16 t	NA	0.13 t	*5.4*
Volatile Organic Compounds								
All compounds below method detection limits.		ND	ND	ND	ND	ND	ND	*ND*

mg/l - milligrams per liter (parts per million)

µg/l - micrograms per liter (parts per billion)

µmhos/cm - micromhos per centimeter at 25^0C

NTU - nephelometric turbidity units

t - trace, estimated value between the method detection limit and the reporting limit.

Bold values exceed concentration limits

NA - Not analyzed

NE - None established; insufficient data or too few detections.

Concentration limits calculated using pooled data from background wells obtained during 2002 - 2009.

Elevated nitrate/nitrite as N concentrations in background wells excluded from concentration limit calculation.

Table 7
Groundwater Analytical Results Eastern Detection Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation		G-16	G-19R	G-20	G-21		G-25	G-26	G-28	G-29	G-30	*Concentration*
Sampling Date		5/1/12	5/3/12	5/1/12	1/30/12	5/3/12	5/1/12	5/2/12	5/1/12	5/2/12	5/2/12	*Limit*
Field Parameters	*Units*											
pH	std. units	7.4	7.05	7.46	7.19	6.62	7.39	7.1	6.92	7.01	7.13	-
Specific Conductance	µmhos/cr	3179	3956	1649	2490	2469	2612	2367	2651	2054	2164	-
Temperature	°C	18.5	16.3	19.2	17.5	17	18.2	18.9	118	18.1	17	-
Turbidity	NTU	1	1	1	1	1	1	1	1	1	1	-
Monitoring Parameters												
Ammonia as N	mg/l	<0.025	**0.97**	<0.025	NA	0.028 t	<0.025	0.041 t	<0.025	0.032 t	<0.025	*0.9*
Arsenic, dissolved	mg/l	<0.0075	<0.0075	<0.0075	NA	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	440	450	340	NA	460	360	490	600	690	650	-
Carbonate Alkalinity	mg/l	<8.2	<8.2	<8.2	NA	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	-
Chloride	mg/l	620	760	290	NA	440	550	350	350	220	240	-
Chromium, dissolved	mg/l	0.0026 t	<0.0010	<0.0010	NA	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	*0.014*
Lead, dissolved	mg/l	0.013 t	0.0058 t	0.012 t	NA	0.014 t	0.012 t	NA	0.0081 t	0.011 t	0.0081 t	*0.045*
Nitrate/Nitrite as N	mg/l	3.2	3.6	0.25	3	3.9	3	2	0.69	<0.010	<0.010	*5*
Sulfate as SO_4	mg/l	330	530	86	NA	200	190	240	290	93	150	-
Total Dissolved Solids	mg/l	2000	2600	950	NA	1500	1500	1500	1600	1300	1300	-
Total Kjeldahl Nitrogen	mg/l	0.086 t	0.12 t	<0.056	NA	0.1 t	0.074 t	0.075 t	0.16 t	0.16 t	0.071 t	*5.4*
Volatile Organic Compounds												
All compounds below method detection limits.												

mg/l - milligrams per liter (parts per million)
µg/l - micrograms per liter (parts per billion)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - Nephelometric Turbidity Units
NA - not analyzed
NE - None established; insufficient data or too few detections.
Concentration limits calculated using pooled data from background wells obtained during 2001 - 2Q2012.
Wells G-14 and G-24 were destroyed in August, 2011 to allow the construction of disposal module DM-6
t - trace, estimated value between the method detection limit and the reporting limit.

Bold values exceed calculated concentration limit.

Table 8
Groundwater Analytical Results Corrective Action Wells
First and Second Quarter 2012
Recology Hay Road

Sample Designation		G-21		Extraction Well G-22		Deep Well G-23		*Concentration Limit*
Sampling Date		1/30/12	5/3/12	1/30/12	5/3/12	1/30/12	5/3/12	
Field Parameters	*Units*							
pH	std. units	7.19	6.62	6.76	6.95	7.12	6.12	-
Specific Conductance	µmhos/cm	2490	2469	2612	2514	2345	2295	-
Temperature	°C	17.5	17	16.2	16.9	17.1	16.4	-
Turbidity	NTU	1	1	2	4	1	1	-
Corrective Action Monitoring Parameter								
Nitrate/Nitrite as N	mg/l	3	3.9	**17**	**21**	2	2	*5*

Extraction Well G-22		Jan	Feb	Mar	Apr	May	NA	
Volume Pumped*	gallons	98,500	113,000	103,500	91,000	89,000	97,500	592,500
Average Extraction Rate	gpd	3,177	3,897	3,339	3,033	2,871	3,250	3,220
	gpm	2.2	2.7	2.3	2.1	2.0	2.3	2.3

mg/l - milligrams per liter (parts per million)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - Nephelometric Turbidity Units
µg/l - micrograms per liter (parts per billion)
gpd = gallons per day
* - note that volume pumped can be derived from tanker truck volumes removed, which can result in skewed volumes from month to month
Well G-22 is the corrective action groundwater extraction well.
Well G-23 is the corrective action monitoring well installed in the next deeper sand layer adjacent to G-21.
Well G-24 was destroyed in July 2011, because the well was in the construction footprint for DM-6
Bold values exceed concentration limits.
Concentration limit calculated using pooled data from background wells obtained during 2001-2Q2012.
Wells G-14 and G-24 were destroyed in August, 2011 to allow the construction of disposal module DM-6

Table 9
Unsaturated Zone Analytical Results
First and Second Quarter 2012
Recology Hay Road

Sample Designation		VZ-2.1	PL-2.2A	PL-2.2B	PL-3.1	LD-3.1	PL-3.2	LD-3.2	PL-3.3	LD-3.3
Sampling Date		5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12
	Units									
General Water Quality Parameters										
pH	std. units	*dry*	*dry*	*dry*	*dry*	*dry*	*dry*	7.30	*dry*	*dry*
Specific Conductance	µmhos/cm	-	-	-	-	-	-	1050	-	-
Temperature	°C	-	-	-	-	-	-	25.6	-	-
Turbidity	NTU	-	-	-	-	-	-	3	-	-
Monitoring Parameters										
Ammonia as N	mg/l	-	-	-	-	-	-	NR	-	-
Arsenic, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Bicarbonate Alkalinity	mg/l	-	-	-	-	-	-	440	-	-
Carbonate Alkalinity	mg/l	-	-	-	-	-	-	NR	-	-
Chloride	mg/l	-	-	-	-	-	-	68	-	-
Chromium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Lead, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Nitrate/Nitrite as N	mg/l	-	-	-	-	-	-	NR	-	-
Sulfate as SO_4	mg/l	-	-	-	-	-	-	NA	-	-
Total Dissolved Solids	mg/l	-	-	-	-	-	-	620	-	-
Total Kjeldahl Nitrogen	mg/l	-	-	-	-	-	-		-	-
VOCs by EPA Method 8260										
Acetone	µg/l	-	-	-	-	-	-	NR	-	-
All other compounds below method detection limits.										

t - Trace concentrations detected between the reporting limit and the detection limit. Results should be considered estimates only.
NA - Not analyzed; insufficient sample volume
NR- not required
mg/l - milligrams per liter (parts per million)
µg/l - micrograms per liter (parts per billion)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - Nephelometric Turbidity Units

Table 9 (continued)
Unsaturated Zone Analytical Results
First and Second Quarter 2012
Recology Hay Road

Sample Designation		PL-4.1	LD-4.1	PL-5.1A	PL-5.1B	PL-5.2	LD-5.2	PL-9.1A	PL-9.1B	PL-11.1	PL-11.2
Sampling Date		5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12	5/8/12
	Units										
General Water Quality Parameters											
pH	std. units	*dry*	*7.38*	*7*	*dry*	*dry*	*dry*	7.35	*dry*	*7*	*dry*
Specific Conductance	µmhos/cm	-	1,280	1,980	-	-	-	980	-	1,670	-
Temperature	°C	-	28	26	-	-	-	20	-	26	-
Turbidity	NTU	-	2	4	-	-	-	8	-	2	-
Monitoring Parameters											
Ammonia as N	mg/l	-	NR	NR	-	-	-	0.033 t	-	NR	-
Arsenic, dissolved	mg/l	-	NR	NR	-	-	-	<0.0075	-	NR	-
Bicarbonate Alkalinity	mg/l	-	390	490	-	-	-	340	-	690	-
Carbonate Alkalinity	mg/l	-	NR	<8.2	-	-	-	<4.1	-	<8.2	-
Chloride	mg/l	-	94	170	-	-	-	54	-	120	-
Chromium, dissolved	mg/l	-	NR	NR	-	-	-	0.0061 t	-	NR	-
Lead, dissolved	mg/l	-	NR	NR	-	-	-	<0.0050	-	NR	-
Nitrate/Nitrite as N	mg/l	-	NR	38	-	-	-	0.015 t	-	1.1	-
Sulfate as SO_4	mg/l	-	NR	220	-	-	-	54	-	97	-
Total Dissolved Solids	mg/l	-	840	1,400	-	-	-	680	-	1,100	-
Total Kjeldahl Nitrogen	mg/l	-		-	-	-	-	0.71	-	NR	-
VOCs by EPA Method 8260											
Acetone	µg/l	-	NR	<4.6	-	-	-	5.5 t	-	<4.6	-
All other compounds below method											

t - Trace concentrations detected between the reporting limit and the detection limit. Results should be considered estimates only.
NA - Not analyzed; insufficient sample volume
NR- not required
mg/l - milligrams per liter (parts per million)
µg/l - micrograms per liter (parts per billion)
µmhos/cm - micromhos per centimeter at 25 °C
NTU - Nephelometric Turbidity Units

Table 10
LTU Sludge Drying Area Soil Sample Analytical Results
First and Second Quarter 2012
Recology Hay Road

Sample Designation		UZ-1	UZ-2	UZ-3	UZ-4	UZ-5	UZ-6	UZ-7	UZ-8	UZ-9	UZ-10	*Concentration*
Sampling Date		5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	5/3/12	*Limit*
Monitoring												
Parameters	*Units*											
pH	std. units	NS	NS	NS	NS	NS	NS	9.12	8.58	8.33	8.28	*5 - 11*
% Moisture	%	NS	NS	NS	NS	NS	NS	14	14.5	16.3	23.3	-
Chloride	mg/l	NS	NS	NS	NS	NS	NS	1.9	3.1	6.5	1.5	*18*
Sulfate as SO_4	mg/l	NS	NS	NS	NS	NS	NS	9.4	8.6	25	8	*47*
Ammonia	mg/l	NS	NS	NS	NS	NS	NS	0.044 t	<0.025	0.036 t	<0.025	*0.25*
Nitrate	mg/l	NS	NS	NS	NS	NS	NS	0.63	0.31	0.079 t	0.089 t	*5.9*
Nitrite	mg/l	NS	NS	NS	NS	NS	NS	0.04 t	0.015 t	0.018 t	0.024 t	*0.97*
TKN	mg/l	NS	NS	NS	NS	NS	NS	0.86	1.2	0.89	0.79	*2.1*

mg/l - milligrams per liter
mg/kg - milligrams per kilograms
TKN - Total Kjeldahl Nitrogen
NS - Not sampled - eastern portion of LTU clean closed in Summer 2011
t - trace, estimated value between the method detection limit and the reporting limit

Table 11
Landfill Gas Monitoring
First and Second Quarter 2012
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
GP-1	2/13/12	0.0	0.4	19.9	NR	NR
	4/18/12	0.0	1.8	11.6	0.0	NA
GP-2	2/13/12	0.3	3.6	8.6	NR	NR
	4/20/12	3.3	3.2	7.0	NA	NA
GP-3A	2/13/12	0.3	4.4	9.3	NR	NR
	4/20/12	0.4	2.8	12.5	NA	NA
GP-3B	2/13/12	0.0	1.8	18.9	NR	NR
	4/20/12	0.1	1.5	16.1	NA	NA
GP-4A	2/13/12	0.0	3.6	12.1	NR	NR
	4/20/12	0.1	3.1	9.6	NA	NA
GP-4B	2/13/12	0.0	3.9	10.6	NR	NR
	4/20/12	0.1	1.5	19.2	NA	NA
GP-5A	2/13/12	0.0	6.8	5.8	NR	NR
	4/20/12	0.0	5.7	5.0	NA	NA
GP-5B	2/13/12	0.0	0.2	19.4	NR	NR
	4/20/12	0.0	0.5	17.3	NA	NA
GP-6	2/13/12	0.0	0.2	20.5	NR	NR
	4/18/12	0.0	1.8	19.6	0.0	NA
GP-7	2/13/12	0.0	3.8	10.4	NR	NR
	4/18/12	0.0	0.2	19.8	0.0	NA
GP-9	2/13/12	0.0	0.5	20.4	NA	NR
	4/18/12	0.0	0.4	19.5	0.0	NA
GP-10	2/13/12	0.0	1.0	20.1	NR	NR
	4/18/12	0.0	0.2	18.7	0.0	NA
GP-11	2/13/12	0.0	0.4	20.5	NR	NR
	4/18/12	0.0	0.3	16.8	0.0	NA
GP-12	2/13/12	0.0	1.6	9.7	NR	NR
	4/18/12	0.0	0.5	19.1	0.0	NA
GP-13	2/13/12	0.0	0.9	20.0	NR	NR
	4/18/12	0.0	0.4	19.2	0.0	NA
GP-14	2/13/12	0.0	1.0	16.1	NR	NR
	4/18/12	0.0	0.8	13.7	0.0	NA
GP-15	2/13/12	0.0	0.3	20.7	NR	NR
	4/18/12	0.0	0.3	15.3	0.0	NA
GP-16	2/13/12	0.0	0.2	21.0	NR	NR
	4/18/12	0.0	0.0	19.4	0.0	NA
GP-17	2/13/12	0.0	1.2	20.3	NR	NR
	4/18/12	0.0	0.1	19.4	0.0	NA
GP-18	2/13/12	0.0	1.2	17.0	NR	NR
	4/18/12	0.0	1.5	18.9	0.0	NA
GP-19	2/13/12	0.0	2.9	16.7	NR	NR
	4/18/12	0.0	2.5	13.8	0.0	NA
GP-20S	2/13/12	0.0	1.6	18.3	NR	NR
	4/20/12	0.0	2.1	14.8	0.0	NA
GP-20D	2/13/12	0.0	4.4	6.6	NR	NR
	4/20/12	0.0	3.8	6.1	0.0	NA
GP-21S	2/13/12	0.0	1.7	16.9	NR	NR
	4/20/12	0.0	2.4	10.3	0.0	NA
GP-21D	2/13/12	0.0	3.9	5.9	NR	NR
	4/20/12	0.0	2.8	9.6	0.0	NA

ppm = parts per million
NR = not required
NA = not analyzed, organic vapor field measurement < 1 ppm.
EPA TO-15 analysis if organic vapor field measurement > 1 ppm.

Table 11 (continued)
Landfill Gas Monitoring
First and Second Quarter 2012
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
LD-3.1	4/23/12	0.5	0.3	19.3	0.7	see below
LD-3.2	4/23/12	2.7	1.7	15.9	0.0	NA
LD-3.3	4/23/12	0.1	0.0	19.6	0.0	NA
LD-4.1	4/23/12	0.3	0.4	19.3	0.0	NA
LD-5.2	4/23/12	0.4	0.8	18.6	0.0	NA
PL-2.2A	4/23/12	0.0	1.0	19.2	0.0	see below
PL-2.2B	4/23/12	0.0	0.7	19.4	0.0	NA
PL-3.1	4/23/12	0.3	0.3	19.4	0.0	NA
PL-3.2	4/23/12	0.2	0.3	19.1	0.0	NA
PL-3.3	4/23/12	0.4	0.4	19.2	0.0	see below
PL-4.1	4/23/12	0.1	0.1	19.7	0.0	NA
PL-5.1A	4/23/12	0.2	0.0	19.9	0.0	see below
PL-5.1B	4/23/12	0.1	0.6	19.1	0.0	NA
PL-5.2	4/23/12	5.4	7.8	11.7	0.0	NA
PL-9.1A	4/23/12	0.1	2.2	14.9	0.0	NA
PL-9.1B	4/23/12	0.1	3.5	9.8	0.0	NA
PL-11.1	4/23/12	0.2	0.2	19.8	0.6	NA
PL-11.2	4/23/12	4.1	17.3	0.1	0.0	NA

Volatile Organic Compounds by EPA Method TO-15

Sample Designation	units	PL-11.2 5/18/12	PL-5.2 5/18/12	LD-3.2 5/18/12
Freon 12	ppbv	2.8	0.84	3.0
Vinyl Chloride	ppbv	1.9	<0.71	<0.78
Freon 11	ppbv	<0.72	<0.71	6.2
Acetone	ppbv	90	220	180
Carbon Disulfide	ppbv	<2.9	<2.8	9.1
Methyl tert-butyl ether	ppbv	1.7	<0.71	<0.78
Hexane	ppbv	6.1	<0.71	2.8
1,1-Dichloroethane	ppbv	2.2	<0.71	<0.78
2-Butanone (MEK)	ppbv	<2.9	4.7	7.2
cis-1,2-Dichloroethene	ppbv	0.81	<0.71	1.1
Chloroform	ppbv	<0.72	0.86	<0.78
Tetrahydrofuran	ppbv	5.1	3.5	10
Cyclohexane	ppbv	5.0	<0.71	3.1
2,2,4-Trimethylpentane	ppbv	9.5	<0.71	0.85
Benzene	ppbv	2.5	1.1	1.7
Heptane	ppbv	1.1	1.5	2.2
Toluene	ppbv	12	13	20
Tetrachloroethene	ppbv	1.8	<0.71	<0.78
Ethyl Benzene	ppbv	3.0	3.3	4.1
m,p-Xylene	ppbv	14	15	18
o-Xylene	ppbv	4.4	4.8	5.7
Styrene	ppbv	0.82	1.1	1.0
Propylbenzene	ppbv	1.0	<0.71	1.0
4-Ethyltoluene	ppbv	4.3	5.0	4.9
1,3,5-Trimethylbenzene	ppbv	1.6	2.1	1.9
1,2,4-Trimethylbenzene	ppbv	6.5	8.2	7.0

ppm - parts per million

ppbv - part per billion by volume

NA - not analyzed, organic vapor field measurement < 1 ppm.

EPA TO-15 analysis if organic vapor field measurement > 1 ppm.

Table 12
Surface Water Analytical Results
First and Second Quarter 2012
Recology Hay Road

Sample Designation		SW-3	SW-4	SW-5	SW-7	*Surface Water Concentration Limit*	Compost Area Pond	
Sampling Date		5/8/12	5/8/12	5/8/12	5/8/12		1/30/12	5/8/12
Field Parameters	*Units*							
pH	std. units	7.58	6.96	7.40	6.97	*6.5 - 9.4*	7.57	*6.97*
Specific Conductance	µmhos/cm	903	895	946	893	*3,319*	2,947	*3,219*
Temperature	°C	22.6	23.4	23.5	24.3	-	13.1	*23.6*
Turbidity	NTU	39	22	19	31	-	105	*618*
Monitoring Parameters								
Ammonia as N	mg/l	0.079	0.078	0.054	0.089	*0.75*	1	0.51
Arsenic	mg/l	<0.0098	<0.0098	<0.0098	<0.0098	*0.071*	NR	NR
Chloride	mg/l	82	88	120	89	*732*	370	81
Chromium	mg/l	<0.0010	0.0011 t	<0.0010	<0.0010	*0.014*	NR	NR
Lead	mg/l	0.0063 t	0.0089 t	0.0092 t	0.0087 t	*0.063*	<0.0050	0.016 t
Nitrate/Nitrite as N	mg/l	2.1	2	0.04 t	1.9	*12*	8.9	9.8
Nitrite as N	mg/l	0.32	0.35	0.01 t	0.34	*2.0*	0.21	NA
Sulfate as SO_4	mg/l	70	74	45	75	*268*	94	21
Total Phosphorus	mg/l	NR	NR	NR	NR	-	12	9.3
Total Dissolved Solids	mg/l	560	590	640	610	*2,025*	2200	2300
Total Fixed Dissolved Solids	mg/l	NR	NR	NR	NR	-	1400	1500
Total Kjeldahl Nitrogen	mg/l	1.9	1.8	1.5	1.8	*4.4*	22	20
Total Suspended Solids	mg/l	6	12	3.8	NA	*279*	NR	NR
Volatile Organic Compounds by EPA Method 8260B								
Chloroform	µg/l	<0.12	0.15 t	<0.12	<0.12	*ND*		
All compounds below method detection limit		ND	ND	ND	ND	*ND*	NR	NR

mg/l - milligrams per liter (parts per million)

µmhos/cm - micromhos per centimeter at 25 °C

NTU - Nephelometric Turbidity Units

µg/l - micrograms per liter (parts per billion)

t - Trace concentrations detected between the reporting limit and the detection limit. Results should be considered estimates only.

Concentration limits calculated using upstream location SW-4, through second quarter 2012.

NE - None established; insufficient data or too few detections.

ND - Non-detect

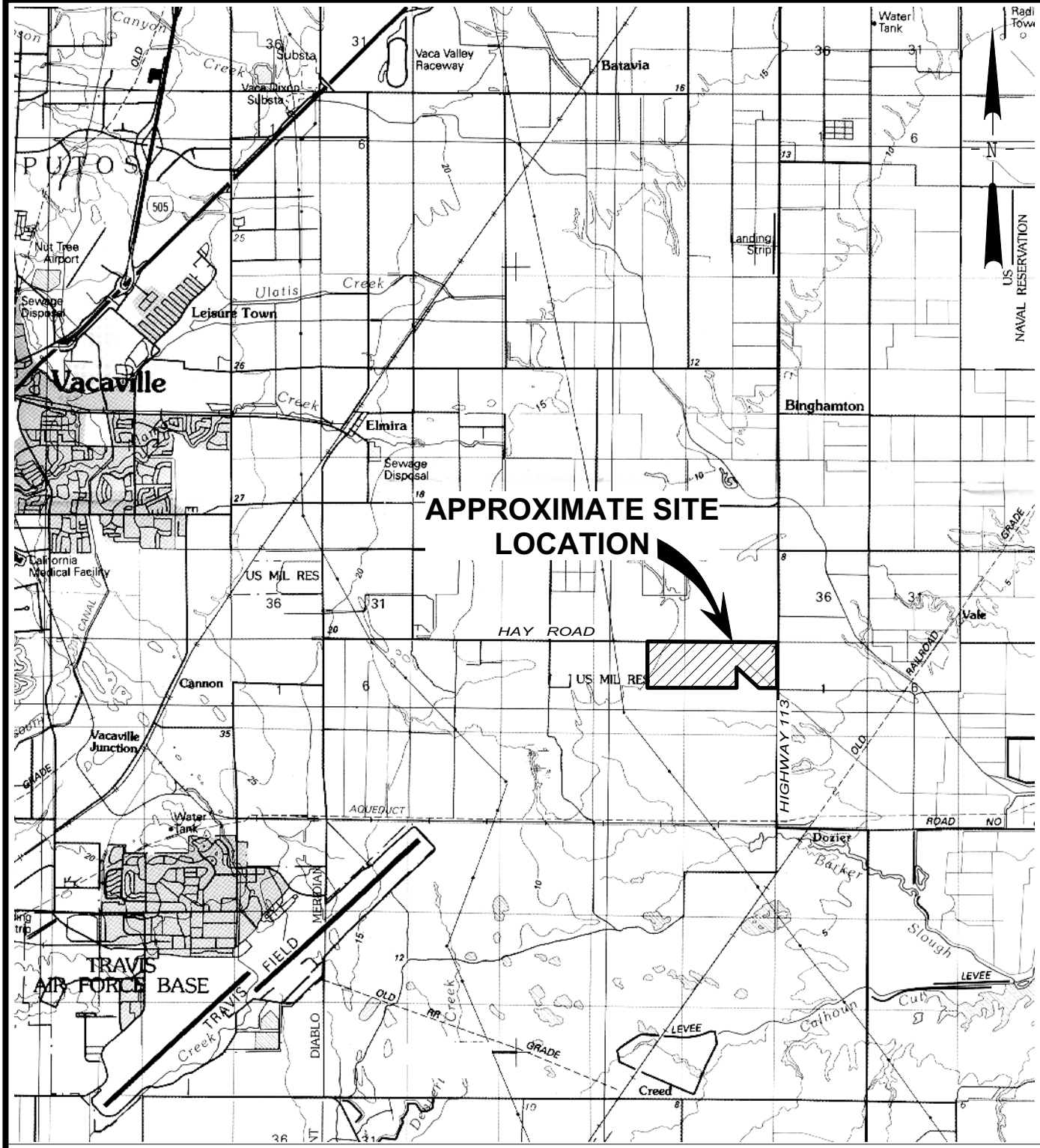
NR- Not required

Table 13
Leachate Pumping Record
First and Second Quarter 2012
Recology Hay Road

Sump	Jan	Feb	Mar	Apr	May	Jun	Total
Gallons pumped							
S-1	26,500	8,500	13,000	8,000	109,000	34,000	199,000
S-2.1	14,000	5,000	29,000	41,000	13,000	10,000	112,000
S-2.2A	6,000	2,800	2,200	5,200	5,600	3,300	25,100
S-2.2B	7,600	18,800	12,700	12,300	10,600	8,000	70,000
S-3.1	0	3,500	4,000	3,000	9,500	0	20,000
S-3.2	6,000	2,500	14,000	11,000	0	3,500	37,000
S-3.3	2,000	1,000	20,000	14,000	0	4,000	41,000
S-4.1	5,000	14,500	15,500	19,000	5,500	4,500	64,000
S-5.1A	0	6,000	4,000	5,000	3,500	0	18,500
S-5.1B	0	6,000	0	10,000	5,000	0	21,000
S-5.2	24,000	3,000	71,000	26,000	3,000	3,000	130,000
S-9.1A	6,000	4,000	5,000	25,500	7,500	11,000	59,000
S-9.1B	8,000	5,000	0	9,500	5,000	4,000	31,500
S-11.1	12,500	9,500	29,700	72,800	11,500	0	136,000
S-11.2	15,500	8,500	52,000	64,500	6,000	9,000	155,500
Gallons pumped per day (calculated from total gallons pumped each month above)							
S-1	855	293	419	267	3,516	1,133	6,419
S-2.1	452	172	935	1,367	419	333	3,613
S-2.2A	194	97	71	173	181	110	810
S-2.2B	245	648	410	410	342	267	2,258
S-3.1	0	121	129	100	306	0	645
S-3.2	194	86	452	367	NA	117	1,194
S-3.3	65	34	645	467	0	133	1,323
S-4.1	161	500	500	633	177	150	2,065
S-5.1A	0	207	129	167	113	0	597
S-5.1B	0	207	0	333	161	0	677
S-5.2	774	103	2,290	867	97	100	4,194
S-9.1A	194	138	161	850	242	367	1,903
S-9.1B	258	172	0	317	161	133	1,016
S-11.1	403	328	958	2,427	371	0	4,387
S-11.2	500	293	1,677	2,150	194	300	5,016
Maximum Monthly Liquid Level (feet above pressure transducer)							Target (ft)
S-1	2.8	3.0	3.2	3.6	3.7	2.4	NA
S-2.1	0.8	0.7	0.8	0.8	0.8	0.7	<1
S-2.2A	0.5	0.2	0.3	0.4	0.2	0.2	<1
S-2.2B	0.6	0.3	0.3	0.4	0.1	0.1	<1
S-3.1	0.5	0.5	0.5	0.5	0.5	0.3	<1
S-3.2	0.7	0.5	0.5	0.4	0.4	0.3	<1
S-3.3	0.4	0.6	0.6	0.8	0.0	0.0	<1
S-4.1	0.4	0.3	0.3	0.2	0.2	0.1	<1
S-5.1A	0.5	0.5	0.5	0.5	0.5	0.3	<1
S-5.1B	0.5	0.3	0.5	0.4	0.3	0.5	<1
S-5.2	0.5	0.2	0.2	0.3	0.3	0.2	<1
S-9.1A	0.6	0.4	0.4	0.4	0.8	0.4	<1
S-9.1B	0.4	0.4	0.4	0.5	0.1	0.3	<1
S-11.1	0.7	0.5	0.5	0.8	0.5	0.5	<1
S-11.2	0.8	0.5	0.4	0.7	0.5	0.6	<1
Borrow Pit							Total
Discharged (gallons)	12,392,500	10,567,200	11,032,100	23,582,100	9,974,400	8,169,900	75,718,200
Days of Evaporator Use	0	0	0	0	0	0	0

Notes: Volumes are based on storage tank readings or tanker truck loads.
NA = not applicable

FIGURES



Base map from USGS 1:100,000 Metric Topographic Map: Lodi, Calif. (1993).

Golder Associates

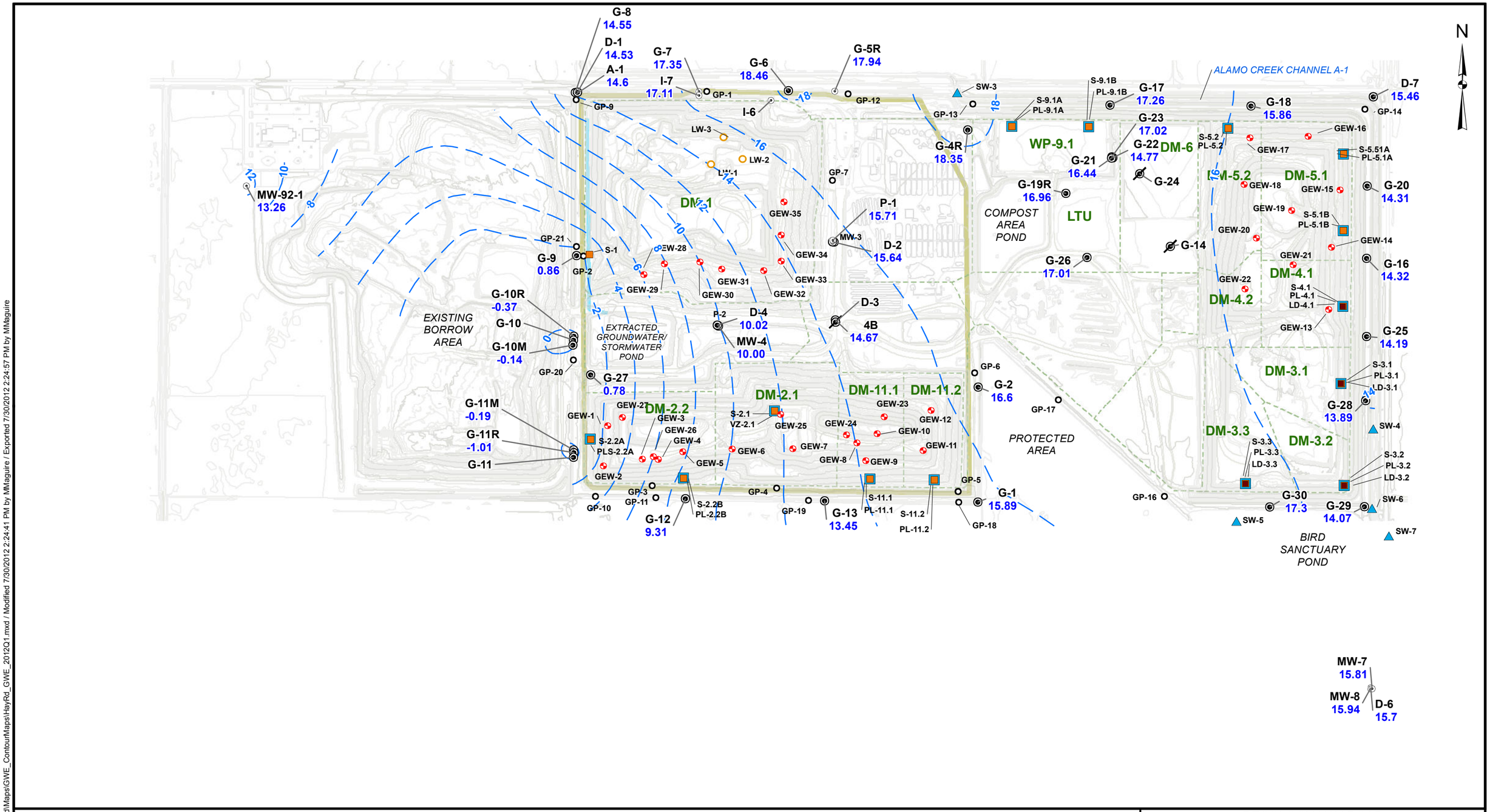
MONITORING AND REPORTING PROGRAM
HAY ROAD LANDFILL
SOLANO COUNTY, CALIFORNIA

SITE LOCATION

FIGURE
1

PROJECT NO.
053-7444

G:\053-7444\FIGURES\SITELOC.DSF 5/23/05



LEGEND

- Groundwater monitoring well
- Destroyed groundwater monitoring well
- Piezometer
- Surface water sampling location
- Leachate sump
- Lysimeter
- Leak detection sump
- Landfill gass extraction / leachate well
- Landfill gas extraction well
- Landfill gas probe
- Groundwater elevation, ft MSL
- NM = not measured
- * Well G-22 is active groundwater extraction well.
- * Well G-21 not included in countouring (influenced by pumping).
- Deep wells (D-) not used in contouring.
- ExtentCurrentCADBase
- Existing Disposal Module Limit/Phase (DM-)
- Groundwater extraction trench
- Perimeter slurry wall

600 0 600 Feet

NOTES AND REFERENCES

1) Groundwater elevations measured 1/18/2012.
2) Site topography April 30, 2012
2) Coordinate System: NAD 1983 StatePlane California II FIPS 0402

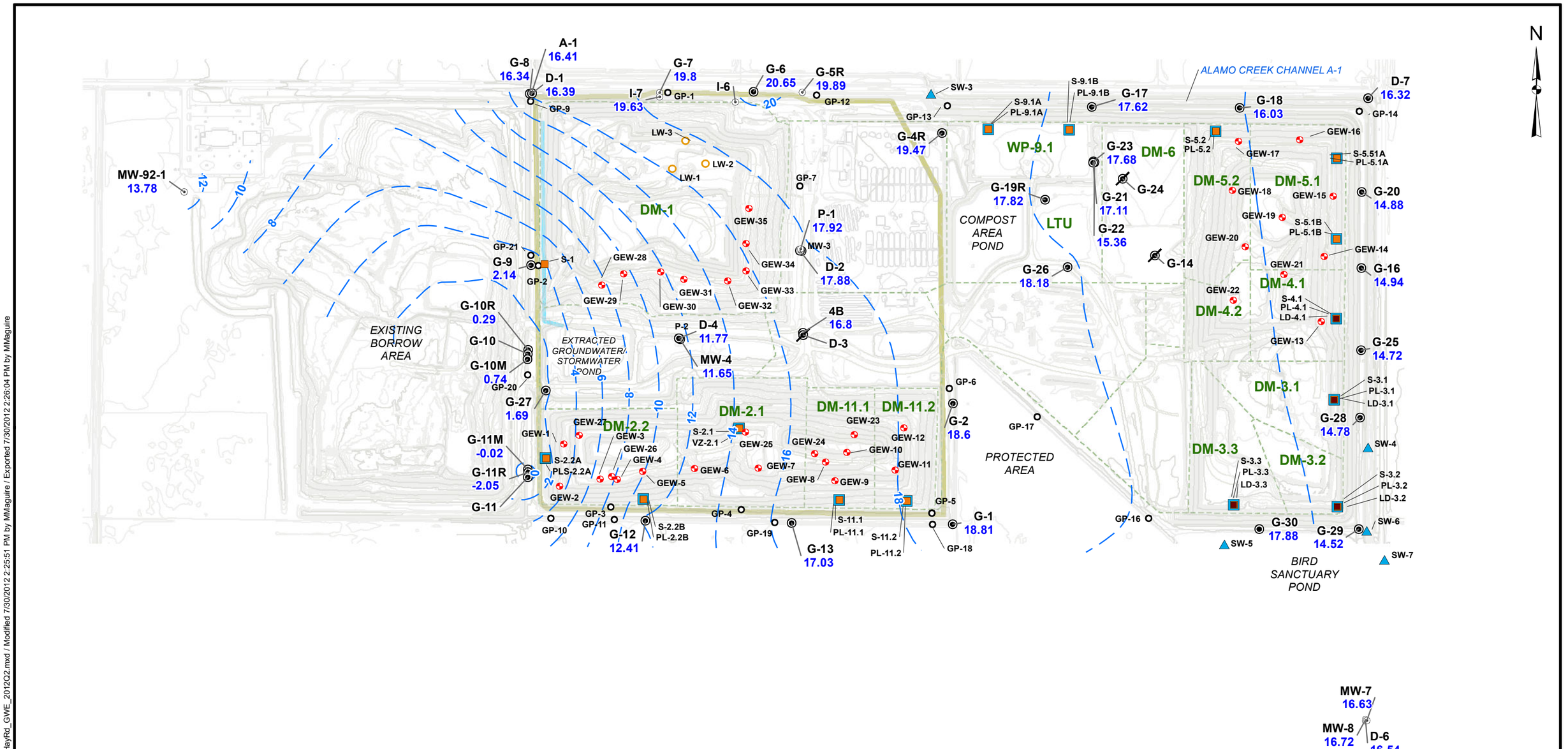
PROJECT
RECOLOGY HAY ROAD
1ST SEMIANNUAL REPORT 2012
SOLANO COUNTY, CALIFORNIA

TITLE
GROUNDWATER ELEVATION CONTOURS JANUARY 2012

Golder Associates

PROJECT No.		053-7444-12	FILE No.	HayRd_GWE_2012Q1.mxd
DESIGN	MM	7/26/2012	SCALE: AS SHOWN	REV. 0
GIS	MM	7/30/2012		
CHECK	KJ	7/30/2012		
REVIEW	KJ	7/30/2012		

FIGURE 2



LEGEND

- Groundwater monitoring well
- Destroyed groundwater monitoring well
- Piezometer
- Surface water sampling location
- Leachate sump
- Lysimeter
- Leak detection sump
- Landfill gas extraction / leachate well
- Landfill gas extraction well
- Landfill gas probe
- Groundwater elevation, ft MSL
- NM = not measured
- * Well G-22 is active groundwater extraction well.
- * Well G-21 not included in countouring (influenced by pumping).
- Deep wells (D-) not used in contouring.
- Existing Disposal Module Limit/Phase (DM-)
- Groundwater extraction trench
- Perimeter slurry wall

600 0 600 Feet

NOTES AND REFERENCES

1) Groundwater elevations measured 5/1/2012
2) Site topography April 30 2012
2) Coordinate System: NAD 1983 StatePlane California II FIPS 0402

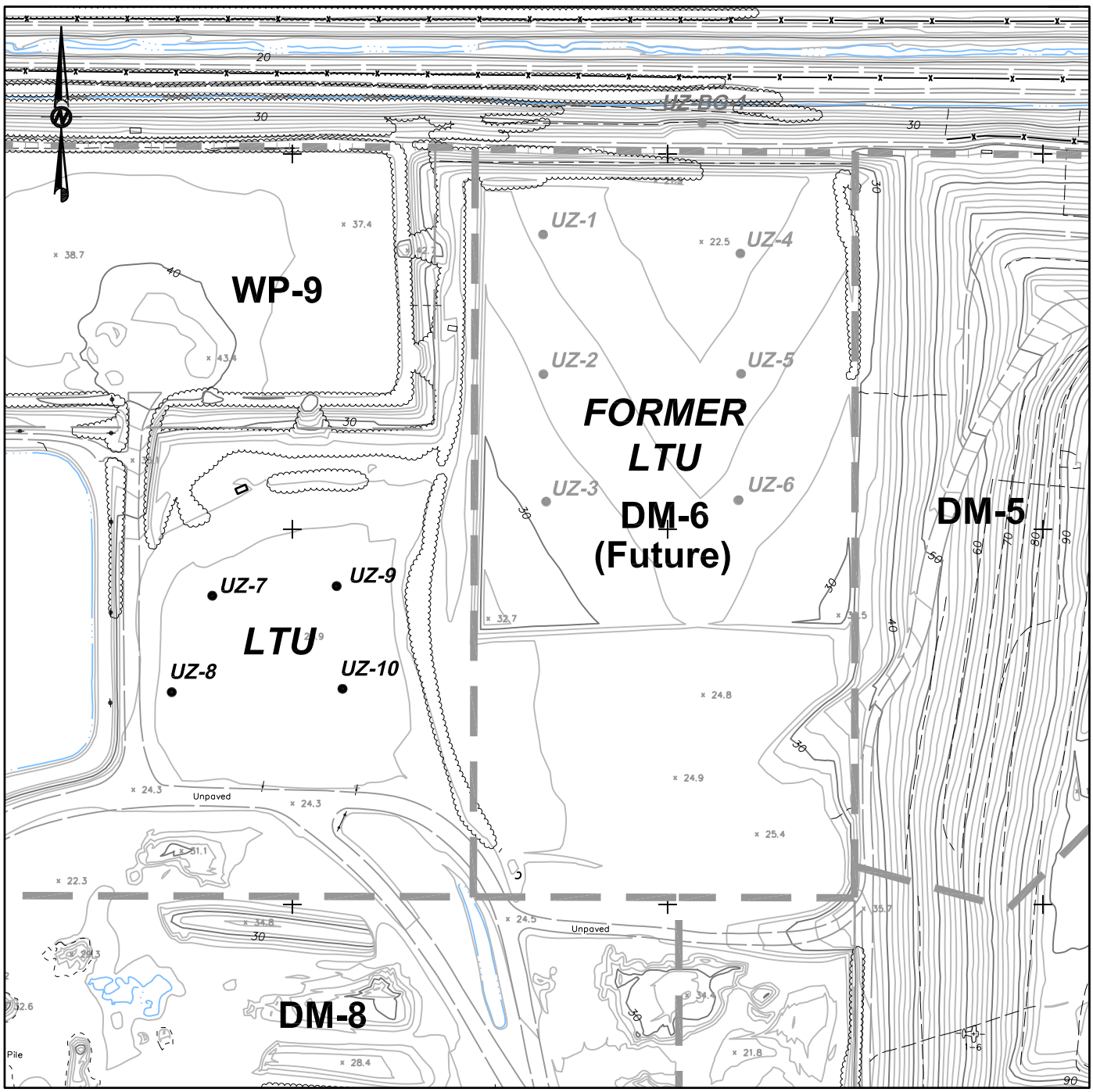
PROJECT
RECOLOGY HAY ROAD
1ST SEMIANNUAL REPORT 2012
SOLANO COUNTY, CALIFORNIA

TITLE
GROUNDWATER ELEVATION CONTOURS MAY 2012

Golder Associates

PROJECT No.		053-7444-12	FILE No.	HayRd_GWE_2012Q2.mxd	
DESIGN	MM	7/26/2012	SCALE:	AS SHOWN	REV. 0
GIS	MM	7/30/2012			
CHECK	KJ	7/30/2012			
REVIEW	KJ	7/30/2012			

FIGURE 3



Topography: April 30, 2012.

0 200 400

SCALE IN FEET

EXPLANATION

UZ-10 ● LTU detection soil sampling location

Golder Associates

DATE 7/27/12
DWN KMM
APP KHJ
REV 0
PROJECT NO. 053-7444-12

FIGURE 4
LAND TREATMENT UNIT
RECOLOGY HAY ROAD
SOLANO COUNTY, CALIFORNIA
SOIL SAMPLE LOCATIONS

Dimscale: 100 Ltscale: 100 Psltscale: 1=1
G:\053-7444-12\FIGURES\LTU sampleloc 2012.DWG 7/27/12

APPENDIX A

WATER AND LEACHATE LEVEL DATA SHEETS, WATER SAMPLE FIELD DATA SHEETS, STANDARD OBSERVATIONS, AND LANDFILL MONITORING RECORDS

WATER LEVEL DATA SHEET

Golder Associates

Project: Recology Hay Road

Project No.:053-7444-11

Date(s): 11/18/12

Name: Steve Cunningham

Weather: Sunny, cool + Dry Sounder #: 26106

Well	Date	Time	DTW (TOC)	Total Depth	Meas. By	Comments
A-1	11/18/12	1423	19.31	45.6		
G-1		1353	8.74	40.4	SC	
G-2		1349	5.97	26.4	SC	
G-4R		1323	9.15	27.2	SC	
G-6		1212	7.59	37.7	SC	
G-5R		1150	8.54	28.6	SC	
G-7		1156	12.22	21.0	SC	
G-8		1421	17.23	24.2	SC	
G-9		1418	31.15	37.4	SC	
G-10		1413	Dry	25.7	SC	
G-10R		1415	33.86	72.9		
G-10M		1411	34.96	36.9		
G-11		1403	Dry	26.7	SC	
G-11R		1406	33.16	75.6	SC	
G-11M		1408	32.33	37.4	SC	
G-12		1401	21.46	29.6	SC	
G-13		1358	14.06	29.6	SC	
~~G-14~~						
G-16		1311	7.91	32.8	SC	
G-17		1302	8.69	27.3	SC	
G-18		1305	9.79	22.3	SC	
G-19R		1328	8.61	25.5	SC	
G-20		1308	9.41	42.6	SC	
G-21		1330	9.03	21.9	SC	
G-22		1334	12.28	NM	SC	* pump in well / pumping
G-23		1332	9.79	47.5	SC	
~~G-24~~						
G-25		1314	8.28	21.9	SC	
G-26		1337	8.66	27.6	SC	
G-27		1430	25.82	30.5	SC	
G-28		1317	9.15	33.0	SC	
G-29		1342	7.39	22.1	SC	
G-30		1340	6.28	21.2	SC	
~~I-6~~						
I-7		1153	12.35	29.4	SC	
MW-4		1433	11.15	29.9	SC	
MW-5		1222	7.60	41.9	SC	
MW-6		1224	7.97	41.6	SC	
MW-7		1232	4.39	40.7	SC	
MW-8		1234	3.99	40.8	SC	
MW92-1		1206	25.78	54.9	SC	
D-1		1425	18.21	66.2	SC	
D-2		1445	10.14	69.2	SC	
D-3		NM				? Inaccessible - well damaged 2011.
D-4		1435	10.09	67.2	SC	
D-5		1226	7.75	66.9	SC	
D-6		1231	5.81	66.8	SC	
D-7		1215	10.58	67.5	SC	
4B		1440	10.98	12.2	SC	
P-1		1443	9.32	22.5	SC	
P-2		1437	Dry	92	SC	
LW-1		1455	69.18	70.8	SC	
LW-2		1500	Dry	67.4	SC	
LW-3		1450	47.30	48.9	SC	

I:BJD/106/WTRLVL.xls.xls

WATER LEVEL DATA SHEET
Golder Associates

Project: Recology Hay Road	
Project No.:053-7444-12	
Date(s): 5/1/12	
Name: Steve Cinerman / R. McCarthy	
Weather: Sunny, warm light wind	Sounder #:

Well	Date	Time	DTW (TOC)	Total Depth	Meas. By	Comments
A-1	5/1/12	1348	17.50	45.6	C	
G-1		1307	5.82	40.4	SC	
G-2		1303	3.97	26.4	S	
G-4R		1145	8.06	27.6	S	
G-6		1151	5.40	37.7	S	
G-5R		1125	6.59	28.6	S	
G-7		1131	9.77	24.0	SC	
G-8		1346	15.44	24.4	SC	
G-9		1343	29.87	37.4	SC	
G-10		1336	DRY	28.7	SC	
G-10R		1338	33.20	72.9	SC	
G-10M		1340	34.08	36.9	SC	
G-11		1328	DRY	26.7	SC	
G-11R		1330	34.20	75.6	SC	
G-11M		1332	32.16	37.4	SC	
G-12		1325	18.36	29.2	SC	
G-13		1312	10.48	29.6	SC	
G-16		1106	7.29	82.8	RM	
G-17		1112	8.33	27.3	RM	
G-18		1119	9.62	22.3	RM	
G-19R		1236	7.75	25.5	SC	
G-20		1126	8.84	42.6	RM	
G-21		1239	8.36	21.9	SC	
G-22		1243	11.69	NM	SC	
G-23		1241	9.12	47.5	SC	
G-25		1130	7.56	21.9	RM	
G-26		1246	7.41	27.6	SC	
G-27		1355	24.91	28.0	SC	
G-28		1134	8.26	33.0	RM	
G-29		1255	6.94	22.1	SC	
G-30		1251	5.70	21.2	SC	
I-7		1129	9.83	29.4	SC	
MW-4		1359	9.50			
MW-5		1203	5.91	41.9	SC	
MW-6		1205	6.31	41.6	SC	
MW-7		1217	3.57	40.7	SC	
MW-8		1216	3.21	40.8	SC	
MW92-1		1140	25.26	54.9	SC	
D-1		1350	16.35	66.2	SC	
D-2		1230	7.90	69.2	SC	
~~D-3~~						well damaged / destroyed.
D-4		1402	8.34	67.2		
D-5		1206	6.07	66.9	SC	
D-6		1214	4.97	66.8	SC	
D-7		1153	9.72	67.5	SC	
4B		1232	8.85	12.2	SC	
P-1		1228	7.11	22.5	SC	
P-2		1404	DRY	9.2	SC	
LW-1		1416	69.28	70.9	SC	
LW-2		1430	DRY	67.5	SC	
LW-3		1422	47.43	49.0	SC	

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

Location: Recology Hay Road Sample ID: G-4R

Project No.: 053-7444-11 Sampled By: R. McCarthy

Client: Recology

Sample type: Groundwater X Leachate ____ Other ____

Casing diameter: 3/4" ____ 1" ____ 2" X 4" ____ 4.5" ____ 6" ____ 8" ____ Other ____

Well Total Depth (ft): 22.7 Screen Length (ft): ____

Depth to Water (ft): 8.70 Total Volume Purged (ml): 2,750

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Bladder Pump ____ Peristaltic Pump X Dedicated ____

Electric Submersible Pump ____ Tubing Types ____ Other ____

Purge Water Containment: None - Ground

Field Measurement Device: Horiba ____ YSI X LaMotte ____ Other ____

QC Samples Collected at this Well: QCEB-____ QCAB-____ DUP-____ Other ____ Time:____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µmhos @ 25°C)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1130	START PURGE								
1134	250	8.78	18.9	7.91	3899	0.29	2	-59.8	clear
1137	250	8.77	19.2	7.90	3901	0.24	1	-65.2	" "
1140	250	8.77	19.2	7.87	3906	0.21	1	-65.9	" "
1141	SAMPLE	TAKEN							

REMARKS: ____

SIGNATURE: [signature] **SAMPLE DATE:** 1/30/12

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

Location: Recology Hay Road Sample ID: G-18

Project No.: 053-7444-11 Sampled By: R. McCarthy

Client: Recology

Sample type: Groundwater X Leachate ____ Other ____

Casing diameter: 3/4" ____ 1" ____ 2" X 4" ____ 4.5" ____ 6" ____ 8" ____ Other ____

Well Total Depth (ft): 22.3 Screen Length (ft): ____

Depth to Water (ft): 9.54 Total Volume Purged (ml): 3,000

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Bladder Pump ____ Peristaltic Pump X Dedicated ____

Electric Submersible Pump ____ Tubing Types ____ Other ____

Purge Water Containment: NONE - GROUND

Field Measurement Device: Horiba ____ YSI X LaMotte ____ Other ____

QC Samples Collected at this Well: QCEB-____ QCAB-____ DUP-____ Other ____ Time: ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µmhos @ 25°C)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1150	START PURGE								
1154	250	9.72	17.2	7.50	3156	0.20	3	-44.5	clear
1157	250	9.71	17.2	7.49	3153	0.19	3	-45.0	" "
1200	250	9.71	17.1	7.48	3147	0.18	3	-45.4	" "
1202	SAMPLE	TAKEN							

REMARKS: ____

SIGNATURE: ____ **SAMPLE DATE:** 1/30/12

WATER SAMPLE FIELD DATA

LOCATION: HAY ROAD SAMPLE ID: G-22
PROJECT NO: 053-7444-11 SAMPLED BY: R. McCARTY
SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 X 8 ____ Other ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 27.5	Volume in Casing (gal):
Depth to Water (ft): 11.94	Calculated Purge (volumes / gal.):
Height of Water Column (ft):	Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
	PUMP ON;		GRAB SAMPLE TAKEN					

Purge Date: ____

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1025	16.2	2612	6.76	0.35	clear	2	-14.2

Sheen: NONE Odor: NONE Sample Date: 1/30/12

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date: 1/30/12 Time: 1020 Location: HAY RD Ins. # 10H100446
pH 4: (4.0 / 4.0 @ 13 °C) pH 7: (7.0 / 7.0 @ 13 °C) pH 10: (____ / ____ @ ____ °C)
D.O. (____ / ____ @100%) EC (2060 / 2060 µmhos/cm@25°C)
ORP (____ / ____ / ____ @°C Turbidity (20. / 20. NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 1/30/12

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

Location: Hwy 82 Sample ID: G-23

Project No.: 053-7444-11 Sampled By: R. McCarthy

Client: Recology

Sample type: Groundwater X Leachate ____ Other ____

Casing diameter: 3/4" ____ 1" ____ 2" X 4" ____ 4.5" ____ 6" ____ 8" ____ Other ____

Well Total Depth (ft): 47.7 Screen Length (ft): ____

Depth to Water (ft): 9.52 Total Volume Purged (ml): ____

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Bladder Pump ____ Peristaltic Pump X Dedicated ____

Electric Submersible Pump ____ Tubing Types ____ Other ____

Purge Water Containment: None - Ground

Field Measurement Device: Horiba ____ YSI X LaMotte ____ Other ____

QC Samples Collected at this Well: QCEB-____ QCAB-____ DUP-____ Other ____ Time:____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µmhos @ 25°C)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1045	START PURGE								
1050	250	9.56	17.0	7.13	2344	0.33	2	-19.1	clear
1053	250	9.55	17.1	7.12	2343	0.25	2	-24.2	" "
1056	250	9.55	17.1	7.12	2345	0.21	2	-29.6	
1059	250	9.55	17.1	7.12	2345	0.20	1	-30.1	
1100	SAMPLE	TAKEN							

REMARKS: ____

SIGNATURE: [signature] **SAMPLE DATE:** 1/30/12

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

Location: Hay Rd. Sample ID: G-21

Project No.: Sampled By: R. McCarthy

Client: Ecology

Sample type: Groundwater X Leachate ____ Other ____

Casing diameter: 3/4" ____ 1" ____ 2" X 4" ____ 4.5" ____ 6" ____ 8" ____ Other ____

Well Total Depth (ft): 21.9 Screen Length (ft): ____

Depth to Water (ft): 8.63 Total Volume Purged (ml): 3,500

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Bladder Pump ____ Peristaltic Pump X Dedicated ____

Electric Submersible Pump ____ Tubing Types ____ Other ____

Purge Water Containment: UNK - Ground

Field Measurement Device: Horiba ____ YSI X LaMotte ____ Other ____

QC Samples Collected at this Well: QCEB-____ QCAB-____ DUP-____ Other ____ Time:____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µmhos @ 25°C)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1102	START PURGE								
1106	250	8.71	17.4	7.21	2494	0.85	2	-19.1	clear
1109	250	8.90	17.5	7.20	2488	0.21	2	-19.6	" "
1112	250	8.90	17.5	7.20	2490	0.20	2	-21.1	" "
1115	250	8.69	17.5	7.19	2490	0.19	1	-20.4	" "
1116	SAMPLE	TAKEN							

REMARKS: ____

SIGNATURE: ____ **SAMPLE DATE:** 1/30/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recovery Hay Road SAMPLE ID: Compost Pond
PROJECT NO: 053-744-11 SAMPLED BY: R. McCarthy
SAMPLE TYPE: Groundwater _____ Surface Water ✓ Leachate _____ Other _____
CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4____ 4.5____ 6____ 8____ Other____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____
Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____
Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____
Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____
Purge Water Containment: _____
Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
	GRAB	SAMPLE	TAKEN					

Purge Date: —

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer___✓__Peristaltic Pump _____ Centrifugal Pump _____
Bladder Pump _____Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1120	13.1	2947	7.57	2.59	brownish	105	-2.7

Sheen: None Odor: None Sample Date: 1/30/12

Field Measurement Devices: Horiba: _____ YSI: ✓ Oakton Turbidity: ✓ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____
pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)
D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)
ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 1/30/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-2.2A

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone, PAN LYS.

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NM
Depth to Water (ft): d	*Calculated* Purge (volumes / gal.): d
Height of Water Column (ft):	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: PAN LYSIMETER DRY - NO SAMPLE

- STUCK PUMP - NO FLOW

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-2.2B

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / PAN Lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): NM

Depth to Water (ft): ▽ Calculated Purge (volumes / gal.): 1

Height of Water Column (ft): 0.00 Actual Pre-Sampling Purge (gal): 1

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump ✗ Dedicated ✗ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: PAN Lysimeter DM - No Sample

SIGNATURE: _____ **DATE:** 5/8/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-3.1

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone - pan. Lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NM
Depth to Water (ft):	*Calculated Purge (volumes / gal.):*
Height of Water Column (ft): 6.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: PAN Lysimeter dry - no samples

SIGNATURE: _____ **DATE:** 5/8/12

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WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-3-Z

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / PAN Lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): NM

Depth to Water (ft): / Calculated Purge (volumes / gal.): /

Height of Water Column (ft): / Actual Pre-Sampling Purge (gal): 4

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump_____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: PAN Lysimeter dry - NO samples

SIGNATURE: _____ **DATE:** 5/8/11

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-3.3

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / PAN 45

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft):	Volume in Casing (gal):
Depth to Water (ft):	*Calculated* Purge (volumes / gal.):
Height of Water Column (ft): 0.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: PAN LYSIMETER Dry - NO Samples

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-4-1

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / PAN ~45

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12-1

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft): 0.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: PAN Lysimeter dry - NO Samples

SIGNATURE: _____ **DATE:** 5/8/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-5.1A

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / Pan-Lvs

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft):	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated X Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1325	25.8	1980	7.13	2.77	Colorless	4	NA

Sheen: none Odor: none Sample Date: 5/8/12

Field Measurement Devices: Horiba: U-5 YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date: 5/8/12 Time: 1155 Location: _____ Ins. # U-5

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: Collected grab sample

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL 5.1B

PROJECT NO: 053744412 SAMPLED BY: S Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone Pan Lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): NA

Depth to Water (ft): _____ *Calculated Purge (volumes / gal.):* _____

Height of Water Column (ft): 0.00 Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: Pan Lysimeter Dry - No Samples

SIGNATURE: _____ **DATE:** 5/8/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-S-2

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / pan lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft): 6	Calculated Purge (volumes / gal.): J
Height of Water Column (ft): 0.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump_____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: PAN lysimeter dry - No samples

SIGNATURE: _____ **DATE:** 3/8/12

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WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-9.1A

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / pan Lys

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft): 0	Actual Pre-Sampling Purge (gal): 0

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated X Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1340	19.5	980	7.35	7.20	colorless	8	

Sheen: none Odor: none Sample Date: 5/8/12

Field Measurement Devices: Horiba: U-5 YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date: 5/8/12 Time: 1155 Location: _____ Ins. # U-5

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: Collected grab sample

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-9.1B

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other PAN Lys / Vadose Zone

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): NA

Depth to Water (ft): Dry *Calculated Purge (volumes / gal.):* /

Height of Water Column (ft): 0.00 Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: PAN Lysimeter Dry - NO samples

SIGNATURE: _____ **DATE:** 5/8/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-11.1

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other PAN Lysimeter - Vadose

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NR	Volume in Casing (gal): NA
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft): 0	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump ✓ Dedicated ✓ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1325	25.6	1670	7.20	6.03	colorless	2	NM

Sheen: none Odor: none Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date: 5/8/12 Time: 1155 Location: Hay Rd Ins. # 45

pH 4: (4.00 / / @ 20.6 °C) pH 7: (7.02 / / @ 20.6 °C) pH 10: (NM / / @ °C)

D.O. (Air / / @100%) EC (0 / 2060 µmhos/cm@25°C)

ORP (NA / / @°C Turbidity (0 / / NTU)

REMARKS: Collected grab sample from pump discharge

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: PL-11.2

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other Vadose Zone / pan lys.

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft): d	Calculated Purge (volumes / gal.): d
Height of Water Column (ft): 0.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: pan lysimeter dry - NO samples

SIGNATURE: _____ **DATE:** 5/8/12

LYSIMETER SAMPLE FIELD DATA

LOCATION: Hay Road Landfill
SAMPLE ID: YZ-2-1
PROJECT NO: 053-7444-12
VACUUM BY: S. Giacomini
CLIENT NAME Norcal
SAMPLED BY:

Date	Time	Cup (A or B)	Soil Moisture	Vacuum Reading (Centibars)	Liquid Removed (Milliliters)	Vacuum Applied (Centibars)
5/1/12	1325	A	—	—	—	70
5/1/12		B				0

SAMPLE FIELD PARAMETERS:

Date	Time	Odor	pH (units)	E.C. (umhos/cm@25C)	Temperature (C)	Other

LYSIMETER INTEGRITY: Good A - B= p/u, 9=5. Lock No: 0909

REMARKS:

Cup-B - TUBING. disconnected below ground surface will not hold Vacuum

Unable to Sample due to 0 Vacuum.

SIGNATURE:

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: LD-4.1

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater ____ Surface Water ____ Leachate ____ Other LEAK Defect

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other ~~GEA~~ 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): N.A

Depth to Water (ft): / Calculated Purge (volumes / gal.): /

Height of Water Column (ft): / Actual Pre-Sampling Purge (gal): ____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer____ Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump____ Dedicated ____ Other____

Purge Water Containment: ____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer____ Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump__/__ Dedicated__/__ Other____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1310	17.9	1280	7.38	4.12	colorless	2	NA

Sheen: none Odor: none Sample Date: 5/8/12

Field Measurement Devices: Horiba: U-5 YSI: ____ Oakton Turbidity: ____ Other: ____

Meter Calibration Date: 5/8/12 Time: 1155 Location: ____ Ins. # U-5

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____NTU)

REMARKS: Collected grab Samples

SIGNATURE: ____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: LD-3.1

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other LEAK Detect

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft):	Volume in Casing (gal): NA
Depth to Water (ft):	*Calculated Purge (volumes / gal.):*
Height of Water Column (ft): 0.00	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

LEAK Detect Riser dry - no Sample

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: LD-3-2

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other LEAK INLET

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM	Volume in Casing (gal): NA
Depth to Water (ft):	Calculated Purge (volumes / gal.):
Height of Water Column (ft):	Actual Pre-Sampling Purge (gal):

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated X Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1300	256	1050	7.30	4.12	colorless	3	NM

Sheen: none Odor: none Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date: 5/8/12 Time: 1155 Location: _____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: Collected grab sample from pump discharge

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: LD-S-2

PROJECT NO: 053744412 SAMPLED BY: S. Giacomini

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other LEAK Detect

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 12"

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NM Volume in Casing (gal): NA

Depth to Water (ft): ~~NM~~ Calculated Purge (volumes / gal.): 0

Height of Water Column (ft): ~~NM~~ 0.00 Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump_____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)

Sheen: _____ Odor: _____ Sample Date: _____

Field Measurement Devices: Horiba: _____ YSI: _____ Oakton Turbidity: _____ Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: LEAK DETECT RISER DRY - NO SAMPLES

SIGNATURE: _____ **DATE:** 5/8/14

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-1

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4 X 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 40.4 Sceen Length (ft): ____

Depth to Water (ft): 6.21 Total Volume Purged (ml): 4.8L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1009	300	START PURGE							
1014	300	6.21	17.5	7.81	1534	1.42	2		
1017	300	6.22	17.5	7.78	1517	1.00	2		
1020	300	6.22	17.4	7.76	1509	0.91	2		
1023	300	6.22	17.4	7.71	1507	0.90	1		
1025	SAMPLE	TAKEN							
	VOC's	SAMPLED W/	BAILER						

Field Measurement Devices: Horiba:____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/4/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-2

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater ✓ Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4 X 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 26.4 Sceen Length (ft): ____

Depth to Water (ft): 4.31 Total Volume Purged (ml): 5.7 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: DOVE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
0916	300	START PURGE							
0922	300	4.31	16.5	7.80	3479	0.26	1		
0925	300	4.31	16.5	7.71	3467	0.20	1		
0928	300	4.31	16.5	7.69	3468	0.18	1		
0931	300	4.31	16.5	7.68	3470	0.18	1		
0935	SAMPLE	TAKEN							
	VOC's	SAMPLED	W/BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/4/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: GL-4R

PROJECT NO: 053744412 SAMPLED BY: R. McCARTHY

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 27.6 Sceen Length (ft): ____

Depth to Water (ft): 8.21 Total Volume Purged (ml): 6.3 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1159	300	START PURGE							
1207	300	8.28	17.5	7.65	3812	0.28	3		
1210	300	8.25	17.5	7.46	3779	0.20	1		
1213	300	8.25	17.5	7.38	3772	0.19	1		
1216	300	8.25	17.5	7.36	3771	0.17	1		
1220	SAMPLE	TAKEN							
	VOC's	SAMPLED	VIA	BAILER					

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/3/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-6

PROJECT NO: 053744412 SAMPLED BY: P. McCarthy

SAMPLE TYPE: Groundwater _____ Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4 X 4.5___ 6___ 8___ Other___

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 39.7 Sceen Length (ft): _____

Depth to Water (ft): 5.28 Total Volume Purged (ml): 6.0 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump _____ Electric Submersible Pump_____

Dedicated _____ Peristaltic Pump X Tubing Types Dedicated Other_____

Purge Water Containment: Done - Ground

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1245	300	START	PURGE						
1250	300	5.31	17.0	7.56	1660	0.61	2		
1253	300	5.30	16.9	7.40	1659	0.52	1		
1256	300	5.29	17.0	7.36	1656	0.51	1		
1259	300	5.29	17.0	7.33	1656	0.49	1		
1305	SAMPLE	TAKEN							
		VOC's	SAMPLED	W/BAILER					

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/3/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: GL-8

PROJECT NO: 053744412 SAMPLED BY: R. McCARTHY

SAMPLE TYPE: Groundwater x Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4 x 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 24.3 Sceen Length (ft): _____

Depth to Water (ft): 15.68 Total Volume Purged (ml): 5.1 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump _____ Electric Submersible Pump_____

Dedicated _____ Peristaltic Pump x Tubing Types DEDICATED Other_____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1223	300	START PURGE							
1229	300	15.68	19.7	7.08	1887	0.66	1		
1232	300	15.68	19.4	7.03	1885	0.30	1		
1235	300	15.68	19.4	6.97	1891	0.29	1		
1238	300	15.68	19.4	6.96					
1240	SAMPLE	TAKEN							
		VOC's SAMPLED W/ BAILER							

Field Measurement Devices: Horiba: _____ YSI: x Oakton Turbidity: x Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/4/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G1-9

PROJECT NO: 053744412 SAMPLED BY: P.McCarthy

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4 X 4.5___ 6___ 8___ Other___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 37.4	Volume in Casing (gal): 4.7
Depth to Water (ft): 30.29	*Calculated* Purge (volumes / gal.): 14.1
Height of Water Column (ft): 7.11	Actual Pre-Sampling Purge (gal): 15.0

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated TUBING Other_____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1048	5.0	21.9	1721	7.37	clear	low		
1053	10.0	21.5	1710	6.91	" "	" "		
1058	15.0	21.5	1711	6.90	" "	" "		

Purge Date: 5/7/12

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated TUBING Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1100	21.5	1712	6.88	0.38	clear	9	

Sheen: NONE Odor: NONE Sample Date: 5/7/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/7/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-10R

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2 X 4___ 4.5___ 6___ 8___ Other___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 72.9	Volume in Casing (gal): 6.7
Depth to Water (ft): 33.81	Calculated Purge (volumes / gal.): 20.1
Height of Water Column (ft): 39.09	Actual Pre-Sampling Purge (gal): 21.0

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump X Dedicated Tubing Other_____

Purge Water Containment: Done - Ground

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1136	7.0	19.0	1016	6.90	clear	low		
1143	14.0	18.8	1026	6.95	"	"		
1150	21.0	18.8	1033	6.97	"	low		

Purge Date: 5/7/12

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump ✓ Dedicated Tubing Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1155	19.8	~~6.99~~ 1035	6.99	1.07	clear	8	

Sheen: — Odor: — Sample Date: 5/7/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/7/12

C:\Users\sgiacomini\Documents\projects\Hay Road Lf\Watersample2011[1].docx

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: GI-11M
PROJECT NO: 053744412 SAMPLED BY: R. McCarty
SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____
CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 37.4	Volume in Casing (gal): 0.7
Depth to Water (ft): 33.03	Calculated Purge (volumes / gal.): 2.1
Height of Water Column (ft): 4.37	Actual Pre-Sampling Purge (gal): 1.0

PURGE:
Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump X Dedicated Tubing Other ____
Purge Water Containment: NONE - GROUND
Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1247	1.0	18.9	1161	7.31	clear	Low		
1248	LOCK	DRY						

Purge Date: 5/7/12

SAMPLE:
Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____
Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1305	23.5	1151	7.03	1.08	Brown	214	

Sheen: ____ Odor: ____ Sample Date: 5/7/12

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____
pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)
D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)
ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: WELL ALLOWED TO RECHARGE TO 35.14' @ 1305

SIGNATURE: [signature] **DATE:** 5/7/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-11R

PROJECT NO: 053744412 SAMPLED BY: R. MCCARTHY

SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 75.6	Volume in Casing (gal): 7.0
Depth to Water (ft): 34.81	Calculated Purge (volumes / gal.): 2L0
Height of Water Column (ft): 40.79	Actual Pre-Sampling Purge (gal): 21.0

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump X Dedicated TUBING Other ____

Purge Water Containment: DRUM - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
0929	7.0	20.0	1070	7.23	clear	low		
0936	14.0	20.0	962	7.14	"	"		
0942	21.0	20.0	954	7.11	"	"		

Purge Date: 5/8/12

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump X Dedicated TUBING Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
0950	19.9	952	7.09	0.62	clear	6	

Sheen: — Odor: — Sample Date: 5/8/12

Field Measurement Devices: Horiba: ____ YSI: ____ Oakton Turbidity: ____ Other: ____

Meter Calibration Date: 5/8/12 Time: 0920 Location: HAY RD Ins. # 10H100446

pH 4: (4.0 / 4.0 @ 20 °C) pH 7: (7.0 / 7.0 @ 20 °C) pH 10: (____ / ____ @ ____ °C)

D.O. (____ / ____ @100%) EC (2060 / 2060 µmhos/cm@25°C)

ORP (____ / ____ / ____ @°C Turbidity (20 / 20 NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/8/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-12

PROJECT NO: 053744412 SAMPLED BY: R McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4 X 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 29.7 Sceen Length (ft): ____

Depth to Water (ft): 19.33 Total Volume Purged (ml): 3.6 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: DONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1138	300	START PURGE							
1143	300	19.33	18.6	7.38	1087	0.96	1		
1146	300	19.33	18.7	7.37	1085	0.94	1		
1149	300	19.33	18.6	7.36	1084	0.91	1		
1150	SAMPLE	TAKEN							
		VOC's	SAMPLED	W/	BAILER				

Field Measurement Devices: Horiba:____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. #____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/4/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-13

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater XX Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2____ 4 X 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 29.6 Sceen Length (ft): _____

Depth to Water (ft): 11.31 Total Volume Purged (ml): 4.5 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump _____ Electric Submersible Pump_____

Dedicated _____ Peristaltic Pump X Tubing Types DEDICATED Other_____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1050	300	START	PURGE						
1055	300	11.31	17.3	7.61	1124	1.68	1		
1058	300	11.31	17.1	7.56	1107	1.50	1		
1101	300	11.31	17.1	7.53	1106	1.49	1		
1105	SAMPLE	TAKEN							
	VOC'S	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/4/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: Gr-16

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater x Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 x 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 32.8 Sceen Length (ft): ____

Depth to Water (ft): 7.29 Total Volume Purged (ml): 4.5L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump x Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1235	300	START	PURGE						
1239	300	7.30	18.7	7.64	3204	0.41	1		
1242	300	7.30	18.4	7.49	3190	0.35	1		
1245	300	7.30	18.4	7.40	3181	0.33	1		
1248	300	7.30	18.5	7.40	3179	0.31	1		
1250	SAMPLE	TAKEN							

Field Measurement Devices: Horiba: ____ YSI: x Oakton Turbidity: x Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/1/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-17

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 27.3 Sceen Length (ft): ____

Depth to Water (ft): 8.33 Total Volume Purged (ml): 5.4 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1412	300	START PURGE							
1416	300	8.35	18.4	7.52	2654	0.49	1		
1419	300	8.33	18.1	7.42	2650	0.45	1		
1422	300	8.33	18.1	7.38	2658	0.41	1		
1425	300	8.33		7.37	2654	0.40	1		
1430	SAMPLE TAKEN								
	VOC's SAMPLED W/ BAILER								

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/1/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-1B

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2 X 4___ 4.5___ 6___ 8___ Other___

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 22.3 Sceen Length (ft): ____

Depth to Water (ft): 9.62 Total Volume Purged (ml): 5.7 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1336	300	START PURGE							
1342	300	9.64	18.7	7.43	2595	0.53	1		
1345	300	9.63	18.0	7.34	2584	0.32	1		
1348	300	9.63	17.9	7.31	2571	0.29	1		
1351	300	9.63	17.9	7.30	2568	0.27	1		
1355	SAMPLE TAKEN								
	VOC'S	SAMPLED	W/BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/11/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-19R

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 25.5 Sceen Length (ft): ____

Depth to Water (ft): 7.91 Total Volume Purged (ml): 4.8 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1104	300	START PURGE							
1109	300	7.96	16.2	7.01	3932	0.24	2		
1112	300	7.93	16.2	7.04	3949	0.22	1		
1115	300	7.93	16.3	7.05	3956	0.20	1		
1120	SAMPLE	TAKEN							
	VOC's	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba:____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/3/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-20

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 42.6 Sceen Length (ft): ____

Depth to Water (ft): 8.84 Total Volume Purged (ml): 3.9 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: DRUM - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1307	300	START PURGE							
1311	300	8.91	19.3	7.45	1676	0.96	1		
1314	300	8.87	19.2	7.47	1655	0.92	1		
1317	300	8.87	19.2	7.46	1649	0.91	1		
1320	SAMPLE TAKEN								

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/1/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-21

PROJECT NO: 053744412 SAMPLED BY: R. McCarry

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2__X__ 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 21.9 Sceen Length (ft): ____

Depth to Water (ft): 8.42 Total Volume Purged (ml): 3.6L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: DRUM - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1018	300	START	PURGE						
1022	300	8.44	17.0	6.59	2466	0.26	1		
1025	300	8.43	17.0	6.61	2466	0.25	1		
1028	300	8.43	17.0	6.62	2469	0.21	1		
1030	SAMPLE	TAKEN							
	VOC's	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/3/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G1-22

PROJECT NO: 053744412 SAMPLED BY: R. McCARTHY

SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 X 8 ____ Other ____

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 27.5 Volume in Casing (gal): ____

Depth to Water (ft): 11.82 Calculated Purge (volumes / gal.): ____

Height of Water Column (ft): 15.68 Actual Pre-Sampling Purge (gal): ____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer ____ Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump X Dedicated X Other ____

Purge Water Containment: ____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
		PUMP ON; GRAB SAMPLE TAKEN						

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump ____ Centrifugal Pump ____

Bladder Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1045	16.9	2514	6.95	0.50	clear	4	

Sheen: ____ Odor: ____ Sample Date: ____

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/3/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-23

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 47.5 Sceen Length (ft): ____

Depth to Water (ft): 9.15 Total Volume Purged (ml): 4.2 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1001	300	START PURGING							
1005	300	9.18	16.4	6.09	2303	0.30	1		
1008	300	9.17	16.4	6.10	2300	0.31	1		
1011	300	9.17	16.4	6.12	2295	0.27	1		
1015	SAMPLE	TAKEN							

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date: 5/3/12 Time: 0945 Location: HAY RD. Ins. # 10H100 4440

pH 4: (4.0 / 4.0 @ 18 °C) pH 7: (7.0 / 7.0 @ 18 °C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (2000 / 2040 µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (20 / 20 NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/3/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-25

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 21.9 Sceen Length (ft): ____

Depth to Water (ft): 7.56 Total Volume Purged (ml): 4.2 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1211	300	START PURGE							
1215	300	7.58	18.3	7.57	2618	0.48	2		
1218	300	7.56	18.2	7.43	2615	0.48	1		
1221	300	7.56	18.2	7.39	2610	0.43	1		
1224	300	7.56	18.2	7.39	2612	0.42	1		
1225	SAMPLE TAKEN								
	VOC's	SAMPLED	w/ BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/1/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-26

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2 X 4___ 4.5___ 6___ 8___ Other___

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 27.6 Sceen Length (ft): ____

Depth to Water (ft): 7.43 Total Volume Purged (ml): 3.6 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: DOES - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1208	START	PURGE		-					
1212	300	7.44	18.9	7.09	2357	0.22	1		
1215	300	7.44	18.9	7.15	2376	0.21	1		
1218	300	7.44	18.9	7.10	2367	0.19	1		
1220	SAMPLE	TAKEN							
	VOC's	SAMPLED	w/ BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/2/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-27

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2 X 4___ 4.5___ 6___ 8___ Other___

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 28.38 Sceen Length (ft): ____

Depth to Water (ft): 26.24 Total Volume Purged (ml): 4.8 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1009	200	START PURGE							
1015	200	25.65	23.0	7.07	1639	0.80	2		
1018	200	25.65	23.0	7.08	1641	0.79	2		
1021	200	25.65	23.2	7.04	1629	0.74	4		
1025	SAMPLE	HAY RD							
	VOC's	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba:____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: 5/7/12 : PURGED OUT WELL COMPLETELY TO "CLEAR OUT"

SIGNATURE: ____ **DATE:** 5/8/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-28

PROJECT NO: 053744412 SAMPLED BY: R McCarthy

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 33.0 Sceen Length (ft): ____

Depth to Water (ft): 8.26 Total Volume Purged (ml): 4.8L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types Dedicated Other ____

Purge Water Containment: Non Ground

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1144	300	START PURGE							
1148	300	8.27	18.2	6.42	2715	0.41	4		
1151	300	8.26	18.0	6.87	2674	0.21	2		
1154	300	8.26	18.0	6.91	2656	0.18	1		
1157	300	8.26	18.0	6.92	2651	0.17	1		
1200	SAMPLES TAKEN								
	VOC's SAMPLED W/ BAILER								

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (4.0 / 4.0 @ 18 °C) pH 7: (7.0 / 7.0 @ 18 °C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (2060 / 2060 µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (20 / 20 NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/1/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-29

PROJECT NO: 053744412 SAMPLED BY: E. McCarthy

SAMPLE TYPE: Groundwater ✓ Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ✓ 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

VOLUME PER LINEAR FOOT(ml): (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 22.1 Sceen Length (ft): ____

Depth to Water (ft): 7.10 Total Volume Purged (ml): 5.4 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump ✓ Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1042	300	START PURGE							
1046	300	7.12	18.2	6.67	2052	1.58	2		
1049	300	7.12	17.6	6.75	2048	1.51	1		
1052	300	7.11	18.1	6.95	2048	1.55	1		
1055	300	7.11	18.1	6.97	2051	1.54	1		
1058	300	7.11	18.1	7.01	2054	1.55	1		
1100	SAMPLE FALCON								
	VOC'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba: ____ YSI: ✓ Oakton Turbidity: ____ Other: ____

Meter Calibration Date: 5/2/12 Time: 1015 Location: Hay Rd. Ins. # 10H100446

pH 4: (4.0 / 4.0 @ 20 °C) pH 7: (7.0 / 7.0 @ 20 °C) pH 10: (____ / ____ @ ____ °C)

D.O. (____ / ____ @100%) EC (2060 / ____ µmhos/cm@25°C)

ORP (____ / ____ / ____ @°C Turbidity (____ / ____ NTU)

REMARKS: ____

SIGNATURE: ____ **DATE:** 5/2/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: G-30

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2 X 4___ 4.5___ 6___ 8___ Other___

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 21.2 Sceen Length (ft): _____

Depth to Water (ft): 5.84 Total Volume Purged (ml): 4.2 L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump _____ Electric Submersible Pump_____

Dedicated _____ Peristaltic Pump X Tubing Types DEDICATED Other_____

Purge Water Containment: DOVE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1116	300	START PURGE							
1120	300	5.90	16.9	7.13	2163	0.20	1		
1123	300	5.89	17.0	7.13	2164	0.18	1		
1126	300	5.87	17.0	7.13	2164	0.17	1		
1130	SAMPLE	FALCON							
	VOCS	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba:_____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/2/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: MW-4

PROJECT NO: 053744412 SAMPLED BY: R. MCCARTHY

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4____ 1____ 2 X 4____ 4.5____ 6____ 8____ Other____

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 29.9 Sceen Length (ft): ____

Depth to Water (ft): ~~MW-4~~ 9.71 Total Volume Purged (ml): 4.8L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump ____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____ Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1326	300	START PURGE							
1331	300	9.78	19.1	7.23	2593	0.85	1		
1334	300	9.76	19.4	7.17	2593	0.21	1		
1337	300	9.76	19.4	7.16	2596	0.20	1		
1340	300	9.75	19.4	7.15	2595	0.18	1		
1342	SAMPLE	TAKEN							
	VOC's	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba: ____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 3/9/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: 4B

PROJECT NO: 053744412 SAMPLED BY: E. McCahon

SAMPLE TYPE: Groundwater _____ Surface Water _____ Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4 X 4.5___ 6___ 8___ Other___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 12.2	Volume in Casing (gal): 2.07
Depth to Water (ft): 9.06	Calculated Purge (volumes / gal.): 6.5
Height of Water Column (ft): 3.14	Actual Pre-Sampling Purge (gal): 20

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Purge Water Containment: Nova - Ground

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time: 0900 Other QCEB-1

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
0808	2.00	15	3148	7.81	brown	Med.		
0909	well	DRY						

Purge Date: 5/7/12

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer _____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1410	20.0	2951	7.23	1.58	clear	28	

Sheen: _____ Odor: _____ Sample Date: 5/7/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date: 5/7/12 Time: 0845 Location: Hay Rd Ins. # 10410044446

pH 4: (4.0 / 4.0 @ 16 °C) pH 7: (7.0 / 7.0 @ 16 °C) pH 10: (_____ / _____ @ _____ °C)

D.O. (_____ / _____ @100%) EC (2060 / 2060 µmhos/cm@25°C)

ORP (_____ / _____ / _____ @°C Turbidity (20 / 20 NTU)

REMARKS: Allowed well to recharge to 9.41' @ 1410

SIGNATURE: _____ **DATE:** 5/11/12

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: P-1

PROJECT NO: 053744412 SAMPLED BY: R McCARTHY

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6 X 8___ Other___

VOLUME PER LINEAR FOOT(ml) : (76) (151) (644) (2,500) (3,150) (5,680) (9,840)

Well Total Depth (ft): 22.5 Sceen Length (ft): ____

Depth to Water (ft): ~~7.25~~ 7.25 Total Volume Purged (ml): 4.8L

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ____ Electric Submersible Pump____

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other____

Purge Water Containment: NONE - GROUND

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:____Other ____

TIME (2400 Hr)	RATE (ml/min)	DTW (ft)	Temp. (°C)	pH (std. units)	EC (µS@ 25°C)	DO (mg/l)	Turbidity (NTU)	ORP (mV)	Color / Odor Comments
1324	300	START PURGE							
1329	300	7.25	23.7	6.91	2642	0.29	2		
1332	300	7.25	21.9	6.97	2624	0.23	1		
1385	300	7.25	21.8	7.00	2620	0.21	1		
1340	SAMPLES	TAKEN							
	VOC's	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba:____ YSI: X Oakton Turbidity: X Other: ____

Meter Calibration Date:____ Time:____ Location:____ Ins. # ____

pH 4: (____/____@____°C) pH 7: (____/____@____°C) pH 10: (____/____@____°C)

D.O. (____/____@100%) EC (____/____µmhos/cm@25°C)

ORP (____/____/____@°C Turbidity (____/____ NTU)

REMARKS: ____

SIGNATURE: [signature] **DATE:** 5/7/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: SW-3

PROJECT NO: 053744412 SAMPLED BY: R. MCCARTHY

SAMPLE TYPE: Groundwater _____ Surface Water X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____

Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____

Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____ Peristaltic Pump_____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
		GRAB SAMPLE TAKEN						

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1115	22.6	903	7.58	1.44	BROWN	89	

Sheen: _____ Odor: _____ Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: T Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/8/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: SW-4

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater _____ Surface Water X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____

Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____

Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer _____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time: _____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
	Grab Sample Taken							

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1140	23.4	895	6.96	2.39	brownish	22	

Sheen: _____ Odor: _____ Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date: _____ Time: _____ Location: _____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/8/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: SW-5

PROJECT NO: 053744412 SAMPLED BY: R. McAvoy

SAMPLE TYPE: Groundwater _____ Surface Water X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____

Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____

Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
		GRAB SAMPLE TAKEN						

Purge Date: —

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1230	23.5	946	7.40	2.98	clear	19	

Sheen: — Odor: — Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/9/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: SW-7

PROJECT NO: 053744412 SAMPLED BY: R. McCarry

SAMPLE TYPE: Groundwater _____ Surface Water X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____

Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____

Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer _____ Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time: _____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
	GRAB SAMPLE TAKEN							

Purge Date: _____

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump _____ Dedicated _____ Other _____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1700	24.3	8912	6.97	2.91	brownish	31	

Sheen: _____ Odor: _____ Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date: _____ Time: _____ Location: _____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/8/12

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road SAMPLE ID: Compost Pond

PROJECT NO: 053744412 SAMPLED BY: R. McCarthy

SAMPLE TYPE: Groundwater _____ Surface Water X Leachate _____ Other _____

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other___

GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): _____ Volume in Casing (gal): _____

Depth to Water (ft): _____ Calculated Purge (volumes / gal.): _____

Height of Water Column (ft): _____ Actual Pre-Sampling Purge (gal): _____

PURGE:

Device (Depth of Intake from TOC): Disp. Bailer_____Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated _____ Other_____

Purge Water Containment: _____

Field QC Samples Collected: EB-___ FB-___ DUP-___ Time:_____Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
	GRAB SAMPLE TAKEN							

Purge Date: —

SAMPLE:

Device (Depth of Intake from TOC): Disp. Bailer X Peristaltic Pump _____ Centrifugal Pump _____

Bladder Pump _____ Electric Submersible Pump_____ Dedicated_____ Other_____

Time (2400 Hr)	Temp. (°C)	EC (µmhos/cm)	pH (std. units)	DO (mg/l)	Color (visual)	Turbidity (NTU)	ORP (mV)
1100	23.6	3719	6.97	2.35	brown	618	

Sheen: — Odor: — Sample Date: 5/8/12

Field Measurement Devices: Horiba: _____ YSI: X Oakton Turbidity: X Other: _____

Meter Calibration Date:_____ Time:_____ Location:_____ Ins. # _____

pH 4: (_____/_____@_____°C) pH 7: (_____/_____@_____°C) pH 10: (_____/_____@_____°C)

D.O. (_____/_____@100%) EC (_____/_____µmhos/cm@25°C)

ORP (_____/_____/_____@°C Turbidity (_____/_____ NTU)

REMARKS: _____

SIGNATURE: _____ **DATE:** 5/8/12

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: Recology Hay Road

Project No.: 09397525

Date: 4/18/12, 4/20/12, 4/23

Technician: R. MacArthy

Sampling Equipment: GEM 2000, MINIRAE 2000 PID

	Sampling Point	Time	VOC (ppm)	METHANE (%)	CO_2 (%)	O_2 (%)	Comments Press.
4/18/12	GP-1	1338	0.0	0.0	0.5	11.6	0.0
4/18/12	GP-6	1419	0.0	0.0	1.8	19.6	0.01
	GP-7	1515	0.0	0.0	0.2	19.8	0.00
4/18/12	GP-9	1348	0.0	0.0	0.4	19.5	0.0
	GP-10	1158	0.0	0.0	0.2	18.2	0.0
	GP-11	1201	0.0	0.0	0.3	16.8	0.03
	GP-12	1519	0.0	0.0	0.5	19.1	0.01
	GP-13	1043	0.0	0.0	~~9.2~~ 0.4	~~20.4~~ 19.2	0.02
	GP-14	1054	0.0	0.0	0.8	13.7	0.00
	GP-15	1115	0.0	0.0	0.3	15.3	0.00
	GP-16	1130	0.0	0.0	0.0	19.4	0.00
	GP-17	1124	0.0	0.0	0.1	19.4	0.00
	GP-18	1217	0.0	0.0	1.5	18.9	0.00
	GP-19	1210	0.0	0.0	2.5	13.8	0.00
	GP-20S	1450	0.0	0.0	2.1	14.8	0.00
4/20/12	GP-20D	1453	0.0	0.0	3.8	6.1	0.00
	GP-21S	1400	0.0	0.0	2.4	10.3	0.00
	GP-21D	1353	0.0	0.0	2.8	9.6	0.00

NOTES:

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: *Recology Hay Road*

Project No.: 09397525

Date: 4/23/12

Technician: R. McCARTHY

Sampling Equipment: GEM 2000 MINI RAE PID

Sampling Point	Time	VOC (ppm)	METHANE (%)	CO_2 (%)	O_2 (%)	Comments
office trailer	1517	0.0	0.0	0.0	20.9	
scale house	1516	0.0	0.0	0.0	20.8	
Maint. Shop	1522	0.0	0.0	0.0	20.8	
Break Room Trailer	1524	0.0	0.0	0.0	20.8	
Composting Shop	1528	0.0	0.0	0.0	20.8	
4/20/12 Solar shed 2.2	1438	0.0	0.0	0.0	20.8	
Solar shed 3.1	1412	0.0	0.0	0.0	20.9	
Solar shed 4.1	1428	0.0	0.0	0.0	20.8	
Solar shed 5.1	1439	0.0	0.0	0.0	20.8	
Solar shed 5.2	1456	0.0	0.0	0.0	20.8	
Solar shed 9.1	1505	0.0	0.0	0.0	20.8	
4/20/12 Solar shed 11	1434	0.0	0.0	0.0	20.9	

NOTES:

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: Recology Hay Road

Project No.: 10397257

Date: 4/23/12

Technician: R. McCarthy

Sampling Equipment: GEM 2000 + PID Mini RAE

Sampling Point	Time	VOC (ppm)	METHANE (%)	CO_2 (%)	O_2 (%)	Comments
PL-2.2A	1300	0.0	0.0	1.0	19.2	
PL-2.2B	1305	0.0	0.0	0.7	19.4	
PL-3.1	1410	0.0	0.3	0.3	19.4	
PL-3.2	1400	0.0	0.2	0.3	19.1	
PL-3.3	1353	0.0	0.4	0.4	19.2	
PL-4.1	1424	0.0	0.1	0.1	19.7	
PL-5.1A	1436	0.0	0.1	0.0	19.9	
PL-5.1B	1446	0.0	0.1	0.6	19.1	
PL-5.2	1454	0.0	5.4	7.8	11.7	
PL-9.1A	1507	0.0	0.1	2.2	14.9	
PL-9.1B	1502	0.0	0.1	3.5	9.8	
PL-11.1	1320	0.6	.0.2	0.2	19.8	
PL-11.2	1327	0.0	4.1	17.3	0.1	
LD-3.1	1416	0.7	0.5	0.3	19.3	
LD-3.2	1357	0.0	2.7	1.7	15.9	
LD-3.3	1350	0.0	0.1	0.0	19.6	
LD-4.1	1420	0.0	0.3	0.4	19.3	
LD-5.2		0.0				

NOTES:

Landfill Gas Migration Monitoring
Recology Hay Road

DATE/TIME: 4/18, 4/20 & 4/23				**TECHNICIAN:** R. MCCARTHY			
EQUIPMENT: GEM 2000				**WEATHER:** Sunny			
TEMPERATURE: ~ 85°				**BAROMETRIC PRESSURE:**			
Well ID	Time	CH_4 (% by vol)	CO_2 (% by vol)	O_2 (% by vol)	Balance (% by vol)	Pressure ("w.c.)	Comments
INTERIOR							
GP-2	1455	3.3	3.2	7.0	86.5	0.00	
GP-3A (deep)	1449	0.0	2.8	12.5	84.7	0.00	
GP-3B (shallow)	1448	0.1	1.5	16.1	82.3	0.00	
GP-4A (deep)	1442	0.1	3.1	9.6	87.2	0.00	
GP-4B (shallow)	1439	0.1	1.5	19.2	79.2	0.00	
GP-5A (deep)	1433	0.0	5.7	5.0	89.3	0.01	
GP-5B (shallow)	1429	0.0	0.5	17.3	82.8	0.00	
PERIMETER							
GP-1	1338	0.0	0.5	11.6	87.9	0.0	
GP-6	1419	0.0	1.2	19.6	78.6	0.01	
GP-7	1515	0.0	0.2	19.8	80.0	0.00	
GP-9	1348	0.0	0.4	19.5	80.1	0.0	
GP-10	1158	0.0	0.2	18.2	81.6	0.0	
GP-11	1201	0.0	0.3	10.8	82.9	0.03	
GP-12	1519	0.0	0.3	19.1	80.4	0.01	
GP-13	1043	0.0	0.4	19.2	80.4	0.02	
GP14	1054	0.0	0.8	13.7	85.5	0.00	
GP-15	1115	0.0	0.3	15.3	84.4	0.00	
GP-16	1130	0.0	0.0	19.4	80.6	0.00	
GP-17	1124	0.0	0.1	19.4	80.5	0.00	
GP-18	1217	0.0	1.5	18.9	79.6	0.00	
GP-19	1210	0.0	2.5	13.8	83.7	0.00	
GP-20S	1450	0.0	2.1	14.8	83.1	0.00	
GP-20D	1453	0.0	3.8	6.1	90.1	0.00	
GP21S	1400	0.0	2.4	10.3	87.3	0.00	
GP-21D	1353	0.0	2.8	9.6	87.6	0.00	
STRUCTURES							
~~Scalehouse~~		0.0	0.0	20.8			
~~Office Trailer~~		0.0	0.0	20.9			
~~Maintenance Shop~~		0.0	0.0	20.8			
~~Composting Shop~~		0.0	0.0	20.8			
~~Breakroom~~		0.0	0.0	20.8			
~~Leachate~~ SS-2.2		0.0	0.0	20.8			
Leachate SS-3.1		0.0	0.0	20.9			
~~Leachate~~ SS-3.2-3.3		0.0	0.0	20.8			
Leachate SS-4.1		0.0	0.0	20.8			
Leachate SS-5.1		0.0	0.0	20.8			
Leachate SS-5.2		0.0	0.0	20.8			
Leachate SS-9.1		0.0	0.0	20.8			
~~Leachate~~ SS-11		0.0	0.0	20.9			

4/20/12 (GP-2 through GP-5B)

4/18/12 (GP-1)

4/18/12 (GP-6 through GP-9)

4/20/12 (GP-20D, GP21S, GP-21D)

NOTES: All monitoring parameters listed above are required by regulations, permits, or regulatory agencies for the perimeter probes and structures but not for the interior probes. Monitoring is required at least quarterly. Evacuate 1 probe casing or achieve stable reading before recording. Calculate purge time based on probe depth, casing diameter, and pump rate. Provide GEM calibration sheet / information. Exceedances at perimeter probes (i.e., 5% methane by volume or greater) or structures (1.25% methane or greater) require immediate reporting to the Compliance Specialist as they also require immediate reporting to the LEA by telephone or email and a written report to the LEA within 7 days. Weather data can be obtained from the internet if not recorded in the field.

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: Recology Hay Road

Project No.:10397257

Date: 4/23/12

Technician: R. McCarthy

Sampling Equipment: GEM 2000 + PID MINI RAE

Sampling Point	Time	VOC (ppm)	METHANE (%)	CO_2 (%)	O_2 (%)	Comments
PL-2.2A	1300	0.0	0.0	1.0	19.2	
PL-2.2B	1305	0.0	0.0	0.7	19.4	
PL-3.1	1410	0.0	0.3	0.3	19.4	
PL-3.2	1400	0.0	0.2	0.3	19.1	
PL-3.3	1353	0.0	0.4	0.4	19.2	
PL-4.1	1424	0.0	0.1	0.1	19.7	
PL-5.1A	1436	0.0	0.2	0.0	19.9	
PL-5.1B	1446	0.0	0.1	0.6	19.1	
PL-5.2	1454	0.0	5.4	7.8	11.7	
PL-9.1A	1507	0.0	0.1	2.2	14.9	
PL-9.1B	1502	0.0	0.1	3.5	9.8	
PL-11.1	1320	0.6	0.2	0.2	19.8	
PL-11.2	1327	0.0	4.1	17.3	0.1	
LD-3.1	1416	0.7	0.5	0.3	19.3	
LD-3.2	1357	0.0	2.7	1.7	15.9	
LD-3.3	1350	0.0	0.1	0.0	19.6	
LD-4.1	1420	0.0	0.3	0.4	19.3	
LD-5.2	1457	0.0	0.4	0.8	18.6	

NOTES:

Landfill Gas Migration Monitoring
Recology Hay Road

DATE/TIME: 2/13/12				**PROJECT NUMBER:** 103-97257-01			
TECHNICIAN: R. McCarthy				**WEATHER/TEMP:** Cloudy / High 50's			
EQUIPMENT: GEM 2000				**BAROMETRIC PRESSURE:**			
Well ID	Time	CH_4 (% by vol)	CO_2 (% by vol)	O_2 (% by vol)	Balance (% by vol)	Pressure ("w.c.)	Comments
INTERIOR							
GP-2	1046	0.3	3.6	8.6	87.5	0.00	
GP-3A (deep)	1136	0.3	4.4	9.3	86.0	+0.06	
GP-3B (shallow)	1133	0.0	1.8	18.9	79.3	0.00	
GP-4A (deep)	1146	0.0	3.6	12.1	84.3	+0.02	
GP-4B (shallow)	1143	0.0	3.9	10.6	85.5	+0.11	
GP-5A (deep)	1159	0.0	6.8	5.8	87.4	0.00	
GP-5B (shallow)	1155	0.0	0.2	19.4	80.4	0.09	
PERIMETER							
GP-1	1031	0.0	0.4	19.9	79.7	+0.03	
GP-6	1206	0.0	0.2	20.5	79.3	+0.03	
GP-7	1342	0.0	3.8	10.4	85.8	0.00	
GP-9	1037	0.0	0.5	20.4	79.1	+0.02	
GP-10	1055	0.0	1.0	20.1	78.9	0.00	
GP-11	1100	0.0	0.4	20.5	79.1	+0.02	
GP-12	1400	0.0	1.6	9.7	88.7	+0.06	
GP-13	1410	0.0	0.9	20.0	79.1	0.00	
GP14	1420	0.0	1.0	16.1	82.8	0.00	
GP-15	1231	0.0	0.3	20.7	79.0	+0.01	
GP-16	1218	0.0	0.2	21.0	78.8	+0.35	
GP-17	1212	0.0	1.2	20.3	78.5	+0.03	
GP-18	1114	0.0	1.2	17.0	81.8	+0.02	
GP-19	1107	0.0	2.9	16.7	80.4	+0.06	
GP-20S	1317	0.0	1.6	18.3	80.1	0.00	
GP-20D	1315	0.0	4.4	6.6	89.0	0.00	
GP-21S	1013	0.0	1.7	16.9	81.4	0.00	
GP-21D	1015	0.0	3.9	5.9	90.2	0.01	
STRUCTURES							
Scalehouse	1344	0.0	0.0	20.8	79.2	0.0	
Office Trailer	1355	0.0	0.0	20.8	79.2	0.0	
Maintenance Shop	1346	0.0	0.0	20.9	79.1	0.0	
Composting Shop	1349	0.0	0.0	20.8	79.2	0.0	
Breakroom	1352	0.0	0.0	20.8	79.2	0.0	
Leachate SS-2.2	1126	0.0	0.0	20.8	79.2	0.0	
Leachate SS-3.1	1246	0.0	0.0	20.8	79.2	0.0	
Leachate SS-3.2/3.3	1242	0.0	0.0	20.8	79.2	0.0	
Leachate SS-4.1	1250	0.0	0.0	20.8	79.2	0.0	
Leachate SS-5.1	1253	0.0	0.0	20.8	79.2	0.0	
Leachate SS-5.2	1256	0.0	0.0	20.8	79.2	0.0	
Leachate SS-9.1	1300	0.0	0.0	20.8	79.2	0.0	
Leachate SS-11	1150	0.0	0.0	20.8	79.2	0.0	

NOTES: All monitoring parameters listed above are required by regulations, permits, or regulatory agencies for the perimeter probes and structures but not for the interior probes. Monitoring is required at least quarterly.

Record the GEM calibration information on the GEM calibration form. Provide it with this sheet to the Compliance Specialist.

Measure the static pressure on the probe prior to obtaining a gas quality reading. Evacuate 1 probe casing or achieve a stable reading before recording. Refer to the purge time table to determine how long it will take to evacuate 1 casing volume.

Exceedances at perimeter probes (i.e., 5% methane by volume or greater) or structures (1.25% methane or greater) require IMMEDIATE reporting to the Compliance Specialist as they also require IMMEDIATE reporting to the LEA by telephone or email and a written report to the LEA within 7 days.

Weather data can be obtained from the internet if not recorded in the field.

Golder Associates

FIELD MONITORING REPORT

PAGE 1 OF 1

PROJECT NUMBER: 053-7444-12 PROJECT TITLE: Recovery Hay Road Soil

OWNER: — CONTRACTOR: —

LOCATION: Hay Road Landfill

DATE 5/3/12 S M T W (T) F S

THE FOLLOWING WAS NOTED:

1340 - Met w/ Josh From ENPRODE. Tailgate H+S Meeting

1400 - Started work at LTU

ID	TIME	DEPTH
UZ-8	1405	5.5'-6'
UZ-7	1420	5.5'-6'
UZ-9	1430	5.5'-6'
UZ-10	1440	5.5'-6'

SUBMITTED BY GOLDER

MONITOR

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
6-1	.30	.10		.0	.10		JT
6-4	.30	.10		.0	.10		
6-5	.30	.10		.0	.10		
6-6	.40	.10		.20	.10		
6-7	.40	.10		.30	.10		
6-8	.30	.10		.30	.10		
6-11	.30	.10		.0	.10		
6-12	.30	.10		.0	.10		
6-13	.30	.10		.0	.10		
6-14	.30	.10		.0	.10		
6-15	.30	.10		.0	.10		
6-18	.30	.10		.0	.10		
6-19	.30	.10		.0	.10		
6-20	.30	.10		.0	.10		
6-21	.20	.10		.0	.10		
6-22	.20	.10		.0	.10		
6-25	.30	.10		.0	.10		
6-26	.30	.10		.0	.10		
6-27	.20	.10		.10	.10		
6-28	.30	.10		.20	.10		
6-29	.20	.10		.10	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
5-1	.40	.10		.0	.10		JT
5-2	.40	.10		.0	.10		
5-3	.30	.10		.0	.10		
5-4	.30	.10		.0	.10		
5-7	.30	.10		.0	.10		
5-8	.30	.10		.0	.10		
5-9	.40			.0	.10		
5-10	.40	.10		.0	.10		
5-11	.30	.10		.0	.10		
5-14	.30	.10		.0	.10		
5-15	.30	.10		.0	.10		
5-16	.20	.10		.0	.10		
5-17	.20	.10		.0	.10		
5-18	.20	.10		.0	.10		
5-21	.30	.10		.0	.10		
5-22	.30	.10		.0	.10		
5-23	.60	.10		.0	.10		
5-24	.80	.10		.10	.10		
5-25	.50	.10		.10	.10		
5-28	.40	.10		.0	.10		
5-29	.40	.10		.0	.10		
5-30	.30	.10		.0	.10		
5-31	.30	.10		.0	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
4.2-12	.30	.10		.0	.10		JT
4-3	.10	.10		.20	.10		
4-4	.40	.10		.30	.10		
4-5	.20	.10		.10	.10		
4-6	.30	.10		.10	.10		
4-9	.40	.10		.20	.10		
4-10	.40	.10		.0	.10		
4-11	.30	.10		.0	.10		
4-12	.30	.10		.10	.10		
4-13	.30	.10		.30	.10		
4-16	.30	.10		.50	.10		
4-17	.30	.10		.10	.10		
4-18	.20	.10		.30	.10		
4-19	.30	.10		.0	.10		
4-20	.30	.10		.10	.10		
4.23	.40	.10		.20	.10		
4-24	.40	.10		.20	.10		
4-25	.20	.10		.0	.10		
4-26	.10	.10		.0	.10		
4-27	.20	.10		.30	.10		
4-30	.20	.10		.0	.10		
5-1							
5-2							
5-3							
5							

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
3-6-12	.20	.10		.0	.10		JT
3-2	.20	.10		.0	.10		
3-4	.20	.10		.10	.10		
3-5	.30	.10		.10	.10		
3-6	.20	.10		.20	.10		
3-7	.10	.10		.30	.10		
3-8	.20	.10		.0	.10		
3-9	.20	.10		.0	.10		
3-12	.20	.10		.10	.10		
3-13	.20	.10		.10	.10		
3-14	.30	.10		.10	.10		
3-15	.30	.10		.20	.10		
3-16	.10	.10		.20	.10		
3-19	.30	.10		.30			
3-20	.30	.10		.40	.10		
3-21	.30	.10		.10	.10		
3-22	.40	.10		.0	.10		
3-23	.40	.10		.0	.10		
3-24	.40	.10		.30	.10		
3-27	.40	.10		.10	.10		
3-28	.10	.10		.10	.10		
3-29	.20	.10		.20	.10		
3-30	.30	.10		.0	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
2-1-12	.20	.10		.10	.10		JT
2-2	.20	.10		.10	.10		
2-3	.40	.10		.30	.10		
2-6	.10	.10		.10	.10		
2-7	.10	.10		.30	.10		
2-8	.30	.10		.0	.10		
2-9	.20	.10		.20	.10		
2-10	.10	.10		.40	.10		
2-13	.30	.10		.0	.10		
2-14	.40	.10		.10	.10		
2-15	30	.10		.20	.10		
2-16	.30	.10		.0	.10		
2-17	.20	.10		.0	.10		
2-20	.30	.10		.10	.10		
2-21	.30	.10		.10	.10		
2-22	.30	.10		.10	.10		
2-23	.20	.10		.10	.10		
2-24	.20	.10		.20	.10		
2-27	.20	.10		.0	.10		
2-28	.20	.10		.0	.10		
2-29	.10	.10		.0	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-9.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
1-2-12	.30	.10		.30	.10		JT
1-3	.50	.10		.0	.10		
1-4	.20	.10		.10	.10		
1-5	.30	.10		.20	.10		
1-6	.30	.10		.30	.10		
1-9	.60	.10		.0	.10		
1-10	.20	.10		.40	.10		
1-11	.40	.10		.10	.10		
1-12	.20	.10		.0	.10		
1-13	.30	.10		.20	.10		
1-16	.30	.10		.30	.10		
1-17	.20	.10		.0	.10		
1-18	.40	.10		.0	.10		
1-19	.10	.10		.10	.10		
1-20	.30	.10		.20	.10		
1-23	.20	.10		.30	.10		
1-24	.40	.10		.0	.10		
1-25	.20	.10		.40	.10		
1-26	.10	.10		.10	.10		
1-27	.30	.10		.20	.10		
1-30	.60	.10		.0	.10		
1-31	.40	.10		.0	.10		

NOTE: Notify site manager when sump levels exceed <u>1 foot</u>.

DM-5 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	5.1						5.2					Data Collector Initials
	A			B								
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		Sump	Lysimeter		Leak Detection		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	.40	.10		.30	.10		.50	.0		.0		JT
1-10	.70	.10		.50	.10		.20	.0		.0		
1-17	.50	.10		.20	.10		.0	.0		.0		
1-24	.40	.10		.30	.10		.10	.0		.0		
1-31	.40	.10		.30	.10		.50	.0		.0		
2-7	.50	.10		.30	.10		.20	.0		.0		
2-13	.50	.10		.30	.10		.0	.0		.0		
2-21	.40	.10		.10	.10		.0	.0		.0		
2-28	.50	.10		.20	.10		.0	.0		.0		
3-1	.50	.10		.50	.10		.10	.0		.0		
3-6	.40	.10		.20	.10		.20	.0		.0		
3-13	.40	.10		.30	.10		.0	.0		.0		
3-20	.30	.10		.20	.10		.10	.0		.0		
3-27	.50	.10		.40	.10		.10	.0		.0		
4-3	.30	.10		.10	.10		.20	.0		.0		
4-9	.40	.10		.30	.10		.30	.0		.0		
4-17	.50	.10		.40	.10		.20	.0		.0		
4-24	.40	.10		.20	.10		.10	.0		.0		
5-1	.40	.10		.30	.10		.10	.0		.0		
5-8	.40	.10		.20	.10		.0	.0		.0		
5-15	.40	.10		.0	.10		.0	.0		.0		
5-22	.40	.10		.30	.10		.30	.0		.0		
5-29	.50	.10		.20	.10		.30	.0		.0		
6-5	.30	.10		.30	.10		.10	.0		.0		
6-12	.30	.10		.50	.10		.40	.0		.0		
6-19	.30	.40		.20	.10		.10	.0		.0		
6-28	.20	.10		.30	.10		.20	.0		.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-4 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	Sump	Leak Detection		Pan Lysimeter		Data Collector Initials
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	.10	.0		.0		JT
1-10	.40	.6		.0		
1-17	.20	.0		.0		
1-24	.30	.0		.0		
1-31	.10	.0		.0		
2-7	.20	.0		.0		
2-13	.30	.0		.0		
2-21	.30	.0		.0		
2-28	.0	.0		.0		
3-1	.0	.0		.0		
3-6	.30	.0		.0		
3-13	.20	.0		.0		
3-20	.10	.0		.0		
3-27	.20	.0		.0		
4-3	.20	.0		.0		
4-9	.70	.0		.0		
4-17	.20	.0		.0		
4-24	.0	.0		.0		
5-1	.10	.0		.0		
5-8	.20	.0		.0		
5-15	.20	.0		.0		
5-22	.20	.0		.0		
5-29	.0	.0		.0		
6-5	.0	.0		.0		
6-12	.10	.0		.0		
6-19	.0	.0		.0		
6-28	.10	.0		.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM 3.1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	Sump	Leak Detection		Pan Lysimeter		Data Collector Initials
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	.30	.0		.0		JT
1-10	.50	.0		.0		
1-17	.40	.0		.0		
1-24	.20	.0		.0		
1-31	.10	.0		.0		
2-7	.20	.0		.0		
2-13	.30	.0		.0		
2-21	.10	.0		.0		
2-28	.50	.0		.0		
3-1	.50	.0		.0		
3-4	.20	.0		.0		
3-13	.40	.0		.0		
3-20	.10	.0		.0		
3-21	.30	.0		.0		
4-3	.30	.0		.0		
4-9	.50	.0		.0		
4-17	.30	.0		.0		
4-24	.10	.0		.0		
5-1	.50	.0		.0		
5-8	.10	.0		.0		
5-15	.10	.0		.0		
5-22	.40	.0		.0		
5-29	.40	.0		.0		
6-5	.10	.0		.0		
6-12	.30	.0		.0		
6-19	.10	.0		.0		
6-28	.20	.0		.10		

NOTE: Notify site manager when sump levels exceel 1 foot

DM-3 LIQUID LEVEL DATA
Recology HAY ROAD

Date	3.2					3.3					Data Collector Initials
	Sump	Lysimeter		Leak Detection		Sump	Lysimeter		Leak Detection		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	.30	.0		.0		.20	.0		.0		JT
1-10	.70	.0		.0		.40	.0		.0		
1-17	.50	.0		.0		.40	.0		.0		
1-24	.30	.0		.0		.10	.0		.0		
1-31	.20	.0		.0		.0	.0		.0		
2-7	.20	.0		.0		.30	.0		.0		
2-13	.40	.0		.0		.50	.0		.0		
2-21	.50	.0				.60	.0		.0		
2-28	.20	.0		.0		.40	.0		.0		
3-1	.20	.0		.0		.60	.0		.0		
3-6	.40	.0		.0		.40	.0		.0		
3-13	.50	.0		.0		.50	.0		.0		
3-20	.20	.0		.0		.50	.0		.0		
3-27	.50	.0		.0		.30	.0		.0		
4-3	.30	.0		.0		.40	.0		.0		
4-9	.10	.0		.0		.30	.0		.0		
4-17	.40	.0		.0		.40	.0		.0		
4-24	.10	.0		.0		.0	.0		.0		
5-1	.30	.0		.0		.0	.0		.0		
5-8	.40	.0		.0		.0	.0		.0		
5-15	.30	.0		.0		.0	.0		.0		
5-22	.30	.0		.0		.0	.0		.0		
5-29	.30	.0		.0		.0	.0		.0		
6-1	.30	.0		.0		.0	.0		.0		
6-12	.20	.0		.0		.0	.0		.0		
6-19	.10	.0		.0		.0	.0		.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

6-28 .20 .0 .0 .0 .0 .0

DM-11 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	1			2			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
1-3-10	.50	.10		.40	.10		JT
1-10	.70	.10		.60	.10		
1-17	.40	.10		.80	.10		
1-24	.30	.10		.50	.10		
1-31	.60	.10		.50	.10		
2-7	.50	.10		.40	.10		
2-13	.30	.10		.50	.10		
2-21	.10	.10		.30	.10		
2-28	.10	.10		.20	.10		
3-1	.10	.10		.20	.10		
3-6	.30	.10		.30	.10		
3-13	.50	.10		.40	.10		
3-20	.20	.10		.30	.10		
3-27	.20	.10		.40	.10		
4-3	.40	.10		.20	.10		
4-9	.80	.10		.70	.10		
4-17	.30	.10		.50	.10		
4-24	.70	.10		.70	.10		
5-1	.20	.10		.40	.10		
5-8	.50	.10		.50	.10		
5-15	.40	.10		.50	.10		
5-22	.50	.10		.50	.10		
5-29	.40	.10		.20	.10		
6-5	.70	.10		.60	.10		
6-12	.70	.10		.10	.10		
6-19	.50	.10		.20	.10		
6-28	.40	.10		.30	.10		

NOTE: Notify site manager when sump levels exceed <u>1 foot</u>.

Hay Road Leachate Pump Monitoring Data
Leachate Sump No. LS 2.1

Technician	Date	Bubbler Reading (In)	Bubbler Tube Purged Y or N	Line Pressure (PSI)	Regulator Traps Drained (Y or N)	Oil added to Lubricator	Air Compressor Drained	Comments
1-3-12	JT	N/A	N/A	60	Yes	yes	yes	.70
1-10		N/A	N/A	60	yes	No	yes	.70
1-17		N/A	N/A	60	yes	yes	yes	.60
1-24		N/A	N/A	60	yes	NO	yes	.80
1-31		N/A	N/A	60	yes	NO	yes	.60
2-7		N/A	N/A	60	yes	NO	yes	.70
2-13		N/A	N/A	60	yes	yes	yes	.60
2-21		N/A	N/A	60	yes	NO	yes	.60
2-28		N/A	N/A	60	yes	NO	yes	.60
3-1		N/A	N/A	60	yes	NO	yes	.60
3-6		N/A	N/A	60	yes	yes	yes	.60
3-13		N/A	N/A	60	yes	NO	yes	.80
3-20		N/A	N/A	60	yes	NO	yes	.80
3-27		N/A	N/A	60	yes	NO	yes	.60
4-3		N/A	N/A	60	yes	yes	yes	.60
4-9		N/A	N/A	60	yes	yes	yes	.80
4-17		N/A	N/A	60	yes	NO	yes	.80
4-24		N/A	N/A	60	yes	NO	yes	.70
5-1		N/A	N/A	60	yes	NO	yes	.80
5-9		N/A	N/A	60	yes	yes	yes	.70
5-15		N/A	N/A	60	yes	NO	yes	.80
5-22		N/A	N/A	60	yes	NO	yes	.70
5-29		N/A	N/A	60	yes	NO	yes	.80
6-1		N/A	N/A	60	yes	yes	yes	.70
6-12		N/A	N/A	60	yes	NO	yes	.60
6-19		N/A	N/A	60	yes	NO	yes	.70
6-28		N/A	N/A	60	Yes	No	Yes	.60

Pump Activated @ 2.5 Inches
Pump Shuts Down @ 2 Inch

DM-2.2 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	A			B			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	.10	.0		.30	.0		JT
1-10	.50	.0		.60	.0		
1-17	.40	.0		.30	.0		
1-24	.30	.0		.40	.0		
1-31	.0	.0		.50	.0		
2-7	.10	.0		.30			
2-13	.0	.0		.20	.0		
2-21	.0	.0		.0	.0		
2-28	.20	.0		.20	.0		
3-1	.20	.0		.30	.0		
3-6	.30	.0		.0	.0		
3-13	.30	.0		.10	.0		
3-20	.20	.0		.0	.0		
3-27	.30	.0		.20	.0		
4-3	.0	.0		.40	.0		
4-9	.10	.0		.10	.0		
4-17	.40	.0		.0	.0		
4-24	.0	.0		.10	.0		
5-1	.0	.0		.10	.0		
5-8	.10	.0		.0	.0		
5-15	.10	.0		.10	.0		
5-22	.10	.0		.10	.0		
5-29	.20	.0		.20	.0		
6-5	.20	.0		.10	.0		
6-12	.0	.0		.0	.0		
6-19	.0	.0		.0	.0		
6-28	.10	.0		.10	.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

S-1 LIQUID LEVEL DATA
NORCAL WASTE SYSTEMS HAY ROAD LANDFILL

Date	1			2			Data Collector Initials
	Sump	Pan Lysimeter		Sump	Pan Lysimeter		
	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	Depth of Water (ft)	Depth of Water (ft)	Volume Removed (gal)	
1-3-12	2.50						JT
1-10	2.70						
1-17	2.48						
1-24	2.80						
1-31	2.50						
2-7	2.60						
2-13	2.70						
2-21	2.80						
2-28	3.00						
3-1	3.00						
3-6	3.00						
3-13	3.10						
3-20	3.00						
3-27	3.20						
4-3	3.20						
4-9	3.60						
4-17	3.50						
4-24	3.60						
5-1	3.70						
5-8	3.60						
5-15	2.80						
5-22	2.40						
5-29	2.30						
6-5	2.40						
6-12	2.30						
6-19	2.40						
6-28	2.30						

NOTE: Notify site manager when sump levels exceed 1 foot.

Leachate Pumping Data
Recology Hay Road
First Semi-Annual 2012

Sump	Mod.1	2.2 A	2.2B	2.1	11.1	11.2	9.1A	9.1B	5.1A	5.1B	5.2	4.1	3.1	3.2	3.3
January Total	26,500	6000	7,600	14,000	12500	15500	6000	8000	0	0	24000	5000	0	6000	2000
Gallons per Day	855	194	245	452	403	500	194	258	0	0	774	161	0	194	65
Depth of Water	2.80	0.50	0.60	0.80	0.70	0.80	0.60	0.40	0.50	0.50	0.50	0.40	0.50	0.70	0.40
February Total	8,500	2800	18,800	5000	9500	8500	4000	5000	6000	6000	3000	14500	3500	2500	1000
Gallons per Day	293	97	648	172	328	293	138	172	207	207	103	500	121	86	35
Depth of Water	3.00	0.20	0.30	0.70	0.50	0.50	0.40	0.40	0.50	0.30	0.20	0.30	0.50	0.50	0.60
March Total	13000	2200	12700	29,000	29700	52000	5000	0	4000	0	71000	15500	4000	14000	20000
Gallons per Day	419	71	410	935	958	1677	161	0	129	0	2290	500	129	452	645
Depth of Water	3.20	0.30	0.30	0.80	0.50	0.40	0.40	0.40	0.50	0.50	0.20	0.30	0.50	0.50	0.60
April Total	8000	5200	12300	41000	72800	64500	25500	9500	5000	10000	26000	19000	3000	11000	14000
Gallons per Day	267	173	410	1323	2348	2080	823	306	161	323	839	613	97	355	452
Depth of Water	3.60	0.40	0.40	0.80	0.80	0.70	0.40	0.50	0.50	0.40	0.30	0.20	0.50	0.40	0.80
May Total	109000	5600	10,600	13000	11500	6000	7500	5000	3500	5000	3000	5500	9500	0	0
Gallons per Day	3516	181	342	419	371	194	242	161	113	161	97	177	306	0	0
Depth of Water	3.70	0.20	0.10	0.80	0.50	0.50	0.80	0.10	0.50	0.30	0.30	0.20	0.50	0.40	0.00
June Total	34000	3300	8,000	10,000	0	9000	11,000	4000	0	0	3000	4500	0	3500	4000
Gallons per Day	1133	110	267	333	0	300	367	133	0	0	100	150	0	117	133
Depth of Water	2.40	0.20	0.10	0.70	0.50	0.60	0.40	0.30	0.30	0.50	0.20	0.10	0.30	0.30	0.00

Depths to water in feet

Operations Data

Recology Hay Road

First Semi-Annual 2012

Asbestos Disposal	10,767.53 tons in DM-1
Refuse Disposal	125,164.62 tons in DM's 3.2 and 3.3
Lowest waste placement	43.00 ft msl

Waste Pile Data

Type of Material	dewatered sludges
Quantity Discharged	33,670.13 tons or 37,411 cubic yards
Moisture Content	80-85 percent
Capacity Remaining	+/- 5%

Land Treatment Unit

Initial Depth	8-12 inches
Number of lifts	May – 1 lift
	June – 2 lifts
Quantity Discharged	May – 5113 tons or 5681 cubic yards
	June - 10,382 tons or 11,535 cubic yards
Location	Western portion of LTU and top of Disposal Modules 5 and 3.3

Quantity Removed	May- 1203 tons or 1337 cubic yards
	June –2443 tons or 2714 cubic yards
Moisture Content	10-15 percent
Disposition	Stockpiled
Final Sludge Depth	0 inches
Area Covered	2 acres
Total Drying cycles	3
Cumulative LTU	2 acres

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month June 2012 Inspector JT

OBSERVATION	WEEK OF 6-3-12	WEEK OF 6-10	WEEK OF 6-17	WEEK OF 6-24	WEEK OF
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	
Evidence of discoloration and turbidity	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of beneficial use; presence of water associated wildlife	water fowl	water fowl	water fowl	water fowl	
Wind direction and estimated velocity	N 35	S/W 30 N 10	S/W 30	S/W 15	
Flow reate and total precipitation	0	0	0	0	
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or exposed refuse	NO	NO	NO	NO	
3. Unit	NO	NO	NO	NO	
Evidence of ponded water	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	
4. Status of my visible portions of liner	OK				

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month MAY 2012 — Inspector JT

OBSERVATION	WEEK OF 5-6-	WEEK OF 5-13	WEEK OF 5-20	WEEK OF 5-27	WEEK OF
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	
Evidence of discoloration and turbidity	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of beneficial use; presence of water associated wildlife	WATER FOWL	WATER FOWL	WATER FOWL	WATER FOWL	
Wind direction and estimated velocity	N-22	S/W 20	S/W 10	S/W 3	
Flow reate and total precipitation	0	0	0	0	
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or exposed refuse	NO	NO	NO	NO	
3. Unit				NO	
Evidence of ponded water	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	
4. Status of my visible portions of liner	OK				

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month April 2017 Inspector JT

OBSERVATION	WEEK OF 4-1	WEEK OF 4-8	WEEK OF 4-15	WEEK OF 4-22	WEEK OF 4-29
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	NO
Evidence of discoloration and turbidity	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of beneficial use; presence of water associated wildlife	water fowl	water fowl	water fowl	water fowl	water fowl
Wind direction and estimated velocity	S/W calm	S/W 10	S/W Lite	S/W 20	N-20
Flow reate and total precipitation	0	2"	0	1/4"	0
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of erosion or exposed refuse	NO	NO	NO	NO	NO
3. Unit					
Evidence of ponded water	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	NO
4. Status of my visible portions of liner	OK				

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month March 2012 3-4 3-11 3-18 Inspector 3-25 JT

OBSERVATION	WEEK OF	WEEK OF	WEEK OF	WEEK OF	WEEK OF
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	
Evidence of discoloration and turbidity	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of beneficial use; presence of water associated wildlife	water fowl	water fowl	water fowl	water fowl	
Wind direction and estimated velocity	N-40	W 15	W 15	W 15	
Flow reate and total precipitation	0	3 1/2"	1 1/8"	1 1/2"	
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or exposed refuse	NO	NO	NO	NO	
3. Unit			/		
Evidence of ponded water	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	
4. Status of my visible portions of liner					

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month Feb 2012 2-5-12 2-12 2-19 Inspector 2-26 JT

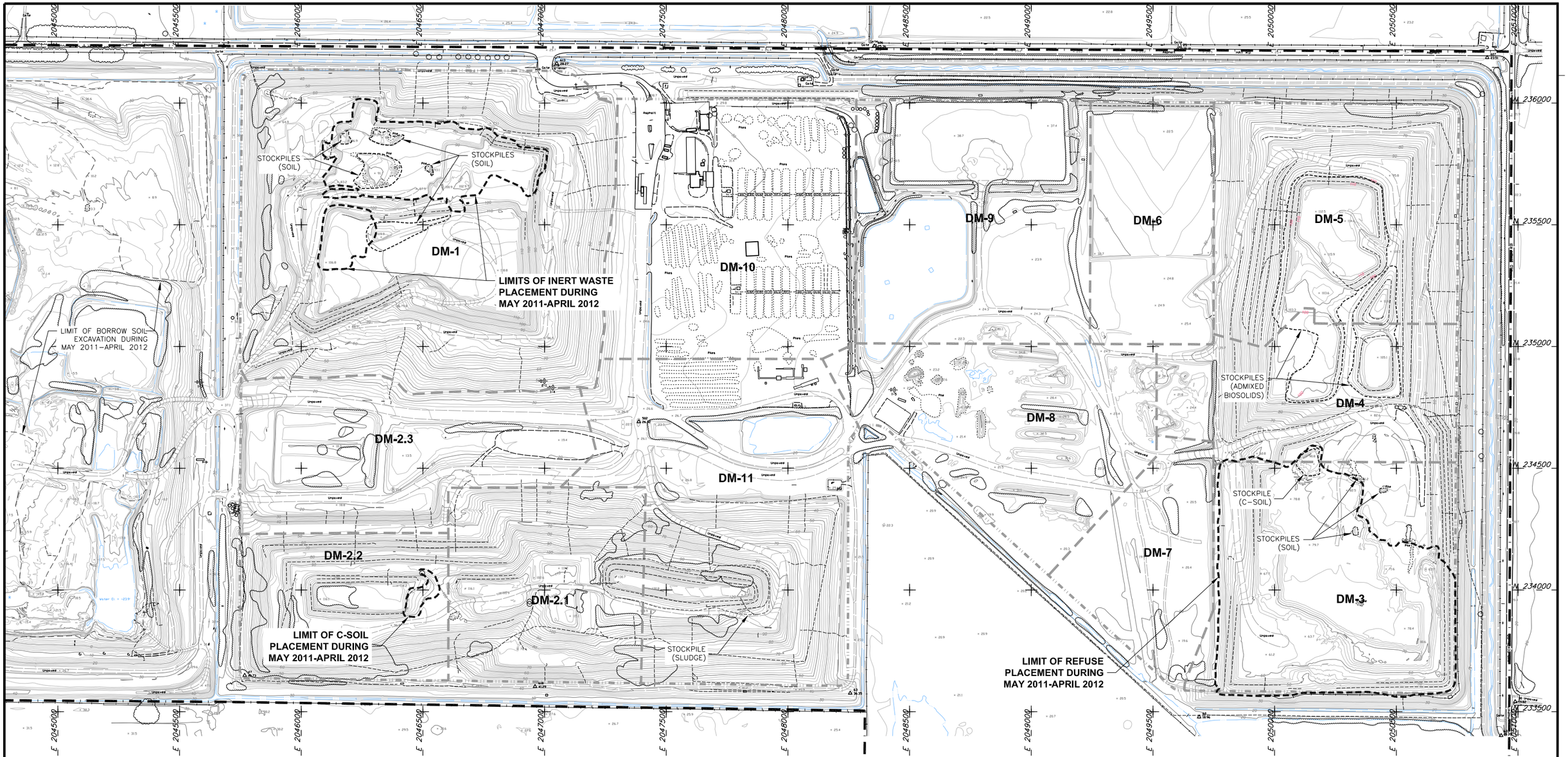
OBSERVATION	WEEK OF	WEEK OF	WEEK OF	WEEK OF	WEEK OF
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	
Evidence of discoloration and turbidity	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of beneficial use; presence of water associated wildlife	water fowl	NO	NO	NO	
Wind direction and estimated velocity	N-5 5/10 5	N to 40+	N to 20	5/10 5 N 25	
Flow reate and total precipitation	1/2"	TRACE	0	1/4"	
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or exposed refuse	NO	NO	NO	NO	
3. Unit					
Evidence of ponded water	NO	NO	NO	NO	
Evidence of odors	NO	NO	NO	NO	
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	
4. Status of my visible portions of liner	OK				

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month Jan 2012 1-1-12 1-8 1-15 Inspector 1-22 1-29 JT

OBSERVATION	WEEK OF	WEEK OF	WEEK OF	WEEK OF	WEEK OF
1. Receving waters					
Evidence of floating and suspended materials of waste origin	NO	NO	NO	NO	NO
Evidence of discoloration and turbidity	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of beneficial use; presence of water associated wildlife	water Fowl	water fowl	water Fowl	water Fowl	water fowl
Wind direction and estimated velocity	S/W 10	S/W 10	N-S, S/W 25	S/W 10	S/W 10
Flow reate and total precipitation	0	0	3"	0	½"
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of erosion or exposed refuse	NO	NO	NO	NO	NO
3. Unit					
Evidence of ponded water	NO	NO	NO	NO	NO
Evidence of odors	NO	NO	NO	NO	NO
Evidence of erosion or daylighted refuse	NO	NO	NO	NO	NO
4. Status of my visible portions of liner	OK				



NOTES

1) TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY TETRA TECH. DATE OF PHOTOGRAPHY: APRIL 30, 2012.

LEGEND

- PROPERTY LINE
- LANDFILL LIMIT
- DISPOSAL MODULE LIMIT
- STOCKPILE BOUNDARY
- LIMITS OF CUT AND FILL

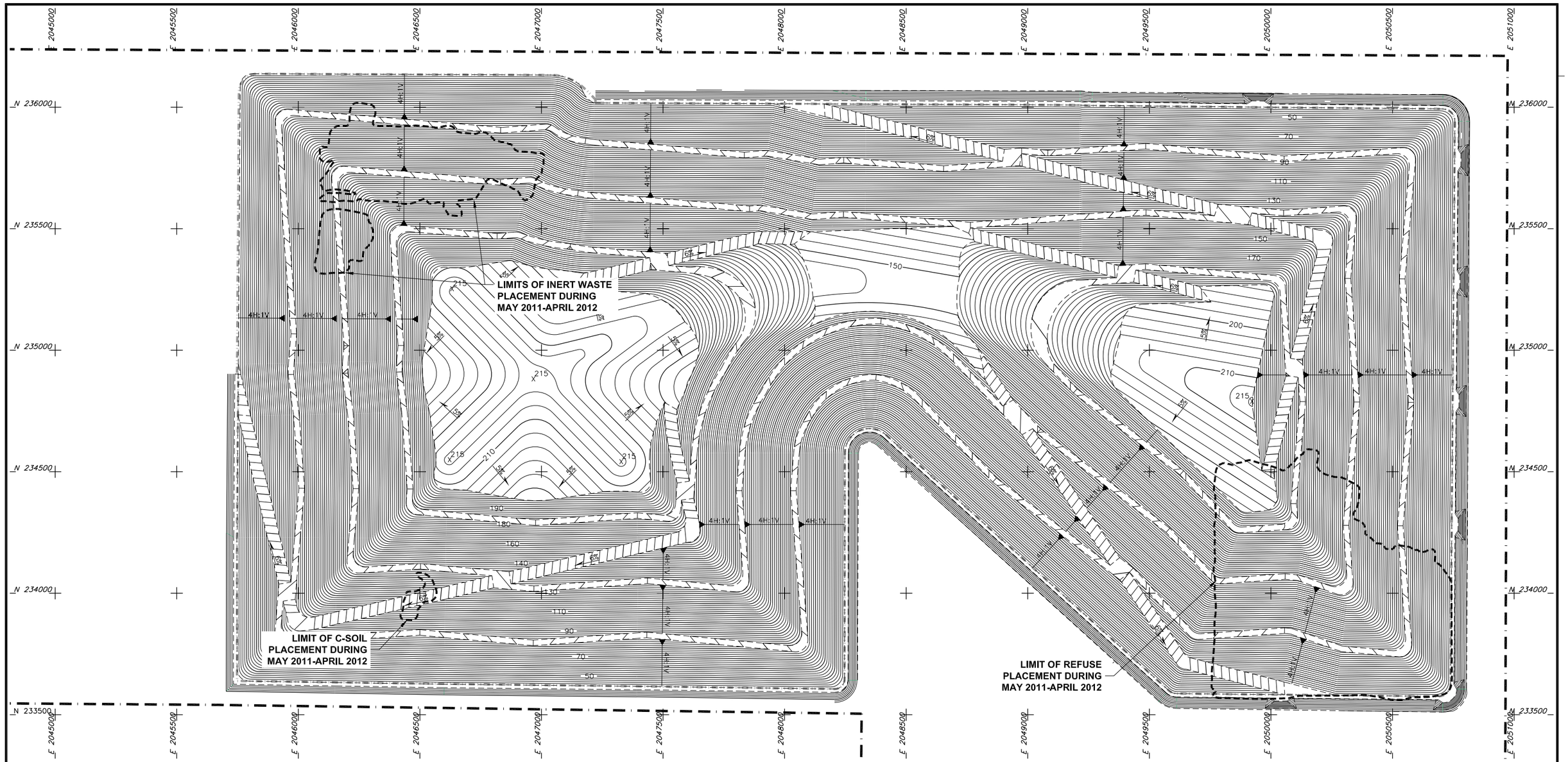
200 0 200
SCALE FEET

Golder Associates
Roseville, California

PROJECT No. 053-7444-12 FILE No. RHR Cap2012 CADD kmm DATE 07/25/12

ANNUAL FILL AREAS
RECOLOGY HAY ROAD

Drawing file: 1237468 RHR Cap2012 Dwgs-Fill Areas_5yr.dwg Jul 25, 2012 - 4:09pm



NOTES

1) FINAL GRADES SHOWN OBTAINED FROM JOINT TECHNICAL DOCUMENT, REV. 11 BY GOLDER ASSOCIATES INC., MAY 2007.

2) FINAL GRADES SHOWN REPRESENT TOP OF FINAL COVER SYSTEM.

LEGEND

- PROPERTY LINE
- LANDFILL LIMIT
- LANDFILL LIMIT
- 2H:1V — SLOPE INDICATOR
- 2% — GRADE INDICATOR

200 0 200
SCALE FEET

ANNUAL FILL AREAS AND SITE FINAL GRADING PLAN

RECOLOGY HAY ROAD

Golder Associates
Roseville, California

PROJECT No. 053744112 FILE No. RHR Cap2012 CADD KMM DATE 7/27/12

Drawing File: 123074R8 RHR Cap2012 Design-Fill Areas_Sl.dwg Jul 27, 2012 - 12:16pm

APPENDIX B

CERTIFIED ANALYTICAL REPORT COVER SHEETS (CARS ON ATTACHED CD)

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 02/23/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1201660
Invoice ID:	B116868

Enclosed are the results of analyses for samples received by the laboratory on 1/30/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1201660-01	**Hay Road LF, Composte Pond, Compost Pond, 1/30/2012 11:20:00AM**					
Chloride	370	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	8.9	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	94	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2200	100	100	mg/L	SM-2540C	
Fixed Dissolved Solids	1400	100	100	mg/L	EPA-160.4	
Total Kjeldahl Nitrogen	22	2.5	0.70	mg/L	EPA-351.2	A01
Ammonia as N	1.0	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.21	0.050	0.0015	mg/L	EPA-353.2	
Total Phosphorus	12	0.62	0.20	mg/L	EPA-365.4	A01
1201660-02	**Hay Road LF, G-4R, G-4R, 1/30/2012 11:41:00AM**					
Nitrate/Nitrite as N	11	0.50	0.050	mg/L	EPA-353.2	A01
1201660-03	**Hay Road LF, G-18, G-18, 1/30/2012 12:02:00PM**					
Nitrate/Nitrite as N	8.9	0.50	0.050	mg/L	EPA-353.2	A01
1201660-04	**Hay Road LF, G-21, G-21, 1/30/2012 11:16:00AM**					
Nitrate/Nitrite as N	3.0	0.10	0.010	mg/L	EPA-353.2	
1201660-05	**Hay Road LF, G-22, G-22, 1/30/2012 10:25:00AM**					
Nitrate/Nitrite as N	17	0.50	0.050	mg/L	EPA-353.2	A01
1201660-06	**Hay Road LF, G-23, G-23, 1/30/2012 11:00:00AM**					
Nitrate/Nitrite as N	2.0	0.10	0.010	mg/L	EPA-353.2	

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1

Quotation No. 12-0116600

PROJECT NO.:	SITE NAME:
053-7444-11	Recovery Haul Road
SAMPLER(S): R. McCarthy (printed) (signature)	
CONTRACT LABORATORY: BC Labs	
TURN-AROUND TIME: Standard	

ANALYSES

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	Type/Vol.	Filter	Preserv.	TDS, Cl, SO_4, NO_2-N, Total Fixed, Dissolved Solids	NO_3 - NO_2, NH_3-N, TKN, Lead	NO_3-N + NO_2-N	Cont. Qty.	Remarks
Compost Pond	-1	1/30/12	1120	W			P 500 mL	N	None	1	1 1		3	
G-4R	-2		1141						H_2SO_4			1	1	
G-1B	-3		1202						HNO_3			1	1	
G-21	-4		1116						H_2SO_4			1	1	
G-22	-5		1025									1	1	
G-23	-6		1100									1	1	

CHK BY: KNQ

DISTRIBUTION: [X] [X] [ ] [ ] [ ] SUB-OUT [ ]

SHORT HOLDING TIME

Cr^{+6}	NO_2	NO_3	OP	SS
DO	Cl_2	BOD	MBAS	COT

Relinquished by: (signature)	Received by: (signature)	Date/Time:
	Ross Dickey	1/30/12 1346
Relinquished by: (signature) Ross Dickey 1-30-12	Received by: (signature) Dave Bogan	Date/Time: 1-30-12 1730
Relinquished by: (signature) Dave Bogan 1-30-12 1900	Received by: (signature) Idelly	Date/Time: 1-30-12 1910.00

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

Rel - Idelly 1-30-12 22:15 Kon 1-30-12 2215

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1201660 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1201660

SHIPPING INFORMATION	SHIPPING CONTAINER
Federal Express ☐ UPS ☐ Hand Delivery ☐	Ice Chest ☒ None ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.98 Container: Glass Thermometer ID: 17

Temperature: A 1.9 °C / C 2.5 °C

Date/Time 1-30-12 2210

Analyst Init JDW

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	A									
PT PE UNPRESERVED	~~A~~	JDW								
QT INORGANIC CHEMICAL METALS		1-30-12								
PT INORGANIC CHEMICAL METALS	B									
PT CYANIDE										
PT NITROGEN FORMS	C									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE		A	A	A	A	A				
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: JDW Date/Time: 1-30-12 2313

A = Actual / C = Corrected

[H:\DOCS\WPB6\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1201660-01	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 11:20
	Sampling Location:	Composte Pond	**Sample Depth:**	---
	Sampling Point:	Compost Pond	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): Compost Pond	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1201660-02	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 11:41
	Sampling Location:	G-4R	**Sample Depth:**	---
	Sampling Point:	G-4R	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): G-4R	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1201660-03	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 12:02
	Sampling Location:	G-18	**Sample Depth:**	---
	Sampling Point:	G-18	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): G-18	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1201660-04	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 11:16
	Sampling Location:	G-21	**Sample Depth:**	---
	Sampling Point:	G-21	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): G-21	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1201660-05	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 10:25
	Sampling Location:	G-22	**Sample Depth:**	---
	Sampling Point:	G-22	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): G-22	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1201660-06	**COC Number:**	---	**Receive Date:**	01/30/2012 22:15
	Project Number:	Hay Road LF	**Sampling Date:**	01/30/2012 11:00
	Sampling Location:	G-23	**Sample Depth:**	---
	Sampling Point:	G-23	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): G-23	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-01 | **Client Sample Name:** Hay Road LF, Composte Pond, Compost Pond, 1/30/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**370**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	1
Nitrate/Nitrite as N	**8.9**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	2
Sulfate	**94**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	1
Total Dissolved Solids @ 180 C	**2200**	**mg/L**	**100**	**100**	**SM-2540C**	ND		3
Fixed Dissolved Solids	**1400**	**mg/L**	**100**	**100**	**EPA-160.4**	ND		4
Total Kjeldahl Nitrogen	**22**	**mg/L**	**2.5**	**0.70**	**EPA-351.2**	ND	**A01**	5
Ammonia as N	**1.0**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Nitrite as N	**0.21**	**mg/L**	**0.050**	**0.0015**	**EPA-353.2**	0.0084		7
Total Phosphorus	**12**	**mg/L**	**0.62**	**0.20**	**EPA-365.4**	ND	**A01**	8

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	01/31/12	02/01/12 01:08	LD1	IC5	2	BVA1972
2	EPA-353.2	02/13/12	02/13/12 15:19	SDU	SC-1	5	BVB0781
3	SM-2540C	02/06/12	02/06/12 10:00	JES2	MANUAL	10	BVB0385
4	EPA-160.4	02/06/12	02/06/12 10:00	JES2	MANUAL	10	BVB0385
5	EPA-351.2	02/07/12	02/10/12 13:19	SDU	SC-1	12.500	BVB0433
6	EPA-350.1	02/01/12	02/01/12 12:51	SDU	SC-1	1	BVB0013
7	EPA-353.2	01/31/12	01/31/12 13:09	TDC	KONE-1	1	BVB0043
8	EPA-365.4	02/07/12	02/10/12 11:42	SDU	SC-1	12.500	BVB0436

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1201660-01 | **Client Sample Name:** Hay Road LF, Composte Pond, Compost Pond, 1/30/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Lead	ND	mg/L	0.050	0.0050	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	02/02/12	02/03/12 07:15	ARD	PE-OP1	1	BVB0165

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-02 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 1/30/2012 11:41:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**11**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	01/31/12	01/31/12 13:53	SDU	SC-1	5	BVA1930

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-03 | **Client Sample Name:** Hay Road LF, G-18, G-18, 1/30/2012 12:02:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**8.9**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	01/31/12	01/31/12 13:55	SDU	SC-1	5	BVA1930

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-04 | **Client Sample Name:** Hay Road LF, G-21, G-21, 1/30/2012 11:16:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**3.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	01/31/12	01/31/12 13:29	SDU	SC-1	1	BVA1930

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-05 | **Client Sample Name:** Hay Road LF, G-22, G-22, 1/30/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**17**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	01/31/12	01/31/12 14:37	SDU	SC-1	5	BVA1930

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1201660-06 | **Client Sample Name:** Hay Road LF, G-23, G-23, 1/30/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**2.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	01/31/12	01/31/12 13:31	SDU	SC-1	1	BVA1930

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVA1930						
Nitrate/Nitrite as N	BVA1930-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVA1972						
Chloride	BVA1972-BLK1	ND	mg/L	0.50	0.066	
Sulfate	BVA1972-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVB0013						
Ammonia as N	BVB0013-BLK1	ND	mg/L	0.050	0.025	
QC Batch ID: BVB0043						
Nitrite as N	BVB0043-BLK1	0.0084430	mg/L	0.050	0.0015	J
QC Batch ID: BVB0385						
Total Dissolved Solids @ 180 C	BVB0385-BLK1	ND	mg/L	6.7	6.7	
Fixed Dissolved Solids	BVB0385-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVB0433						
Total Kjeldahl Nitrogen	BVB0433-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVB0436						
Total Phosphorus	BVB0436-BLK1	ND	mg/L	0.050	0.016	
QC Batch ID: BVB0781						
Nitrate/Nitrite as N	BVB0781-BLK1	ND	mg/L	0.10	0.010	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVA1930										
Nitrate/Nitrite as N	BVA1930-BS1	LCS	2.0465	2.0000	mg/L	102		90 - 110		
QC Batch ID: BVA1972										
Chloride	BVA1972-BS1	LCS	48.714	50.000	mg/L	97.4		90 - 110		
Sulfate	BVA1972-BS1	LCS	98.074	100.00	mg/L	98.1		90 - 110		
QC Batch ID: BVB0013										
Ammonia as N	BVB0013-BS1	LCS	0.99730	1.0000	mg/L	99.7		90 - 110		
QC Batch ID: BVB0043										
Nitrite as N	BVB0043-BS1	LCS	0.48427	0.50000	mg/L	96.9		90 - 110		
QC Batch ID: BVB0385										
Total Dissolved Solids @ 180 C	BVB0385-BS1	LCS	555.00	586.00	mg/L	94.7		90 - 110		
QC Batch ID: BVB0433										
Total Kjeldahl Nitrogen	BVB0433-BS1	LCS	1.8985	2.0000	mg/L	94.9		85 - 115		
QC Batch ID: BVB0436										
Total Phosphorus	BVB0436-BS1	LCS	0.96850	1.0000	mg/L	96.8		85 - 115		
QC Batch ID: BVB0781										
Nitrate/Nitrite as N	BVB0781-BS1	LCS	2.0181	2.0000	mg/L	101		90 - 110		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVA1930	Used client sample: N										
Nitrate/Nitrite as N	DUP	1201561-06	0.11630	0.11830		mg/L	1.7		10		
	MS	1201561-06	0.11630	2.3126	2.1053	mg/L		104		90 - 110	
	MSD	1201561-06	0.11630	2.3404	2.1053	mg/L	1.2	106	10	90 - 110	
QC Batch ID: BVA1972	Used client sample: N										
Chloride	DUP	1201561-01	23.982	23.990		mg/L	0.0		10		
	MS	1201561-01	23.982	77.028	50.505	mg/L		105		80 - 120	
	MSD	1201561-01	23.982	77.015	50.505	mg/L	0.0	105	10	80 - 120	
Sulfate	DUP	1201561-01	293.97	294.44		mg/L	0.2		10		
	MS	1201561-01	293.97	387.43	101.01	mg/L		92.5		80 - 120	
	MSD	1201561-01	293.97	389.31	101.01	mg/L	0.5	94.4	10	80 - 120	
QC Batch ID: BVB0013	Used client sample: N										
Ammonia as N	DUP	1201464-01	0.037500	0.029600		mg/L	23.5		10		J,A02
	MS	1201464-01	0.037500	1.1334	1.1111	mg/L		98.6		90 - 110	
	MSD	1201464-01	0.037500	1.1363	1.1111	mg/L	0.3	98.9	10	90 - 110	
QC Batch ID: BVB0043	Used client sample: N										
Nitrite as N	DUP	1201663-01	0.018766	0.017442		mg/L	7.3		10		J
	MS	1201663-01	0.018766	0.53342	0.52632	mg/L		97.8		90 - 110	
	MSD	1201663-01	0.018766	0.52311	0.52632	mg/L	2.0	95.8	10	90 - 110	
QC Batch ID: BVB0385	Used client sample: Y - Description: Compost Pond, 01/30/2012 11:20										
Total Dissolved Solids @ 180 C	DUP	1201660-01	2190.0	2150.0		mg/L	1.8		10		
Fixed Dissolved Solids	DUP	1201660-01	1370.0	1350.0		mg/L	1.5		20		
QC Batch ID: BVB0433	Used client sample: N										
Total Kjeldahl Nitrogen	DUP	1201827-06	0.61340	0.67050		mg/L	8.9		20		
	MS	1201827-06	0.61340	2.3011	2.0000	mg/L		84.4		80 - 120	
	MSD	1201827-06	0.61340	2.4358	2.0000	mg/L	5.7	91.1	20	80 - 120	
QC Batch ID: BVB0436	Used client sample: N										
Total Phosphorus	DUP	1201827-06	ND	ND		mg/L			20		
	MS	1201827-06	ND	0.97150	1.0000	mg/L		97.2		80 - 120	
	MSD	1201827-06	ND	0.97770	1.0000	mg/L	0.6	97.8	20	80 - 120	
QC Batch ID: BVB0781	Used client sample: N										
Nitrate/Nitrite as N	DUP	1201764-01	9.5092	9.4846		mg/L	0.3		10		
	MS	1201764-01	9.5092	11.775	2.1053	mg/L		108		90 - 110	
	MSD	1201764-01	9.5092	11.825	2.1053	mg/L	0.4	110	10	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVB0165						
Total Lead	BVB0165-BLK1	ND	mg/L	0.050	0.0050	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVB0165										
Total Lead	BVB0165-BS1	LCS	0.44198	0.40000	mg/L	110		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVB0165	Used client sample: N										
Total Lead	DUP	1201606-01	ND	ND		mg/L			20		
	MS	1201606-01	ND	0.39705	0.40000	mg/L		99.3		75 - 125	
	MSD	1201606-01	ND	0.39324	0.40000	mg/L	1.0	98.3	20	75 - 125	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 02/23/2012 17:35
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A02	The difference between duplicate readings is less than the PQL.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/21/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project: Hay Road LF
BC Work Order: 1208257
Invoice ID: B122542

Enclosed are the results of analyses for samples received by the laboratory on 5/3/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

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Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208257-01 Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM						
Bicarbonate Alkalinity as CaCO3	600	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	600	8.2	8.2	mg/L	SM-2320B	
Chloride	350	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.69	0.10	0.010	mg/L	EPA-353.2	
Sulfate	290	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1600	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.16	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Lead	0.0081	0.050	0.0050	mg/L	EPA-6010B	J
1208257-02 Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM						
Bicarbonate Alkalinity as CaCO3	360	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	360	8.2	8.2	mg/L	SM-2320B	
Chloride	550	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.0	0.10	0.010	mg/L	EPA-353.2	
Sulfate	190	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.074	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Lead	0.012	0.050	0.0050	mg/L	EPA-6010B	J
1208257-03 Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM						
Bicarbonate Alkalinity as CaCO3	440	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	440	8.2	8.2	mg/L	SM-2320B	
Chloride	620	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.2	0.10	0.010	mg/L	EPA-353.2	
Sulfate	330	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2000	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.086	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Chromium	0.0026	0.010	0.0010	mg/L	EPA-6010B	J
Dissolved Lead	0.013	0.050	0.0050	mg/L	EPA-6010B	J
1208257-04 Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM						
Bicarbonate Alkalinity as CaCO3	340	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	340	8.2	8.2	mg/L	SM-2320B	
Chloride	290	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.25	0.10	0.010	mg/L	EPA-353.2	
Sulfate	86	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	950	50	50	mg/L	SM-2540C	
Dissolved Lead	0.012	0.050	0.0050	mg/L	EPA-6010B	J
1208257-05 Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM						
Bicarbonate Alkalinity as CaCO3	440	8.2	8.2	mg/L	SM-2320B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208257-05 Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM						
Total Alkalinity as CaCO3	440	8.2	8.2	mg/L	SM-2320B	
Chloride	510	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	5.7	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	140	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.13	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.050	0.050	0.025	mg/L	EPA-350.1	
Dissolved Chromium	0.0026	0.010	0.0010	mg/L	EPA-6010B	J
Dissolved Lead	0.0078	0.050	0.0050	mg/L	EPA-6010B	J
1208257-06 Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM						
Bicarbonate Alkalinity as CaCO3	510	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	510	8.2	8.2	mg/L	SM-2320B	
Chloride	410	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.1	0.10	0.010	mg/L	EPA-353.2	
Sulfate	330	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1700	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.16	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Lead	0.013	0.050	0.0050	mg/L	EPA-6010B	J
1208257-07 Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM						
Bicarbonate Alkalinity as CaCO3	690	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	690	8.2	8.2	mg/L	SM-2320B	
Chloride	220	1.0	0.13	mg/L	EPA-300.0	A01
Sulfate	93	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1300	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.16	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.032	0.050	0.025	mg/L	EPA-350.1	J
Dissolved Lead	0.011	0.050	0.0050	mg/L	EPA-6010B	J
1208257-08 Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM						
Bicarbonate Alkalinity as CaCO3	650	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	650	8.2	8.2	mg/L	SM-2320B	
Chloride	240	1.0	0.13	mg/L	EPA-300.0	A01
Sulfate	150	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1300	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.071	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Lead	0.0081	0.050	0.0050	mg/L	EPA-6010B	J
1208257-09 Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM						
Bicarbonate Alkalinity as CaCO3	490	8.2	8.2	mg/L	SM-2320B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208257-09 Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM						
Total Alkalinity as CaCO3	490	8.2	8.2	mg/L	SM-2320B	
Chloride	350	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	4.6	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	240	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.075	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.041	0.050	0.025	mg/L	EPA-350.1	J
1208257-10 Hay Road LF, G-23, G-23, 5/3/2012 10:15:00AM						
Nitrate/Nitrite as N	2.0	0.10	0.010	mg/L	EPA-353.2	
1208257-11 Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM						
Bicarbonate Alkalinity as CaCO3	460	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	460	8.2	8.2	mg/L	SM-2320B	
Chloride	440	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.9	0.10	0.010	mg/L	EPA-353.2	
Sulfate	200	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.10	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.028	0.050	0.025	mg/L	EPA-350.1	J
Dissolved Lead	0.014	0.050	0.0050	mg/L	EPA-6010B	J
1208257-12 Hay Road LF, G-22, G-22, 5/3/2012 10:45:00AM						
Nitrate/Nitrite as N	21	2.0	0.20	mg/L	EPA-353.2	A01
1208257-13 Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM						
Bicarbonate Alkalinity as CaCO3	450	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	450	8.2	8.2	mg/L	SM-2320B	
Chloride	760	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.6	0.10	0.010	mg/L	EPA-353.2	
Sulfate	530	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2600	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.12	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.97	0.050	0.025	mg/L	EPA-350.1	
Dissolved Lead	0.0058	0.050	0.0050	mg/L	EPA-6010B	J
1208257-14 Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM						
Bicarbonate Alkalinity as CaCO3	630	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	630	8.2	8.2	mg/L	SM-2320B	
Chloride	580	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	11	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	530	5.0	0.60	mg/L	EPA-300.0	A01

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208257-14 Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM						
Total Dissolved Solids @ 180 C	2500	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.38	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.067	0.050	0.025	mg/L	EPA-350.1	
Dissolved Lead	0.0075	0.050	0.0050	mg/L	EPA-6010B	J
1208257-15 Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM						
Bicarbonate Alkalinity as CaCO3	590	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	590	8.2	8.2	mg/L	SM-2320B	
Chloride	140	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.12	0.10	0.010	mg/L	EPA-353.2	
Sulfate	120	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	1000	50	50	mg/L	SM-2540C	
Ammonia as N	0.030	0.050	0.025	mg/L	EPA-350.1	J
Dissolved Lead	0.0085	0.050	0.0050	mg/L	EPA-6010B	J

Golder Associates
CHAIN OF CUSTODY

GW

1208257

Page 1 of ___

Quotation No. _____

PROJECT NO.:	SITE NAME:
053-7444-12	RECOLOGY - HAY RD

SAMPLER(S): R. MCCARTHY (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: Standard

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info: Type/Vol. / Filter / Preserv.	ANALYSES: BSD 8260 short list	TDS, Cl, SO4	Alk, carb, bicarb	NO3+NO2-N	NH3-N	TKN	As, Cr, Pb	NO3+NO2-N	As, Cr	Cont. Qty.	Remarks
						Type/Vol.	VOA 40ml	PE 1602	PE 1602	PE 1602			PE 1602	PE 1602			
						Filter	N	N	N				Y	N	Y		
						Preserv.	HCl	none					HNO3	H2SO4	HNO3		
G-28	-1	5/1/12	1200	W			3	1	1	1						6	REPORT TRACE for 8260
G-25	-2		1225				3	1	1	1						6	
G-16	-3		1250				3	1	1	1						6	
G-20	-4		1320				3	1	1	1						6	
G-18	-5		1355				3	1	1	1						6	
G-17	-6		1430				3	1	1	1						6	
G-29	-7	5/2/12	1100				3	1	1	1						6	
G-30	-8		1130				3	1	1	1						6	
G-20	-9		1220				3	1	1	1						6	
G-23	-10	5/3/12	1015										1			1	
G-21	-11		1030				3	1	1	1						6	
G-22	-12		1045										1			1	
G-19R	-13		1120				3	1	1	1						6	
G-4R	-14		1220				3	1	1	1						6	
G-6	-15		1305				3	1	1	1						6	

Relinquished by: (signature)	Received by: (signature)	Date/Time:
	Mary Bogan	5/3/12 1430
Mary Bogan 5-3-12 1830		5-3-12 19:00
Relinquished by: (signature) 5-3-12 22:25	Received by: (signature)	Date/Time: 5-3-12 2225

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 120257 Page 1 of 3

Chain of Custody and Cooler Receipt Form for 1208257 Page 2 of 3

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 2

Submission #: 1208257

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.98 Container: Pe Thermometer ID: 177

Temperature: A 2-6 °C / C 2.7 °C

Date/Time 5-3-12

Analyst Init KIQ 2125

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	B	B	B	B	B	B	B		
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C	C	C	C	C	C		
PT CYANIDE										
PT NITROGEN FORMS	D	D	D	D	D	D	D	D		
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A3	A3	A3	A3	A3	A3	A3	A3	~~A3~~ JNN 5/4/12	
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

CHK BY KIQ

DISTRIBUTION WHITE CANARY SUB-OUT ☐

Comments:

Sample Numbering Completed By: JNN Date/Time: 5/4/12 1825

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1208257 Page 3 of 3

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 2 Of 2

Submission #: 1208257

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: V09 Thermometer ID: 177

Temperature: A 3.9 °C / C 4.1 °C

Date/Time 5-3-12

Analyst Init KIQ 2125

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B		B	B	B				B	
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C		C	C	C				C	
PT CYANIDE										
PT NITROGEN FORMS	D		D	D	D				D	
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE		A								A
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A3	( )	A3	A3	A3	( )	( )	( )	A3	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: JNW Date/Time: 5/4/12 1825

A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1208257-01

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-28
Sampling Point: G-28
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 12:00
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-28
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

1208257-02

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-25
Sampling Point: G-25
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 12:25
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-25
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

1208257-03

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-16
Sampling Point: G-16
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 12:50
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-16
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1208257-04

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-20
Sampling Point: G-20
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 13:20
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-20
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

1208257-05

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-18
Sampling Point: G-18
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 13:55
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-18
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

1208257-06

COC Number: ---
Project Number: Hay Road LF
Sampling Location: G-17
Sampling Point: G-17
Sampled By: GAMV

Receive Date: 05/03/2012 22:25
Sampling Date: 05/01/2012 14:30
Sample Depth: ---
Lab Matrix: Water
Sample Type: Water
Metal Analysis: 1-Field Filtered and Acidified
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): G-17
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208257-07	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/02/2012 11:00
	Sampling Location:	G-29	**Sample Depth:** ---
	Sampling Point:	G-29	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-29
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-08	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/02/2012 11:30
	Sampling Location:	G-30	**Sample Depth:** ---
	Sampling Point:	G-30	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-30
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-09	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/02/2012 12:20
	Sampling Location:	G-26	**Sample Depth:** ---
	Sampling Point:	G-26	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-26
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208257-10	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 10:15
	Sampling Location:	G-23	**Sample Depth:** ---
	Sampling Point:	G-23	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-23
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-11	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 10:30
	Sampling Location:	G-21	**Sample Depth:** ---
	Sampling Point:	G-21	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-21
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-12	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 10:45
	Sampling Location:	G-22	**Sample Depth:** ---
	Sampling Point:	G-22	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-22
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208257-13	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 11:20
	Sampling Location:	G-19R	**Sample Depth:** ---
	Sampling Point:	G-19R	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-19R
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-14	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 12:20
	Sampling Location:	G-4R	**Sample Depth:** ---
	Sampling Point:	G-4R	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-4R
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208257-15	**COC Number:**	---	**Receive Date:** 05/03/2012 22:25
	Project Number:	Hay Road LF	**Sampling Date:** 05/03/2012 13:05
	Sampling Location:	G-6	**Sample Depth:** ---
	Sampling Point:	G-6	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-6
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-01 | **Client Sample Name:** Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-01 | **Client Sample Name:** Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-01 | **Client Sample Name:** Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 19:49	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-01 | **Client Sample Name:** Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**600**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**600**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**350**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**0.69**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**290**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1600**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.16**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 14:00	RML	MET-1	2	BVE0519
2	EPA-300.0	05/08/12	05/09/12 00:43	LD1	IC5	2	BVE0571
3	EPA-353.2	05/14/12	05/14/12 13:52	SDU	SC-1	1	BVE1054
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:26	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:28	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-01 | **Client Sample Name:** Hay Road LF, G-28, G-28, 5/1/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.0081**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:02	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-02 | **Client Sample Name:** Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-02 | **Client Sample Name:** Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-02 | **Client Sample Name:** Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	98.9	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 20:11	MGC	MS-V5	1	BVE0492

Golder Associates
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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-02 | **Client Sample Name:** Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**360**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**360**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**550**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**3.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**190**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.074**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 14:37	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 20:38	AKB	IC5	5	BVE0571
3	EPA-353.2	05/14/12	05/14/12 13:53	SDU	SC-1	1	BVE1054
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:29	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:30	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-02 | **Client Sample Name:** Hay Road LF, G-25, G-25, 5/1/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.012**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:10	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-03 | **Client Sample Name:** Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-03 | **Client Sample Name:** Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-03 | **Client Sample Name:** Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.0	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 20:33	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-03 | **Client Sample Name:** Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**440**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**440**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**620**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**3.2**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**330**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**2000**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.086**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 14:47	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 20:53	AKB	IC5	5	BVE0571
3	EPA-353.2	05/14/12	05/14/12 13:57	SDU	SC-1	1	BVE1054
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:31	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:30	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-03 | **Client Sample Name:** Hay Road LF, G-16, G-16, 5/1/2012 12:50:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	**0.0026**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1
Dissolved Lead	**0.013**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:12	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-04 | **Client Sample Name:** Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-04 | **Client Sample Name:** Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-04 | **Client Sample Name:** Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	95.7	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.5	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 20:56	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-04 | **Client Sample Name:** Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**340**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**340**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**290**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**0.25**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**86**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**950**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.056	EPA-351.2	ND		5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 14:52	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 21:07	AKB	IC5	2	BVE0571
3	EPA-353.2	05/14/12	05/14/12 13:58	SDU	SC-1	1	BVE1054
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	5	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:31	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:32	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-04 | **Client Sample Name:** Hay Road LF, G-20, G-20, 5/1/2012 1:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.012**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:14	ARD	PE-OP1	1	BVE0543

Golder Associates
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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-05 | **Client Sample Name:** Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-05 | **Client Sample Name:** Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-05 | **Client Sample Name:** Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	99.1	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	99.5	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.9	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 21:18	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-05 | **Client Sample Name:** Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**440**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**440**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**510**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**5.7**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	3
Sulfate	**140**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.13**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	**0.050**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 14:57	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 21:22	AKB	IC5	5	BVE0571
3	EPA-353.2	05/14/12	05/14/12 16:20	SDU	SC-1	5	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:33	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:32	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-05 | **Client Sample Name:** Hay Road LF, G-18, G-18, 5/1/2012 1:55:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	**0.0026**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1
Dissolved Lead	**0.0078**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:22	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-06 | **Client Sample Name:** Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-06 | **Client Sample Name:** Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-06 | **Client Sample Name:** Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	98.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.4	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 21:41	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-06 | **Client Sample Name:** Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**510**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**510**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**410**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**3.1**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**330**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1700**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.16**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:02	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 21:36	AKB	IC5	5	BVE0571
3	EPA-353.2	05/14/12	05/14/12 14:08	SDU	SC-1	1	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:35	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:34	SDU	SC-1	1	BVE1275

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-06 | **Client Sample Name:** Hay Road LF, G-17, G-17, 5/1/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.013**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/01/12	05/08/12 09:23	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-07 | **Client Sample Name:** Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-07 | **Client Sample Name:** Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-07 | **Client Sample Name:** Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	96.5	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.6	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 22:03	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-07 | **Client Sample Name:** Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**690**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**690**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**220**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	ND	mg/L	0.10	0.010	EPA-353.2	ND		3
Sulfate	**93**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1300**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.16**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	**0.032**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046	**J**	6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:08	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 21:50	AKB	IC5	2	BVE0571
3	EPA-353.2	05/14/12	05/14/12 14:02	SDU	SC-1	1	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:36	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:37	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-07 | **Client Sample Name:** Hay Road LF, G-29, G-29, 5/2/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.011**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/12	05/08/12 09:25	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-08 | **Client Sample Name:** Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-08 | **Client Sample Name:** Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-08 | **Client Sample Name:** Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.9	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 22:26	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-08 | **Client Sample Name:** Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**650**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**650**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**240**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	ND	mg/L	0.10	0.010	EPA-353.2	ND		3
Sulfate	**150**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1300**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.071**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	0.046		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:13	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 22:05	AKB	IC5	2	BVE0571
3	EPA-353.2	05/14/12	05/14/12 14:11	SDU	SC-1	1	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:37	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:43	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-08 | **Client Sample Name:** Hay Road LF, G-30, G-30, 5/2/2012 11:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.0081**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/12	05/08/12 09:27	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-09 | **Client Sample Name:** Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-09 | **Client Sample Name:** Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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425 Lakeside Drive
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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-09 | **Client Sample Name:** Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	96.7	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.8	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 22:48	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-09 | **Client Sample Name:** Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**490**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**490**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**350**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**4.6**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	3
Sulfate	**240**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.075**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	**0.041**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046	**J**	6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:18	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 22:19	AKB	IC5	2	BVE0571
3	EPA-353.2	05/14/12	05/14/12 16:22	SDU	SC-1	5	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:38	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:43	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-09 | **Client Sample Name:** Hay Road LF, G-26, G-26, 5/2/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	ND	mg/L	0.050	0.0050	EPA-6010B	0.0062		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/12	05/08/12 09:29	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-10 | **Client Sample Name:** Hay Road LF, G-23, G-23, 5/3/2012 10:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**2.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	05/14/12	05/14/12 14:14	SDU	SC-1	1	BVE1055

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-11 | **Client Sample Name:** Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-11 | **Client Sample Name:** Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-11 | **Client Sample Name:** Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	98.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 23:11	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-11 | **Client Sample Name:** Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**460**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**460**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**440**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**3.9**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**200**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.10**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	**0.028**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046	**J**	6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:24	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 22:34	AKB	IC5	5	BVE0571
3	EPA-353.2	05/14/12	05/14/12 14:15	SDU	SC-1	1	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0458
5	EPA-351.2	05/09/12	05/10/12 10:38	SDU	SC-1	1	BVE0758
6	EPA-350.1	05/16/12	05/16/12 10:44	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-11 | **Client Sample Name:** Hay Road LF, G-21, G-21, 5/3/2012 10:30:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.014**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/03/12	05/08/12 09:30	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-12 | **Client Sample Name:** Hay Road LF, G-22, G-22, 5/3/2012 10:45:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Nitrate/Nitrite as N	**21**	**mg/L**	**2.0**	**0.20**	**EPA-353.2**	ND	**A01**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-353.2	05/14/12	05/14/12 16:38	SDU	SC-1	20	BVE1055

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-13 | **Client Sample Name:** Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-13 | **Client Sample Name:** Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-13 | **Client Sample Name:** Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.8	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 23:33	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-13 | **Client Sample Name:** Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**450**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**450**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**760**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	0.61	**A01**	2
Nitrate/Nitrite as N	**3.6**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**530**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**2600**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.12**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND	**J**	5
Ammonia as N	**0.97**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:29	RML	MET-1	2	BVE0275
2	EPA-300.0	05/08/12	05/08/12 22:48	AKB	IC5	5	BVE0570
3	EPA-353.2	05/14/12	05/14/12 14:17	SDU	SC-1	1	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0459
5	EPA-351.2	05/09/12	05/10/12 10:15	SDU	SC-1	1	BVE0757
6	EPA-350.1	05/16/12	05/16/12 10:45	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-13 | **Client Sample Name:** Hay Road LF, G-19R, G-19R, 5/3/2012 11:20:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.0058**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/03/12	05/08/12 09:32	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-14 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-14 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-14 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.0	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/07/12 23:56	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-14 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**630**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**630**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**580**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	0.61	**A01**	2
Nitrate/Nitrite as N	**11**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	3
Sulfate	**530**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**2500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.38**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.067**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046		6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 15:59	RML	MET-1	2	BVE0276
2	EPA-300.0	05/08/12	05/08/12 23:31	AKB	IC5	5	BVE0570
3	EPA-353.2	05/14/12	05/14/12 16:26	SDU	SC-1	5	BVE1055
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0459
5	EPA-351.2	05/09/12	05/10/12 10:15	SDU	SC-1	1	BVE0757
6	EPA-350.1	05/16/12	05/16/12 10:46	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-14 | **Client Sample Name:** Hay Road LF, G-4R, G-4R, 5/3/2012 12:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.0075**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/03/12	05/08/12 09:34	ARD	PE-OP1	1	BVE0543

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-15 | **Client Sample Name:** Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-15 | **Client Sample Name:** Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	5.7		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208257-15 | **Client Sample Name:** Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	99.6	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	103	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.4	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/07/12	05/08/12 00:18	MGC	MS-V5	1	BVE0492

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208257-15 | **Client Sample Name:** Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**590**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**590**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**140**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.12		2
Nitrate/Nitrite as N	**0.12**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**120**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**1000**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	ND	mg/L	0.20	0.056	EPA-351.2	ND		5
Ammonia as N	**0.030**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.046	**J**	6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 16:05	RML	MET-1	2	BVE0276
2	EPA-300.0	05/08/12	05/09/12 00:58	LD1	IC5	1	BVE0570
3	EPA-353.2	05/14/12	05/14/12 14:29	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	5	BVE0459
5	EPA-351.2	05/09/12	05/10/12 10:17	SDU	SC-1	1	BVE0757
6	EPA-350.1	05/16/12	05/16/12 10:46	SDU	SC-1	1	BVE1276

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Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208257-15 | **Client Sample Name:** Hay Road LF, G-6, G-6, 5/3/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Lead	**0.0085**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	0.0062	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/03/12	05/08/12 09:36	ARD	PE-OP1	1	BVE0543

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Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0492						
Benzene	BVE0492-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE0492-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE0492-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE0492-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE0492-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE0492-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE0492-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE0492-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE0492-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE0492-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE0492-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE0492-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE0492-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE0492-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE0492-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE0492-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE0492-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE0492-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE0492-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE0492-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE0492-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE0492-BLK1	ND	ug/L	1.0	0.11	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0492						
Naphthalene	BVE0492-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE0492-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE0492-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE0492-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE0492-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE0492-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE0492-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE0492-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE0492-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE0492-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE0492-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE0492-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE0492-BLK1	5.6800	ug/L	10	4.6	J,M03
Acrylonitrile	BVE0492-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE0492-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE0492-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE0492-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE0492-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE0492-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE0492-BLK1	ND	ug/L	100	42	
Ethanol	BVE0492-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE0492-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE0492-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE0492-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE0492-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE0492-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE0492-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE0492-BLK1	101	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE0492-BLK1	102	%	88 - 110 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0492						
4-Bromofluorobenzene (Surrogate)	BVE0492-BLK1	96.8	%	86 - 115 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0492										
Benzene	BVE0492-BS1	LCS	26.160	25.000	ug/L	105		70 - 130		
Bromodichloromethane	BVE0492-BS1	LCS	25.980	25.000	ug/L	104		70 - 130		
Chlorobenzene	BVE0492-BS1	LCS	23.200	25.000	ug/L	92.8		70 - 130		
Chloroethane	BVE0492-BS1	LCS	27.250	25.000	ug/L	109		70 - 130		
1,4-Dichlorobenzene	BVE0492-BS1	LCS	24.050	25.000	ug/L	96.2		70 - 130		
1,1-Dichloroethane	BVE0492-BS1	LCS	26.440	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	BVE0492-BS1	LCS	27.080	25.000	ug/L	108		70 - 130		
Toluene	BVE0492-BS1	LCS	24.890	25.000	ug/L	99.6		70 - 130		
Trichloroethene	BVE0492-BS1	LCS	24.790	25.000	ug/L	99.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE0492-BS1	LCS	9.8000	10.000	ug/L	98.0		76 - 114		
Toluene-d8 (Surrogate)	BVE0492-BS1	LCS	10.120	10.000	ug/L	101		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE0492-BS1	LCS	10.400	10.000	ug/L	104		86 - 115		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0492	Used client sample: N										
Benzene	MS	1208170-04	ND	26.390	25.000	ug/L		106		70 - 130	
	MSD	1208170-04	ND	27.010	25.000	ug/L	2.3	108	20	70 - 130	
Bromodichloromethane	MS	1208170-04	ND	25.600	25.000	ug/L		102		70 - 130	
	MSD	1208170-04	ND	26.330	25.000	ug/L	2.8	105	20	70 - 130	
Chlorobenzene	MS	1208170-04	ND	23.500	25.000	ug/L		94.0		70 - 130	
	MSD	1208170-04	ND	23.960	25.000	ug/L	1.9	95.8	20	70 - 130	
Chloroethane	MS	1208170-04	ND	27.410	25.000	ug/L		110		70 - 130	
	MSD	1208170-04	ND	27.960	25.000	ug/L	2.0	112	20	70 - 130	
1,4-Dichlorobenzene	MS	1208170-04	ND	24.380	25.000	ug/L		97.5		70 - 130	
	MSD	1208170-04	ND	24.170	25.000	ug/L	0.9	96.7	20	70 - 130	
1,1-Dichloroethane	MS	1208170-04	ND	26.980	25.000	ug/L		108		70 - 130	
	MSD	1208170-04	ND	27.390	25.000	ug/L	1.5	110	20	70 - 130	
1,1-Dichloroethene	MS	1208170-04	ND	27.800	25.000	ug/L		111		70 - 130	
	MSD	1208170-04	ND	28.070	25.000	ug/L	1.0	112	20	70 - 130	
Toluene	MS	1208170-04	ND	25.280	25.000	ug/L		101		70 - 130	
	MSD	1208170-04	ND	25.460	25.000	ug/L	0.7	102	20	70 - 130	
Trichloroethene	MS	1208170-04	ND	24.700	25.000	ug/L		98.8		70 - 130	
	MSD	1208170-04	ND	25.290	25.000	ug/L	2.4	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1208170-04	ND	9.6500	10.000	ug/L		96.5		76 - 114	
	MSD	1208170-04	ND	9.9200	10.000	ug/L	2.8	99.2		76 - 114	
Toluene-d8 (Surrogate)	MS	1208170-04	ND	10.250	10.000	ug/L		102		88 - 110	
	MSD	1208170-04	ND	10.160	10.000	ug/L	0.9	102		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1208170-04	ND	10.350	10.000	ug/L		104		86 - 115	
	MSD	1208170-04	ND	10.230	10.000	ug/L	1.2	102		86 - 115	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0275						
Bicarbonate Alkalinity as CaCO3	BVE0275-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0275-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0275-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE0276						
Bicarbonate Alkalinity as CaCO3	BVE0276-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0276-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0276-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE0458						
Total Dissolved Solids @ 180 C	BVE0458-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0459						
Total Dissolved Solids @ 180 C	BVE0459-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0519						
Bicarbonate Alkalinity as CaCO3	BVE0519-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0519-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0519-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE0570						
Chloride	BVE0570-BLK1	0.12200	mg/L	0.50	0.066	J
Sulfate	BVE0570-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE0571						
Chloride	BVE0571-BLK1	ND	mg/L	0.50	0.066	
Sulfate	BVE0571-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE0757						
Total Kjeldahl Nitrogen	BVE0757-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE0758						
Total Kjeldahl Nitrogen	BVE0758-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE1054						
Nitrate/Nitrite as N	BVE1054-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1055						
Nitrate/Nitrite as N	BVE1055-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1057						

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1057						
Nitrate/Nitrite as N	BVE1057-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1275						
Ammonia as N	BVE1275-BLK1	ND	mg/L	0.050	0.025	
QC Batch ID: BVE1276						
Ammonia as N	BVE1276-BLK1	0.046500	mg/L	0.050	0.025	J

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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0275										
Total Alkalinity as CaCO3	BVE0275-BS3	LCS	95.840	100.00	mg/L	95.8		90 - 110		
QC Batch ID: BVE0276										
Total Alkalinity as CaCO3	BVE0276-BS3	LCS	94.780	100.00	mg/L	94.8		90 - 110		
QC Batch ID: BVE0458										
Total Dissolved Solids @ 180 C	BVE0458-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
QC Batch ID: BVE0459										
Total Dissolved Solids @ 180 C	BVE0459-BS1	LCS	535.00	586.00	mg/L	91.3		90 - 110		
QC Batch ID: BVE0519										
Total Alkalinity as CaCO3	BVE0519-BS3	LCS	96.910	100.00	mg/L	96.9		90 - 110		
QC Batch ID: BVE0570										
Chloride	BVE0570-BS1	LCS	49.930	50.000	mg/L	99.9		90 - 110		
Sulfate	BVE0570-BS1	LCS	99.313	100.00	mg/L	99.3		90 - 110		
QC Batch ID: BVE0571										
Chloride	BVE0571-BS1	LCS	50.268	50.000	mg/L	101		90 - 110		
Sulfate	BVE0571-BS1	LCS	99.800	100.00	mg/L	99.8		90 - 110		
QC Batch ID: BVE0757										
Total Kjeldahl Nitrogen	BVE0757-BS1	LCS	1.9998	2.0000	mg/L	100		85 - 115		
QC Batch ID: BVE0758										
Total Kjeldahl Nitrogen	BVE0758-BS1	LCS	1.9393	2.0000	mg/L	97.0		85 - 115		
QC Batch ID: BVE1054										
Nitrate/Nitrite as N	BVE1054-BS1	LCS	2.0345	2.0000	mg/L	102		90 - 110		
QC Batch ID: BVE1055										
Nitrate/Nitrite as N	BVE1055-BS1	LCS	2.0641	2.0000	mg/L	103		90 - 110		
QC Batch ID: BVE1057										
Nitrate/Nitrite as N	BVE1057-BS1	LCS	2.0095	2.0000	mg/L	100		90 - 110		
QC Batch ID: BVE1275										
Ammonia as N	BVE1275-BS1	LCS	0.97410	1.0000	mg/L	97.4		90 - 110		
QC Batch ID: BVE1276										
Ammonia as N	BVE1276-BS1	LCS	0.93970	1.0000	mg/L	94.0		90 - 110		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0275	Used client sample: Y - Description: G-25, 05/01/2012 12:25										
Bicarbonate Alkalinity as CaCO3	DUP	1208257-02	361.16	362.99		mg/L	0.5		10		
Carbonate Alkalinity as CaCO3	DUP	1208257-02	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208257-02	361.16	362.99		mg/L	0.5		10		
QC Batch ID: BVE0276	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1208206-01	189.25	189.86		mg/L	0.3		10		
Carbonate Alkalinity as CaCO3	DUP	1208206-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208206-01	189.25	189.86		mg/L	0.3		10		
QC Batch ID: BVE0458	Used client sample: Y - Description: G-28, 05/01/2012 12:00										
Total Dissolved Solids @ 180 C	DUP	1208257-01	1650.0	1680.0		mg/L	1.8		10		
QC Batch ID: BVE0459	Used client sample: Y - Description: G-19R, 05/03/2012 11:20										
Total Dissolved Solids @ 180 C	DUP	1208257-13	2560.0	2530.0		mg/L	1.2		10		
QC Batch ID: BVE0519	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1208174-03	266.08	270.80		mg/L	1.8		10		
Carbonate Alkalinity as CaCO3	DUP	1208174-03	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208174-03	266.08	270.80		mg/L	1.8		10		
QC Batch ID: BVE0570	Used client sample: N										
Chloride	DUP	1208195-01	357.83	358.99		mg/L	0.3		10		
	MS	1208195-01	357.83	446.49	101.01	mg/L		87.8		80 - 120	
	MSD	1208195-01	357.83	446.07	101.01	mg/L	0.1	87.4	10	80 - 120	
Sulfate	DUP	1208195-01	194.32	194.91		mg/L	0.3		10		
	MS	1208195-01	194.32	408.81	202.02	mg/L		106		80 - 120	
	MSD	1208195-01	194.32	407.90	202.02	mg/L	0.2	106	10	80 - 120	
QC Batch ID: BVE0571	Used client sample: Y - Description: G-28, 05/01/2012 12:00										
Chloride	DUP	1208257-01	371.60	369.58		mg/L	0.5		10		
	MS	1208257-01	371.60	632.49	252.53	mg/L		103		80 - 120	
	MSD	1208257-01	371.60	623.74	252.53	mg/L	1.4	99.9	10	80 - 120	
Sulfate	DUP	1208257-01	280.73	278.06		mg/L	1.0		10		
	MS	1208257-01	280.73	822.09	505.05	mg/L		107		80 - 120	
	MSD	1208257-01	280.73	821.17	505.05	mg/L	0.1	107	10	80 - 120	
QC Batch ID: BVE0757	Used client sample: N										
Total Kjeldahl Nitrogen	DUP	1208181-02	1.6284	1.6092		mg/L	1.2		20		
	MS	1208181-02	1.6284	3.5308	2.0000	mg/L		95.1		80 - 120	
	MSD	1208181-02	1.6284	3.4918	2.0000	mg/L	1.1	93.2	20	80 - 120	
QC Batch ID: BVE0758	Used client sample: Y - Description: G-28, 05/01/2012 12:00										

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0758	Used client sample: Y - Description: G-28, 05/01/2012 12:00										
Total Kjeldahl Nitrogen	DUP	1208257-01	0.16020	0.19540		mg/L	19.8		20		J
	MS	1208257-01	0.16020	2.1170	2.0000	mg/L		97.8		80 - 120	
	MSD	1208257-01	0.16020	2.0603	2.0000	mg/L	2.7	95.0	20	80 - 120	
QC Batch ID: BVE1054	Used client sample: Y - Description: E-8, 05/02/2012 09:50										
Nitrate/Nitrite as N	DUP	1208145-01	ND	ND		mg/L			10		
	MS	1208145-01	ND	2.0922	2.1053	mg/L		99.4		90 - 110	
	MSD	1208145-01	ND	2.2096	2.1053	mg/L	5.5	105	10	90 - 110	
QC Batch ID: BVE1055	Used client sample: Y - Description: G-29, 05/02/2012 11:00										
Nitrate/Nitrite as N	DUP	1208257-07	ND	ND		mg/L			10		
	MS	1208257-07	ND	2.1897	2.1053	mg/L		104		90 - 110	
	MSD	1208257-07	ND	2.1452	2.1053	mg/L	2.1	102	10	90 - 110	
QC Batch ID: BVE1057	Used client sample: Y - Description: G-1, 05/04/2012 10:25										
Nitrate/Nitrite as N	DUP	1208277-01	0.99590	0.96600		mg/L	3.0		10		
	MS	1208277-01	0.99590	3.1627	2.1053	mg/L		103		90 - 110	
	MSD	1208277-01	0.99590	3.2108	2.1053	mg/L	1.5	105	10	90 - 110	
QC Batch ID: BVE1275	Used client sample: N										
Ammonia as N	DUP	1208195-03	0.10540	0.10270		mg/L	2.6		10		
	MS	1208195-03	0.10540	1.1604	1.1111	mg/L		95.0		90 - 110	
	MSD	1208195-03	0.10540	1.2017	1.1111	mg/L	3.5	98.7	10	90 - 110	
QC Batch ID: BVE1276	Used client sample: Y - Description: G-29, 05/02/2012 11:00										
Ammonia as N	DUP	1208257-07	0.031800	0.028500		mg/L	10.9		10		J,A02
	MS	1208257-07	0.031800	1.1193	1.1111	mg/L		97.9		90 - 110	
	MSD	1208257-07	0.031800	1.1078	1.1111	mg/L	1.0	96.8	10	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0543						
Dissolved Arsenic	BVE0543-BLK1	ND	mg/L	0.050	0.0075	
Dissolved Chromium	BVE0543-BLK1	ND	mg/L	0.010	0.0010	
Dissolved Lead	BVE0543-BLK1	0.0061688	mg/L	0.050	0.0050	J

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0543										
Dissolved Arsenic	BVE0543-BS1	LCS	0.18153	0.20000	mg/L	90.8		85 - 115		
Dissolved Chromium	BVE0543-BS1	LCS	0.18191	0.20000	mg/L	91.0		85 - 115		
Dissolved Lead	BVE0543-BS1	LCS	0.38038	0.40000	mg/L	95.1		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0543	Used client sample: Y - Description: G-28, 05/01/2012 12:00										
Dissolved Arsenic	DUP	1208257-01	ND	ND		mg/L			20		
	MS	1208257-01	ND	0.20582	0.20408	mg/L		101		75 - 125	
	MSD	1208257-01	ND	0.20477	0.20408	mg/L	0.5	100	20	75 - 125	
Dissolved Chromium	DUP	1208257-01	ND	ND		mg/L			20		
	MS	1208257-01	ND	0.19731	0.20408	mg/L		96.7		75 - 125	
	MSD	1208257-01	ND	0.19823	0.20408	mg/L	0.5	97.1	20	75 - 125	
Dissolved Lead	DUP	1208257-01	0.0080668	0.0074023		mg/L	8.6		20		J
	MS	1208257-01	0.0080668	0.41070	0.40816	mg/L		98.6		75 - 125	
	MSD	1208257-01	0.0080668	0.40528	0.40816	mg/L	1.3	97.3	20	75 - 125	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/21/2012 16:34
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A02	The difference between duplicate readings is less than the PQL.
M03	Analyte detected in the Method Blank at a level between the PQL and the MDL.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 07/26/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1208277
Invoice ID:	B122544

Enclosed are the results of analyses for samples received by the laboratory on 5/4/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208277-01 Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM						
Bicarbonate Alkalinity as CaCO3	420	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	420	8.2	8.2	mg/L	SM-2320B	
Chloride	190	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.0	0.10	0.010	mg/L	EPA-353.2	
Sulfate	66	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	840	50	50	mg/L	SM-2540C	
Dissolved Chromium	0.0019	0.010	0.0010	mg/L	EPA-6010B	J
1208277-02 Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM						
Bicarbonate Alkalinity as CaCO3	960	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	960	8.2	8.2	mg/L	SM-2320B	
Chloride	330	1.0	0.13	mg/L	EPA-300.0	A01
Sulfate	460	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2300	100	100	mg/L	SM-2540C	
1208277-03 Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM						
Bicarbonate Alkalinity as CaCO3	650	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	650	8.2	8.2	mg/L	SM-2320B	
Chloride	200	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.059	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	90	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1100	50	50	mg/L	SM-2540C	
Dissolved Barium	0.48	0.010	0.0012	mg/L	EPA-6010B	
1208277-04 Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM						
Bicarbonate Alkalinity as CaCO3	360	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	360	8.2	8.2	mg/L	SM-2320B	
Chloride	110	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.36	0.10	0.010	mg/L	EPA-353.2	
Sulfate	43	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	610	33	33	mg/L	SM-2540C	
1208277-05 Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM						
Bicarbonate Alkalinity as CaCO3	120	4.1	4.1	mg/L	SM-2320B	
Total Alkalinity as CaCO3	120	4.1	4.1	mg/L	SM-2320B	
Chloride	100	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.12	0.10	0.010	mg/L	EPA-353.2	
Sulfate	54	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	680	33	33	mg/L	SM-2540C	
1208277-06 Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM						
Bicarbonate Alkalinity as CaCO3	370	8.2	8.2	mg/L	SM-2320B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208277-06 Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM						
Total Alkalinity as CaCO3	370	8.2	8.2	mg/L	SM-2320B	
Chloride	530	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	1.1	0.10	0.010	mg/L	EPA-353.2	
Sulfate	160	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	

Golder Associates
CHAIN OF CUSTODY

GW

12-08277

Page 1 of 1

Quotation No.

PROJECT NO.:	SITE NAME:
053744412	RECOLOGY Hay Rd

SAMPLER(S): R. McCarthy (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: Standard

EDD required? ~~Yes~~ No

EDF required? ~~Yes~~ No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	ANALYSES: BTD 8260 5 short List	TDS, Cl, SO4 Alk, carb, bicarb.	NO3+NO2-N As, Cr	NO2+NO3-N NH3-N TKN As, Cr, Pb	Cont. Qty.	Remarks
						Type/Vol.	VOA 40ml	PE 1602	PE 202	PE 1602		
						Filter	N	N	N	Y		
						Preserv.	HCl	none	H_2SO_4	HNO_3		
G-1	-1	5/4/12	1025	W			3	1	1	1	6	Report Trace for 8260
G-2	-2		0935				3	1	1	1	6	
G-8	-3		1240				3	1	1	1	6	
~~G-9~~												
G-12	-4		1150				3	1	1	1	6	
G-13	-5		1105				3	1	1	1	6	
MW-4	-6		1342				3	1	1	1	6	

CHK BY BLT

DISTRIBUTION SUB-OUT

Relinquished by: (signature)	Received by: (signature)	Date/Time:	
	Ross Dickey	5/4/12	1404
Relinquished by: (signature)	Received by: (signature)	Date/Time:	
Ross Dickey 5-4-12	[illegible]	5-4-12	18:20
Relinquished by: (signature)	Received by: (signature)	Date/Time:	
[illegible] 5-4-12 21:40	[illegible]	5-4-12	2140

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1208277 Page 1 of 2

Chain of Custody and Cooler Receipt Form for 1208277 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1208277

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

☒ COC Received ☒ YES ☐ NO

Emissivity: 0.98 Container: QTPE Thermometer ID: 177

Temperature: A 3.2 °C / C 3.3 °C

Date/Time 5-4-12

Analyst Init KIQ 2145

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	B	B	B	B	B				
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C	C	C	C				
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE	D	D	D	D	D	D				
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A3	A3	A3	A3	A3	A3	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:_____
Sample Numbering Completed By: _____ Date/Time: 5/7/12 0740
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208277-01	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 10:25
	Sampling Location:	G-1	**Sample Depth:** ---
	Sampling Point:	G-1	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208277-02	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 09:55
	Sampling Location:	G-2	**Sample Depth:** ---
	Sampling Point:	G-2	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208277-03	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 12:40
	Sampling Location:	G-8	**Sample Depth:** ---
	Sampling Point:	G-8	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-8
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208277-04	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 11:50
	Sampling Location:	G-12	**Sample Depth:** ---
	Sampling Point:	G-12	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-12
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208277-05	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 11:05
	Sampling Location:	G-13	**Sample Depth:** ---
	Sampling Point:	G-13	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-13
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208277-06	**COC Number:**	---	**Receive Date:** 05/04/2012 21:40
	Project Number:	Reology Hay Road	**Sampling Date:** 05/04/2012 13:42
	Sampling Location:	MW-4	**Sample Depth:** ---
	Sampling Point:	MW-4	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): MW-4
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-01 | **Client Sample Name:** Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-01 | **Client Sample Name:** Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-01 | **Client Sample Name:** Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	110	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	89.4	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 15:00	MGC	MS-V5	1	BVE1077

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-01 | **Client Sample Name:** Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**420**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**420**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**190**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	ND		2
Nitrate/Nitrite as N	**1.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**66**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**840**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 21:59	RML	MET-1	2	BVE0614
2	EPA-300.0	05/14/12	05/14/12 10:40	LD1	IC1	1	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:22	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	5	BVE0459

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-01 | **Client Sample Name:** Reology Hay Road, G-1, G-1, 5/4/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	**0.0019**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:19	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-02 | **Client Sample Name:** Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-02 | **Client Sample Name:** Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-02 | **Client Sample Name:** Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	89.2	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 15:22	MGC	MS-V5	1	BVE1077

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-02 | **Client Sample Name:** Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**960**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**960**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**330**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	ND	mg/L	0.10	0.010	EPA-353.2	ND		3
Sulfate	**460**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**2300**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 22:16	RML	MET-1	2	BVE0614
2	EPA-300.0	05/14/12	05/14/12 14:57	LD1	IC1	2	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:30	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0459

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-02 | **Client Sample Name:** Reology Hay Road, G-2, G-2, 5/4/2012 9:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:20	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-03 | **Client Sample Name:** Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-03 | **Client Sample Name:** Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-03 | **Client Sample Name:** Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	87.7	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 15:44	MGC	MS-V5	1	BVE1077

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-03 | **Client Sample Name:** Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**650**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**650**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**200**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**0.059**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND	**J**	3
Sulfate	**90**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1100**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 22:24	RML	MET-1	2	BVE0614
2	EPA-300.0	05/14/12	05/14/12 11:48	LD1	IC1	2	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:32	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	5	BVE0459

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-03 | **Client Sample Name:** Reology Hay Road, G-8, G-8, 5/4/2012 12:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Barium	**0.48**	**mg/L**	**0.010**	**0.0012**	**EPA-6010B**	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Iron	ND	mg/L	0.050	0.0050	EPA-6010B	0.0090		1
Dissolved Manganese	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:22	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-04 | **Client Sample Name:** Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-04 | **Client Sample Name:** Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-04 | **Client Sample Name:** Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	88.5	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 16:07	MGC	MS-V5	1	BVE1077

Golder Associates
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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-04 | **Client Sample Name:** Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**360**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**360**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**110**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	ND		2
Nitrate/Nitrite as N	**0.36**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**43**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**610**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 22:30	RML	MET-1	2	BVE0614
2	EPA-300.0	05/14/12	05/14/12 12:01	LD1	IC1	1	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:33	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	3.333	BVE0459

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425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-04 | **Client Sample Name:** Reology Hay Road, G-12, G-12, 5/4/2012 11:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:24	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-05 | **Client Sample Name:** Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-05 | **Client Sample Name:** Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-05 | **Client Sample Name:** Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	88.7	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 16:29	MGC	MS-V5	1	BVE1077

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-05 | **Client Sample Name:** Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**120**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		1
Total Alkalinity as CaCO3	**120**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**100**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	ND		2
Nitrate/Nitrite as N	**0.12**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**54**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**680**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 22:50	RML	MET-1	1	BVE0615
2	EPA-300.0	05/14/12	05/14/12 12:15	LD1	IC1	1	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:34	SDU	SC-1	1	BVE1057
4	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	3.333	BVE0459

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-05 | **Client Sample Name:** Reology Hay Road, G-13, G-13, 5/4/2012 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:26	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-06 | **Client Sample Name:** Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-06 | **Client Sample Name:** Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208277-06 | **Client Sample Name:** Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	110	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	91.1	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/14/12	05/14/12 16:52	MGC	MS-V5	1	BVE1077

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208277-06 | **Client Sample Name:** Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**370**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**370**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**530**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**1.1**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**160**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	4
Total Dissolved Solids @ 180 C	**1500**	**mg/L**	**100**	**100**	**SM-2540C**	ND		5

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/08/12 23:00	RML	MET-1	2	BVE0615
2	EPA-300.0	05/14/12	05/14/12 15:38	AKB	IC1	5	BVE1137
3	EPA-353.2	05/14/12	05/14/12 14:35	SDU	SC-1	1	BVE1057
4	EPA-300.0	05/14/12	05/14/12 12:56	LD1	IC1	2	BVE1137
5	SM-2540C	05/07/12	05/07/12 08:30	NW1	MANUAL	10	BVE0459

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208277-06 | **Client Sample Name:** Reology Hay Road, MW-4, MW-4, 5/4/2012 1:42:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/12	05/09/12 16:28	ARD	PE-OP2	1	BVE0542

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1077						
Benzene	BVE1077-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE1077-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE1077-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE1077-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE1077-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE1077-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE1077-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE1077-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE1077-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE1077-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE1077-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE1077-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE1077-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE1077-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE1077-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE1077-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE1077-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE1077-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE1077-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE1077-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE1077-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE1077-BLK1	ND	ug/L	1.0	0.11	

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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1077						
Naphthalene	BVE1077-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE1077-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE1077-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE1077-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE1077-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE1077-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE1077-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE1077-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE1077-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE1077-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE1077-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE1077-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE1077-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE1077-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE1077-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE1077-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE1077-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE1077-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE1077-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE1077-BLK1	ND	ug/L	100	42	
Ethanol	BVE1077-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE1077-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE1077-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE1077-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE1077-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE1077-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE1077-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE1077-BLK1	104	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE1077-BLK1	100	%	88 - 110 (LCL - UCL)		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1077						
4-Bromofluorobenzene (Surrogate)	BVE1077-BLK1	90.3	%	86 - 115 (LCL - UCL)		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE1077										
Benzene	BVE1077-BS1	LCS	26.750	25.000	ug/L	107		70 - 130		
Bromodichloromethane	BVE1077-BS1	LCS	26.550	25.000	ug/L	106		70 - 130		
Chlorobenzene	BVE1077-BS1	LCS	25.260	25.000	ug/L	101		70 - 130		
Chloroethane	BVE1077-BS1	LCS	27.670	25.000	ug/L	111		70 - 130		
1,4-Dichlorobenzene	BVE1077-BS1	LCS	27.350	25.000	ug/L	109		70 - 130		
1,1-Dichloroethane	BVE1077-BS1	LCS	27.180	25.000	ug/L	109		70 - 130		
1,1-Dichloroethene	BVE1077-BS1	LCS	27.450	25.000	ug/L	110		70 - 130		
Toluene	BVE1077-BS1	LCS	26.340	25.000	ug/L	105		70 - 130		
Trichloroethene	BVE1077-BS1	LCS	26.080	25.000	ug/L	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE1077-BS1	LCS	10.090	10.000	ug/L	101		76 - 114		
Toluene-d8 (Surrogate)	BVE1077-BS1	LCS	10.000	10.000	ug/L	100		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE1077-BS1	LCS	10.250	10.000	ug/L	102		86 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE1077	Used client sample: N										
Benzene	MS	1208260-13	ND	27.130	25.000	ug/L		109		70 - 130	
	MSD	1208260-13	ND	27.280	25.000	ug/L	0.6	109	20	70 - 130	
Bromodichloromethane	MS	1208260-13	ND	26.500	25.000	ug/L		106		70 - 130	
	MSD	1208260-13	ND	27.150	25.000	ug/L	2.4	109	20	70 - 130	
Chlorobenzene	MS	1208260-13	ND	25.030	25.000	ug/L		100		70 - 130	
	MSD	1208260-13	ND	25.210	25.000	ug/L	0.7	101	20	70 - 130	
Chloroethane	MS	1208260-13	ND	26.740	25.000	ug/L		107		70 - 130	
	MSD	1208260-13	ND	27.720	25.000	ug/L	3.6	111	20	70 - 130	
1,4-Dichlorobenzene	MS	1208260-13	ND	27.010	25.000	ug/L		108		70 - 130	
	MSD	1208260-13	ND	27.820	25.000	ug/L	3.0	111	20	70 - 130	
1,1-Dichloroethane	MS	1208260-13	ND	27.620	25.000	ug/L		110		70 - 130	
	MSD	1208260-13	ND	27.730	25.000	ug/L	0.4	111	20	70 - 130	
1,1-Dichloroethene	MS	1208260-13	ND	27.200	25.000	ug/L		109		70 - 130	
	MSD	1208260-13	ND	27.820	25.000	ug/L	2.3	111	20	70 - 130	
Toluene	MS	1208260-13	ND	26.480	25.000	ug/L		106		70 - 130	
	MSD	1208260-13	ND	26.670	25.000	ug/L	0.7	107	20	70 - 130	
Trichloroethene	MS	1208260-13	0.12000	25.050	25.000	ug/L		99.7		70 - 130	
	MSD	1208260-13	0.12000	25.290	25.000	ug/L	1.0	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1208260-13	ND	10.550	10.000	ug/L		106		76 - 114	
	MSD	1208260-13	ND	10.320	10.000	ug/L	2.2	103		76 - 114	
Toluene-d8 (Surrogate)	MS	1208260-13	ND	10.170	10.000	ug/L		102		88 - 110	
	MSD	1208260-13	ND	10.060	10.000	ug/L	1.1	101		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1208260-13	ND	10.140	10.000	ug/L		101		86 - 115	
	MSD	1208260-13	ND	10.250	10.000	ug/L	1.1	102		86 - 115	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0459						
Total Dissolved Solids @ 180 C	BVE0459-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0614						
Bicarbonate Alkalinity as CaCO3	BVE0614-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0614-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0614-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE0615						
Bicarbonate Alkalinity as CaCO3	BVE0615-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0615-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0615-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE1057						
Nitrate/Nitrite as N	BVE1057-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1137						
Chloride	BVE1137-BLK1	ND	mg/L	0.50	0.066	
Sulfate	BVE1137-BLK1	ND	mg/L	1.0	0.12	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0459										
Total Dissolved Solids @ 180 C	BVE0459-BS1	LCS	535.00	586.00	mg/L	91.3		90 - 110		
QC Batch ID: BVE0614										
Total Alkalinity as CaCO3	BVE0614-BS3	LCS	97.670	100.00	mg/L	97.7		90 - 110		
QC Batch ID: BVE0615										
Total Alkalinity as CaCO3	BVE0615-BS3	LCS	95.690	100.00	mg/L	95.7		90 - 110		
QC Batch ID: BVE1057										
Nitrate/Nitrite as N	BVE1057-BS1	LCS	2.0095	2.0000	mg/L	100		90 - 110		
QC Batch ID: BVE1137										
Chloride	BVE1137-BS1	LCS	51.374	50.000	mg/L	103		90 - 110		
Sulfate	BVE1137-BS1	LCS	102.34	100.00	mg/L	102		90 - 110		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0459	Used client sample: Y - Description: G-19R, 05/03/2012 11:20										
Total Dissolved Solids @ 180 C	DUP	1208257-13	2560.0	2530.0		mg/L	1.2		10		
QC Batch ID: BVE0614	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1208260-11	288.14	288.44		mg/L	0.1		10		
Carbonate Alkalinity as CaCO3	DUP	1208260-11	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208260-11	288.14	288.44		mg/L	0.1		10		
QC Batch ID: BVE0615	Used client sample: Y - Description: G-13, 05/04/2012 11:05										
Bicarbonate Alkalinity as CaCO3	DUP	1208277-05	118.82	118.21		mg/L	0.5		10		
Carbonate Alkalinity as CaCO3	DUP	1208277-05	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208277-05	118.82	118.21		mg/L	0.5		10		
QC Batch ID: BVE1057	Used client sample: Y - Description: G-1, 05/04/2012 10:25										
Nitrate/Nitrite as N	DUP	1208277-01	0.99590	0.96600		mg/L	3.0		10		
	MS	1208277-01	0.99590	3.1627	2.1053	mg/L		103		90 - 110	
	MSD	1208277-01	0.99590	3.2108	2.1053	mg/L	1.5	105	10	90 - 110	
QC Batch ID: BVE1137	Used client sample: Y - Description: G-1, 05/04/2012 10:25										
Chloride	DUP	208277-01RE1	207.68	205.37		mg/L	1.1		10		
	MS	208277-01RE1	207.68	311.24	101.01	mg/L		103		80 - 120	
	MSD	208277-01RE1	207.68	311.70	101.01	mg/L	0.1	103	10	80 - 120	
Sulfate	DUP	208277-01RE1	65.088	64.954		mg/L	0.2		10		
	MS	208277-01RE1	65.088	282.72	202.02	mg/L		108		80 - 120	
	MSD	208277-01RE1	65.088	279.41	202.02	mg/L	1.2	106	10	80 - 120	

Golder Associates
425 Lakeside Drive
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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0542						
Dissolved Arsenic	BVE0542-BLK1	ND	mg/L	0.050	0.0075	
Dissolved Barium	BVE0542-BLK1	ND	mg/L	0.010	0.0012	
Dissolved Chromium	BVE0542-BLK1	ND	mg/L	0.010	0.0010	
Dissolved Iron	BVE0542-BLK1	0.0090104	mg/L	0.050	0.0050	J
Dissolved Manganese	BVE0542-BLK1	ND	mg/L	0.010	0.0010	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0542										
Dissolved Arsenic	BVE0542-BS1	LCS	0.18603	0.20000	mg/L	93.0		85 - 115		
Dissolved Barium	BVE0542-BS1	LCS	0.40347	0.40000	mg/L	101		85 - 115		
Dissolved Chromium	BVE0542-BS1	LCS	0.19639	0.20000	mg/L	98.2		85 - 115		
Dissolved Iron	BVE0542-BS1	LCS	1.0048	1.0000	mg/L	100		85 - 115		
Dissolved Manganese	BVE0542-BS1	LCS	0.51135	0.50000	mg/L	102		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0542	Used client sample: N										
Dissolved Arsenic	DUP	1208206-01	0.037955	0.037800		mg/L	0.4		20		J
	MS	1208206-01	0.037955	0.23903	0.20408	mg/L		98.5		75 - 125	
	MSD	1208206-01	0.037955	0.25590	0.20408	mg/L	6.8	107	20	75 - 125	
Dissolved Barium	DUP	1208206-01	0.057394	0.059292		mg/L	3.3		20		
	MS	1208206-01	0.057394	0.46563	0.40816	mg/L		100		75 - 125	
	MSD	1208206-01	0.057394	0.45410	0.40816	mg/L	2.5	97.2	20	75 - 125	
Dissolved Chromium	DUP	1208206-01	ND	ND		mg/L			20		
	MS	1208206-01	ND	0.20108	0.20408	mg/L		98.5		75 - 125	
	MSD	1208206-01	ND	0.19599	0.20408	mg/L	2.6	96.0	20	75 - 125	
Dissolved Iron	DUP	1208206-01	ND	ND		mg/L			20		
	MS	1208206-01	ND	1.0018	1.0204	mg/L		98.2		75 - 125	
	MSD	1208206-01	ND	0.98592	1.0204	mg/L	1.6	96.6	20	75 - 125	
Dissolved Manganese	DUP	1208206-01	0.89223	0.89552		mg/L	0.4		20		
	MS	1208206-01	0.89223	1.3998	0.51020	mg/L		99.5		75 - 125	
	MSD	1208206-01	0.89223	1.3739	0.51020	mg/L	1.9	94.4	20	75 - 125	

Golder Associates
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Reported: 07/26/2012 16:30
Project: Hay Road LF
Project Number: 053-7444-12
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Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/22/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1208278
Invoice ID:	B122581

Enclosed are the results of analyses for samples received by the laboratory on 5/4/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208278-01 Hay Road LF, UZ-7, UZ-7, 5/3/2012 2:20:00PM						
Moisture	14.0	0.05	0.05	%	Calc	
pH	9.12	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	23.3	0.1	0.1	C	EPA-9045	
Solids	86.0	0.05	0.05	%	SM-2540G	
Chloride	1.9	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.63	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	
Sulfate	9.4	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Ammonia as N	0.044	0.050	0.025	mg/L	EPA-350.1 (Mod. STLC)	J
Nitrite as N	0.040	0.050	0.0015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	0.86	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1208278-02 Hay Road LF, UZ-8, UZ-8, 5/3/2012 2:05:00PM						
Moisture	14.5	0.05	0.05	%	Calc	
pH	8.58	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	23.5	0.1	0.1	C	EPA-9045	
Solids	85.5	0.05	0.05	%	SM-2540G	
Chloride	3.1	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.31	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	
Sulfate	8.6	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Nitrite as N	0.015	0.050	0.0015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	1.2	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1208278-03 Hay Road LF, UZ-9, UZ-9, 5/3/2012 2:30:00PM						
Moisture	16.3	0.05	0.05	%	Calc	
pH	8.33	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	23.0	0.1	0.1	C	EPA-9045	
Solids	83.7	0.05	0.05	%	SM-2540G	
Chloride	6.5	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.079	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	J
Sulfate	25	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Ammonia as N	0.036	0.050	0.025	mg/L	EPA-350.1 (Mod. STLC)	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208278-03 Hay Road LF, UZ-9, UZ-9, 5/3/2012 2:30:00PM						
Nitrite as N	0.018	0.050	0.0015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	0.89	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1208278-04 Hay Road LF, UZ-10, UZ-10, 5/3/2012 2:40:00PM						
Moisture	23.3	0.05	0.05	%	Calc	
pH	8.28	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	23.2	0.1	0.1	C	EPA-9045	
Solids	76.7	0.05	0.05	%	SM-2540G	
Chloride	1.5	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.089	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	J
Sulfate	8.0	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Nitrite as N	0.024	0.050	0.0015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	0.79	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	

Golder Associates

12-08278

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1

Quotation No.

PROJECT NO.:	SITE NAME:
053-7444-11	Peacock Hay Road

SAMPLER(S): R. McCarthy (printed) (signature)

CONTRACT LABORATORY: BC Labs

TURN-AROUND TIME: Standard

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	Type/Vol.	Filter	Preserv.	pH (9045C)	STLC Chloride (300)	STLC Sulfate (300)	STLC Nitrate Nitrite (300)	Ammonia as N (350.3)	TKN (351.2)	% Soil Moisture	Cont. Qty.	Remarks
UZ-7	-1	5/3/12	1420	S			TUBE	N	—	X	X	X	X	X	X	X	1	
UZ-8	-2		1405				TUBE	N	—	X	X	X	X	X	X	X	1	
UZ-9	-3		1430				TUBE	N	—	X	X	X	X	X	X	X	1	
UZ-10	-4		1440				TUBE	N	—	X	X	X	X	X	X	X	1	

CHK BY BLT

DISTRIBUTION

SUB-OUT

Relinquished by: (signature)	Received by: (signature)	Date/Time:
	Ross Dickey	5/4/12 1404
Ross Dickey 5-4-12	Ian G	5-4-12 1820
Ian G 5-4-12 21:40	Komar	5-4-12 2140

SEND RESULTS TO:

Attn: Kris Johnson

Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 120278 Page 1 of 2

Chain of Custody and Cooler Receipt Form for 1208278 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 of 1

Submission #: 12-08278

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☐ No ☐

☑ COC Received ☑ YES ☐ NO

Emissivity: 0.98 Container: soil sleeve Thermometer ID: 177

Temperature: A 4.5 °C / C 4.6 °C

Date/Time 5-4-12 2145

Analyst Init KIQ

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE plastic	A	A	A	A						
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: _____ Date/Time: 5/7/12 0740
A = Actual / C = Corrected
[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

-3 time Lab 1470.

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1208278-01	**COC Number:**	---	**Receive Date:**	05/04/2012 21:40
	Project Number:	Hay Road LF	**Sampling Date:**	05/03/2012 14:20
	Sampling Location:	UZ-7	**Sample Depth:**	---
	Sampling Point:	UZ-7	**Lab Matrix:**	Solids
	Sampled By:	GAMV	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): UZ-7	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208278-02	**COC Number:**	---	**Receive Date:**	05/04/2012 21:40
	Project Number:	Hay Road LF	**Sampling Date:**	05/03/2012 14:05
	Sampling Location:	UZ-8	**Sample Depth:**	---
	Sampling Point:	UZ-8	**Lab Matrix:**	Solids
	Sampled By:	GAMV	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): UZ-8	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208278-03	**COC Number:**	---	**Receive Date:**	05/04/2012 21:40
	Project Number:	Hay Road LF	**Sampling Date:**	05/03/2012 14:30
	Sampling Location:	UZ-9	**Sample Depth:**	---
	Sampling Point:	UZ-9	**Lab Matrix:**	Solids
	Sampled By:	GAMV	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): UZ-9	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1208278-04

COC Number: ---
Project Number: Hay Road LF
Sampling Location: UZ-10
Sampling Point: UZ-10
Sampled By: GAMV

Receive Date: 05/04/2012 21:40
Sampling Date: 05/03/2012 14:40
Sample Depth: ---
Lab Matrix: Solids
Sample Type: Soil
Delivery Work Order:
Global ID: L10007011530
Location ID (FieldPoint): UZ-10
Matrix: SO
Sample QC Type (SACode): CS
Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

BCL Sample ID: 1208278-01 | **Client Sample Name:** Hay Road LF, UZ-7, UZ-7, 5/3/2012 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Moisture	**14.0**	**%**	**0.05**	**0.05**	**Calc**	ND		1
pH	**9.12**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	2
pH Measurement Temperature	**23.3**	**C**	**0.1**	**0.1**	**EPA-9045**			2
Solids	**86.0**	**%**	**0.05**	**0.05**	**SM-2540G**			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Calc	05/08/12	05/17/12 17:19	TMS	Calc	1	BVE0679
2	EPA-9045	05/10/12	05/10/12 13:22	RML	B360	1	BVE0923
3	SM-2540G	05/08/12	05/08/12 09:15	RAC	MANUAL	1	BVE0583

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

BCL Sample ID: 1208278-01 | **Client Sample Name:** Hay Road LF, UZ-7, UZ-7, 5/3/2012 2:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**1.9**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.13		1
Nitrate as N	**0.63**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		1
Sulfate	**9.4**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	0.35		1
Ammonia as N	**0.044**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND	**J**	2
Nitrite as N	**0.040**	**mg/L**	**0.050**	**0.0015**	**EPA-353.2**	0.0026	**J**	3
Total Kjeldahl Nitrogen	**0.86**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/12	05/14/12 15:40	LD1	IC5	1	BVE1139
2	EPA-350.1	05/15/12	05/15/12 11:22	SDU	SC-1	1	BVE1182
3	EPA-353.2	05/15/12	05/15/12 10:12	TDC	KONE-1	1	BVE1293
4	EPA-351.2	05/15/12	05/20/12 11:55	SDU	SC-1	1	BVE1194

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

BCL Sample ID: 1208278-02 | **Client Sample Name:** Hay Road LF, UZ-8, UZ-8, 5/3/2012 2:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Moisture	**14.5**	**%**	**0.05**	**0.05**	**Calc**	ND		1
pH	**8.58**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	2
pH Measurement Temperature	**23.5**	**C**	**0.1**	**0.1**	**EPA-9045**			2
Solids	**85.5**	**%**	**0.05**	**0.05**	**SM-2540G**			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Calc	05/08/12	05/17/12 17:19	TMS	Calc	1	BVE0679
2	EPA-9045	05/10/12	05/10/12 13:22	RML	B360	1	BVE0923
3	SM-2540G	05/08/12	05/08/12 09:15	RAC	MANUAL	1	BVE0583

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

BCL Sample ID: 1208278-02 | **Client Sample Name:** Hay Road LF, UZ-8, UZ-8, 5/3/2012 2:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**3.1**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.13		1
Nitrate as N	**0.31**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND		1
Sulfate	**8.6**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	0.35		1
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		2
Nitrite as N	**0.015**	**mg/L**	**0.050**	**0.0015**	**EPA-353.2**	0.0026	**J**	3
Total Kjeldahl Nitrogen	**1.2**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/12	05/14/12 15:54	LD1	IC5	1	BVE1139
2	EPA-350.1	05/15/12	05/15/12 11:19	SDU	SC-1	1	BVE1182
3	EPA-353.2	05/15/12	05/15/12 10:12	TDC	KONE-1	1	BVE1293
4	EPA-351.2	05/15/12	05/20/12 11:52	SDU	SC-1	1	BVE1194

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

BCL Sample ID: 1208278-03 | **Client Sample Name:** Hay Road LF, UZ-9, UZ-9, 5/3/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Moisture	**16.3**	**%**	**0.05**	**0.05**	**Calc**	ND		1
pH	**8.33**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	2
pH Measurement Temperature	**23.0**	**C**	**0.1**	**0.1**	**EPA-9045**			2
Solids	**83.7**	**%**	**0.05**	**0.05**	**SM-2540G**			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Calc	05/08/12	05/17/12 17:19	TMS	Calc	1	BVE0679
2	EPA-9045	05/10/12	05/10/12 13:22	RML	B360	1	BVE0923
3	SM-2540G	05/08/12	05/08/12 09:15	RAC	MANUAL	1	BVE0583

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

BCL Sample ID: 1208278-03 | **Client Sample Name:** Hay Road LF, UZ-9, UZ-9, 5/3/2012 2:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**6.5**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.13		1
Nitrate as N	**0.079**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND	**J**	1
Sulfate	**25**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	0.35		1
Ammonia as N	**0.036**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND	**J**	2
Nitrite as N	**0.018**	**mg/L**	**0.050**	**0.0015**	**EPA-353.2**	0.0026	**J**	3
Total Kjeldahl Nitrogen	**0.89**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/12	05/14/12 16:52	AKB	IC5	1	BVE1139
2	EPA-350.1	05/15/12	05/15/12 11:24	SDU	SC-1	1	BVE1182
3	EPA-353.2	05/15/12	05/15/12 10:12	TDC	KONE-1	1	BVE1293
4	EPA-351.2	05/15/12	05/20/12 11:57	SDU	SC-1	1	BVE1194

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

BCL Sample ID: 1208278-04 | **Client Sample Name:** Hay Road LF, UZ-10, UZ-10, 5/3/2012 2:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Moisture	**23.3**	**%**	**0.05**	**0.05**	**Calc**	ND		1
pH	**8.28**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	2
pH Measurement Temperature	**23.2**	**C**	**0.1**	**0.1**	**EPA-9045**			2
Solids	**76.7**	**%**	**0.05**	**0.05**	**SM-2540G**			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Calc	05/08/12	05/17/12 17:19	TMS	Calc	1	BVE0679
2	EPA-9045	05/10/12	05/10/12 13:22	RML	B360	1	BVE0923
3	SM-2540G	05/08/12	05/08/12 09:15	RAC	MANUAL	1	BVE0583

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

BCL Sample ID: 1208278-04 | **Client Sample Name:** Hay Road LF, UZ-10, UZ-10, 5/3/2012 2:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**1.5**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.13		1
Nitrate as N	**0.089**	**mg/L**	**0.10**	**0.021**	**EPA-300.0**	ND	**J**	1
Sulfate	**8.0**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	0.35		1
Ammonia as N	ND	mg/L	0.050	0.025	EPA-350.1	ND		2
Nitrite as N	**0.024**	**mg/L**	**0.050**	**0.0015**	**EPA-353.2**	0.0026	**J**	3
Total Kjeldahl Nitrogen	**0.79**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/14/12	05/14/12 17:06	AKB	IC5	1	BVE1139
2	EPA-350.1	05/15/12	05/15/12 11:26	SDU	SC-1	1	BVE1182
3	EPA-353.2	05/15/12	05/15/12 10:12	TDC	KONE-1	1	BVE1293
4	EPA-351.2	05/15/12	05/20/12 11:59	SDU	SC-1	1	BVE1194

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0679						
Moisture	BVE0679-BLK1	ND	%	0.05	0.05	

Golder Associates
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Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0923										
pH	BVE0923-BS1	LCS	10.025	10.000	pH Units	100		95 - 105		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Chemical Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0583	Used client sample: Y - Description: UZ-7, 05/03/2012 14:20										
Solids	DUP	1208278-01	86.030	84.870		%	1.4		20		
QC Batch ID: BVE0923	Used client sample: N										
pH	DUP	1208231-01	8.6550	8.6500		pH Units	0.1		20		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1139						
Chloride	BVE1139-BLK1	0.12900	mg/L	0.50	0.066	J
Nitrate as N	BVE1139-BLK1	ND	mg/L	0.10	0.021	
Sulfate	BVE1139-BLK1	0.35200	mg/L	1.0	0.12	J
QC Batch ID: BVE1182						
Ammonia as N	BVE1182-BLK1	ND	mg/L	0.050	0.025	
QC Batch ID: BVE1194						
Total Kjeldahl Nitrogen	BVE1194-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE1293						
Nitrite as N	BVE1293-BLK1	0.026250	mg/L	0.50	0.015	J

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE1139										
Chloride	BVE1139-BS1	LCS	51.089	50.000	mg/L	102		90 - 110		
Nitrate as N	BVE1139-BS1	LCS	5.0900	5.0000	mg/L	102		90 - 110		
Sulfate	BVE1139-BS1	LCS	102.36	100.00	mg/L	102		90 - 110		
QC Batch ID: BVE1182										
Ammonia as N	BVE1182-BS1	LCS	0.95330	1.0000	mg/L	95.3		90 - 110		
QC Batch ID: BVE1194										
Total Kjeldahl Nitrogen	BVE1194-BS1	LCS	1.8231	2.0000	mg/L	91.2		85 - 115		
QC Batch ID: BVE1293										
Nitrite as N	BVE1293-BS1	LCS	0.48552	0.50000	mg/L	97.1		90 - 110		

Golder Associates
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Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Modified WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE1139	Used client sample: Y - Description: UZ-8, 05/03/2012 14:05										
Chloride	DUP	1208278-02	3.1150	3.0880		mg/L	0.9		20		
	MS	1208278-02	3.1150	56.062	50.505	mg/L		105		80 - 120	
	MSD	1208278-02	3.1150	56.098	50.505	mg/L	0.1	105	20	80 - 120	
Nitrate as N	DUP	1208278-02	0.30600	0.27500		mg/L	10.7		20		
	MS	1208278-02	0.30600	5.5121	5.0505	mg/L		103		80 - 120	
	MSD	1208278-02	0.30600	5.5232	5.0505	mg/L	0.2	103	20	80 - 120	
Sulfate	DUP	1208278-02	8.6170	8.1620		mg/L	5.4		20		
	MS	1208278-02	8.6170	114.29	101.01	mg/L		105		80 - 120	
	MSD	1208278-02	8.6170	115.21	101.01	mg/L	0.8	106	20	80 - 120	
QC Batch ID: BVE1182	Used client sample: Y - Description: UZ-8, 05/03/2012 14:05										
Ammonia as N	DUP	1208278-02	ND	ND		mg/L			20		
	MS	1208278-02	ND	1.0864	1.1111	mg/L		97.8		90 - 110	
	MSD	1208278-02	ND	1.0882	1.1111	mg/L	0.2	97.9	20	90 - 110	
QC Batch ID: BVE1194	Used client sample: Y - Description: UZ-8, 05/03/2012 14:05										
Total Kjeldahl Nitrogen	DUP	1208278-02	1.2227	1.2105		mg/L	1.0		20		
	MS	1208278-02	1.2227	3.2172	2.0000	mg/L		99.7		80 - 120	
	MSD	1208278-02	1.2227	3.2866	2.0000	mg/L	2.1	103	20	80 - 120	
QC Batch ID: BVE1293	Used client sample: Y - Description: UZ-8, 05/03/2012 14:05										
Nitrite as N	DUP	1208278-02	0.015396	0.14630		mg/L	162		20		J,A02
	MS	1208278-02	0.015396	0.51895	0.52632	mg/L		95.7		90 - 110	
	MSD	1208278-02	0.015396	0.51967	0.52632	mg/L	0.1	95.8	20	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 11:48
Project: Hay Road LF
Project Number: 053-7444-11
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
pH1:1	pH result reported on a 1:1 dilution of sample

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/22/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project: Hay Road LF
BC Work Order: 1208363
Invoice ID: B122640

Enclosed are the results of analyses for samples received by the laboratory on 5/7/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208363-01 Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM						
Dichlorodifluoromethane	0.46	1.0	0.099	ug/L	EPA-8260	J
Bicarbonate Alkalinity as CaCO3	620	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	620	8.2	8.2	mg/L	SM-2320B	
Chloride	200	1.0	0.13	mg/L	EPA-300.0	A01
Sulfate	23	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	980	50	50	mg/L	SM-2540C	
Dissolved Barium	0.48	0.010	0.0012	mg/L	EPA-6010B	
Dissolved Iron	0.51	0.050	0.0050	mg/L	EPA-6010B	
Dissolved Manganese	0.42	0.010	0.0010	mg/L	EPA-6010B	
1208363-02 Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM						
Bicarbonate Alkalinity as CaCO3	350	4.1	4.1	mg/L	SM-2320B	
Total Alkalinity as CaCO3	350	4.1	4.1	mg/L	SM-2320B	
Chloride	100	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.064	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	31	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	430	33	33	mg/L	SM-2540C	
1208363-03 Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM						
Bicarbonate Alkalinity as CaCO3	370	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	370	8.2	8.2	mg/L	SM-2320B	
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.3	0.10	0.010	mg/L	EPA-353.2	
Sulfate	30	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	650	33	33	mg/L	SM-2540C	
Dissolved Chromium	0.0011	0.010	0.0010	mg/L	EPA-6010B	J
1208363-04 Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM						
Bicarbonate Alkalinity as CaCO3	590	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	590	8.2	8.2	mg/L	SM-2320B	
Chloride	380	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.35	0.10	0.010	mg/L	EPA-353.2	
Sulfate	230	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1600	100	100	mg/L	SM-2540C	
1208363-05 Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM						
Bicarbonate Alkalinity as CaCO3	520	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	520	8.2	8.2	mg/L	SM-2320B	
Chloride	510	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	1.7	0.10	0.010	mg/L	EPA-353.2	
Sulfate	310	5.0	0.60	mg/L	EPA-300.0	A01

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208363-05 **Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM**						
Total Dissolved Solids @ 180 C	1800	100	100	mg/L	SM-2540C	
1208363-06 **Recology Hay Road, QCEB, QCEB, 5/7/2012 12:00:00AM**						
Chloroform	5.5	1.0	0.12	ug/L	EPA-8260	
Acetone	5.5	10	4.6	ug/L	EPA-8260	J

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1

Quotation No. 1208363

PROJECT NO.:	SITE NAME:
053-7444-12	Petrology Hay Road

SAMPLER(S): R. MacCarthy (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: STANDARD

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info: Type/Vol.	Filter	Preserv.	ANALYSES: BTEX 8260	Shore List TDS, Cl, TSS	Alk, Cmds, Sulfides	NO3+NO2-N	As, Cr	Cont. Qty.	Remarks
						VOA 40 ml	P/U 1 l 0Z	P/U 2 0Z	P/U 1 l 0Z						
						N	NF	N	Y						
						HCl	None	H_2SO_4	HNO_3						
G-9	-1	5/7/12	1100	W		3	1	1	1					6	Report TRACE
G-10R	-2		1155			3	1	1	1					6	for 8260
G-11M	-3		1305			3	1	1	1					6	
P-1	-4		1340			3	1	1	1					6	
4B	-5		1410			3	1	1	1					6	

CHK BY KQ

SUB-OUT

Relinquished by: (signature)	Received by: (signature)	Date/Time:
	Ross Dickey	5/7/12 1450
Relinquished by: (signature) Ross Dickey 5-7-12	Received by: (signature) Mary Bogan	Date/Time: 5-7-12 1710
Relinquished by: (signature) Mary Bogan 5-7-12 1830	Received by: (signature) Fed Ex	Date/Time: 5-7-12 1830

white: lab copy yellow: project file

Rel - Fed Ex 5-7-12 22:30 Komex 5-7-12 2230

SEND RESULTS TO:

Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1208363 Page 1 of 2

Chain of Custody and Cooler Receipt Form for 1208363 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1208363

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: 0.98 Container: PAPR Thermometer ID: 177
Temperature: A 0.6 °C / C 0.7 °C

Date/Time 5-7-12
Analyst Init JNW 2245

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	B	B	B	B					
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C	C	C					
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE	D	D	D	D	D					
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A,B	A3	A3	A3	A3	A3				
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ JAR										
32 OZ JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: JNW Date/Time: 5/7/12 2340
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208363-01	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 11:00
	Sampling Location:	G-9	**Sample Depth:** ---
	Sampling Point:	G-9	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-9
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208363-02	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 11:55
	Sampling Location:	G-10R	**Sample Depth:** ---
	Sampling Point:	G-10R	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-10R
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208363-03	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 13:05
	Sampling Location:	G-11M	**Sample Depth:** ---
	Sampling Point:	G-11M	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-11M
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208363-04	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 13:40
	Sampling Location:	P-1	**Sample Depth:** ---
	Sampling Point:	P-1	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): P-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208363-05	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 14:10
	Sampling Location:	4B	**Sample Depth:** ---
	Sampling Point:	4B	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): 4B
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208363-06	**COC Number:**	---	**Receive Date:** 05/07/2012 22:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/07/2012 00:00
	Sampling Location:	QCEB	**Sample Depth:** ---
	Sampling Point:	QCEB	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): QCEB
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-01 | **Client Sample Name:** Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	**0.46**	**ug/L**	**1.0**	**0.099**	**EPA-8260**	ND	**J**	1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-01 | **Client Sample Name:** Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-01 | **Client Sample Name:** Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	89.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	97.7	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.0	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 13:51	KEA	HPCHEM	1	BVE0867

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208363-01 | **Client Sample Name:** Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**620**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**620**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**200**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	ND	mg/L	0.10	0.010	EPA-353.2	ND		3
Sulfate	**23**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**980**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/09/12 00:05	RML	MET-1	2	BVE0616
2	EPA-300.0	05/14/12	05/14/12 12:33	LD1	IC5	2	BVE1138
3	EPA-353.2	05/14/12	05/14/12 14:36	SDU	SC-1	1	BVE1057
4	SM-2540C	05/08/12	05/08/12 08:05	NW1	MANUAL	5	BVE0550

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208363-01 | **Client Sample Name:** Recology Hay Road, G-9, G-9, 5/7/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Barium	**0.48**	**mg/L**	**0.010**	**0.0012**	**EPA-6010B**	0.0026		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Dissolved Iron	**0.51**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND		1
Dissolved Manganese	**0.42**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/12	05/09/12 10:21	ARD	PE-OP2	1	BVE0509

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-02 | **Client Sample Name:** Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-02 | **Client Sample Name:** Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-02 | **Client Sample Name:** Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	97.3	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	98.1	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.8	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 08:32	KEA	HPCHEM	1	BVE0867

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208363-02 | **Client Sample Name:** Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**350**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		1
Total Alkalinity as CaCO3	**350**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**100**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	ND		2
Nitrate/Nitrite as N	**0.064**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND	**J**	3
Sulfate	**31**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**430**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/09/12 00:16	RML	MET-1	1	BVE0616
2	EPA-300.0	05/14/12	05/14/12 13:16	LD1	IC5	1	BVE1138
3	EPA-353.2	05/14/12	05/14/12 14:40	SDU	SC-1	1	BVE1057
4	SM-2540C	05/08/12	05/08/12 08:05	NW1	MANUAL	3.333	BVE0550

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208363-02 | **Client Sample Name:** Recology Hay Road, G-10R, G-10R, 5/7/2012 11:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/12	05/09/12 10:22	ARD	PE-OP2	1	BVE0509

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-03 | **Client Sample Name:** Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-03 | **Client Sample Name:** Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-03 | **Client Sample Name:** Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	93.4	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	99.0	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.5	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 08:07	KEA	HPCHEM	1	BVE0867

Golder Associates
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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208363-03 | **Client Sample Name:** Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**370**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**370**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**120**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	ND		2
Nitrate/Nitrite as N	**1.3**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**30**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**650**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/09/12 00:22	RML	MET-1	2	BVE0616
2	EPA-300.0	05/14/12	05/14/12 13:30	LD1	IC5	1	BVE1138
3	EPA-353.2	05/14/12	05/14/12 14:41	SDU	SC-1	1	BVE1057
4	SM-2540C	05/08/12	05/08/12 08:05	NW1	MANUAL	3.333	BVE0550

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208363-03 | **Client Sample Name:** Recology Hay Road, G-11M, G-11M, 5/7/2012 1:05:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	**0.0011**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/12	05/09/12 10:24	ARD	PE-OP2	1	BVE0509

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-04 | **Client Sample Name:** Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-04 | **Client Sample Name:** Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-04 | **Client Sample Name:** Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	92.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	98.8	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.9	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 07:42	KEA	HPCHEM	1	BVE0867

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208363-04 | **Client Sample Name:** Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**590**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**590**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**380**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**0.35**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**230**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1600**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/09/12 00:27	RML	MET-1	2	BVE0616
2	EPA-300.0	05/14/12	05/14/12 13:45	LD1	IC5	2	BVE1138
3	EPA-353.2	05/21/12	05/22/12 08:55	SDU	SC-1	1	BVE1635
4	SM-2540C	05/08/12	05/08/12 08:05	NW1	MANUAL	10	BVE0550

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208363-04 | **Client Sample Name:** Recology Hay Road, P-1, P-1, 5/7/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/12	05/09/12 10:26	ARD	PE-OP2	1	BVE0509

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-05 | **Client Sample Name:** Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-05 | **Client Sample Name:** Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
425 Lakeside Drive
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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-05 | **Client Sample Name:** Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	88.9	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.5	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 07:17	KEA	HPCHEM	1	BVE0867

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208363-05 | **Client Sample Name:** Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**520**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**520**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**510**	**mg/L**	**2.5**	**0.33**	**EPA-300.0**	ND	**A01**	2
Nitrate/Nitrite as N	**1.7**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**310**	**mg/L**	**5.0**	**0.60**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1800**	**mg/L**	**100**	**100**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/08/12	05/09/12 00:33	RML	MET-1	2	BVE0616
2	EPA-300.0	05/14/12	05/14/12 13:59	LD1	IC5	5	BVE1138
3	EPA-353.2	05/21/12	05/22/12 08:57	SDU	SC-1	1	BVE1635
4	SM-2540C	05/08/12	05/08/12 08:05	NW1	MANUAL	10	BVE0550

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208363-05 | **Client Sample Name:** Recology Hay Road, 4B, 4B, 5/7/2012 2:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/12	05/09/12 10:28	ARD	PE-OP2	1	BVE0509

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-06 | **Client Sample Name:** Recology Hay Road, QCEB, QCEB, 5/7/2012 12:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	**5.5**	**ug/L**	**1.0**	**0.12**	**EPA-8260**	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-06 | **Client Sample Name:** Recology Hay Road, QCEB, QCEB, 5/7/2012 12:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	**5.5**	**ug/L**	**10**	**4.6**	**EPA-8260**	ND	**J**	1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208363-06 | **Client Sample Name:** Recology Hay Road, QCEB, QCEB, 5/7/2012 12:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	97.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	99.8	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.3	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/10/12 13:34	KEA	HPCHEM	1	BVE0865

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0865						
Benzene	BVE0865-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE0865-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE0865-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE0865-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE0865-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE0865-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE0865-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE0865-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE0865-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE0865-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE0865-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE0865-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE0865-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE0865-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE0865-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE0865-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE0865-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE0865-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE0865-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE0865-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE0865-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE0865-BLK1	ND	ug/L	1.0	0.11	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0865						
Naphthalene	BVE0865-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE0865-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE0865-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE0865-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE0865-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE0865-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE0865-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE0865-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE0865-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE0865-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE0865-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE0865-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE0865-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE0865-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE0865-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE0865-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE0865-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE0865-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE0865-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE0865-BLK1	ND	ug/L	100	42	
Ethanol	BVE0865-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE0865-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE0865-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE0865-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE0865-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE0865-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE0865-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE0865-BLK1	103	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE0865-BLK1	101	%	88 - 110 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0865						
4-Bromofluorobenzene (Surrogate)	BVE0865-BLK1	101	%	86 - 115 (LCL - UCL)		
QC Batch ID: BVE0867						
Benzene	BVE0867-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE0867-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE0867-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE0867-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE0867-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE0867-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE0867-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE0867-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE0867-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE0867-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE0867-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE0867-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE0867-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE0867-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE0867-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE0867-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE0867-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE0867-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE0867-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.098	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0867						
Hexachlorobutadiene	BVE0867-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE0867-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE0867-BLK1	ND	ug/L	1.0	0.11	
Naphthalene	BVE0867-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE0867-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE0867-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE0867-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE0867-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE0867-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE0867-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE0867-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE0867-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE0867-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE0867-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE0867-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE0867-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE0867-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE0867-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE0867-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE0867-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE0867-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE0867-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE0867-BLK1	ND	ug/L	100	42	
Ethanol	BVE0867-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE0867-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE0867-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE0867-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE0867-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE0867-BLK1	ND	ug/L	10	2.1	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0867						
Vinyl acetate	BVE0867-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE0867-BLK1	96.2	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE0867-BLK1	98.3	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BVE0867-BLK1	98.3	%	86 - 115 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0865										
Benzene	BVE0865-BS1	LCS	21.610	25.000	ug/L	86.4		70 - 130		
Bromodichloromethane	BVE0865-BS1	LCS	23.250	25.000	ug/L	93.0		70 - 130		
Chlorobenzene	BVE0865-BS1	LCS	24.870	25.000	ug/L	99.5		70 - 130		
Chloroethane	BVE0865-BS1	LCS	23.700	25.000	ug/L	94.8		70 - 130		
1,4-Dichlorobenzene	BVE0865-BS1	LCS	27.450	25.000	ug/L	110		70 - 130		
1,1-Dichloroethane	BVE0865-BS1	LCS	21.030	25.000	ug/L	84.1		70 - 130		
1,1-Dichloroethene	BVE0865-BS1	LCS	20.990	25.000	ug/L	84.0		70 - 130		
Toluene	BVE0865-BS1	LCS	23.620	25.000	ug/L	94.5		70 - 130		
Trichloroethene	BVE0865-BS1	LCS	24.420	25.000	ug/L	97.7		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE0865-BS1	LCS	8.9000	10.000	ug/L	89.0		76 - 114		
Toluene-d8 (Surrogate)	BVE0865-BS1	LCS	10.010	10.000	ug/L	100		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE0865-BS1	LCS	9.7000	10.000	ug/L	97.0		86 - 115		
QC Batch ID: BVE0867										
Benzene	BVE0867-BS1	LCS	25.500	25.000	ug/L	102		70 - 130		
Bromodichloromethane	BVE0867-BS1	LCS	27.200	25.000	ug/L	109		70 - 130		
Chlorobenzene	BVE0867-BS1	LCS	27.760	25.000	ug/L	111		70 - 130		
Chloroethane	BVE0867-BS1	LCS	26.830	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BVE0867-BS1	LCS	27.370	25.000	ug/L	109		70 - 130		
1,1-Dichloroethane	BVE0867-BS1	LCS	25.170	25.000	ug/L	101		70 - 130		
1,1-Dichloroethene	BVE0867-BS1	LCS	24.600	25.000	ug/L	98.4		70 - 130		
Toluene	BVE0867-BS1	LCS	27.310	25.000	ug/L	109		70 - 130		
Trichloroethene	BVE0867-BS1	LCS	31.810	25.000	ug/L	127		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE0867-BS1	LCS	9.2500	10.000	ug/L	92.5		76 - 114		
Toluene-d8 (Surrogate)	BVE0867-BS1	LCS	10.100	10.000	ug/L	101		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE0867-BS1	LCS	9.8200	10.000	ug/L	98.2		86 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0865	Used client sample: N										
Benzene	MS	1207076-42	ND	22.830	25.000	ug/L		91.3		70 - 130	
	MSD	1207076-42	ND	23.480	25.000	ug/L	2.8	93.9	20	70 - 130	
Bromodichloromethane	MS	1207076-42	ND	24.570	25.000	ug/L		98.3		70 - 130	
	MSD	1207076-42	ND	25.270	25.000	ug/L	2.8	101	20	70 - 130	
Chlorobenzene	MS	1207076-42	ND	26.010	25.000	ug/L		104		70 - 130	
	MSD	1207076-42	ND	26.800	25.000	ug/L	3.0	107	20	70 - 130	
Chloroethane	MS	1207076-42	ND	24.960	25.000	ug/L		99.8		70 - 130	
	MSD	1207076-42	ND	25.560	25.000	ug/L	2.4	102	20	70 - 130	
1,4-Dichlorobenzene	MS	1207076-42	ND	28.410	25.000	ug/L		114		70 - 130	
	MSD	1207076-42	ND	29.820	25.000	ug/L	4.8	119	20	70 - 130	
1,1-Dichloroethane	MS	1207076-42	ND	22.370	25.000	ug/L		89.5		70 - 130	
	MSD	1207076-42	ND	22.850	25.000	ug/L	2.1	91.4	20	70 - 130	
1,1-Dichloroethene	MS	1207076-42	ND	21.960	25.000	ug/L		87.8		70 - 130	
	MSD	1207076-42	ND	22.660	25.000	ug/L	3.1	90.6	20	70 - 130	
Toluene	MS	1207076-42	ND	24.620	25.000	ug/L		98.5		70 - 130	
	MSD	1207076-42	ND	25.340	25.000	ug/L	2.9	101	20	70 - 130	
Trichloroethene	MS	1207076-42	ND	25.390	25.000	ug/L		102		70 - 130	
	MSD	1207076-42	ND	26.060	25.000	ug/L	2.6	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1207076-42	ND	8.9200	10.000	ug/L		89.2		76 - 114	
	MSD	1207076-42	ND	8.9800	10.000	ug/L	0.7	89.8		76 - 114	
Toluene-d8 (Surrogate)	MS	1207076-42	ND	10.070	10.000	ug/L		101		88 - 110	
	MSD	1207076-42	ND	9.9700	10.000	ug/L	1.0	99.7		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1207076-42	ND	9.7700	10.000	ug/L		97.7		86 - 115	
	MSD	1207076-42	ND	9.7500	10.000	ug/L	0.2	97.5		86 - 115	
QC Batch ID: BVE0867	Used client sample: N										
Benzene	MS	1207076-41	ND	25.670	25.000	ug/L		103		70 - 130	
	MSD	1207076-41	ND	25.660	25.000	ug/L	0.0	103	20	70 - 130	
Bromodichloromethane	MS	1207076-41	ND	27.080	25.000	ug/L		108		70 - 130	
	MSD	1207076-41	ND	27.380	25.000	ug/L	1.1	110	20	70 - 130	
Chlorobenzene	MS	1207076-41	ND	27.540	25.000	ug/L		110		70 - 130	
	MSD	1207076-41	ND	27.580	25.000	ug/L	0.1	110	20	70 - 130	
Chloroethane	MS	1207076-41	ND	26.930	25.000	ug/L		108		70 - 130	
	MSD	1207076-41	ND	26.980	25.000	ug/L	0.2	108	20	70 - 130	
1,4-Dichlorobenzene	MS	1207076-41	ND	27.390	25.000	ug/L		110		70 - 130	
	MSD	1207076-41	ND	27.770	25.000	ug/L	1.4	111	20	70 - 130	
1,1-Dichloroethane	MS	1207076-41	ND	25.350	25.000	ug/L		101		70 - 130	
	MSD	1207076-41	ND	25.460	25.000	ug/L	0.4	102	20	70 - 130	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0867	Used client sample: N										
1,1-Dichloroethene	MS	1207076-41	ND	24.290	25.000	ug/L		97.2		70 - 130	
	MSD	1207076-41	ND	24.630	25.000	ug/L	1.4	98.5	20	70 - 130	
Toluene	MS	1207076-41	ND	26.890	25.000	ug/L		108		70 - 130	
	MSD	1207076-41	ND	26.930	25.000	ug/L	0.1	108	20	70 - 130	
Trichloroethene	MS	1207076-41	ND	30.350	25.000	ug/L		121		70 - 130	
	MSD	1207076-41	ND	30.830	25.000	ug/L	1.6	123	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1207076-41	ND	9.5500	10.000	ug/L		95.5		76 - 114	
	MSD	1207076-41	ND	9.6300	10.000	ug/L	0.8	96.3		76 - 114	
Toluene-d8 (Surrogate)	MS	1207076-41	ND	10.100	10.000	ug/L		101		88 - 110	
	MSD	1207076-41	ND	9.9900	10.000	ug/L	1.1	99.9		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1207076-41	ND	9.8500	10.000	ug/L		98.5		86 - 115	
	MSD	1207076-41	ND	9.9900	10.000	ug/L	1.4	99.9		86 - 115	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0550						
Total Dissolved Solids @ 180 C	BVE0550-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0616						
Bicarbonate Alkalinity as CaCO3	BVE0616-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0616-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0616-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE1057						
Nitrate/Nitrite as N	BVE1057-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1138						
Chloride	BVE1138-BLK1	ND	mg/L	0.50	0.066	
Sulfate	BVE1138-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE1635						
Nitrate/Nitrite as N	BVE1635-BLK1	ND	mg/L	0.10	0.010	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0550										
Total Dissolved Solids @ 180 C	BVE0550-BS1	LCS	540.00	586.00	mg/L	92.2		90 - 110		
QC Batch ID: BVE0616										
Total Alkalinity as CaCO3	BVE0616-BS3	LCS	97.670	100.00	mg/L	97.7		90 - 110		
QC Batch ID: BVE1057										
Nitrate/Nitrite as N	BVE1057-BS1	LCS	2.0095	2.0000	mg/L	100		90 - 110		
QC Batch ID: BVE1138										
Chloride	BVE1138-BS1	LCS	50.652	50.000	mg/L	101		90 - 110		
Sulfate	BVE1138-BS1	LCS	100.81	100.00	mg/L	101		90 - 110		
QC Batch ID: BVE1635										
Nitrate/Nitrite as N	BVE1635-BS1	LCS	1.9733	2.0000	mg/L	98.7		90 - 110		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0550	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1208361-01	1150.0	1115.0		mg/L	3.1		10		
QC Batch ID: BVE0616	Used client sample: Y - Description: G-9, 05/07/2012 11:00										
Bicarbonate Alkalinity as CaCO3	DUP	1208363-01	617.96	622.83		mg/L	0.8		10		
Carbonate Alkalinity as CaCO3	DUP	1208363-01	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208363-01	617.96	622.83		mg/L	0.8		10		
QC Batch ID: BVE1057	Used client sample: Y - Description: G-1, 05/04/2012 10:25										
Nitrate/Nitrite as N	DUP	1208277-01	0.99590	0.96600		mg/L	3.0		10		
	MS	1208277-01	0.99590	3.1627	2.1053	mg/L		103		90 - 110	
	MSD	1208277-01	0.99590	3.2108	2.1053	mg/L	1.5	105	10	90 - 110	
QC Batch ID: BVE1138	Used client sample: N										
Chloride	DUP	1208340-01	194.46	192.60		mg/L	1.0		10		
	MS	1208340-01	194.46	296.45	101.01	mg/L		101		80 - 120	
	MSD	1208340-01	194.46	294.16	101.01	mg/L	0.8	98.7	10	80 - 120	
Sulfate	DUP	1208340-01	340.47	344.36		mg/L	1.1		10		
	MS	1208340-01	340.47	556.18	202.02	mg/L		107		80 - 120	
	MSD	1208340-01	340.47	555.61	202.02	mg/L	0.1	106	10	80 - 120	
QC Batch ID: BVE1635	Used client sample: Y - Description: SW-3, 05/08/2012 11:15										
Nitrate/Nitrite as N	DUP	1208477-01	2.1435	2.1526		mg/L	0.4		10		
	MS	1208477-01	2.1435	4.1789	2.1053	mg/L		96.7		90 - 110	
	MSD	1208477-01	2.1435	4.1869	2.1053	mg/L	0.2	97.1	10	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0509						
Dissolved Arsenic	BVE0509-BLK1	ND	mg/L	0.050	0.0075	
Dissolved Barium	BVE0509-BLK1	0.0025556	mg/L	0.010	0.0012	J
Dissolved Chromium	BVE0509-BLK1	ND	mg/L	0.010	0.0010	
Dissolved Iron	BVE0509-BLK1	ND	mg/L	0.050	0.0050	
Dissolved Manganese	BVE0509-BLK1	ND	mg/L	0.010	0.0010	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0509										
Dissolved Arsenic	BVE0509-BS1	LCS	0.18884	0.20000	mg/L	94.4		85 - 115		
Dissolved Barium	BVE0509-BS1	LCS	0.39151	0.40000	mg/L	97.9		85 - 115		
Dissolved Chromium	BVE0509-BS1	LCS	0.20465	0.20000	mg/L	102		85 - 115		
Dissolved Iron	BVE0509-BS1	LCS	0.99336	1.0000	mg/L	99.3		85 - 115		
Dissolved Manganese	BVE0509-BS1	LCS	0.49570	0.50000	mg/L	99.1		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0509	Used client sample: N										
Dissolved Arsenic	DUP	1208104-01	ND	ND		mg/L			20		
	MS	1208104-01	ND	0.21440	0.20408	mg/L		105		75 - 125	
	MSD	1208104-01	ND	0.20367	0.20408	mg/L	5.1	99.8	20	75 - 125	
Dissolved Barium	DUP	1208104-01	0.087799	0.085235		mg/L	3.0		20		
	MS	1208104-01	0.087799	0.49425	0.40816	mg/L		99.6		75 - 125	
	MSD	1208104-01	0.087799	0.48090	0.40816	mg/L	2.7	96.3	20	75 - 125	
Dissolved Chromium	DUP	1208104-01	ND	ND		mg/L			20		
	MS	1208104-01	ND	0.21207	0.20408	mg/L		104		75 - 125	
	MSD	1208104-01	ND	0.21116	0.20408	mg/L	0.4	103	20	75 - 125	
Dissolved Iron	DUP	1208104-01	ND	ND		mg/L			20		
	MS	1208104-01	ND	1.0221	1.0204	mg/L		100		75 - 125	
	MSD	1208104-01	ND	0.97681	1.0204	mg/L	4.5	95.7	20	75 - 125	
Dissolved Manganese	DUP	1208104-01	0.010712	0.011200		mg/L	4.5		20		
	MS	1208104-01	0.010712	0.53398	0.51020	mg/L		103		75 - 125	
	MSD	1208104-01	0.010712	0.51979	0.51020	mg/L	2.7	99.8	20	75 - 125	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A40	Initial calibration linearity criteria not met.
V01	The Initial Calibration Verification (ICV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/22/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1208478
Invoice ID:	B122641

Enclosed are the results of analyses for samples received by the laboratory on 5/8/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208478-01 Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM						
Bicarbonate Alkalinity as CaCO3	320	4.1	4.1	mg/L	SM-2320B	
Total Alkalinity as CaCO3	320	4.1	4.1	mg/L	SM-2320B	
Chloride	98	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.9	0.10	0.010	mg/L	EPA-353.2	
Sulfate	26	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	590	33	33	mg/L	SM-2540C	
1208478-02 Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM						
Bicarbonate Alkalinity as CaCO3	350	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	350	8.2	8.2	mg/L	SM-2320B	
Chloride	290	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	2.2	0.10	0.010	mg/L	EPA-353.2	
Sulfate	35	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	970	50	50	mg/L	SM-2540C	

Golder Associates
CHAIN OF CUSTODY

Golder Associates #1208478

Page 1 of 1

Quotation No.

PROJECT NO.:	SITE NAME:
053-7444-12	RECOLOGY HAY ROAD

SAMPLER(S): R. McCARTHY (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: STANDARD

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

ANALYSES: BTEX 8260; TDS, Cl, SO4, Alk, Ca, Mg, K, Na, B (CAM); NO3 + NO2 - N; As, Cr

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info: Type/Vol.	Filter	Preserv.	Cont. Qty.	Remarks
						VOA 40ml	1 liter PE	Plastic 250mL	Plastic 1 liter	
						N	N	N	Y	
						HCl	None	H_2SO_4	HNO_3	
GI-11R	-1	5/8/12	0950	W		3	1	1	1	6 REPORT TRACE
GI-7R	-2	5/8/12	1025	W		3	1	1	1	6 FOR 8260

CHK BY: [signature]

DISTRIBUTION: MW MOTSEP

SUB-OUT [ ]

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	[signature]	5/8/12 1400
Relinquished by: (signature) [signature] 5-8-12	Received by: (signature) [signature]	Date/Time: 5-8-12 19:30
Relinquished by: (signature) [signature] 5-8-12 23:30	Received by: (signature) [signature]	Date/Time: 5-8-12 2330

white: lab copy yellow: project file

SEND RESULTS TO:
Attn: KRIS JOHNSON
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1208478 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1208478

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☐ No ☑

COC Received ☑ YES ☐ NO

Emissivity: 0.98 Container: Qtpp Thermometer ID: 177

Temperature: A 0.8 °C / C 0.9 °C

Date/Time 5-8-12

Analyst Init JNW 2310

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	B								
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C								
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE	D	D								
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A (3)	A (3)	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: NO description on -2B
Sample Numbering Completed By: BLF Date/Time: 5/9/12@ 0740
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208478-01	**COC Number:**	---	**Receive Date:** 05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/08/2012 09:50
	Sampling Location:	G-11R	**Sample Depth:** ---
	Sampling Point:	G-11R	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-11R
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208478-02	**COC Number:**	---	**Receive Date:** 05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/08/2012 10:25
	Sampling Location:	G-27	**Sample Depth:** ---
	Sampling Point:	G-27	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): G-27
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-01 | **Client Sample Name:** Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-01 | **Client Sample Name:** Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-01 | **Client Sample Name:** Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	97.2	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	105	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	93.7	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/11/12 18:26	JCC	MS-V4	1	BVE0869

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208478-01 | **Client Sample Name:** Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**320**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		1
Total Alkalinity as CaCO3	**320**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**98**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.17		2
Nitrate/Nitrite as N	**1.9**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	0.011		3
Sulfate	**26**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**590**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/11/12	05/11/12 11:11	RML	MET-1	1	BVE0988
2	EPA-300.0	05/15/12	05/15/12 13:40	LD1	IC2	1	BVE1198
3	EPA-353.2	05/21/12	05/22/12 09:18	SDU	SC-1	1	BVE1636
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0832

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208478-01 | **Client Sample Name:** Recology Hay Road, G-11R, G-11R, 5/8/2012 9:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/10/12	05/11/12 08:45	ARD	PE-OP1	1	BVE0958

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-02 | **Client Sample Name:** Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

Golder Associates
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Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-02 | **Client Sample Name:** Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

Golder Associates
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Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208478-02 | **Client Sample Name:** Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	93.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	105	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/11/12 23:54	JCC	MS-V4	1	BVE0869

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208478-02 | **Client Sample Name:** Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**350**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**350**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**290**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.33	**A01**	2
Nitrate/Nitrite as N	**2.2**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	0.011		3
Sulfate	**35**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**970**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/11/12	05/11/12 11:17	RML	MET-1	2	BVE0988
2	EPA-300.0	05/15/12	05/15/12 14:34	LD1	IC2	2	BVE1198
3	EPA-353.2	05/21/12	05/22/12 09:19	SDU	SC-1	1	BVE1636
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	5	BVE0832

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208478-02 | **Client Sample Name:** Recology Hay Road, G-27, G-27, 5/8/2012 10:25:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/10/12	05/11/12 08:53	ARD	PE-OP1	1	BVE0958

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
Benzene	BVE0869-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE0869-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE0869-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE0869-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE0869-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE0869-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE0869-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE0869-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE0869-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE0869-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE0869-BLK1	ND	ug/L	1.0	0.11	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
Naphthalene	BVE0869-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE0869-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE0869-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE0869-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE0869-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE0869-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE0869-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE0869-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE0869-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE0869-BLK1	ND	ug/L	100	42	
Ethanol	BVE0869-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE0869-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE0869-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE0869-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE0869-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE0869-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE0869-BLK1	109	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE0869-BLK1	105	%	88 - 110 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
4-Bromofluorobenzene (Surrogate)	BVE0869-BLK1	98.4	%	86 - 115 (LCL - UCL)		

Golder Associates
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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0869										
Benzene	BVE0869-BS1	LCS	26.010	25.000	ug/L	104		70 - 130		
Bromodichloromethane	BVE0869-BS1	LCS	23.430	25.000	ug/L	93.7		70 - 130		
Chlorobenzene	BVE0869-BS1	LCS	25.430	25.000	ug/L	102		70 - 130		
Chloroethane	BVE0869-BS1	LCS	26.710	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BVE0869-BS1	LCS	25.940	25.000	ug/L	104		70 - 130		
1,1-Dichloroethane	BVE0869-BS1	LCS	26.580	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	BVE0869-BS1	LCS	23.500	25.000	ug/L	94.0		70 - 130		
Toluene	BVE0869-BS1	LCS	25.930	25.000	ug/L	104		70 - 130		
Trichloroethene	BVE0869-BS1	LCS	26.670	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE0869-BS1	LCS	10.430	10.000	ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BVE0869-BS1	LCS	10.230	10.000	ug/L	102		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE0869-BS1	LCS	10.530	10.000	ug/L	105		86 - 115		

Golder Associates
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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0869	Used client sample: N										
Benzene	MS	1208340-06	ND	26.870	25.000	ug/L		107		70 - 130	
	MSD	1208340-06	ND	26.520	25.000	ug/L	1.3	106	20	70 - 130	
Bromodichloromethane	MS	1208340-06	ND	21.880	25.000	ug/L		87.5		70 - 130	
	MSD	1208340-06	ND	20.530	25.000	ug/L	6.4	82.1	20	70 - 130	
Chlorobenzene	MS	1208340-06	ND	24.350	25.000	ug/L		97.4		70 - 130	
	MSD	1208340-06	ND	25.150	25.000	ug/L	3.2	101	20	70 - 130	
Chloroethane	MS	1208340-06	ND	30.550	25.000	ug/L		122		70 - 130	
	MSD	1208340-06	ND	28.270	25.000	ug/L	7.8	113	20	70 - 130	
1,4-Dichlorobenzene	MS	1208340-06	ND	24.340	25.000	ug/L		97.4		70 - 130	
	MSD	1208340-06	ND	24.270	25.000	ug/L	0.3	97.1	20	70 - 130	
1,1-Dichloroethane	MS	1208340-06	ND	26.920	25.000	ug/L		108		70 - 130	
	MSD	1208340-06	ND	25.300	25.000	ug/L	6.2	101	20	70 - 130	
1,1-Dichloroethene	MS	1208340-06	ND	24.150	25.000	ug/L		96.6		70 - 130	
	MSD	1208340-06	ND	22.990	25.000	ug/L	4.9	92.0	20	70 - 130	
Toluene	MS	1208340-06	ND	26.080	25.000	ug/L		104		70 - 130	
	MSD	1208340-06	ND	25.040	25.000	ug/L	4.1	100	20	70 - 130	
Trichloroethene	MS	1208340-06	ND	24.680	25.000	ug/L		98.7		70 - 130	
	MSD	1208340-06	ND	23.090	25.000	ug/L	6.7	92.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1208340-06	ND	9.9300	10.000	ug/L		99.3		76 - 114	
	MSD	1208340-06	ND	9.9500	10.000	ug/L	0.2	99.5		76 - 114	
Toluene-d8 (Surrogate)	MS	1208340-06	ND	10.380	10.000	ug/L		104		88 - 110	
	MSD	1208340-06	ND	10.310	10.000	ug/L	0.7	103		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1208340-06	ND	9.6100	10.000	ug/L		96.1		86 - 115	
	MSD	1208340-06	ND	10.210	10.000	ug/L	6.1	102		86 - 115	

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425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0832						
Total Dissolved Solids @ 180 C	BVE0832-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0988						
Bicarbonate Alkalinity as CaCO3	BVE0988-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0988-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0988-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE1198						
Chloride	BVE1198-BLK1	0.16600	mg/L	0.50	0.066	J
Sulfate	BVE1198-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE1636						
Nitrate/Nitrite as N	BVE1636-BLK1	0.011200	mg/L	0.10	0.010	J

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Reported: 05/22/2012 16:54
Project: Hay Road LF
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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0832										
Total Dissolved Solids @ 180 C	BVE0832-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
QC Batch ID: BVE0988										
Total Alkalinity as CaCO3	BVE0988-BS3	LCS	91.280	100.00	mg/L	91.3		90 - 110		
QC Batch ID: BVE1198										
Chloride	BVE1198-BS1	LCS	51.565	50.000	mg/L	103		90 - 110		
Sulfate	BVE1198-BS1	LCS	102.82	100.00	mg/L	103		90 - 110		
QC Batch ID: BVE1636										
Nitrate/Nitrite as N	BVE1636-BS1	LCS	1.9686	2.0000	mg/L	98.4		90 - 110		

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0832	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1208475-03	2060.0	2080.0		mg/L	1.0		10		
QC Batch ID: BVE0988	Used client sample: Y - Description: SW-7, 05/08/2012 12:00										
Bicarbonate Alkalinity as CaCO3	DUP	1208477-04	237.17	236.41		mg/L	0.3		10		
Carbonate Alkalinity as CaCO3	DUP	1208477-04	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208477-04	237.17	236.41		mg/L	0.3		10		
QC Batch ID: BVE1198	Used client sample: Y - Description: G-11R, 05/08/2012 09:50										
Chloride	DUP	1208478-01	98.309	98.932		mg/L	0.6		10		
	MS	1208478-01	98.309	150.01	50.505	mg/L		102		80 - 120	
	MSD	1208478-01	98.309	148.68	50.505	mg/L	0.9	99.7	10	80 - 120	
Sulfate	DUP	1208478-01	26.073	26.172		mg/L	0.4		10		
	MS	1208478-01	26.073	134.99	101.01	mg/L		108		80 - 120	
	MSD	1208478-01	26.073	135.03	101.01	mg/L	0.0	108	10	80 - 120	
QC Batch ID: BVE1636	Used client sample: N										
Nitrate/Nitrite as N	DUP	1209179-02	0.034000	0.035100		mg/L	3.2		10		J
	MS	1209179-02	0.034000	2.1387	2.1053	mg/L		100		90 - 110	
	MSD	1209179-02	0.034000	2.1245	2.1053	mg/L	0.7	99.3	10	90 - 110	

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0958						
Dissolved Arsenic	BVE0958-BLK1	ND	mg/L	0.050	0.0075	
Dissolved Chromium	BVE0958-BLK1	ND	mg/L	0.010	0.0010	

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Project: Hay Road LF
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Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0958										
Dissolved Arsenic	BVE0958-BS1	LCS	0.18480	0.20000	mg/L	92.4		85 - 115		
Dissolved Chromium	BVE0958-BS1	LCS	0.19312	0.20000	mg/L	96.6		85 - 115		

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0958	Used client sample: Y - Description: G-11R, 05/08/2012 09:50										
Dissolved Arsenic	DUP	1208478-01	ND	ND		mg/L			20		
	MS	1208478-01	ND	0.20261	0.20408	mg/L		99.3		75 - 125	
	MSD	1208478-01	ND	0.20262	0.20408	mg/L	0.0	99.3	20	75 - 125	
Dissolved Chromium	DUP	1208478-01	ND	ND		mg/L			20		
	MS	1208478-01	ND	0.20284	0.20408	mg/L		99.4		75 - 125	
	MSD	1208478-01	ND	0.19981	0.20408	mg/L	1.5	97.9	20	75 - 125	

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Reported: 05/22/2012 16:54
Project: Hay Road LF
Project Number: 053-7444-12
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Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/23/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project: Hay Road LF
BC Work Order: 1208465
Invoice ID: B122667

Enclosed are the results of analyses for samples received by the laboratory on 5/8/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208465-01 Recology Hay Road, PL-5-1A, PL-5-1A, 5/8/2012 1:25:00PM						
Bicarbonate Alkalinity as CaCO3	490	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	490	8.2	8.2	mg/L	SM-2320B	
Chloride	170	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	38	2.0	0.20	mg/L	EPA-353.2	A01
Sulfate	220	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1400	50	50	mg/L	SM-2540C	
1208465-02 Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM						
Bicarbonate Alkalinity as CaCO3	340	4.1	4.1	mg/L	SM-2320B	
Total Alkalinity as CaCO3	340	4.1	4.1	mg/L	SM-2320B	
Chloride	54	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	12	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	54	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	680	33	33	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.71	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.033	0.050	0.025	mg/L	EPA-350.1	J
Nitrite as N	0.015	0.050	0.010	mg/L	EPA-353.2	J
Dissolved Chromium	0.0061	0.010	0.0010	mg/L	EPA-6010B	J
1208465-03 Recology Hay Road, PL-11-1, PL-11-1, 5/8/2012 12:25:00PM						
Bicarbonate Alkalinity as CaCO3	690	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	690	8.2	8.2	mg/L	SM-2320B	
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.1	0.10	0.010	mg/L	EPA-353.2	
Sulfate	97	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	1100	50	50	mg/L	SM-2540C	
1208465-04 Recology Hay Road, LD-3-2, LD-3-2, 5/8/2012 1:00:00PM						
Bicarbonate Alkalinity as CaCO3	440	4.1	4.1	mg/L	SM-2320B	
Chloride	68	0.50	0.066	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	620	33	33	mg/L	SM-2540C	
1208465-05 Recology Hay Road, LD-4-1, LD-4-1, 5/8/2012 1:10:00PM						
Bicarbonate Alkalinity as CaCO3	390	8.2	8.2	mg/L	SM-2320B	
Chloride	94	0.50	0.066	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	840	50	50	mg/L	SM-2540C	

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1

Quotation No. 1208465

PROJECT NO.:	SITE NAME:
053-7444-12	Recology Hay Rd

SAMPLER(S): S. Gilcrease (printed) / S. G. (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: Standard

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	ANALYSES: BOD 5260 5 DAY 1155; TDS, SO4, Cl, Alk, CaCO3, Bicarb, NO3+NO2-N; NO3+NO2-N, TKN, NH3-N; As, Cr, Pb; NO2-N; TDS, Cl, Bicarbonate	Cont. Qty.	Remarks
						Type/Vol.			
						Filter			
						Preserv.			
PL-5.1A	-1	5/8/12	1325	W	—		3 1 1	5	Report Trace for 8260
PL-9.1A	-2		1340		—		3 1 1 1 X	6	
PL-11.1	-3		1225		—		3 1 1	5	
LD-3.2	-4	5/8/12	1300	W	—		1	1	
LD-4.1	-5		1310		—		1	1	

CHK BY: WW

DISTRIBUTION: SUB-OUT [ ]

SHORT HOLDING TIME: Cr^{+6} NO_2 NO_3 OP SS; DO Cl_2 BOD MBAS COT

Relinquished by: (signature)	Received by: (signature)	Date/Time:
S. G.	Ross Dickey	5/8/12 1405
Ross Dickey 5-8-12	Jail G	5-8-12 1930
Jail G 5-8-12 2330		5-8-12 2330

SEND RESULTS TO:

Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1208465 Page 1 of 2

Chain of Custody and Cooler Receipt Form for 1208465 Page 2 of 2

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1208465

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received
☑ YES ☐ NO

Emissivity: 0.98 Container: pipe Thermometer ID: 177
Temperature: A 0.3 °C / C 0.4 °C

Date/Time 5-8-12
Analyst Init JNW 2316

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	B	B	A	A					
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS		C								
PT CYANIDE										
PT NITROGEN FORMS		D								
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE	C		C							
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A 3	A 3	A 3	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:_____
Sample Numbering Completed By: JNW Date/Time: 5/9/12 0015
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1208465-01	**COC Number:**	---	**Receive Date:** 05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/08/2012 13:25
	Sampling Location:	PL-5-1A	**Sample Depth:** ---
	Sampling Point:	PL-5-1A	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): PL-5-1A
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208465-02	**COC Number:**	---	**Receive Date:** 05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/08/2012 13:40
	Sampling Location:	PL-9-1A	**Sample Depth:** ---
	Sampling Point:	PL-9-1A	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Metal Analysis: 1-Field Filtered and Acidified
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): PL-9-1A
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1208465-03	**COC Number:**	---	**Receive Date:** 05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:** 05/08/2012 12:25
	Sampling Location:	PL-11-1	**Sample Depth:** ---
	Sampling Point:	PL-11-1	**Lab Matrix:** Water
	Sampled By:	GAMV	**Sample Type:** Water
			Delivery Work Order:
			Global ID: L10007011530
			Location ID (FieldPoint): PL-11-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

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Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1208465-04	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 13:00
	Sampling Location:	LD-3-2	**Sample Depth:**	---
	Sampling Point:	LD-3-2	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): LD-3-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208465-05	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 13:10
	Sampling Location:	LD-4-1	**Sample Depth:**	---
	Sampling Point:	LD-4-1	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): LD-4-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-01 | **Client Sample Name:** Recology Hay Road, PL-5-1A, PL-5-1A, 5/8/2012 1:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-01 | **Client Sample Name:** Recology Hay Road, PL-5-1A, PL-5-1A, 5/8/2012 1:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-01 | **Client Sample Name:** Recology Hay Road, PL-5-1A, PL-5-1A, 5/8/2012 1:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	98.5	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.8	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 16:47	KEA	HPCHEM	1	BVE1026

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208465-01 | **Client Sample Name:** Recology Hay Road, PL-5-1A, PL-5-1A, 5/8/2012 1:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**490**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**490**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**170**	**mg/L**	**1.0**	**0.13**	**EPA-300.0**	0.31	**A01**	2
Nitrate/Nitrite as N	**38**	**mg/L**	**2.0**	**0.20**	**EPA-353.2**	ND	**A01**	3
Sulfate	**220**	**mg/L**	**2.0**	**0.24**	**EPA-300.0**	ND	**A01**	2
Total Dissolved Solids @ 180 C	**1400**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/10/12	05/10/12 12:52	RML	MET-1	2	BVE0880
2	EPA-300.0	05/15/12	05/15/12 13:53	LD1	IC1	2	BVE1197
3	EPA-353.2	05/21/12	05/22/12 10:17	SDU	SC-1	20	BVE1635
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	5	BVE0831

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-02 | **Client Sample Name:** Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-02 | **Client Sample Name:** Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-02 | **Client Sample Name:** Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	99.0	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	98.6	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.5	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 16:22	KEA	HPCHEM	1	BVE1026

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208465-02 | **Client Sample Name:** Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**340**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	4.1	4.1	SM-2320B	ND		1
Total Alkalinity as CaCO3	**340**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**54**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		2
Nitrate/Nitrite as N	**12**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	3
Sulfate	**54**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**680**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**0.71**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.033**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	0.034	**J**	6
Nitrite as N	**0.015**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/10/12	05/10/12 12:58	RML	MET-1	1	BVE0880
2	EPA-300.0	05/15/12	05/15/12 14:47	LD1	IC1	1	BVE1197
3	EPA-353.2	05/21/12	05/22/12 10:04	SDU	SC-1	5	BVE1635
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831
5	EPA-351.2	05/14/12	05/20/12 11:03	SDU	SC-1	1	BVE1108
6	EPA-350.1	05/21/12	05/21/12 13:55	SDU	SC-1	1	BVE1586
7	EPA-353.2	05/09/12	05/09/12 09:02	TDC	KONE-1	1	BVE0844

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208465-02 | **Client Sample Name:** Recology Hay Road, PL-9-1A, PL-9-1A, 5/8/2012 1:40:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Arsenic	ND	mg/L	0.050	0.0075	EPA-6010B	ND		1
Dissolved Chromium	**0.0061**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1
Dissolved Lead	ND	mg/L	0.050	0.0050	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/12	05/10/12 11:55	ARD	PE-OP1	1	BVE0876

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-03 | **Client Sample Name:** Recology Hay Road, PL-11-1, PL-11-1, 5/8/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-03 | **Client Sample Name:** Recology Hay Road, PL-11-1, PL-11-1, 5/8/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND	A40,V01	1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208465-03 | **Client Sample Name:** Recology Hay Road, PL-11-1, PL-11-1, 5/8/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	96.1	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	98.7	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.2	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/11/12	05/12/12 15:57	KEA	HPCHEM	1	BVE1026

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208465-03 | **Client Sample Name:** Recology Hay Road, PL-11-1, PL-11-1, 5/8/2012 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**690**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B	ND		1
Total Alkalinity as CaCO3	**690**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**120**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		2
Nitrate/Nitrite as N	**1.1**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**97**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**1100**	**mg/L**	**50**	**50**	**SM-2540C**	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/10/12	05/10/12 13:04	RML	MET-1	2	BVE0880
2	EPA-300.0	05/15/12	05/15/12 17:16	AKB	IC1	1	BVE1197
3	EPA-353.2	05/21/12	05/22/12 09:03	SDU	SC-1	1	BVE1635
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	5	BVE0831

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208465-04 | **Client Sample Name:** Recology Hay Road, LD-3-2, LD-3-2, 5/8/2012 1:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**440**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**68**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		2
Total Dissolved Solids @ 180 C	**620**	**mg/L**	**33**	**33**	**SM-2540C**	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/10/12	05/10/12 13:10	RML	MET-1	1	BVE0880
2	EPA-300.0	05/15/12	05/15/12 15:14	AKB	IC1	1	BVE1197
3	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208465-05 | **Client Sample Name:** Recology Hay Road, LD-4-1, LD-4-1, 5/8/2012 1:10:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Bicarbonate Alkalinity as CaCO3	**390**	**mg/L**	**8.2**	**8.2**	**SM-2320B**	ND		1
Chloride	**94**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		2
Total Dissolved Solids @ 180 C	**840**	**mg/L**	**50**	**50**	**SM-2540C**	ND		3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/10/12	05/10/12 13:16	RML	MET-1	2	BVE0880
2	EPA-300.0	05/15/12	05/15/12 15:28	AKB	IC1	1	BVE1197
3	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	5	BVE0831

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1026						
Benzene	BVE1026-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE1026-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE1026-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE1026-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE1026-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE1026-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE1026-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE1026-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE1026-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE1026-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE1026-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE1026-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE1026-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE1026-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE1026-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE1026-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE1026-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE1026-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE1026-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE1026-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE1026-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE1026-BLK1	ND	ug/L	1.0	0.11	

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1026						
Naphthalene	BVE1026-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE1026-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE1026-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE1026-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE1026-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE1026-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE1026-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE1026-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE1026-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE1026-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE1026-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE1026-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE1026-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE1026-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE1026-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE1026-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE1026-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE1026-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE1026-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE1026-BLK1	ND	ug/L	100	42	
Ethanol	BVE1026-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE1026-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE1026-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE1026-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE1026-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE1026-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE1026-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE1026-BLK1	94.9	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE1026-BLK1	97.9	%	88 - 110 (LCL - UCL)		

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Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1026						
4-Bromofluorobenzene (Surrogate)	BVE1026-BLK1	99.3	%	86 - 115 (LCL - UCL)		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE1026										
Benzene	BVE1026-BS1	LCS	24.500	25.000	ug/L	98.0		70 - 130		
Bromodichloromethane	BVE1026-BS1	LCS	25.420	25.000	ug/L	102		70 - 130		
Chlorobenzene	BVE1026-BS1	LCS	26.310	25.000	ug/L	105		70 - 130		
Chloroethane	BVE1026-BS1	LCS	25.470	25.000	ug/L	102		70 - 130		
1,4-Dichlorobenzene	BVE1026-BS1	LCS	26.510	25.000	ug/L	106		70 - 130		
1,1-Dichloroethane	BVE1026-BS1	LCS	24.120	25.000	ug/L	96.5		70 - 130		
1,1-Dichloroethene	BVE1026-BS1	LCS	23.610	25.000	ug/L	94.4		70 - 130		
Toluene	BVE1026-BS1	LCS	26.020	25.000	ug/L	104		70 - 130		
Trichloroethene	BVE1026-BS1	LCS	29.830	25.000	ug/L	119		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE1026-BS1	LCS	9.0600	10.000	ug/L	90.6		76 - 114		
Toluene-d8 (Surrogate)	BVE1026-BS1	LCS	10.020	10.000	ug/L	100		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE1026-BS1	LCS	9.9300	10.000	ug/L	99.3		86 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE1026	Used client sample: N										
Benzene	MS	1207076-43	ND	24.730	25.000	ug/L		98.9		70 - 130	
	MSD	1207076-43	ND	25.410	25.000	ug/L	2.7	102	20	70 - 130	
Bromodichloromethane	MS	1207076-43	ND	26.210	25.000	ug/L		105		70 - 130	
	MSD	1207076-43	ND	26.920	25.000	ug/L	2.7	108	20	70 - 130	
Chlorobenzene	MS	1207076-43	ND	26.740	25.000	ug/L		107		70 - 130	
	MSD	1207076-43	ND	27.490	25.000	ug/L	2.8	110	20	70 - 130	
Chloroethane	MS	1207076-43	ND	25.570	25.000	ug/L		102		70 - 130	
	MSD	1207076-43	ND	26.430	25.000	ug/L	3.3	106	20	70 - 130	
1,4-Dichlorobenzene	MS	1207076-43	ND	26.410	25.000	ug/L		106		70 - 130	
	MSD	1207076-43	ND	27.700	25.000	ug/L	4.8	111	20	70 - 130	
1,1-Dichloroethane	MS	1207076-43	ND	24.510	25.000	ug/L		98.0		70 - 130	
	MSD	1207076-43	ND	24.980	25.000	ug/L	1.9	99.9	20	70 - 130	
1,1-Dichloroethene	MS	1207076-43	ND	24.020	25.000	ug/L		96.1		70 - 130	
	MSD	1207076-43	ND	24.180	25.000	ug/L	0.7	96.7	20	70 - 130	
Toluene	MS	1207076-43	ND	26.300	25.000	ug/L		105		70 - 130	
	MSD	1207076-43	ND	27.020	25.000	ug/L	2.7	108	20	70 - 130	
Trichloroethene	MS	1207076-43	ND	29.830	25.000	ug/L		119		70 - 130	
	MSD	1207076-43	ND	31.540	25.000	ug/L	5.6	126	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1207076-43	ND	9.1000	10.000	ug/L		91.0		76 - 114	
	MSD	1207076-43	ND	9.2100	10.000	ug/L	1.2	92.1		76 - 114	
Toluene-d8 (Surrogate)	MS	1207076-43	ND	9.9200	10.000	ug/L		99.2		88 - 110	
	MSD	1207076-43	ND	9.9500	10.000	ug/L	0.3	99.5		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1207076-43	ND	9.5600	10.000	ug/L		95.6		86 - 115	
	MSD	1207076-43	ND	9.8800	10.000	ug/L	3.3	98.8		86 - 115	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0831						
Total Dissolved Solids @ 180 C	BVE0831-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0844						
Nitrite as N	BVE0844-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BVE0880						
Bicarbonate Alkalinity as CaCO3	BVE0880-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BVE0880-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BVE0880-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE1108						
Total Kjeldahl Nitrogen	BVE1108-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE1197						
Chloride	BVE1197-BLK1	0.15400	mg/L	0.50	0.066	J
Sulfate	BVE1197-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE1586						
Ammonia as N	BVE1586-BLK1	0.033500	mg/L	0.050	0.025	J
QC Batch ID: BVE1635						
Nitrate/Nitrite as N	BVE1635-BLK1	ND	mg/L	0.10	0.010	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0831										
Total Dissolved Solids @ 180 C	BVE0831-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
QC Batch ID: BVE0844										
Nitrite as N	BVE0844-BS1	LCS	0.50308	0.50000	mg/L	101		90 - 110		
QC Batch ID: BVE0880										
Total Alkalinity as CaCO3	BVE0880-BS3	LCS	95.540	100.00	mg/L	95.5		90 - 110		
QC Batch ID: BVE1108										
Total Kjeldahl Nitrogen	BVE1108-BS1	LCS	1.9488	2.0000	mg/L	97.4		85 - 115		
QC Batch ID: BVE1197										
Chloride	BVE1197-BS1	LCS	50.946	50.000	mg/L	102		90 - 110		
Sulfate	BVE1197-BS1	LCS	102.35	100.00	mg/L	102		90 - 110		
QC Batch ID: BVE1586										
Ammonia as N	BVE1586-BS1	LCS	1.0145	1.0000	mg/L	101		90 - 110		
QC Batch ID: BVE1635										
Nitrate/Nitrite as N	BVE1635-BS1	LCS	1.9733	2.0000	mg/L	98.7		90 - 110		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0831	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Total Dissolved Solids @ 180 C	DUP	1208465-01	1415.0	1400.0		mg/L	1.1		10		
QC Batch ID: BVE0844	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Nitrite as N	DUP	1208465-01	0.028662	0.026355		mg/L	8.4		10		J
	MS	1208465-01	0.028662	0.55065	0.52632	mg/L		99.2		90 - 110	
	MSD	1208465-01	0.028662	0.55419	0.52632	mg/L	0.6	99.9	10	90 - 110	
QC Batch ID: BVE0880	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1208407-03	90.670	90.820		mg/L	0.2		10		
Carbonate Alkalinity as CaCO3	DUP	1208407-03	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1208407-03	90.670	90.820		mg/L	0.2		10		
QC Batch ID: BVE1108	Used client sample: N										
Total Kjeldahl Nitrogen	DUP	1208434-02	0.64830	0.62620		mg/L	3.5		20		
	MS	1208434-02	0.64830	2.5773	2.0000	mg/L		96.4		80 - 120	
	MSD	1208434-02	0.64830	2.5331	2.0000	mg/L	1.7	94.2	20	80 - 120	
QC Batch ID: BVE1197	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Chloride	DUP	1208465-01	170.65	171.72		mg/L	0.6		10		
	MS	1208465-01	170.65	275.18	101.01	mg/L		103		80 - 120	
	MSD	1208465-01	170.65	276.24	101.01	mg/L	0.4	105	10	80 - 120	
Sulfate	DUP	1208465-01	221.08	221.12		mg/L	0.0		10		
	MS	1208465-01	221.08	436.95	202.02	mg/L		107		80 - 120	
	MSD	1208465-01	221.08	436.85	202.02	mg/L	0.0	107	10	80 - 120	
QC Batch ID: BVE1586	Used client sample: N										
Ammonia as N	DUP	1208475-01	0.40300	0.39070		mg/L	3.1		10		
	MS	1208475-01	0.40300	1.5508	1.1111	mg/L		103		90 - 110	
	MSD	1208475-01	0.40300	1.5342	1.1111	mg/L	1.1	102	10	90 - 110	
QC Batch ID: BVE1635	Used client sample: Y - Description: SW-3, 05/08/2012 11:15										
Nitrate/Nitrite as N	DUP	1208477-01	2.1435	2.1526		mg/L	0.4		10		
	MS	1208477-01	2.1435	4.1789	2.1053	mg/L		96.7		90 - 110	
	MSD	1208477-01	2.1435	4.1869	2.1053	mg/L	0.2	97.1	10	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0876						
Dissolved Arsenic	BVE0876-BLK1	ND	mg/L	0.050	0.0075	
Dissolved Chromium	BVE0876-BLK1	ND	mg/L	0.010	0.0010	
Dissolved Lead	BVE0876-BLK1	ND	mg/L	0.050	0.0050	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0876										
Dissolved Arsenic	BVE0876-BS1	LCS	0.17367	0.20000	mg/L	86.8		85 - 115		
Dissolved Chromium	BVE0876-BS1	LCS	0.19856	0.20000	mg/L	99.3		85 - 115		
Dissolved Lead	BVE0876-BS1	LCS	0.39828	0.40000	mg/L	99.6		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0876	Used client sample: Y - Description: PL-9-1A, 05/08/2012 13:40										
Dissolved Arsenic	DUP	1208465-02	ND	ND		mg/L			20		
	MS	1208465-02	ND	0.19897	0.20408	mg/L		97.5		75 - 125	
	MSD	1208465-02	ND	0.20063	0.20408	mg/L	0.8	98.3	20	75 - 125	
Dissolved Chromium	DUP	1208465-02	0.0061156	0.0061063		mg/L	0.2		20		J
	MS	1208465-02	0.0061156	0.21451	0.20408	mg/L		102		75 - 125	
	MSD	1208465-02	0.0061156	0.21193	0.20408	mg/L	1.2	101	20	75 - 125	
Dissolved Lead	DUP	1208465-02	ND	ND		mg/L			20		
	MS	1208465-02	ND	0.42313	0.40816	mg/L		104		75 - 125	
	MSD	1208465-02	ND	0.41477	0.40816	mg/L	2.0	102	20	75 - 125	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/23/2012 13:15
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A40	Initial calibration linearity criteria not met.
V01	The Initial Calibration Verification (ICV) recovery is not within established control limits.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 05/29/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1208477
Invoice ID:	B122994

Enclosed are the results of analyses for samples received by the laboratory on 5/8/2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Linda Phoudamneun

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208477-01 Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM						
Chloride	82	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	2.1	0.10	0.010	mg/L	EPA-353.2	
Sulfate	70	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	560	33	33	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	6.0	2.0	2.0	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	1.9	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.079	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.32	0.050	0.010	mg/L	EPA-353.2	
Total Lead	0.0063	0.050	0.0050	mg/L	EPA-6010B	J
1208477-02 Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM						
Chloroform	0.15	1.0	0.12	ug/L	EPA-8260	J
Chloride	88	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	2.0	0.10	0.010	mg/L	EPA-353.2	
Sulfate	74	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	590	33	33	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	12	2.0	2.0	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	1.8	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.078	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.35	0.050	0.010	mg/L	EPA-353.2	
Total Chromium	0.0011	0.010	0.0010	mg/L	EPA-6010B	J
Total Lead	0.0089	0.050	0.0050	mg/L	EPA-6010B	J
1208477-03 Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM						
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.040	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	45	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	640	33	33	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	3.8	1.2	1.2	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	1.5	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.054	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.010	0.050	0.010	mg/L	EPA-353.2	J
Total Lead	0.0092	0.050	0.0050	mg/L	EPA-6010B	J
1208477-04 Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM						
Total Alkalinity as CaCO3	240	4.1	4.1	mg/L	SM-2320B	
Chloride	89	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.9	0.10	0.010	mg/L	EPA-353.2	
Sulfate	75	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	610	33	33	mg/L	SM-2540C	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1208477-04 Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM						
Total Kjeldahl Nitrogen	1.8	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.089	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.34	0.050	0.010	mg/L	EPA-353.2	
Total Lead	0.0087	0.050	0.0050	mg/L	EPA-6010B	J
1208477-05 Recology Hay Road, Compost Pond, Compost Pond, 5/8/2012 11:00:00AM						
Chloride	81	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	9.8	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	21	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	2300	100	100	mg/L	SM-2540C	
Fixed Dissolved Solids	1500	100	100	mg/L	EPA-160.4	
Total Kjeldahl Nitrogen	20	1.0	0.28	mg/L	EPA-351.2	A01
Ammonia as N	0.51	0.050	0.025	mg/L	EPA-350.1	
Total Phosphorus	9.3	0.25	0.080	mg/L	EPA-365.4	A01
Total Lead	0.016	0.050	0.0050	mg/L	EPA-6010B	J

SW

Golder Associates
CHAIN OF CUSTODY

Golder Associates #1208477

Page 1 of 1
Quotation No.

PROJECT NO.:	SITE NAME:
053744412	Recology Hay Road

SAMPLER(S): _____ _____
(printed) (signature)

CONTRACT LABORATORY: BC LABS
TURN-AROUND TIME: Standard

EDD required? [X] Yes [ ] No
EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	ANALYSES: BOD 5260, SHORT LIST, TDS, Cl, SO4, TSS, NO2-N, NO3+NO2-N, TKN, NH3-N, AS, Cr, Pb, TDS, Cl, SO4, TOTAL FIXED DISSOLVED SOLIDS, TOTAL PHOSPHORUS, TOTAL LEAD	Cont. Qty.	Remarks
						Type/Vol.	VOA 40ml; PE 250; PE 1607; PE 1607; PE 1607; PE 1607; PE 1607; PE 1607		
						Filter	N; N; N; N; N; N; N; N		
						Preserv.	HCl; none; H_2SO_4; HNO_3; none; none; H_2SO_4; HNO_3		
SW-3	-1	5/8/12	1115	W	✓		3; 1; 1; 1	6	Report trace for 8260
SW-4	-2		1140		✓		3; 1; 1; 1	6	
SW-5	-3		1230		✓		3; 1; 1; 1	6	
SW-7	-4		1200	↓	✓		3; 1; 1; 1	6	
Compost pond	-5	5/8/12	1100	W	✓		1; 1; 1; 1	5	

CHK BY: DJH
DISTRIBUTION: MM MM KJ SH
SUB-OUT [ ]

SHORT HOLDING TIME
Cr^{+6} | (NO_2) | NO_3 | OP | SS
DO | Cl_2 | BOD | MBAS | COT

Relinquished by: (signature)	Received by: (signature)	Date/Time
Ross Wadley	Ross Wadley	5/8/12 1400
Ross Wadley 5/8/12	Jall	5-8-12 19:30
Jall 5-8-12 23:30		5-8-12 2330

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

Chain of Custody and Cooler Receipt Form for 1208477 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1208477

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑YES ☐ NO

Emissivity: 0.98 Container: Qtpr Thermometer ID: 177

Temperature: A 0.8 °C / C 0.9 °C

Date/Time 5-8-12

Analyst Init JNW 2310

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL	B	B	B	B						
PT PE UNPRESERVED					A,B					
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C	C	C	C	C					
PT CYANIDE										
PT NITROGEN FORMS	D	D	D	D	D,E					
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A,3	A,3	A,3	A,3	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: BLT Date/Time: 5/9/12 @ 0740
A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1208477-01	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 11:15
	Sampling Location:	SW-3	**Sample Depth:**	---
	Sampling Point:	SW-3	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): SW-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208477-02	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 11:40
	Sampling Location:	SW-4	**Sample Depth:**	---
	Sampling Point:	SW-4	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): SW-4	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208477-03	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 12:30
	Sampling Location:	SW-5	**Sample Depth:**	---
	Sampling Point:	SW-5	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): SW-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1208477-04	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 12:00
	Sampling Location:	SW-7	**Sample Depth:**	---
	Sampling Point:	SW-7	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): SW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1208477-05	**COC Number:**	---	**Receive Date:**	05/08/2012 23:30
	Project Number:	Recology Hay Road	**Sampling Date:**	05/08/2012 11:00
	Sampling Location:	Compost Pond	**Sample Depth:**	---
	Sampling Point:	Compost Pond	**Lab Matrix:**	Water
	Sampled By:	GAMV	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: L10007011530	
			Location ID (FieldPoint): Compost Pond	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-01 | **Client Sample Name:** Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-01 | **Client Sample Name:** Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-01 | **Client Sample Name:** Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/12/12 02:40	JCC	MS-V4	1	BVE0869

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208477-01 | **Client Sample Name:** Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**82**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		1
Nitrate/Nitrite as N	**2.1**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		2
Sulfate	**70**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		1
Total Dissolved Solids @ 180 C	**560**	**mg/L**	**33**	**33**	**SM-2540C**	ND		3
Total Suspended Solids (Glass Fiber)	**6.0**	**mg/L**	**2.0**	**2.0**	**SM-2540D**	ND		4
Total Kjeldahl Nitrogen	**1.9**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.079**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Nitrite as N	**0.32**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/15/12	05/15/12 16:08	AKB	IC1	1	BVE1197
2	EPA-353.2	05/21/12	05/22/12 08:51	SDU	SC-1	1	BVE1635
3	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831
4	SM-2540D	05/11/12	05/11/12 14:15	CAD	MANUAL	4	BVE1031
5	EPA-351.2	05/15/12	05/20/12 14:38	SDU	SC-1	1	BVE1195
6	EPA-350.1	05/22/12	05/22/12 14:26	SDU	SC-1	1	BVE1707
7	EPA-353.2	05/09/12	05/09/12 09:06	TDC	KONE-1	1	BVE0844

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425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208477-01 | **Client Sample Name:** Recology Hay Road, SW-3, SW-3, 5/8/2012 11:15:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Arsenic	ND	mg/L	0.050	0.0098	EPA-6010B	ND		1
Total Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Total Lead	**0.0063**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/15/12	05/16/12 14:08	ARD	PE-OP1	1	BVE1185

Golder Associates
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Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-02 | **Client Sample Name:** Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	**0.15**	**ug/L**	**1.0**	**0.12**	**EPA-8260**	ND	**J**	1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-02 | **Client Sample Name:** Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-02 | **Client Sample Name:** Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	107	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/12/12 03:07	JCC	MS-V4	1	BVE0869

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208477-02 | **Client Sample Name:** Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**88**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		1
Nitrate/Nitrite as N	**2.0**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		2
Sulfate	**74**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		1
Total Dissolved Solids @ 180 C	**590**	**mg/L**	**33**	**33**	**SM-2540C**	ND		3
Total Suspended Solids (Glass Fiber)	**12**	**mg/L**	**2.0**	**2.0**	**SM-2540D**	ND		4
Total Kjeldahl Nitrogen	**1.8**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.078**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Nitrite as N	**0.35**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/15/12	05/15/12 16:22	AKB	IC1	1	BVE1197
2	EPA-353.2	05/21/12	05/22/12 09:04	SDU	SC-1	1	BVE1635
3	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831
4	SM-2540D	05/11/12	05/11/12 14:15	CAD	MANUAL	4	BVE1031
5	EPA-351.2	05/15/12	05/20/12 14:39	SDU	SC-1	1	BVE1195
6	EPA-350.1	05/22/12	05/22/12 14:35	SDU	SC-1	1	BVE1708
7	EPA-353.2	05/09/12	05/09/12 09:06	TDC	KONE-1	1	BVE0844

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208477-02 | **Client Sample Name:** Recology Hay Road, SW-4, SW-4, 5/8/2012 11:40:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Arsenic	ND	mg/L	0.050	0.0098	EPA-6010B	ND		1
Total Chromium	**0.0011**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**	ND	**J**	1
Total Lead	**0.0089**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/15/12	05/16/12 14:10	ARD	PE-OP1	1	BVE1185

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-03 | **Client Sample Name:** Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-03 | **Client Sample Name:** Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-03 | **Client Sample Name:** Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	97.1	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.4	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/12/12 03:35	JCC	MS-V4	1	BVE0869

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208477-03 | **Client Sample Name:** Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**120**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		1
Nitrate/Nitrite as N	**0.040**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND	**J**	2
Sulfate	**45**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		1
Total Dissolved Solids @ 180 C	**640**	**mg/L**	**33**	**33**	**SM-2540C**	ND		3
Total Suspended Solids (Glass Fiber)	**3.8**	**mg/L**	**1.2**	**1.2**	**SM-2540D**	ND		4
Total Kjeldahl Nitrogen	**1.5**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.054**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Nitrite as N	**0.010**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND	**J**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/15/12	05/15/12 16:35	AKB	IC1	1	BVE1197
2	EPA-353.2	05/21/12	05/22/12 09:05	SDU	SC-1	1	BVE1635
3	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831
4	SM-2540D	05/11/12	05/11/12 14:15	CAD	MANUAL	2.500	BVE1031
5	EPA-351.2	05/15/12	05/20/12 14:42	SDU	SC-1	1	BVE1195
6	EPA-350.1	05/22/12	05/22/12 14:35	SDU	SC-1	1	BVE1708
7	EPA-353.2	05/09/12	05/09/12 09:09	TDC	KONE-1	1	BVE0844

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208477-03 | **Client Sample Name:** Recology Hay Road, SW-5, SW-5, 5/8/2012 12:30:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Arsenic	ND	mg/L	0.050	0.0098	EPA-6010B	ND		1
Total Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Total Lead	**0.0092**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/15/12	05/16/12 14:12	ARD	PE-OP1	1	BVE1185

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-04 | **Client Sample Name:** Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	1.0	0.083	EPA-8260	ND		1
Bromobenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Bromochloromethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
Bromodichloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Bromoform	ND	ug/L	1.0	0.27	EPA-8260	ND		1
Bromomethane	ND	ug/L	1.0	0.25	EPA-8260	ND		1
n-Butylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
sec-Butylbenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
tert-Butylbenzene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Carbon tetrachloride	ND	ug/L	1.0	0.18	EPA-8260	ND		1
Chlorobenzene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
Chloroethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Chloroform	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Chloromethane	ND	ug/L	1.0	0.14	EPA-8260	ND		1
Dibromochloromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	0.44	EPA-8260	ND		1
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Dibromomethane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2-Dichlorobenzene	ND	ug/L	1.0	0.072	EPA-8260	ND		1
1,3-Dichlorobenzene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,4-Dichlorobenzene	ND	ug/L	1.0	0.062	EPA-8260	ND		1
Dichlorodifluoromethane	ND	ug/L	1.0	0.099	EPA-8260	ND		1
1,1-Dichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
1,1-Dichloroethene	ND	ug/L	1.0	0.18	EPA-8260	ND		1
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.15	EPA-8260	ND		1
1,2-Dichloropropane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.14	EPA-8260	ND		1
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.079	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	1.0	0.098	EPA-8260	ND		1
Hexachlorobutadiene	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Methylene chloride	ND	ug/L	1.0	0.48	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-04 | **Client Sample Name:** Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methyl t-butyl ether	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Naphthalene	ND	ug/L	1.0	0.36	EPA-8260	ND		1
n-Propylbenzene	ND	ug/L	1.0	0.11	EPA-8260	ND		1
Styrene	ND	ug/L	1.0	0.068	EPA-8260	ND		1
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.18	EPA-8260	ND		1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.17	EPA-8260	ND		1
Tetrachloroethene	ND	ug/L	1.0	0.13	EPA-8260	ND		1
Toluene	ND	ug/L	1.0	0.093	EPA-8260	ND		1
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.19	EPA-8260	ND		1
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	EPA-8260	ND		1
1,1,2-Trichloroethane	ND	ug/L	1.0	0.16	EPA-8260	ND		1
Trichloroethene	ND	ug/L	1.0	0.085	EPA-8260	ND		1
Trichlorofluoromethane	ND	ug/L	1.0	0.13	EPA-8260	ND		1
1,2,3-Trichloropropane	ND	ug/L	1.0	0.24	EPA-8260	ND		1
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Vinyl chloride	ND	ug/L	1.0	0.12	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260	ND		1
Acetone	ND	ug/L	10	4.6	EPA-8260	ND		1
Acrylonitrile	ND	ug/L	5.0	1.2	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260	ND		1
Carbon disulfide	ND	ug/L	1.0	0.38	EPA-8260	ND		1
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0	1.4	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	0.23	EPA-8260	ND		1
1,4-Dioxane	ND	ug/L	100	42	EPA-8260	ND		1
Ethanol	ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	0.18	EPA-8260	ND		1
2-Hexanone	ND	ug/L	10	3.4	EPA-8260	ND		1
2-Butanone	ND	ug/L	10	2.5	EPA-8260	ND		1
Iodomethane	ND	ug/L	2.0	0.47	EPA-8260	ND		1
4-Methyl-2-pentanone	ND	ug/L	10	2.1	EPA-8260	ND		1
Vinyl acetate	ND	ug/L	10	1.8	EPA-8260	ND		1

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1208477-04 | **Client Sample Name:** Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)		EPA-8260			1
Toluene-d8 (Surrogate)	104	%	88 - 110 (LCL - UCL)		EPA-8260			1
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)		EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	05/10/12	05/12/12 04:03	JCC	MS-V4	1	BVE0869

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208477-04 | **Client Sample Name:** Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Alkalinity as CaCO3	**240**	**mg/L**	**4.1**	**4.1**	**SM-2320B**	ND		1
Chloride	**89**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		2
Nitrate/Nitrite as N	**1.9**	**mg/L**	**0.10**	**0.010**	**EPA-353.2**	ND		3
Sulfate	**75**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		2
Total Dissolved Solids @ 180 C	**610**	**mg/L**	**33**	**33**	**SM-2540C**	ND		4
Total Kjeldahl Nitrogen	**1.8**	**mg/L**	**0.20**	**0.056**	**EPA-351.2**	ND		5
Ammonia as N	**0.089**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Nitrite as N	**0.34**	**mg/L**	**0.050**	**0.010**	**EPA-353.2**	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	SM-2320B	05/11/12	05/11/12 10:57	RML	MET-1	1	BVE0988
2	EPA-300.0	05/15/12	05/15/12 16:49	AKB	IC1	1	BVE1197
3	EPA-353.2	05/21/12	05/22/12 09:06	SDU	SC-1	1	BVE1635
4	SM-2540C	05/10/12	05/10/12 07:15	NW1	MANUAL	3.333	BVE0831
5	EPA-351.2	05/15/12	05/20/12 14:43	SDU	SC-1	1	BVE1195
6	EPA-350.1	05/22/12	05/22/12 14:36	SDU	SC-1	1	BVE1708
7	EPA-353.2	05/09/12	05/09/12 09:09	TDC	KONE-1	1	BVE0844

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208477-04 | **Client Sample Name:** Recology Hay Road, SW-7, SW-7, 5/8/2012 12:00:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Arsenic	ND	mg/L	0.050	0.0098	EPA-6010B	ND		1
Total Chromium	ND	mg/L	0.010	0.0010	EPA-6010B	ND		1
Total Lead	**0.0087**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/15/12	05/16/12 14:13	ARD	PE-OP1	1	BVE1185

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

BCL Sample ID: 1208477-05 | **Client Sample Name:** Recology Hay Road, Compost Pond, Compost Pond, 5/8/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Chloride	**81**	**mg/L**	**0.50**	**0.066**	**EPA-300.0**	0.15		1
Nitrate/Nitrite as N	**9.8**	**mg/L**	**0.50**	**0.050**	**EPA-353.2**	ND	**A01**	2
Sulfate	**21**	**mg/L**	**1.0**	**0.12**	**EPA-300.0**	ND		1
Total Dissolved Solids @ 180 C	**2300**	**mg/L**	**100**	**100**	**SM-2540C**	ND		3
Fixed Dissolved Solids	**1500**	**mg/L**	**100**	**100**	**EPA-160.4**	ND		4
Total Kjeldahl Nitrogen	**20**	**mg/L**	**1.0**	**0.28**	**EPA-351.2**	ND	**A01**	5
Ammonia as N	**0.51**	**mg/L**	**0.050**	**0.025**	**EPA-350.1**	ND		6
Total Phosphorus	**9.3**	**mg/L**	**0.25**	**0.080**	**EPA-365.4**	ND	**A01**	7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-300.0	05/15/12	05/15/12 17:02	AKB	IC1	1	BVE1197
2	EPA-353.2	05/21/12	05/22/12 10:06	SDU	SC-1	5	BVE1635
3	SM-2540C	05/11/12	05/11/12 10:30	NW1	MANUAL	10	BVE0976
4	EPA-160.4	05/11/12	05/11/12 10:30	NW1	MANUAL	10	BVE0976
5	EPA-351.2	05/24/12	05/25/12 10:39	SDU	SC-1	5	BVE1916
6	EPA-350.1	05/22/12	05/22/12 14:37	SDU	SC-1	1	BVE1708
7	EPA-365.4	05/24/12	05/25/12 09:20	SDU	SC-1	5	BVE1917

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

BCL Sample ID: 1208477-05 | **Client Sample Name:** Recology Hay Road, Compost Pond, Compost Pond, 5/8/2012 11:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Lead	**0.016**	**mg/L**	**0.050**	**0.0050**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/15/12	05/16/12 14:15	ARD	PE-OP1	1	BVE1185

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Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
Benzene	BVE0869-BLK1	ND	ug/L	1.0	0.083	
Bromobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Bromochloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
Bromodichloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Bromoform	BVE0869-BLK1	ND	ug/L	1.0	0.27	
Bromomethane	BVE0869-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.11	
sec-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
tert-Butylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Carbon tetrachloride	BVE0869-BLK1	ND	ug/L	1.0	0.18	
Chlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.093	
Chloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Chloroform	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Chloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.14	
Dibromochloromethane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
1,2-Dibromo-3-chloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane (EDB)	BVE0869-BLK1	ND	ug/L	1.0	0.16	
Dibromomethane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
1,2-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.072	
1,3-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
1,4-Dichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.062	
Dichlorodifluoromethane	BVE0869-BLK1	ND	ug/L	1.0	0.099	
1,1-Dichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.11	
1,2-Dichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.17	
1,1-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.18	
cis-1,2-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.085	
trans-1,2-Dichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.15	
1,2-Dichloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
cis-1,3-Dichloropropene	BVE0869-BLK1	ND	ug/L	1.0	0.14	
trans-1,3-Dichloropropene	BVE0869-BLK1	ND	ug/L	1.0	0.079	
Ethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.098	
Hexachlorobutadiene	BVE0869-BLK1	ND	ug/L	1.0	0.17	
Methylene chloride	BVE0869-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BVE0869-BLK1	ND	ug/L	1.0	0.11	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
Naphthalene	BVE0869-BLK1	ND	ug/L	1.0	0.36	
n-Propylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.11	
Styrene	BVE0869-BLK1	ND	ug/L	1.0	0.068	
1,1,1,2-Tetrachloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.18	
1,1,2,2-Tetrachloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.17	
Tetrachloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.13	
Toluene	BVE0869-BLK1	ND	ug/L	1.0	0.093	
1,2,4-Trichlorobenzene	BVE0869-BLK1	ND	ug/L	1.0	0.19	
1,1,1-Trichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.11	
1,1,2-Trichloroethane	BVE0869-BLK1	ND	ug/L	1.0	0.16	
Trichloroethene	BVE0869-BLK1	ND	ug/L	1.0	0.085	
Trichlorofluoromethane	BVE0869-BLK1	ND	ug/L	1.0	0.13	
1,2,3-Trichloropropane	BVE0869-BLK1	ND	ug/L	1.0	0.24	
1,2,4-Trimethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.12	
1,3,5-Trimethylbenzene	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Vinyl chloride	BVE0869-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BVE0869-BLK1	ND	ug/L	1.0	0.36	
Acetone	BVE0869-BLK1	ND	ug/L	10	4.6	
Acrylonitrile	BVE0869-BLK1	ND	ug/L	5.0	1.2	
t-Amyl Methyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BVE0869-BLK1	ND	ug/L	10	9.4	
Carbon disulfide	BVE0869-BLK1	ND	ug/L	1.0	0.38	
trans-1,4-Dichloro-2-butene	BVE0869-BLK1	ND	ug/L	5.0	1.4	
Diisopropyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.23	
1,4-Dioxane	BVE0869-BLK1	ND	ug/L	100	42	
Ethanol	BVE0869-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BVE0869-BLK1	ND	ug/L	0.50	0.18	
2-Hexanone	BVE0869-BLK1	ND	ug/L	10	3.4	
2-Butanone	BVE0869-BLK1	ND	ug/L	10	2.5	
Iodomethane	BVE0869-BLK1	ND	ug/L	2.0	0.47	
4-Methyl-2-pentanone	BVE0869-BLK1	ND	ug/L	10	2.1	
Vinyl acetate	BVE0869-BLK1	ND	ug/L	10	1.8	
1,2-Dichloroethane-d4 (Surrogate)	BVE0869-BLK1	109	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BVE0869-BLK1	105	%	88 - 110 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0869						
4-Bromofluorobenzene (Surrogate)	BVE0869-BLK1	98.4	%	86 - 115 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0869										
Benzene	BVE0869-BS1	LCS	26.010	25.000	ug/L	104		70 - 130		
Bromodichloromethane	BVE0869-BS1	LCS	23.430	25.000	ug/L	93.7		70 - 130		
Chlorobenzene	BVE0869-BS1	LCS	25.430	25.000	ug/L	102		70 - 130		
Chloroethane	BVE0869-BS1	LCS	26.710	25.000	ug/L	107		70 - 130		
1,4-Dichlorobenzene	BVE0869-BS1	LCS	25.940	25.000	ug/L	104		70 - 130		
1,1-Dichloroethane	BVE0869-BS1	LCS	26.580	25.000	ug/L	106		70 - 130		
1,1-Dichloroethene	BVE0869-BS1	LCS	23.500	25.000	ug/L	94.0		70 - 130		
Toluene	BVE0869-BS1	LCS	25.930	25.000	ug/L	104		70 - 130		
Trichloroethene	BVE0869-BS1	LCS	26.670	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BVE0869-BS1	LCS	10.430	10.000	ug/L	104		76 - 114		
Toluene-d8 (Surrogate)	BVE0869-BS1	LCS	10.230	10.000	ug/L	102		88 - 110		
4-Bromofluorobenzene (Surrogate)	BVE0869-BS1	LCS	10.530	10.000	ug/L	105		86 - 115		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0869	Used client sample: N										
Benzene	MS	1208340-06	ND	26.870	25.000	ug/L		107		70 - 130	
	MSD	1208340-06	ND	26.520	25.000	ug/L	1.3	106	20	70 - 130	
Bromodichloromethane	MS	1208340-06	ND	21.880	25.000	ug/L		87.5		70 - 130	
	MSD	1208340-06	ND	20.530	25.000	ug/L	6.4	82.1	20	70 - 130	
Chlorobenzene	MS	1208340-06	ND	24.350	25.000	ug/L		97.4		70 - 130	
	MSD	1208340-06	ND	25.150	25.000	ug/L	3.2	101	20	70 - 130	
Chloroethane	MS	1208340-06	ND	30.550	25.000	ug/L		122		70 - 130	
	MSD	1208340-06	ND	28.270	25.000	ug/L	7.8	113	20	70 - 130	
1,4-Dichlorobenzene	MS	1208340-06	ND	24.340	25.000	ug/L		97.4		70 - 130	
	MSD	1208340-06	ND	24.270	25.000	ug/L	0.3	97.1	20	70 - 130	
1,1-Dichloroethane	MS	1208340-06	ND	26.920	25.000	ug/L		108		70 - 130	
	MSD	1208340-06	ND	25.300	25.000	ug/L	6.2	101	20	70 - 130	
1,1-Dichloroethene	MS	1208340-06	ND	24.150	25.000	ug/L		96.6		70 - 130	
	MSD	1208340-06	ND	22.990	25.000	ug/L	4.9	92.0	20	70 - 130	
Toluene	MS	1208340-06	ND	26.080	25.000	ug/L		104		70 - 130	
	MSD	1208340-06	ND	25.040	25.000	ug/L	4.1	100	20	70 - 130	
Trichloroethene	MS	1208340-06	ND	24.680	25.000	ug/L		98.7		70 - 130	
	MSD	1208340-06	ND	23.090	25.000	ug/L	6.7	92.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1208340-06	ND	9.9300	10.000	ug/L		99.3		76 - 114	
	MSD	1208340-06	ND	9.9500	10.000	ug/L	0.2	99.5		76 - 114	
Toluene-d8 (Surrogate)	MS	1208340-06	ND	10.380	10.000	ug/L		104		88 - 110	
	MSD	1208340-06	ND	10.310	10.000	ug/L	0.7	103		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1208340-06	ND	9.6100	10.000	ug/L		96.1		86 - 115	
	MSD	1208340-06	ND	10.210	10.000	ug/L	6.1	102		86 - 115	

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Project: Hay Road LF
Project Number: 053-7444-12
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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE0831						
Total Dissolved Solids @ 180 C	BVE0831-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0844						
Nitrite as N	BVE0844-BLK1	ND	mg/L	0.050	0.010	
QC Batch ID: BVE0976						
Total Dissolved Solids @ 180 C	BVE0976-BLK1	ND	mg/L	6.7	6.7	
Fixed Dissolved Solids	BVE0976-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BVE0988						
Total Alkalinity as CaCO3	BVE0988-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BVE1031						
Total Suspended Solids (Glass Fiber)	BVE1031-BLK1	ND	mg/L	0.50	0.50	
QC Batch ID: BVE1195						
Total Kjeldahl Nitrogen	BVE1195-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE1197						
Chloride	BVE1197-BLK1	0.15400	mg/L	0.50	0.066	J
Sulfate	BVE1197-BLK1	ND	mg/L	1.0	0.12	
QC Batch ID: BVE1635						
Nitrate/Nitrite as N	BVE1635-BLK1	ND	mg/L	0.10	0.010	
QC Batch ID: BVE1707						
Ammonia as N	BVE1707-BLK1	ND	mg/L	0.050	0.025	
QC Batch ID: BVE1708						
Ammonia as N	BVE1708-BLK1	ND	mg/L	0.050	0.025	
QC Batch ID: BVE1916						
Total Kjeldahl Nitrogen	BVE1916-BLK1	ND	mg/L	0.20	0.056	
QC Batch ID: BVE1917						
Total Phosphorus	BVE1917-BLK1	ND	mg/L	0.050	0.016	

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Project: Hay Road LF
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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE0831										
Total Dissolved Solids @ 180 C	BVE0831-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		
QC Batch ID: BVE0844										
Nitrite as N	BVE0844-BS1	LCS	0.50308	0.50000	mg/L	101		90 - 110		
QC Batch ID: BVE0976										
Total Dissolved Solids @ 180 C	BVE0976-BS1	LCS	585.00	586.00	mg/L	99.8		90 - 110		
QC Batch ID: BVE0988										
Total Alkalinity as CaCO3	BVE0988-BS3	LCS	91.280	100.00	mg/L	91.3		90 - 110		
QC Batch ID: BVE1195										
Total Kjeldahl Nitrogen	BVE1195-BS1	LCS	1.9473	2.0000	mg/L	97.4		85 - 115		
QC Batch ID: BVE1197										
Chloride	BVE1197-BS1	LCS	50.946	50.000	mg/L	102		90 - 110		
Sulfate	BVE1197-BS1	LCS	102.35	100.00	mg/L	102		90 - 110		
QC Batch ID: BVE1635										
Nitrate/Nitrite as N	BVE1635-BS1	LCS	1.9733	2.0000	mg/L	98.7		90 - 110		
QC Batch ID: BVE1707										
Ammonia as N	BVE1707-BS1	LCS	0.96320	1.0000	mg/L	96.3		90 - 110		
QC Batch ID: BVE1708										
Ammonia as N	BVE1708-BS1	LCS	1.0759	1.0000	mg/L	108		90 - 110		
QC Batch ID: BVE1916										
Total Kjeldahl Nitrogen	BVE1916-BS1	LCS	2.0026	2.0000	mg/L	100		85 - 115		
QC Batch ID: BVE1917										
Total Phosphorus	BVE1917-BS1	LCS	1.0367	1.0000	mg/L	104		85 - 115		

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Project Number: 053-7444-12
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Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE0831	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Total Dissolved Solids @ 180 C	DUP	1208465-01	1415.0	1400.0		mg/L	1.1		10		
QC Batch ID: BVE0844	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Nitrite as N	DUP	1208465-01	0.028662	0.026355		mg/L	8.4		10		J
	MS	1208465-01	0.028662	0.55065	0.52632	mg/L		99.2		90 - 110	
	MSD	1208465-01	0.028662	0.55419	0.52632	mg/L	0.6	99.9	10	90 - 110	
QC Batch ID: BVE0976	Used client sample: Y - Description: Compost Pond, 05/08/2012 11:00										
Total Dissolved Solids @ 180 C	DUP	1208477-05	2280.0	2320.0		mg/L	1.7		10		
Fixed Dissolved Solids	DUP	1208477-05	1490.0	1460.0		mg/L	2.0		20		
QC Batch ID: BVE0988	Used client sample: Y - Description: SW-7, 05/08/2012 12:00										
Total Alkalinity as CaCO3	DUP	1208477-04	237.17	236.41		mg/L	0.3		10		
QC Batch ID: BVE1031	Used client sample: Y - Description: SW-3, 05/08/2012 11:15										
Total Suspended Solids (Glass Fiber)	DUP	1208477-01	6.0000	6.0000		mg/L	0		10		
QC Batch ID: BVE1195	Used client sample: N										
Total Kjeldahl Nitrogen	DUP	1208460-16	0.10060	ND		mg/L			20		
	MS	1208460-16	0.10060	2.0753	2.0000	mg/L		98.7		80 - 120	
	MSD	1208460-16	0.10060	2.0185	2.0000	mg/L	2.8	95.9	20	80 - 120	
QC Batch ID: BVE1197	Used client sample: Y - Description: PL-5-1A, 05/08/2012 13:25										
Chloride	DUP	1208465-01	170.65	171.72		mg/L	0.6		10		
	MS	1208465-01	170.65	275.18	101.01	mg/L		103		80 - 120	
	MSD	1208465-01	170.65	276.24	101.01	mg/L	0.4	105	10	80 - 120	
Sulfate	DUP	1208465-01	221.08	221.12		mg/L	0.0		10		
	MS	1208465-01	221.08	436.95	202.02	mg/L		107		80 - 120	
	MSD	1208465-01	221.08	436.85	202.02	mg/L	0.0	107	10	80 - 120	
QC Batch ID: BVE1635	Used client sample: Y - Description: SW-3, 05/08/2012 11:15										
Nitrate/Nitrite as N	DUP	1208477-01	2.1435	2.1526		mg/L	0.4		10		
	MS	1208477-01	2.1435	4.1789	2.1053	mg/L		96.7		90 - 110	
	MSD	1208477-01	2.1435	4.1869	2.1053	mg/L	0.2	97.1	10	90 - 110	
QC Batch ID: BVE1707	Used client sample: N										
Ammonia as N	DUP	1208476-01	0.050600	0.049400		mg/L	2.4		10		J
	MS	1208476-01	0.050600	1.1144	1.1111	mg/L		95.7		90 - 110	
	MSD	1208476-01	0.050600	1.1356	1.1111	mg/L	1.9	97.6	10	90 - 110	
QC Batch ID: BVE1708	Used client sample: N										
Ammonia as N	DUP	1208556-01	ND	ND		mg/L			10		
	MS	1208556-01	ND	1.1097	1.1111	mg/L		99.9		90 - 110	
	MSD	1208556-01	ND	1.1063	1.1111	mg/L	0.3	99.6	10	90 - 110	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE1916	Used client sample: N										
Total Kjeldahl Nitrogen	DUP	1209044-11	0.82640	0.81310		mg/L	1.6		20		
	MS	1209044-11	0.82640	2.6906	2.0000	mg/L		93.2		80 - 120	
	MSD	1209044-11	0.82640	2.6596	2.0000	mg/L	1.2	91.7	20	80 - 120	
QC Batch ID: BVE1917	Used client sample: N										
Total Phosphorus	DUP	1209044-11	0.36830	0.33300		mg/L	10.1		20		
	MS	1209044-11	0.36830	1.3372	1.0000	mg/L		96.9		80 - 120	
	MSD	1209044-11	0.36830	1.3437	1.0000	mg/L	0.5	97.5	20	80 - 120	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BVE1185						
Total Arsenic	BVE1185-BLK1	ND	mg/L	0.050	0.0098	
Total Chromium	BVE1185-BLK1	ND	mg/L	0.010	0.0010	
Total Lead	BVE1185-BLK1	ND	mg/L	0.050	0.0050	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BVE1185										
Total Arsenic	BVE1185-BS1	LCS	0.18323	0.20000	mg/L	91.6		85 - 115		
Total Chromium	BVE1185-BS1	LCS	0.20116	0.20000	mg/L	101		85 - 115		
Total Lead	BVE1185-BS1	LCS	0.39202	0.40000	mg/L	98.0		85 - 115		

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BVE1185	Used client sample: N										
Total Arsenic	DUP	1208561-02	ND	ND		mg/L			20		
	MS	1208561-02	ND	0.19079	0.20000	mg/L		95.4		75 - 125	
	MSD	1208561-02	ND	0.18468	0.20000	mg/L	3.3	92.3	20	75 - 125	
Total Chromium	DUP	1208561-02	0.0026340	0.0024323		mg/L	8.0		20		J
	MS	1208561-02	0.0026340	0.20310	0.20000	mg/L		100		75 - 125	
	MSD	1208561-02	0.0026340	0.20611	0.20000	mg/L	1.5	102	20	75 - 125	
Total Lead	DUP	1208561-02	0.0057658	0.0089520		mg/L	43.3		20		J,A02
	MS	1208561-02	0.0057658	0.40228	0.40000	mg/L		99.1		75 - 125	
	MSD	1208561-02	0.0057658	0.40626	0.40000	mg/L	1.0	100	20	75 - 125	

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Reported: 05/29/2012 15:35
Project: Hay Road LF
Project Number: 053-7444-12
Project Manager: Kris Johnson

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A02	The difference between duplicate readings is less than the PQL.

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6/1/2012
Mr. Steve Giacomini
Golder Associates, Inc.
425 Lakeside Drive

Sunnyvale CA 94085

Project Name: Recology Hay Road
Project #: 053-7444-12
Workorder #: 1205392

Dear Mr. Steve Giacomini

The following report includes the data for the above referenced project for sample(s) received on 5/18/2012 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: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

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WORK ORDER #: 1205392

Work Order Summary

CLIENT:	Mr. Steve Giacomini Golder Associates, Inc. 425 Lakeside Drive Sunnyvale, CA 94085	**BILL TO:**	Mr. Steve Giacomini Golder Associates, Inc. 425 Lakeside Drive Sunnyvale, CA 94085
PHONE:	408-220-9223	**P.O. #**	
FAX:	408-222-9224	**PROJECT #**	053-7444-12 Recology Hay Road
DATE RECEIVED:	05/18/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	06/01/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	PL-11.2	Modified TO-15	2.2 "Hg	5 psi
02A	PL-5.2	Modified TO-15	1.6 "Hg	5 psi
03A	LD-3.2	Modified TO-15	4.4 "Hg	5 psi
04A	Lab Blank	Modified TO-15	NA	NA
05A	CCV	Modified TO-15	NA	NA
06A	LCS	Modified TO-15	NA	NA
06AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 06/01/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
EPA Method TO-15
Golder Associates, Inc.
Workorder# 1205392

Three 6 Liter Summa Canister samples were received on May 18, 2012. The laboratory performed analysis via 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.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances 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.

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 and/or LCS.

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

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

Client Sample ID: PL-11.2

Lab ID#: 1205392-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.72	2.8	3.6	14
Vinyl Chloride	0.72	1.9	1.8	4.8
Acetone	7.2	90	17	210
Methyl tert-butyl ether	0.72	1.7	2.6	6.2
Hexane	0.72	6.1	2.6	22
1,1-Dichloroethane	0.72	2.2	2.9	8.9
cis-1,2-Dichloroethene	0.72	0.81	2.9	3.2
Tetrahydrofuran	0.72	5.1	2.1	15
Cyclohexane	0.72	5.0	2.5	17
2,2,4-Trimethylpentane	0.72	9.5	3.4	44
Benzene	0.72	2.5	2.3	8.1
Heptane	0.72	1.1	3.0	4.5
Toluene	0.72	12	2.7	44
Tetrachloroethene	0.72	1.8	4.9	12
Ethyl Benzene	0.72	3.0	3.1	13
m,p-Xylene	0.72	14	3.1	60
o-Xylene	0.72	4.4	3.1	19
Styrene	0.72	0.82	3.1	3.5
Propylbenzene	0.72	1.0	3.6	5.0
4-Ethyltoluene	0.72	4.3	3.6	21
1,3,5-Trimethylbenzene	0.72	1.6	3.6	7.7
1,2,4-Trimethylbenzene	0.72	6.5	3.6	32

Client Sample ID: PL-5.2

Lab ID#: 1205392-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	0.84	3.5	4.1
Acetone	7.1	220	17	530
2-Butanone (Methyl Ethyl Ketone)	2.8	4.7	8.4	14
Tetrahydrofuran	0.71	3.5	2.1	10
Chloroform	0.71	0.86	3.5	4.2
Benzene	0.71	1.1	2.3	3.5

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

Client Sample ID: PL-5.2

Lab ID#: 1205392-02A

Heptane	0.71	1.5	2.9	6.2
Toluene	0.71	13	2.7	51
Ethyl Benzene	0.71	3.3	3.1	14
m,p-Xylene	0.71	15	3.1	67
o-Xylene	0.71	4.8	3.1	21
Styrene	0.71	1.1	3.0	4.7
4-Ethyltoluene	0.71	5.0	3.5	25
1,3,5-Trimethylbenzene	0.71	2.1	3.5	10
1,2,4-Trimethylbenzene	0.71	8.2	3.5	40

Client Sample ID: LD-3.2

Lab ID#: 1205392-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.78	3.0	3.9	15
Freon 11	0.78	6.2	4.4	35
Acetone	7.8	180	19	440
Carbon Disulfide	3.1	9.1	9.8	28
Hexane	0.78	2.8	2.8	9.9
2-Butanone (Methyl Ethyl Ketone)	3.1	7.2	9.2	21
cis-1,2-Dichloroethene	0.78	1.1	3.1	4.3
Tetrahydrofuran	0.78	10	2.3	31
Cyclohexane	0.78	3.1	2.7	11
2,2,4-Trimethylpentane	0.78	0.85	3.7	4.0
Benzene	0.78	1.7	2.5	5.5
Heptane	0.78	2.2	3.2	8.9
Toluene	0.78	20	3.0	74
Ethyl Benzene	0.78	4.1	3.4	18
m,p-Xylene	0.78	18	3.4	77
o-Xylene	0.78	5.7	3.4	25
Styrene	0.78	1.0	3.3	4.3
Propylbenzene	0.78	1.0	3.8	5.0
4-Ethyltoluene	0.78	4.9	3.8	24
1,3,5-Trimethylbenzene	0.78	1.9	3.8	9.4
1,2,4-Trimethylbenzene	0.78	7.0	3.8	34

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Client Sample ID: PL-11.2

Lab ID#: 1205392-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052124**	**Date of Collection:**	**5/18/12 11:15:00 AM**
Dil. Factor:	**1.45**	**Date of Analysis:**	**5/21/12 09:46 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.72	2.8	3.6	14
Freon 114	0.72	Not Detected	5.1	Not Detected
Chloromethane	7.2	Not Detected	15	Not Detected
Vinyl Chloride	0.72	1.9	1.8	4.8
1,3-Butadiene	0.72	Not Detected	1.6	Not Detected
Bromomethane	7.2	Not Detected	28	Not Detected
Chloroethane	2.9	Not Detected	7.6	Not Detected
Freon 11	0.72	Not Detected	4.1	Not Detected
Ethanol	2.9	Not Detected	5.5	Not Detected
Freon 113	0.72	Not Detected	5.6	Not Detected
1,1-Dichloroethene	0.72	Not Detected	2.9	Not Detected
Acetone	7.2	90	17	210
2-Propanol	2.9	Not Detected	7.1	Not Detected
Carbon Disulfide	2.9	Not Detected	9.0	Not Detected
3-Chloropropene	2.9	Not Detected	9.1	Not Detected
Methylene Chloride	7.2	Not Detected	25	Not Detected
Methyl tert-butyl ether	0.72	1.7	2.6	6.2
trans-1,2-Dichloroethene	0.72	Not Detected	2.9	Not Detected
Hexane	0.72	6.1	2.6	22
1,1-Dichloroethane	0.72	2.2	2.9	8.9
2-Butanone (Methyl Ethyl Ketone)	2.9	Not Detected	8.6	Not Detected
cis-1,2-Dichloroethene	0.72	0.81	2.9	3.2
Tetrahydrofuran	0.72	5.1	2.1	15
Chloroform	0.72	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.72	Not Detected	4.0	Not Detected
Cyclohexane	0.72	5.0	2.5	17
Carbon Tetrachloride	0.72	Not Detected	4.6	Not Detected
2,2,4-Trimethylpentane	0.72	9.5	3.4	44
Benzene	0.72	2.5	2.3	8.1
1,2-Dichloroethane	0.72	Not Detected	2.9	Not Detected
Heptane	0.72	1.1	3.0	4.5
Trichloroethene	0.72	Not Detected	3.9	Not Detected
1,2-Dichloropropane	0.72	Not Detected	3.4	Not Detected
1,4-Dioxane	2.9	Not Detected	10	Not Detected
Bromodichloromethane	0.72	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.72	Not Detected	3.3	Not Detected
4-Methyl-2-pentanone	0.72	Not Detected	3.0	Not Detected
Toluene	0.72	12	2.7	44
trans-1,3-Dichloropropene	0.72	Not Detected	3.3	Not Detected
1,1,2-Trichloroethane	0.72	Not Detected	4.0	Not Detected
Tetrachloroethene	0.72	1.8	4.9	12
2-Hexanone	2.9	Not Detected	12	Not Detected

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Client Sample ID: PL-11.2

Lab ID#: 1205392-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052124**	**Date of Collection:**	**5/18/12 11:15:00 AM**
Dil. Factor:	**1.45**	**Date of Analysis:**	**5/21/12 09:46 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.72	Not Detected	6.2	Not Detected
1,2-Dibromoethane (EDB)	0.72	Not Detected	5.6	Not Detected
Chlorobenzene	0.72	Not Detected	3.3	Not Detected
Ethyl Benzene	0.72	3.0	3.1	13
m,p-Xylene	0.72	14	3.1	60
o-Xylene	0.72	4.4	3.1	19
Styrene	0.72	0.82	3.1	3.5
Bromoform	0.72	Not Detected	7.5	Not Detected
Cumene	0.72	Not Detected	3.6	Not Detected
1,1,2,2-Tetrachloroethane	0.72	Not Detected	5.0	Not Detected
Propylbenzene	0.72	1.0	3.6	5.0
4-Ethyltoluene	0.72	4.3	3.6	21
1,3,5-Trimethylbenzene	0.72	1.6	3.6	7.7
1,2,4-Trimethylbenzene	0.72	6.5	3.6	32
1,3-Dichlorobenzene	0.72	Not Detected	4.4	Not Detected
1,4-Dichlorobenzene	0.72	Not Detected	4.4	Not Detected
alpha-Chlorotoluene	0.72	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.72	Not Detected	4.4	Not Detected
1,2,4-Trichlorobenzene	2.9	Not Detected	22	Not Detected
Hexachlorobutadiene	2.9	Not Detected	31	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: PL-5.2

Lab ID#: 1205392-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052125**	**Date of Collection:**	**5/18/12 12:30:00 PM**
Dil. Factor:	**1.42**	**Date of Analysis:**	**5/21/12 10:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	0.84	3.5	4.1
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	2.8	Not Detected	5.4	Not Detected
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	220	17	530
2-Propanol	2.8	Not Detected	7.0	Not Detected
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	0.71	Not Detected	2.6	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	4.7	8.4	14
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	3.5	2.1	10
Chloroform	0.71	0.86	3.5	4.2
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	1.1	2.3	3.5
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	1.5	2.9	6.2
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	13	2.7	51
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected

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Client Sample ID: PL-5.2

Lab ID#: 1205392-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052125**	**Date of Collection:**	**5/18/12 12:30:00 PM**
Dil. Factor:	**1.42**	**Date of Analysis:**	**5/21/12 10:02 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	3.3	3.1	14
m,p-Xylene	0.71	15	3.1	67
o-Xylene	0.71	4.8	3.1	21
Styrene	0.71	1.1	3.0	4.7
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	5.0	3.5	25
1,3,5-Trimethylbenzene	0.71	2.1	3.5	10
1,2,4-Trimethylbenzene	0.71	8.2	3.5	40
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LD-3.2

Lab ID#: 1205392-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052126**	**Date of Collection:**	**5/18/12 11:45:00 AM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**5/21/12 10:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.78	3.0	3.9	15
Freon 114	0.78	Not Detected	5.5	Not Detected
Chloromethane	7.8	Not Detected	16	Not Detected
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
1,3-Butadiene	0.78	Not Detected	1.7	Not Detected
Bromomethane	7.8	Not Detected	30	Not Detected
Chloroethane	3.1	Not Detected	8.3	Not Detected
Freon 11	0.78	6.2	4.4	35
Ethanol	3.1	Not Detected	5.9	Not Detected
Freon 113	0.78	Not Detected	6.0	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Acetone	7.8	180	19	440
2-Propanol	3.1	Not Detected	7.7	Not Detected
Carbon Disulfide	3.1	9.1	9.8	28
3-Chloropropene	3.1	Not Detected	9.8	Not Detected
Methylene Chloride	7.8	Not Detected	27	Not Detected
Methyl tert-butyl ether	0.78	Not Detected	2.8	Not Detected
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Hexane	0.78	2.8	2.8	9.9
1,1-Dichloroethane	0.78	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.1	7.2	9.2	21
cis-1,2-Dichloroethene	0.78	1.1	3.1	4.3
Tetrahydrofuran	0.78	10	2.3	31
Chloroform	0.78	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Cyclohexane	0.78	3.1	2.7	11
Carbon Tetrachloride	0.78	Not Detected	4.9	Not Detected
2,2,4-Trimethylpentane	0.78	0.85	3.7	4.0
Benzene	0.78	1.7	2.5	5.5
1,2-Dichloroethane	0.78	Not Detected	3.2	Not Detected
Heptane	0.78	2.2	3.2	8.9
Trichloroethene	0.78	Not Detected	4.2	Not Detected
1,2-Dichloropropane	0.78	Not Detected	3.6	Not Detected
1,4-Dioxane	3.1	Not Detected	11	Not Detected
Bromodichloromethane	0.78	Not Detected	5.2	Not Detected
cis-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.78	Not Detected	3.2	Not Detected
Toluene	0.78	20	3.0	74
trans-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Tetrachloroethene	0.78	Not Detected	5.3	Not Detected
2-Hexanone	3.1	Not Detected	13	Not Detected

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Client Sample ID: LD-3.2

Lab ID#: 1205392-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052126**	**Date of Collection:**	**5/18/12 11:45:00 AM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**5/21/12 10:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.78	Not Detected	6.7	Not Detected
1,2-Dibromoethane (EDB)	0.78	Not Detected	6.0	Not Detected
Chlorobenzene	0.78	Not Detected	3.6	Not Detected
Ethyl Benzene	0.78	4.1	3.4	18
m,p-Xylene	0.78	18	3.4	77
o-Xylene	0.78	5.7	3.4	25
Styrene	0.78	1.0	3.3	4.3
Bromoform	0.78	Not Detected	8.1	Not Detected
Cumene	0.78	Not Detected	3.8	Not Detected
1,1,2,2-Tetrachloroethane	0.78	Not Detected	5.4	Not Detected
Propylbenzene	0.78	1.0	3.8	5.0
4-Ethyltoluene	0.78	4.9	3.8	24
1,3,5-Trimethylbenzene	0.78	1.9	3.8	9.4
1,2,4-Trimethylbenzene	0.78	7.0	3.8	34
1,3-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,4-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
alpha-Chlorotoluene	0.78	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,2,4-Trichlorobenzene	3.1	Not Detected	23	Not Detected
Hexachlorobutadiene	3.1	Not Detected	33	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1205392-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 11:14 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	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	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	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	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)	2.0	Not Detected	5.9	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
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

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Client Sample ID: Lab Blank

Lab ID#: 1205392-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 11:14 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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	99	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: CCV

Lab ID#: 1205392-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:10 AM**	

Compound	%Recovery
Freon 12	112
Freon 114	105
Chloromethane	108
Vinyl Chloride	102
1,3-Butadiene	102
Bromomethane	105
Chloroethane	104
Freon 11	111
Ethanol	94
Freon 113	104
1,1-Dichloroethene	98
Acetone	103
2-Propanol	97
Carbon Disulfide	102
3-Chloropropene	94
Methylene Chloride	105
Methyl tert-butyl ether	105
trans-1,2-Dichloroethene	100
Hexane	99
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	99
Tetrahydrofuran	100
Chloroform	104
1,1,1-Trichloroethane	106
Cyclohexane	99
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	100
Benzene	101
1,2-Dichloroethane	109
Heptane	101
Trichloroethene	102
1,2-Dichloropropane	98
1,4-Dioxane	98
Bromodichloromethane	107
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	99
Toluene	98
trans-1,3-Dichloropropene	102
1,1,2-Trichloroethane	102
Tetrachloroethene	101
2-Hexanone	103

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Client Sample ID: CCV

Lab ID#: 1205392-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:10 AM**	

Compound	%Recovery
Dibromochloromethane	108
1,2-Dibromoethane (EDB)	102
Chlorobenzene	98
Ethyl Benzene	103
m,p-Xylene	102
o-Xylene	102
Styrene	103
Bromoform	103
Cumene	106
1,1,2,2-Tetrachloroethane	103
Propylbenzene	106
4-Ethyltoluene	102
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	111
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCS

Lab ID#: 1205392-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:42 AM**	

Compound	%Recovery
Freon 12	122
Freon 114	117
Chloromethane	134 Q
Vinyl Chloride	130
1,3-Butadiene	127
Bromomethane	118
Chloroethane	111
Freon 11	120
Ethanol	96
Freon 113	117
1,1-Dichloroethene	114
Acetone	112
2-Propanol	105
Carbon Disulfide	137 Q
3-Chloropropene	123
Methylene Chloride	112
Methyl tert-butyl ether	118
trans-1,2-Dichloroethene	121
Hexane	110
1,1-Dichloroethane	113
2-Butanone (Methyl Ethyl Ketone)	117
cis-1,2-Dichloroethene	113
Tetrahydrofuran	110
Chloroform	119
1,1,1-Trichloroethane	121
Cyclohexane	114
Carbon Tetrachloride	124
2,2,4-Trimethylpentane	109
Benzene	117
1,2-Dichloroethane	128
Heptane	117
Trichloroethene	120
1,2-Dichloropropane	115
1,4-Dioxane	111
Bromodichloromethane	126
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	115
Toluene	114
trans-1,3-Dichloropropene	122
1,1,2-Trichloroethane	121
Tetrachloroethene	118
2-Hexanone	119

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1205392-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:42 AM**	

Compound	%Recovery
Dibromochloromethane	124
1,2-Dibromoethane (EDB)	121
Chlorobenzene	115
Ethyl Benzene	121
m,p-Xylene	119
o-Xylene	121
Styrene	121
Bromoform	118
Cumene	124
1,1,2,2-Tetrachloroethane	120
Propylbenzene	122
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	119
1,2,4-Trimethylbenzene	122
1,3-Dichlorobenzene	115
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	113
1,2-Dichlorobenzene	112
1,2,4-Trichlorobenzene	102
Hexachlorobutadiene	108

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCSD

Lab ID#: 1205392-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:59 AM**	

Compound	%Recovery
Freon 12	124
Freon 114	114
Chloromethane	132 Q
Vinyl Chloride	128
1,3-Butadiene	127
Bromomethane	119
Chloroethane	110
Freon 11	122
Ethanol	100
Freon 113	118
1,1-Dichloroethene	113
Acetone	111
2-Propanol	107
Carbon Disulfide	138 Q
3-Chloropropene	123
Methylene Chloride	119
Methyl tert-butyl ether	118
trans-1,2-Dichloroethene	126
Hexane	110
1,1-Dichloroethane	114
2-Butanone (Methyl Ethyl Ketone)	116
cis-1,2-Dichloroethene	111
Tetrahydrofuran	110
Chloroform	118
1,1,1-Trichloroethane	121
Cyclohexane	112
Carbon Tetrachloride	124
2,2,4-Trimethylpentane	110
Benzene	117
1,2-Dichloroethane	126
Heptane	116
Trichloroethene	118
1,2-Dichloropropane	114
1,4-Dioxane	109
Bromodichloromethane	126
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	113
Toluene	114
trans-1,3-Dichloropropene	118
1,1,2-Trichloroethane	120
Tetrachloroethene	118
2-Hexanone	119

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Client Sample ID: LCSD

Lab ID#: 1205392-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3052104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/21/12 09:59 AM**	

Compound	%Recovery
Dibromochloromethane	123
1,2-Dibromoethane (EDB)	122
Chlorobenzene	117
Ethyl Benzene	118
m,p-Xylene	121
o-Xylene	120
Styrene	122
Bromoform	115
Cumene	125
1,1,2,2-Tetrachloroethane	120
Propylbenzene	121
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	121
1,2,4-Trimethylbenzene	124
1,3-Dichlorobenzene	117
1,4-Dichlorobenzene	110
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	114
1,2,4-Trichlorobenzene	110
Hexachlorobutadiene	116

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	98	70-130

Golder Associates
CHAIN OF CUSTODY

12353.92

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Quotation No. _____

PROJECT NO.:	SITE NAME:
053-7444-12	Petaluma Hay Road

SAMPLER(S): R. McCARTHY (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: STANDARD

ANALYSES

EDD required? [X] Yes [ ] No

EDF required? [X] Yes [ ] No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	60-15	Cont. Qty.	Remarks
						Type/Vol.	Summa can		
						Filter	—		
						Preserv.	—		
PL-11.2	01	5/18/12	1115	air			X	1	
PL-5.2	02		1230				X	1	
LD-3.2	03		1145				X	1	

Hand Delivered
Custody Seal Intact
Y N None Temp N/A

Relinquished by: (signature)	Received by: (signature)	Date/Time:
R. McCarthy	B. Whitcher GL	5/18/12 1415
Relinquished by: (signature)	Received by: (signature)	Date/Time:
Relinquished by: (signature)	Received by: (signature)	Date/Time:

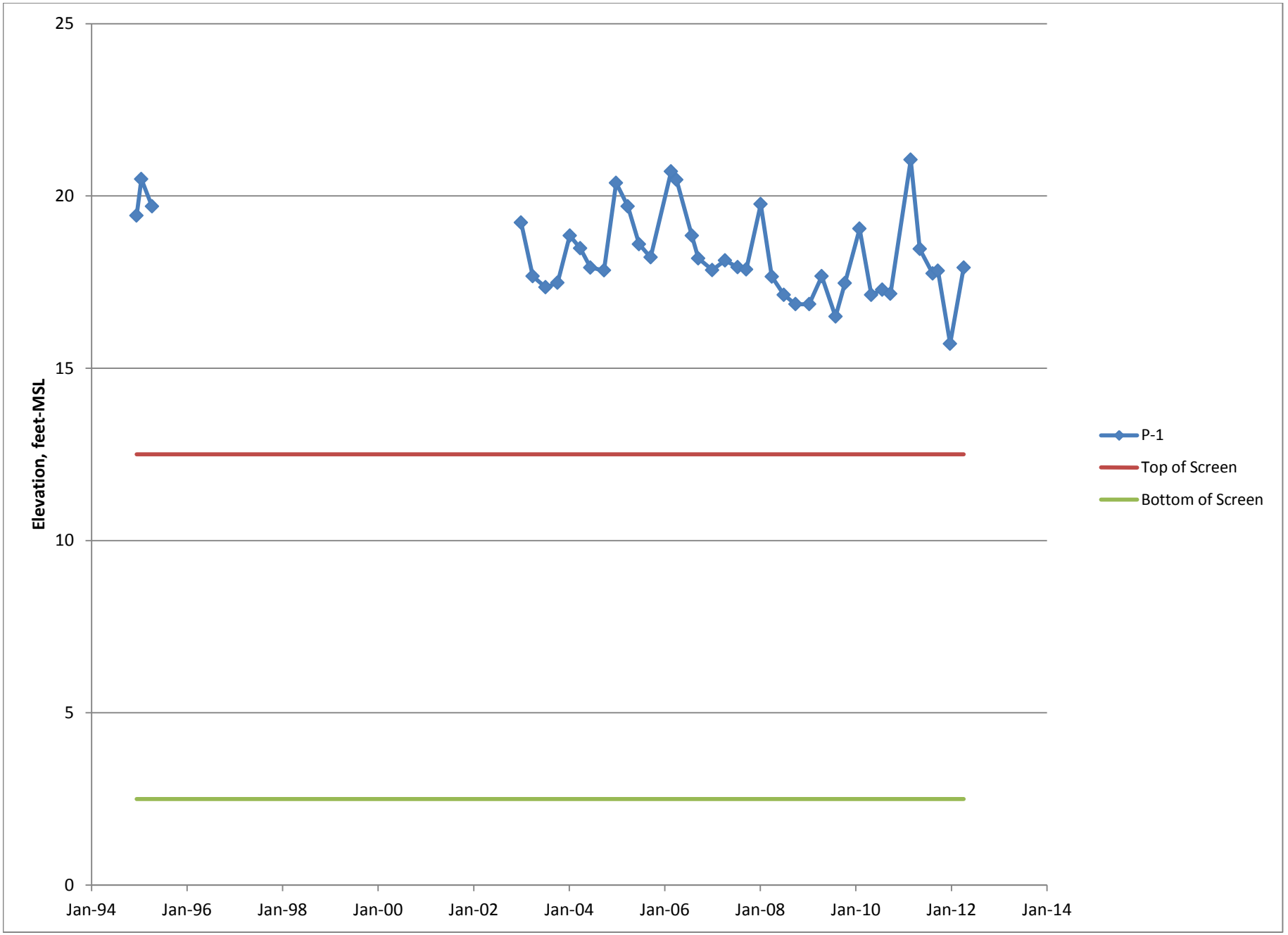
SEND RESULTS TO:

Attn: Kris Johnson

Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

APPENDIX C
WELL HYDROGRAPHS AND STATISTICAL CALCULATIONS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Jan-94
Jan-96
Jan-98
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Jan-10
Jan-12
Jan-14
P-1
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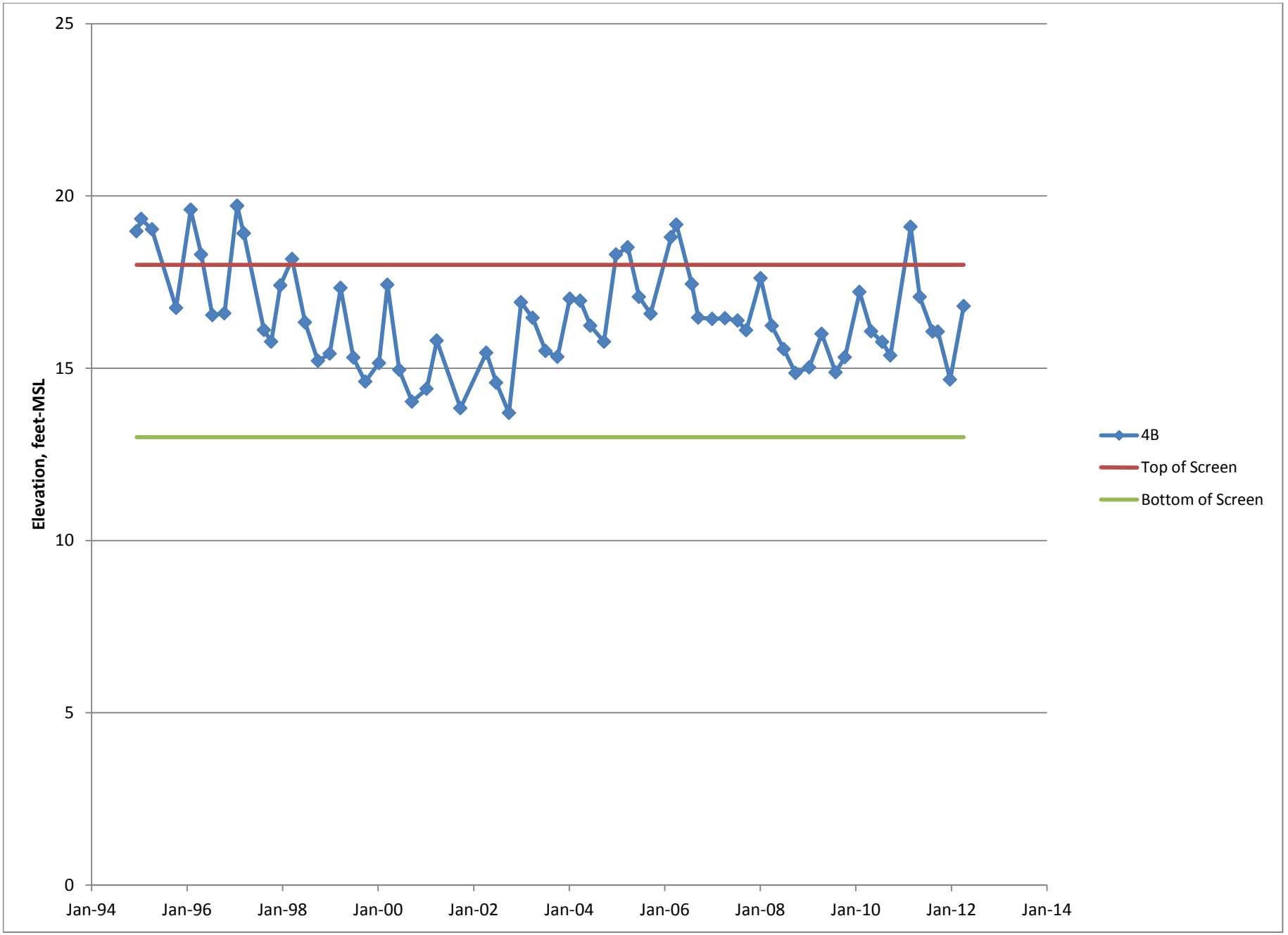
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Jan-98
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Jan-12
Jan-14
4B
Top of Screen
Bottom of Screen


30
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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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Jan-14
D-7
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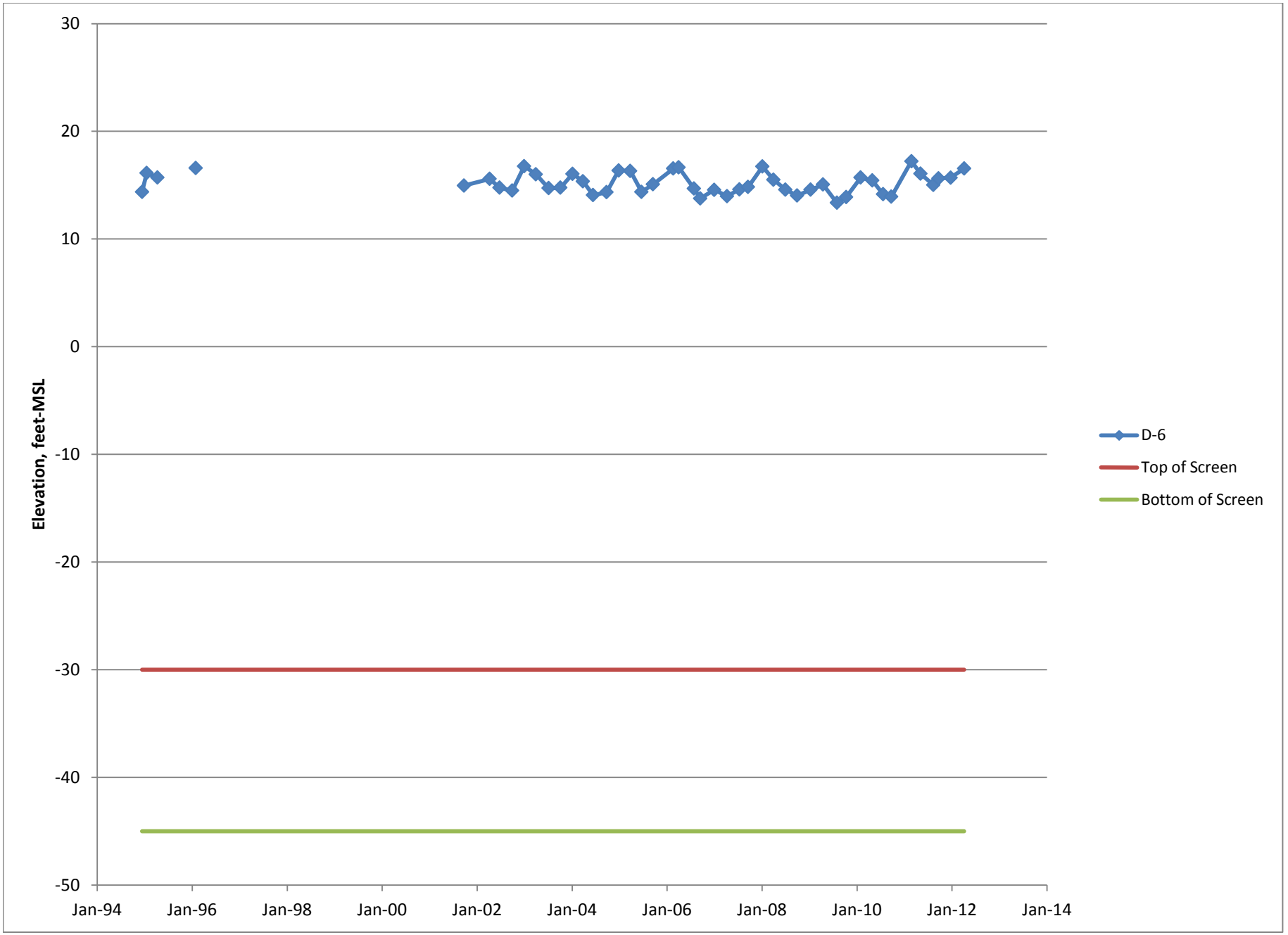
Bottom of Screen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Elevation, feet-MSL
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Jan-96
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D-6
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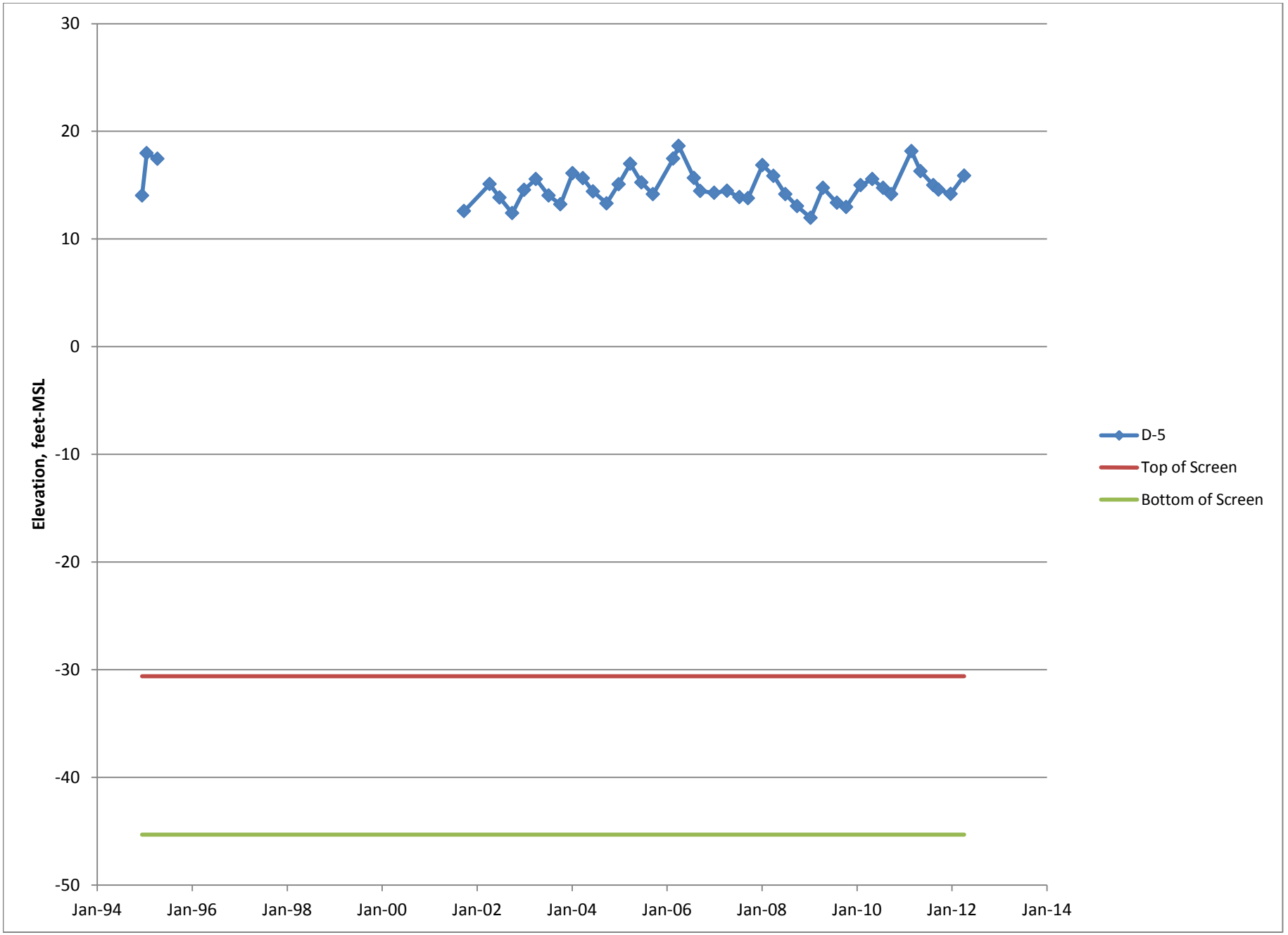
Bottom of Screen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D-5
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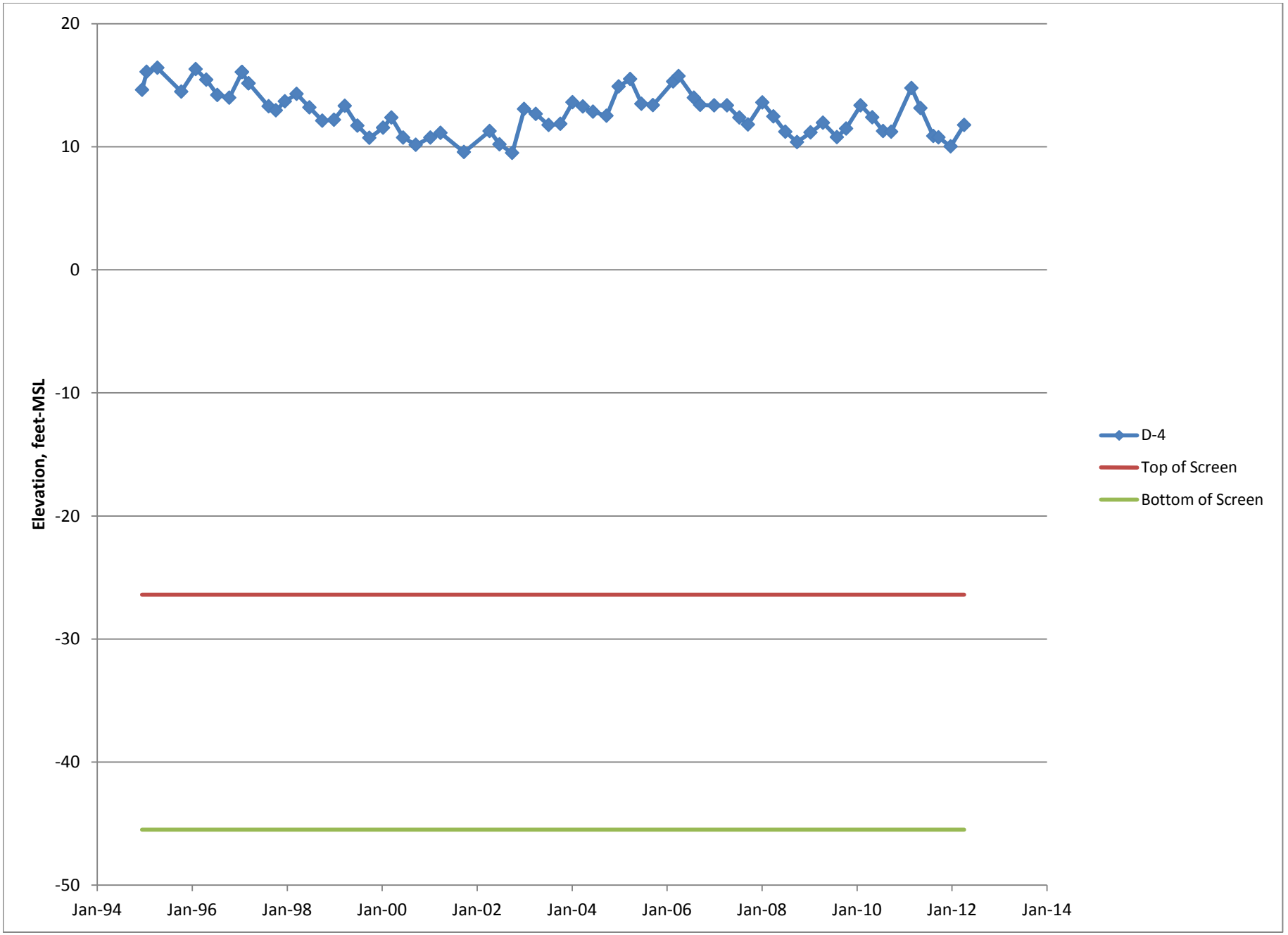
Bottom of Screen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Elevation, feet-MSL
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Jan-14
D-4
Top of Screen
Bottom of Screen


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Elevation, feet-MSL
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Jan-96
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D-3
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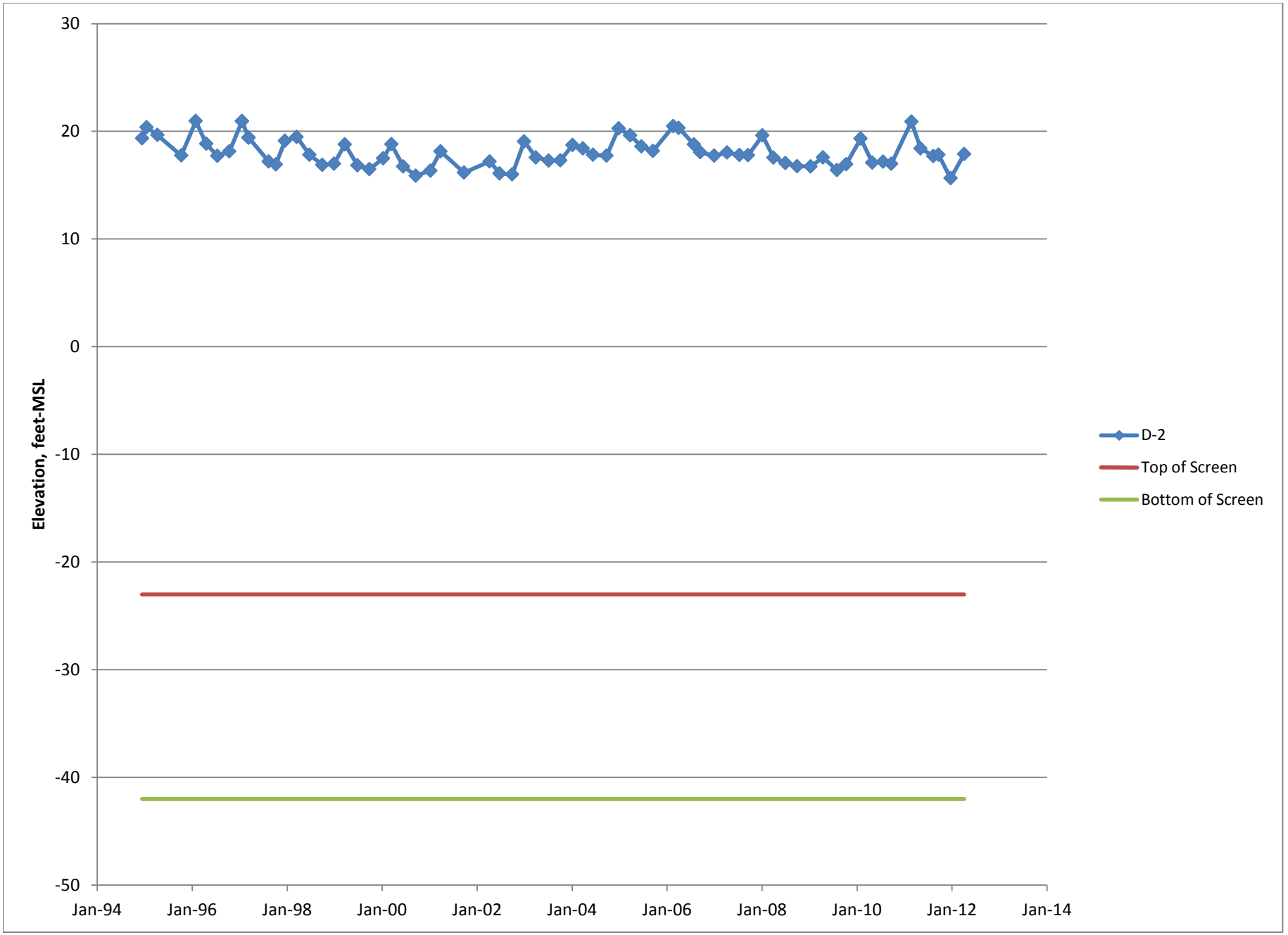
Bottom of Screen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D-2
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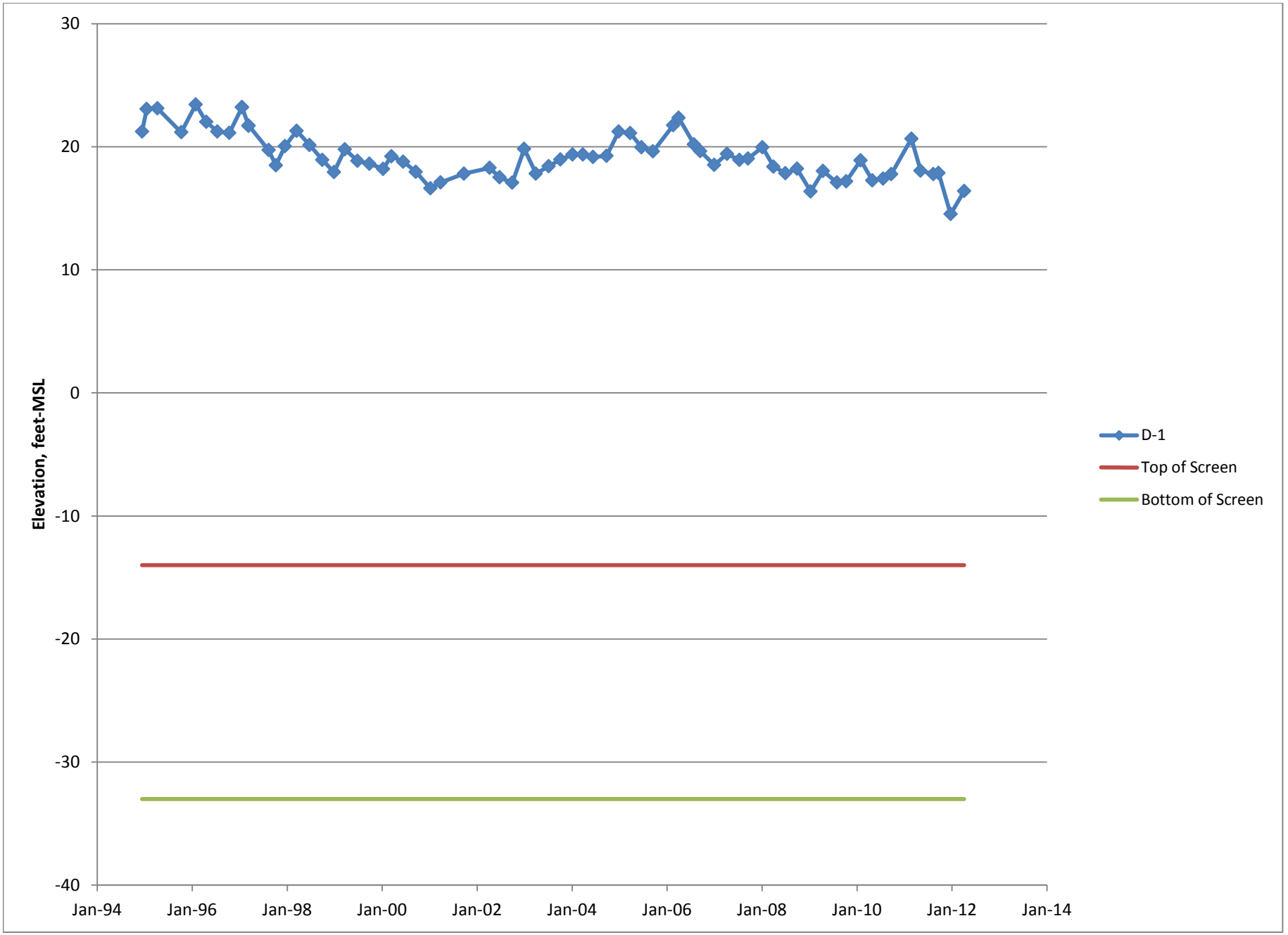
Bottom of Screen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Elevation, feet-MSL
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Jan-14
D-1
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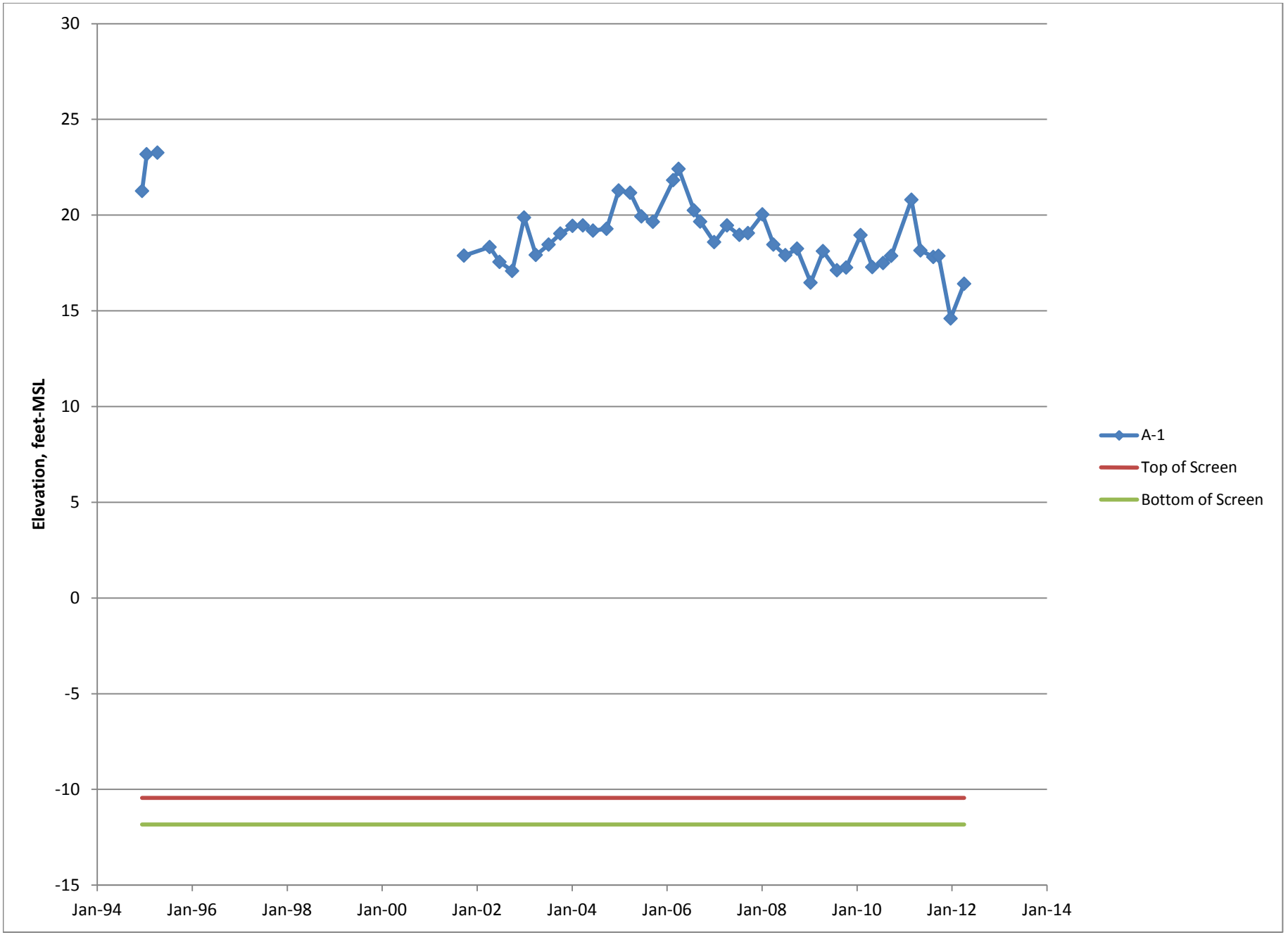
Bottom of Screen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Elevation, feet-MSL
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Jan-96
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Jan-14
A-1
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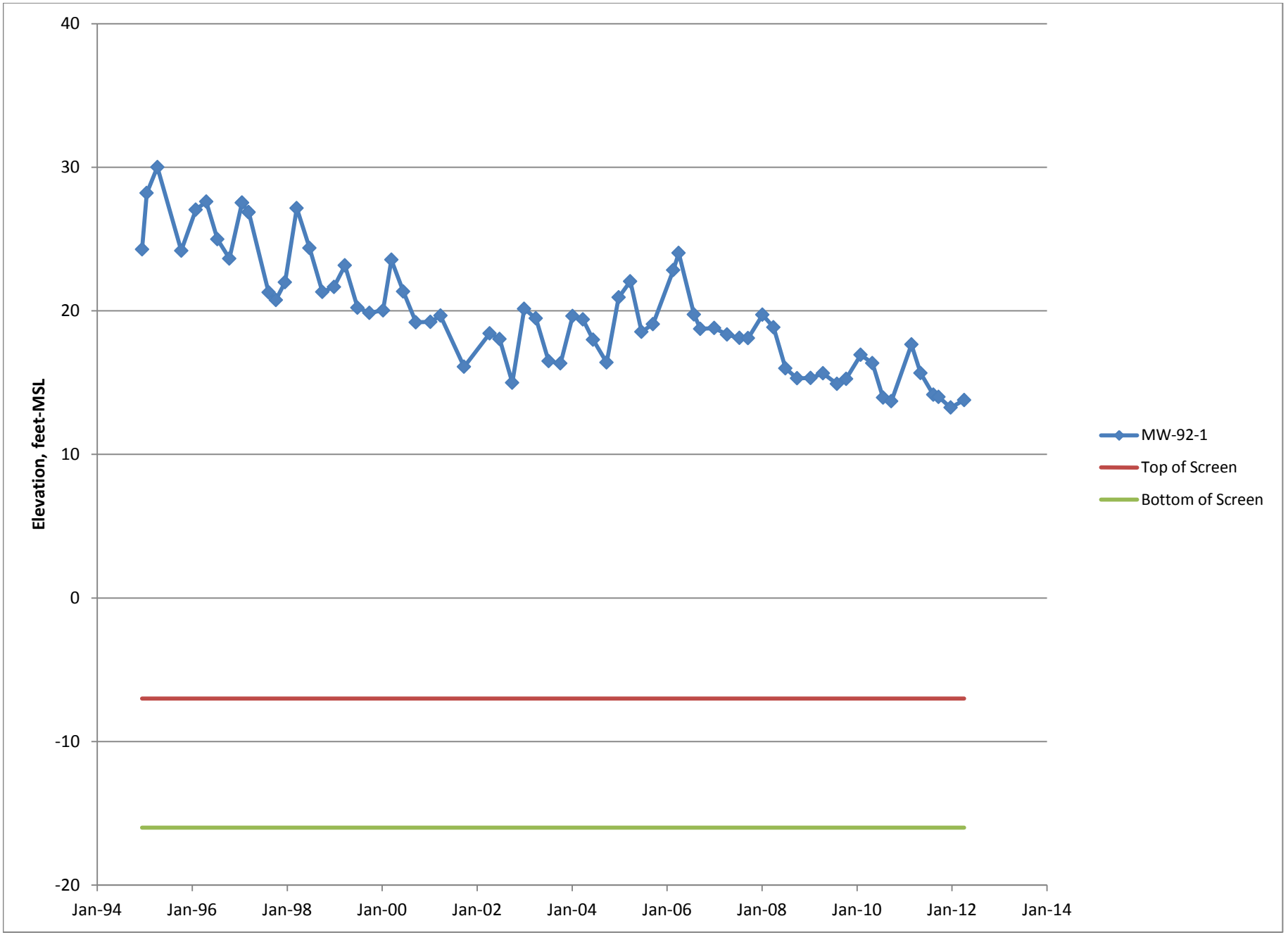
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Elevation, feet-MSL
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Jan-12
Jan-14
MW-92-1
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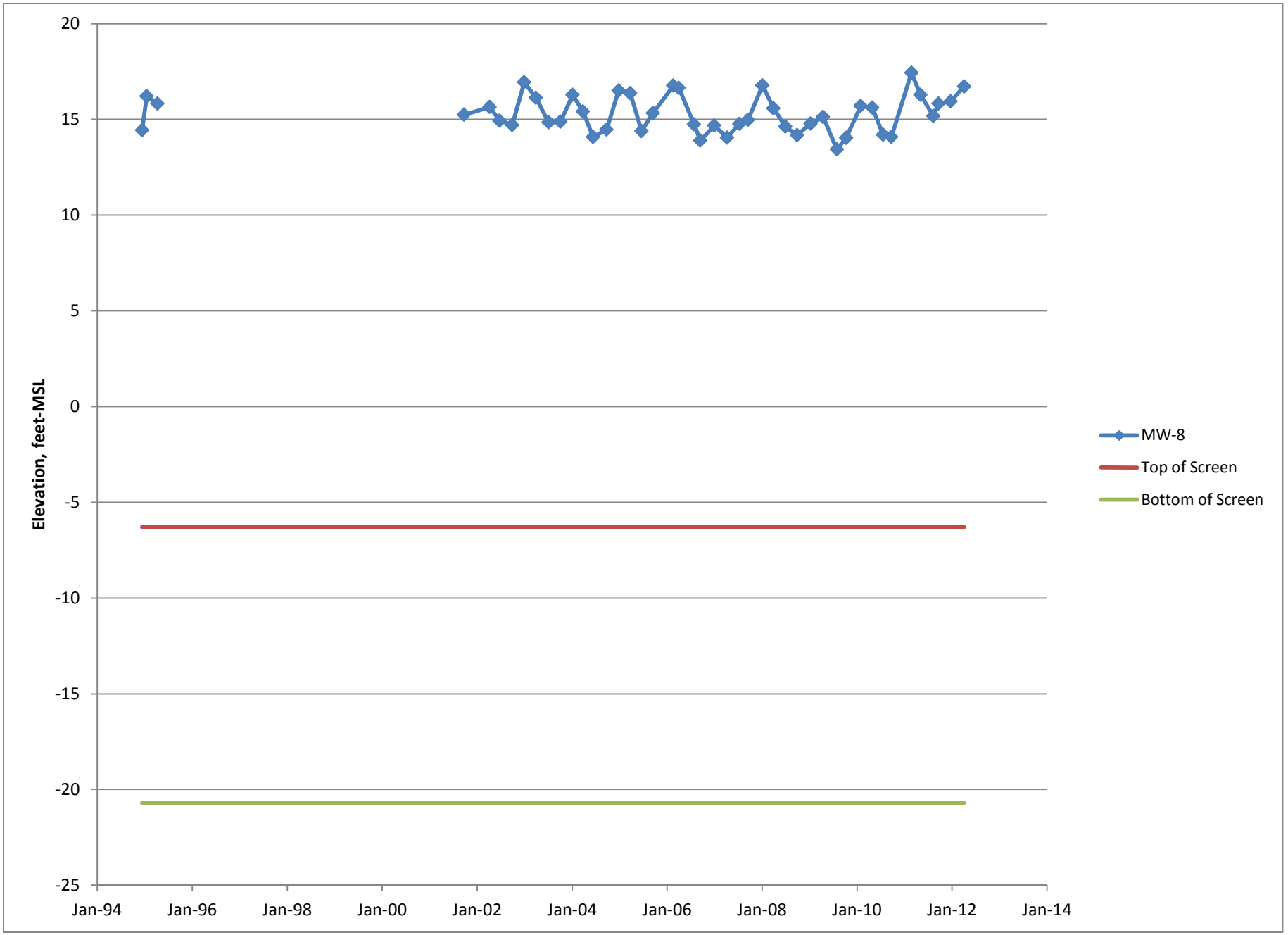
Bottom of Screen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Elevation, feet-MSL
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Jan-12
Jan-14
MW-8
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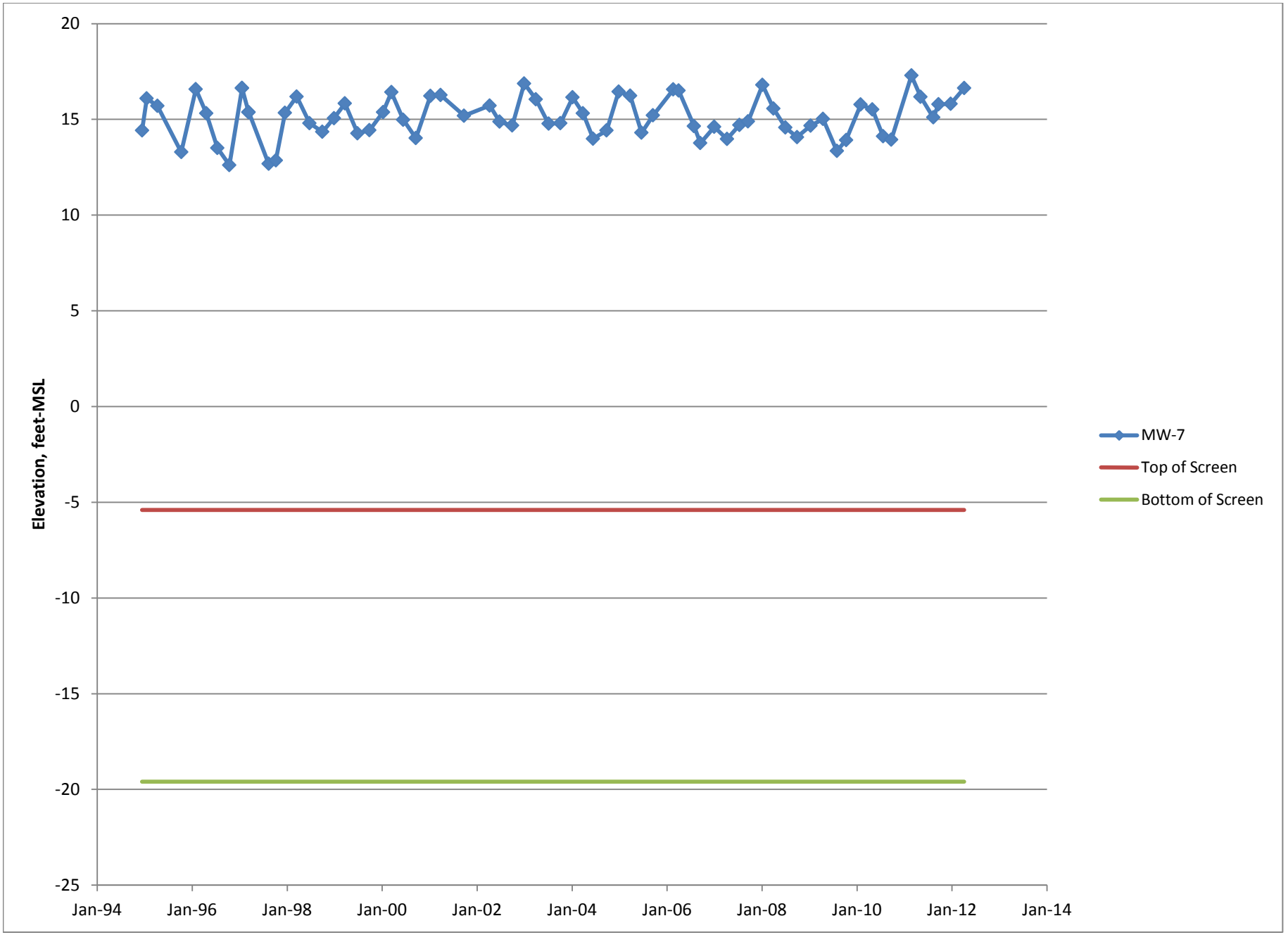
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Elevation, feet-MSL
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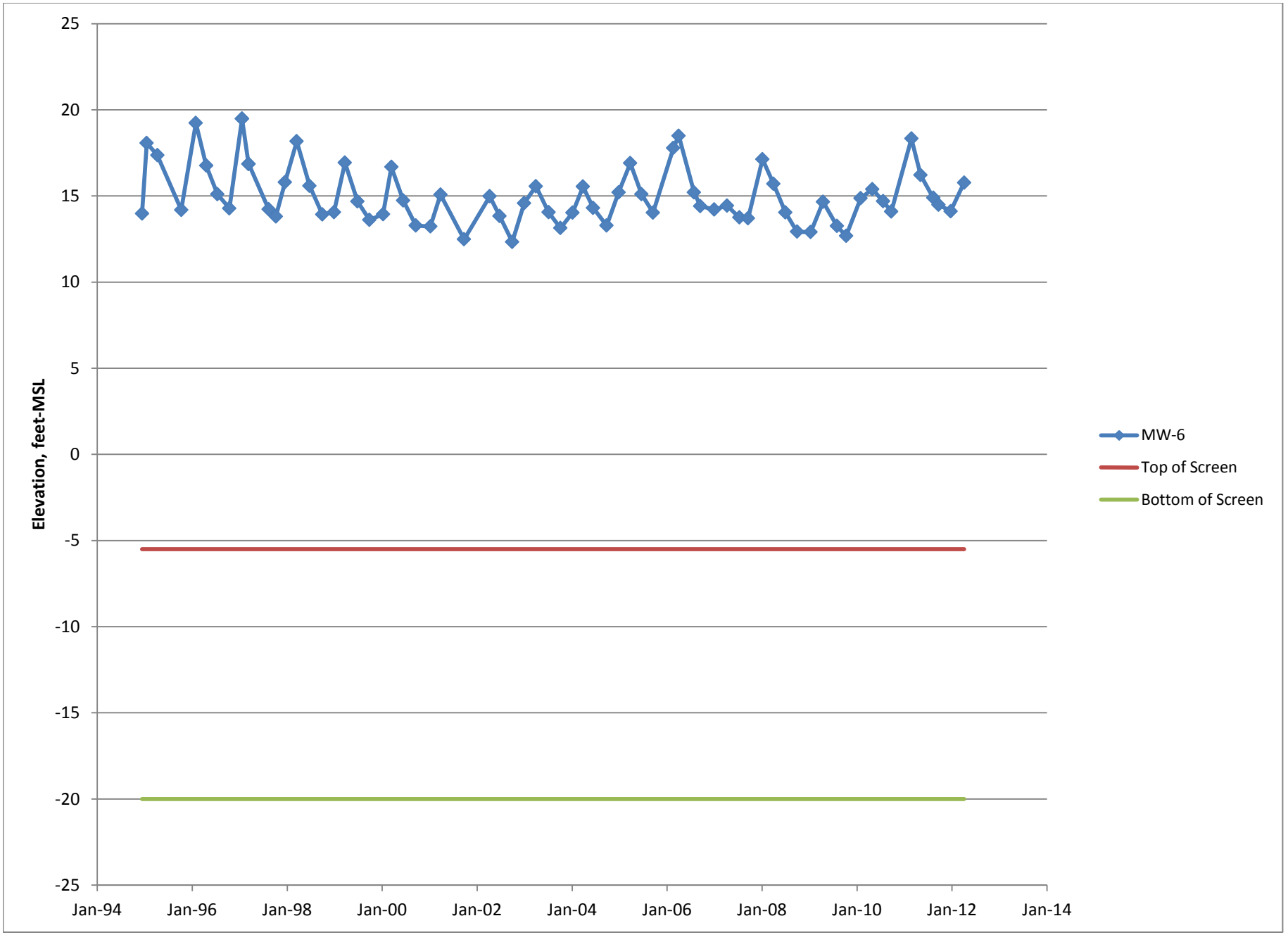
Jan-14
MW-7
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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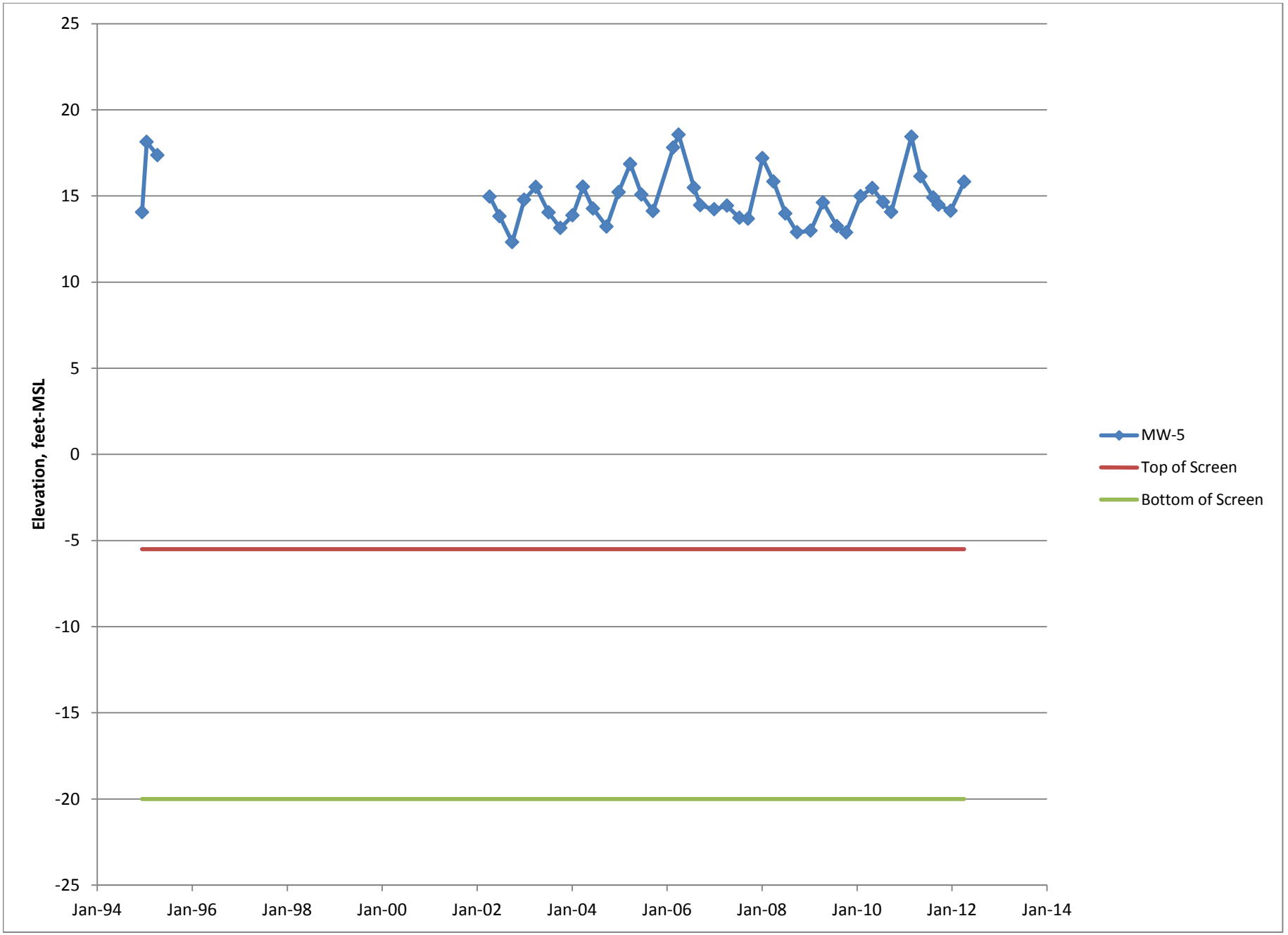
Jan-12
Jan-14
MW-6
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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Jan-14
MW-5
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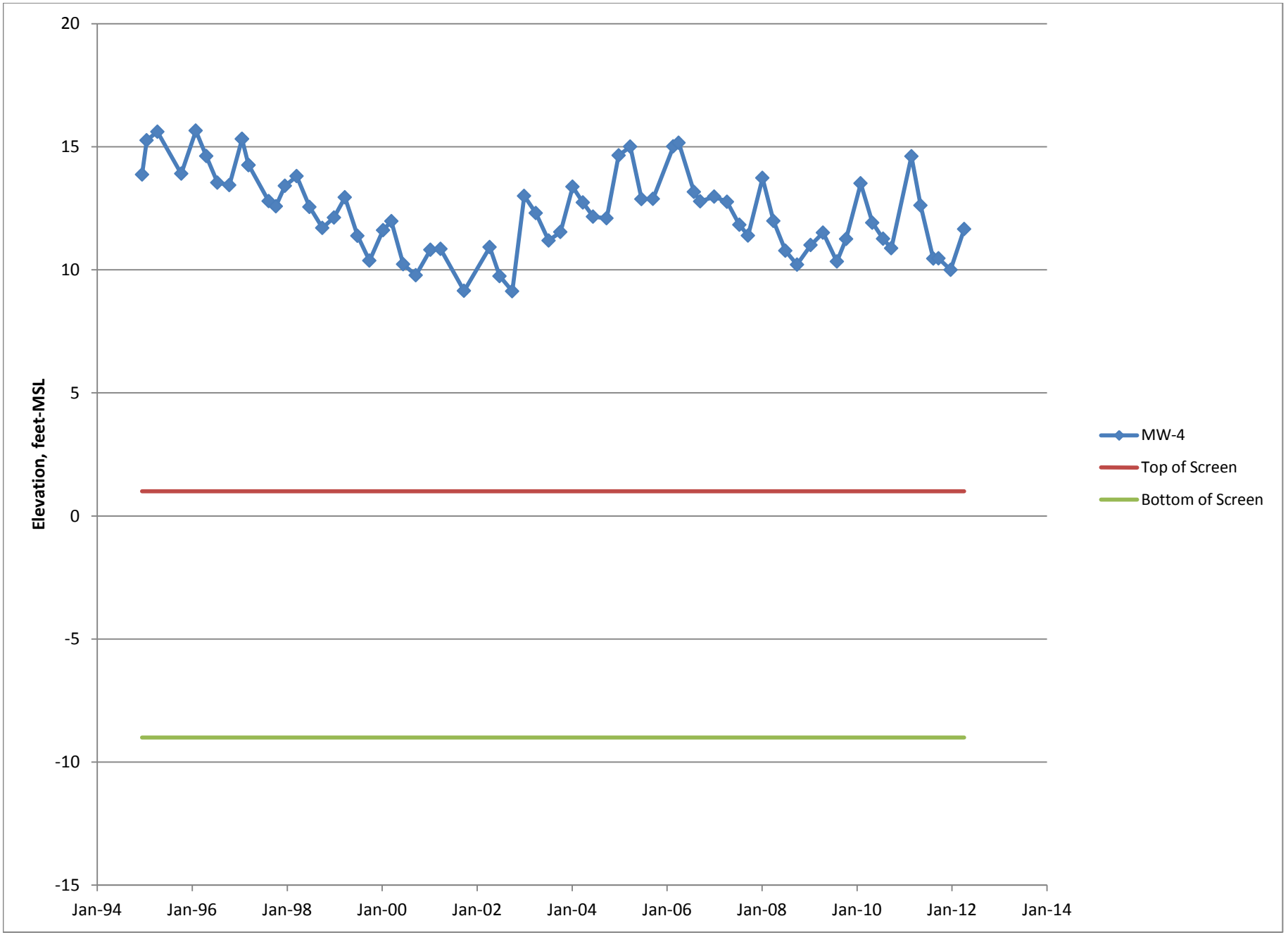
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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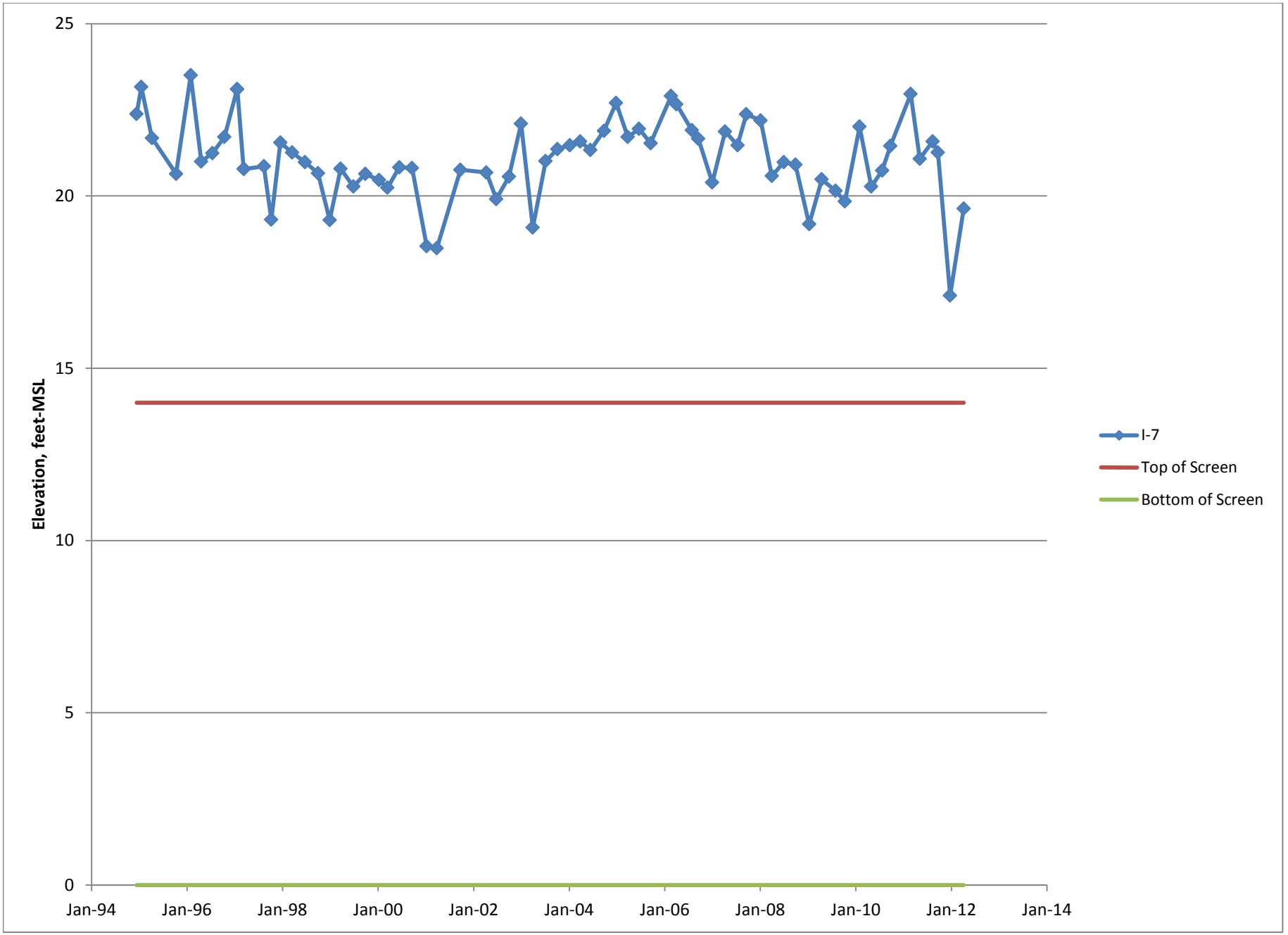
Jan-14
MW-4
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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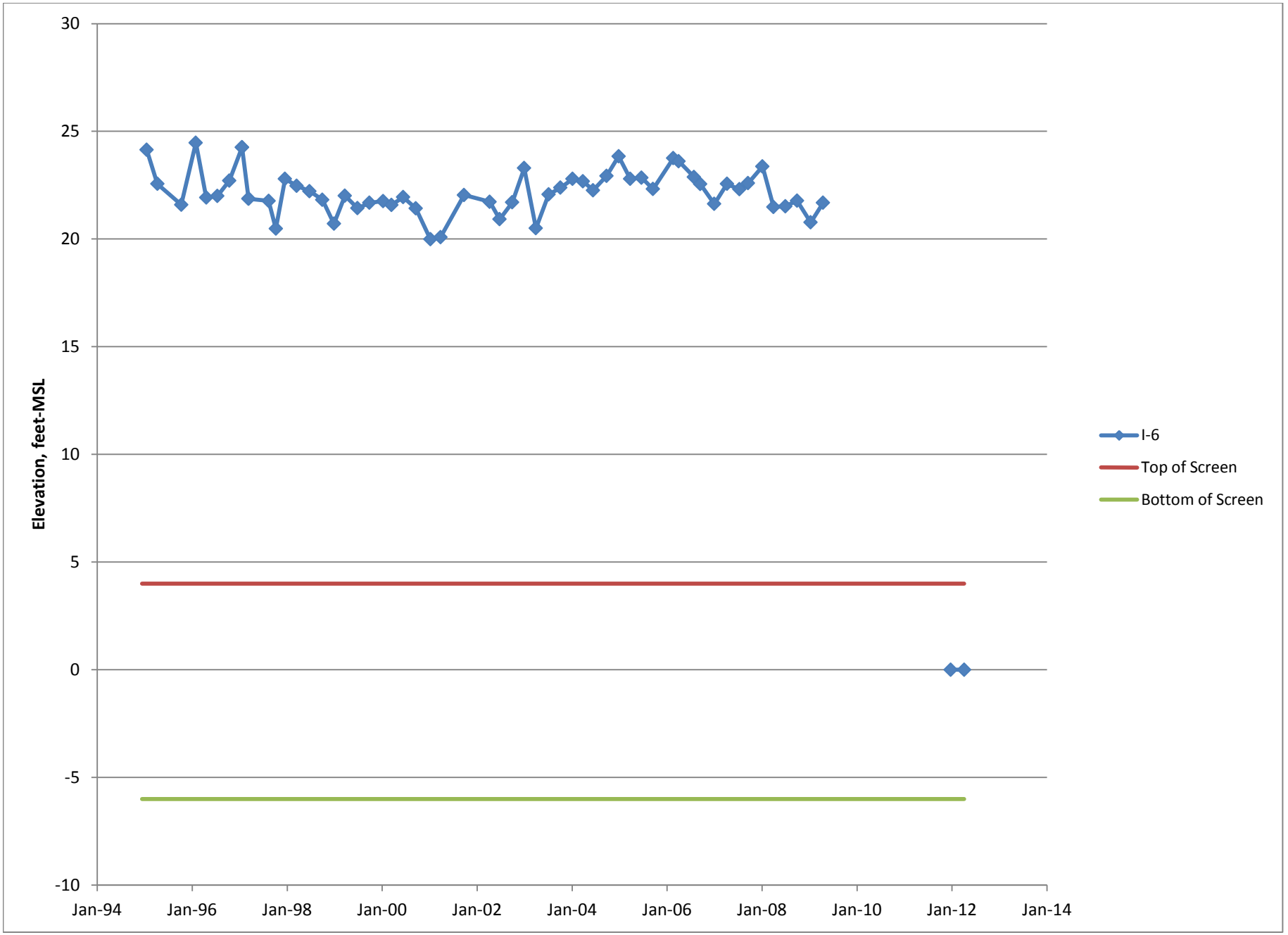
Jan-12
Jan-14
I-7
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
I-6
Top of Screen
Bottom of Screen


20
18
16
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12
10
8
6
4
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0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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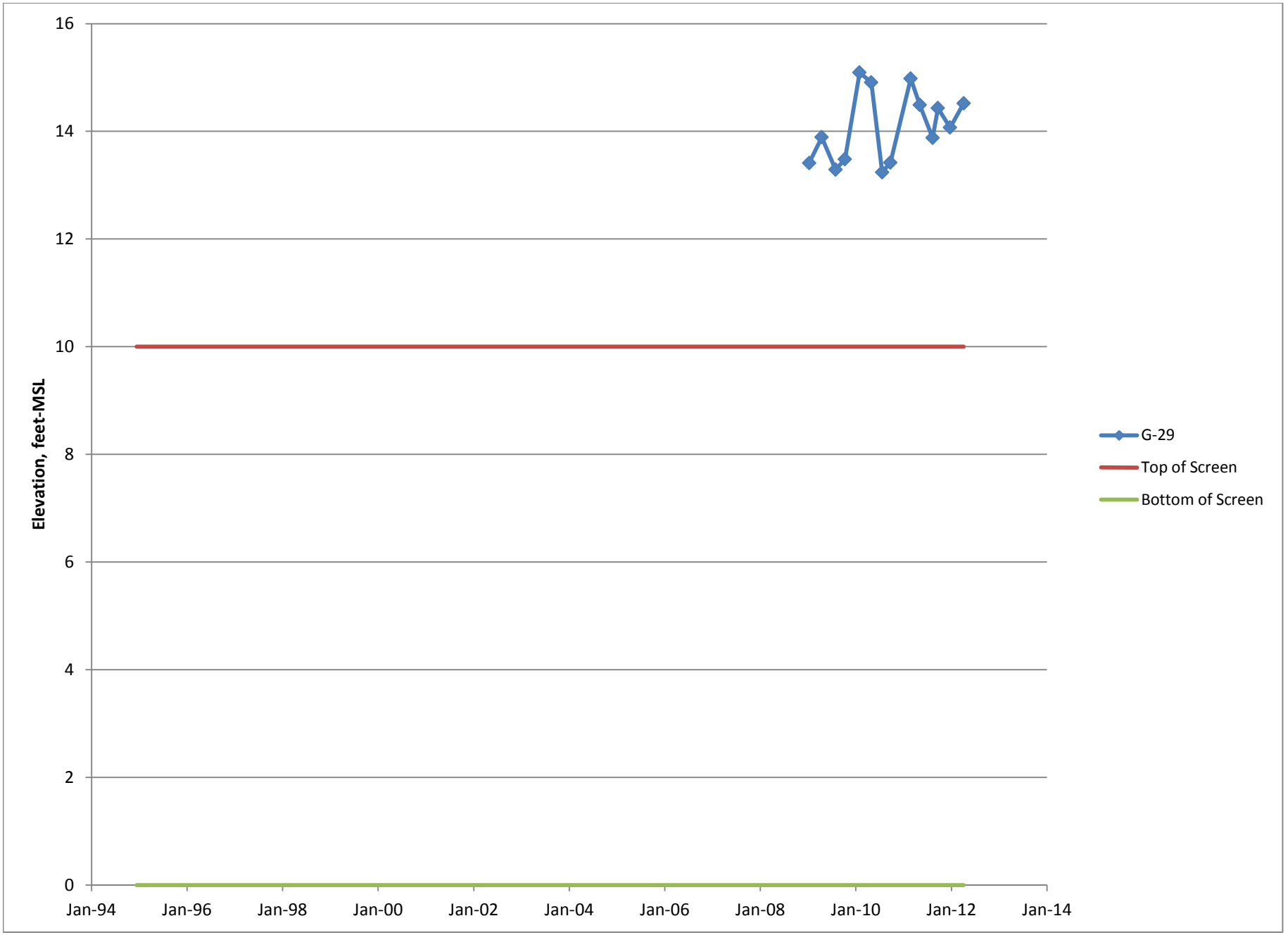
Jan-12
Jan-14
G-30
Top of Screen
Bottom of Screen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Elevation, feet-MSL
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Jan-96
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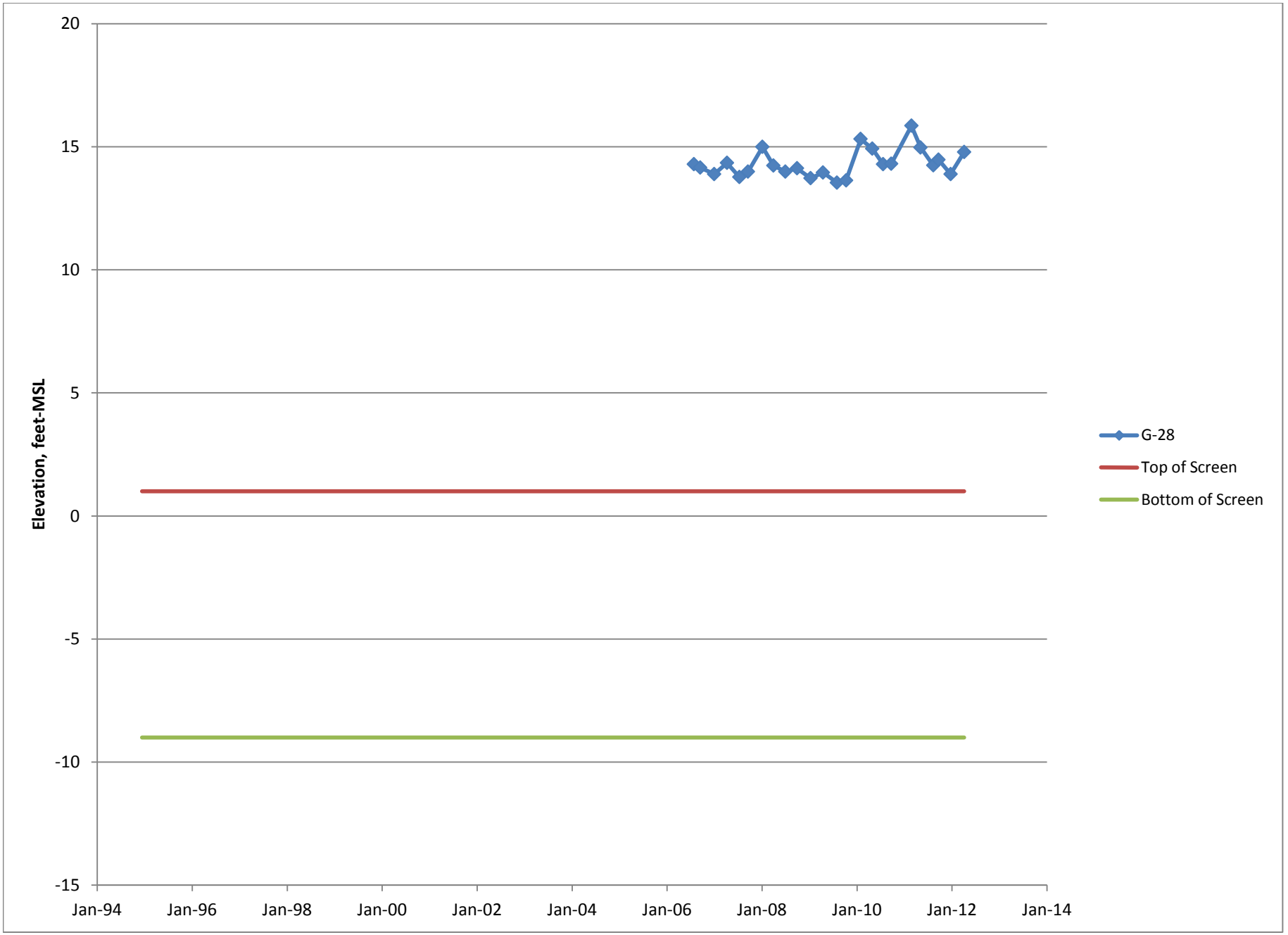
Jan-14
G-29
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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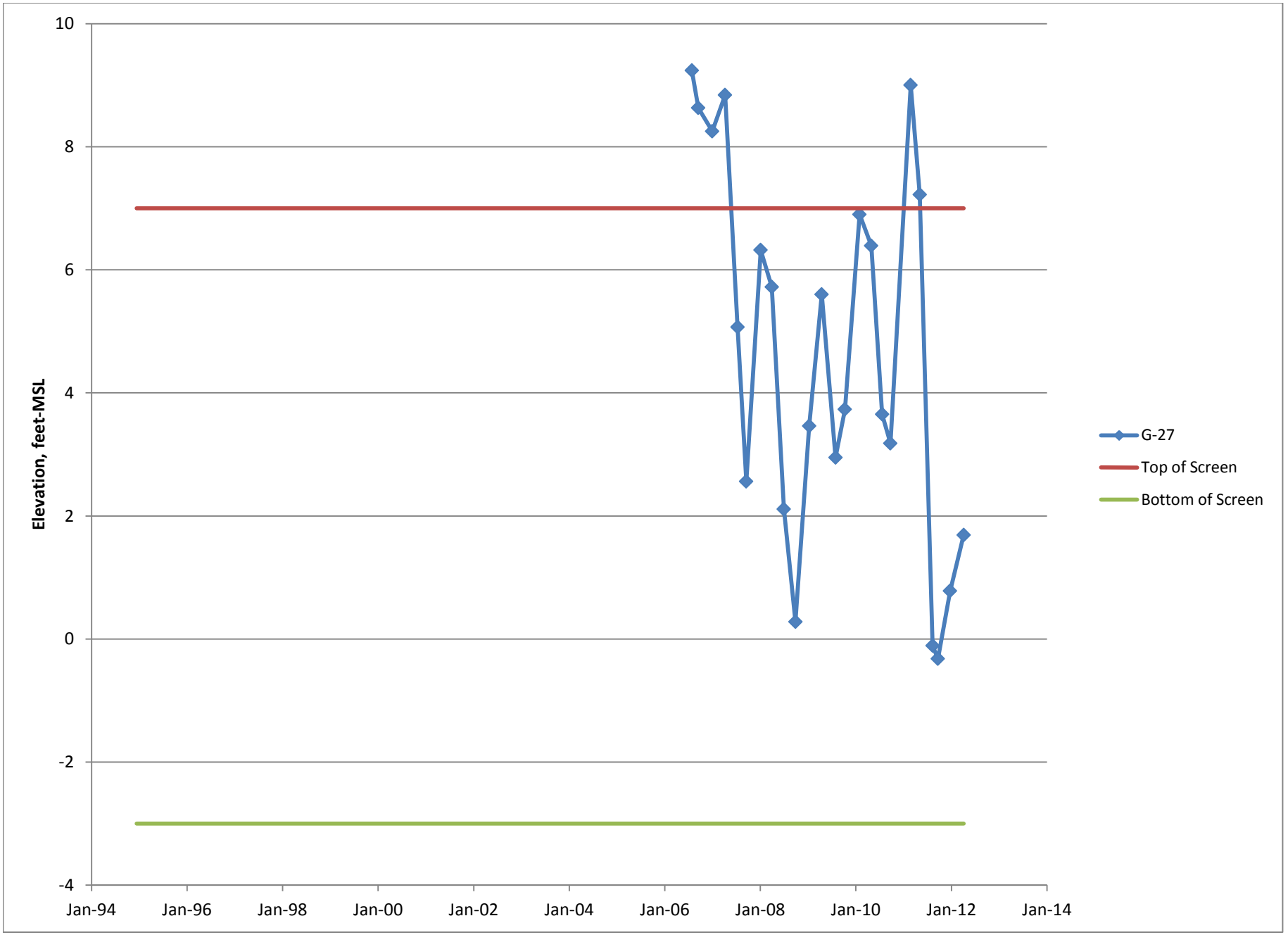
Jan-12
Jan-14
G-28
Top of Screen
Bottom of Screen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6
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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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Jan-12
Jan-14
G-27
Top of Screen
Bottom of Screen


25
20
15
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-5
Elevation, feet-MSL
Jan-94
Jan-96
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Jan-14
G-26
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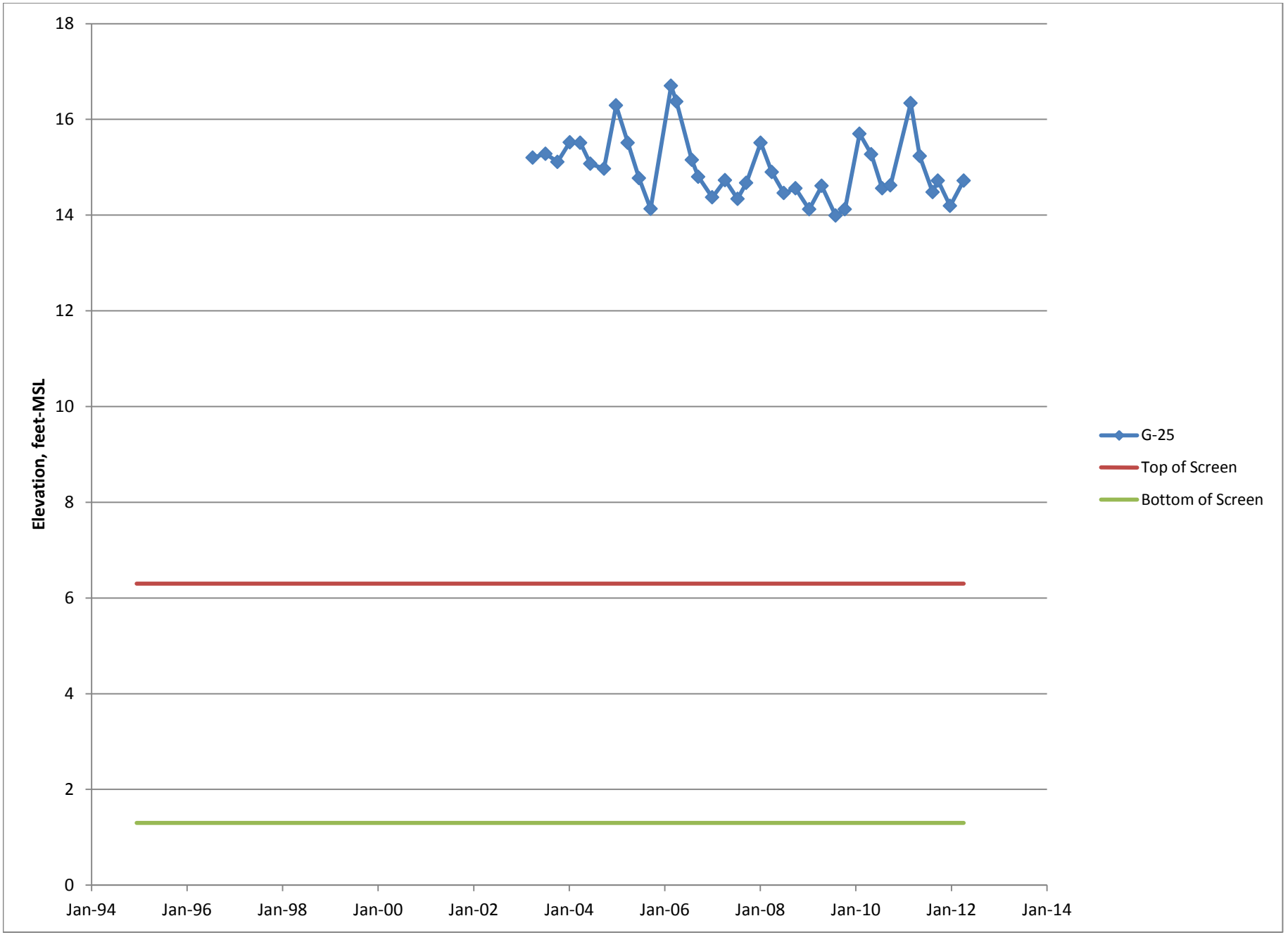
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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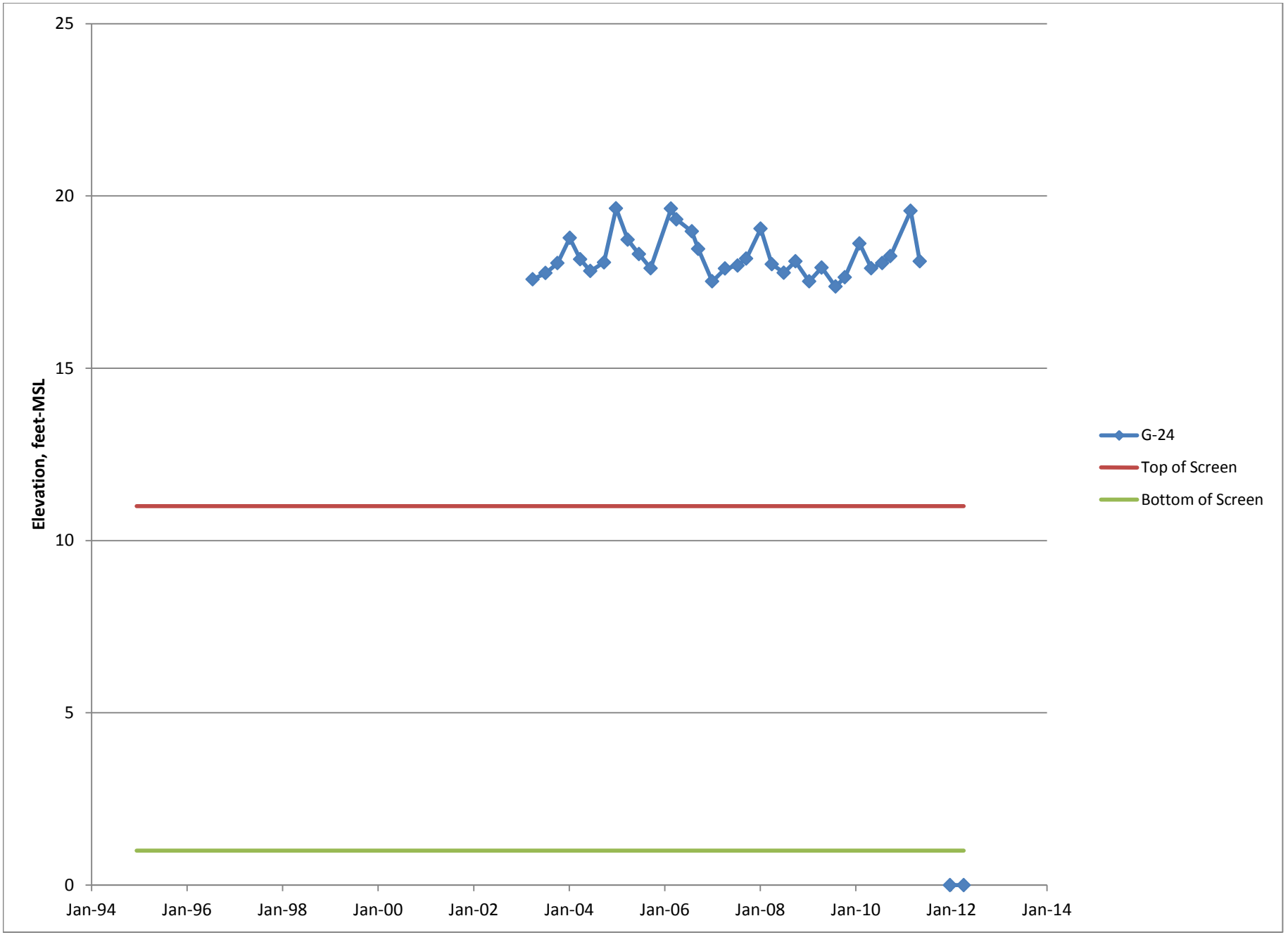
Jan-14
G-25
Top of Screen
Bottom of Screen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Elevation, feet-MSL
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Jan-14
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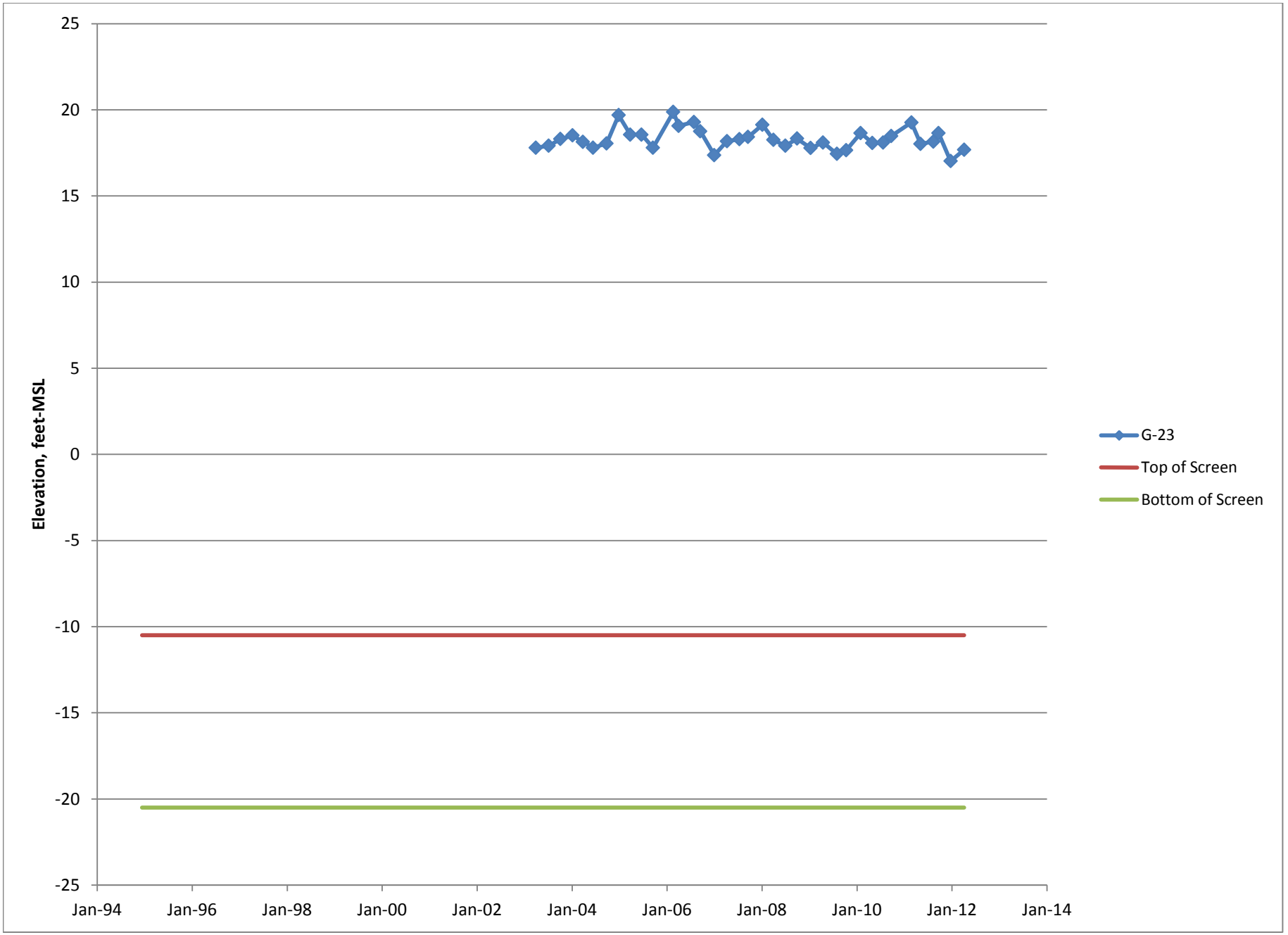
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Elevation, feet-MSL
Jan-94
Jan-96
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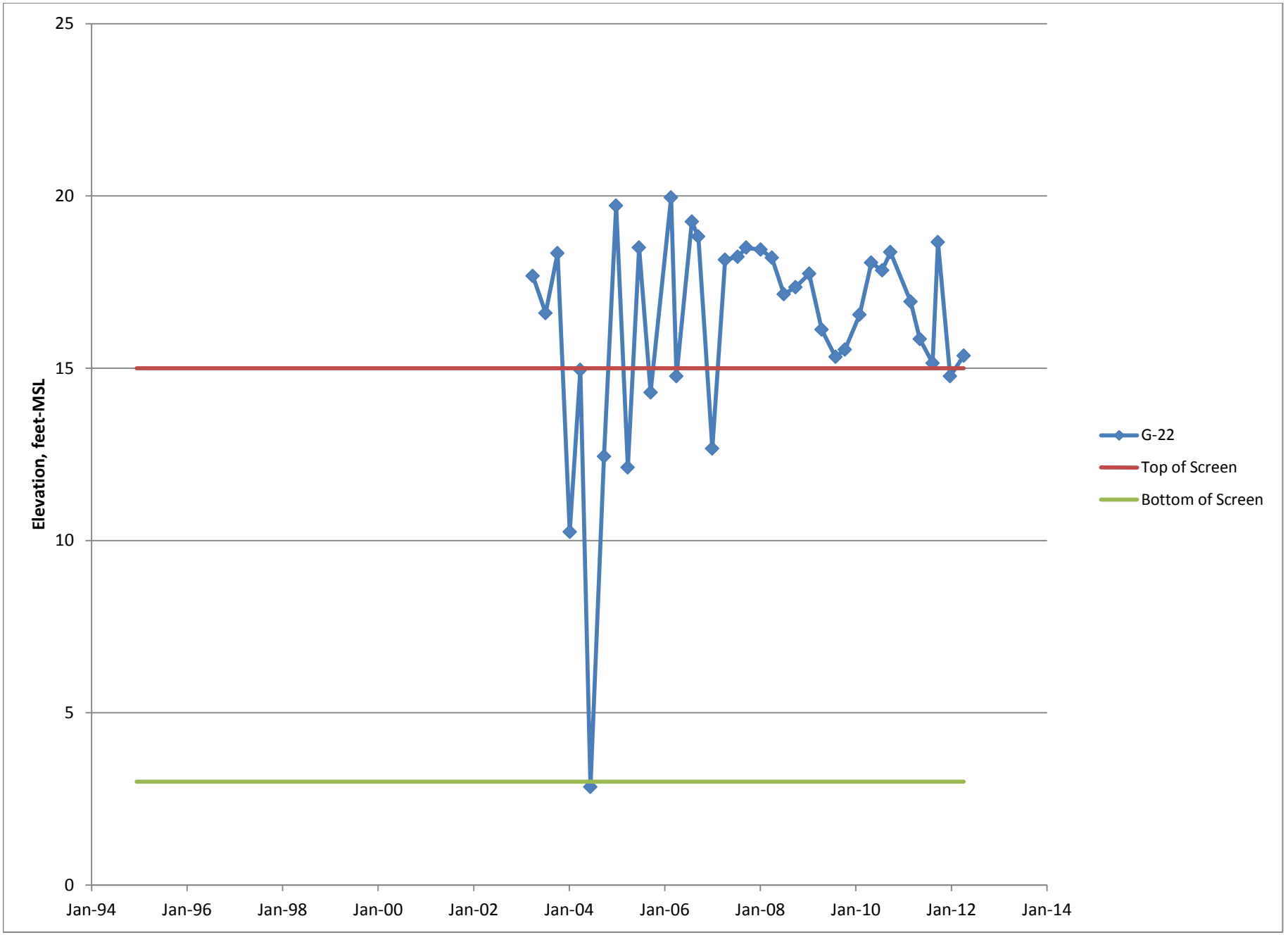
Jan-12
Jan-14
G-23
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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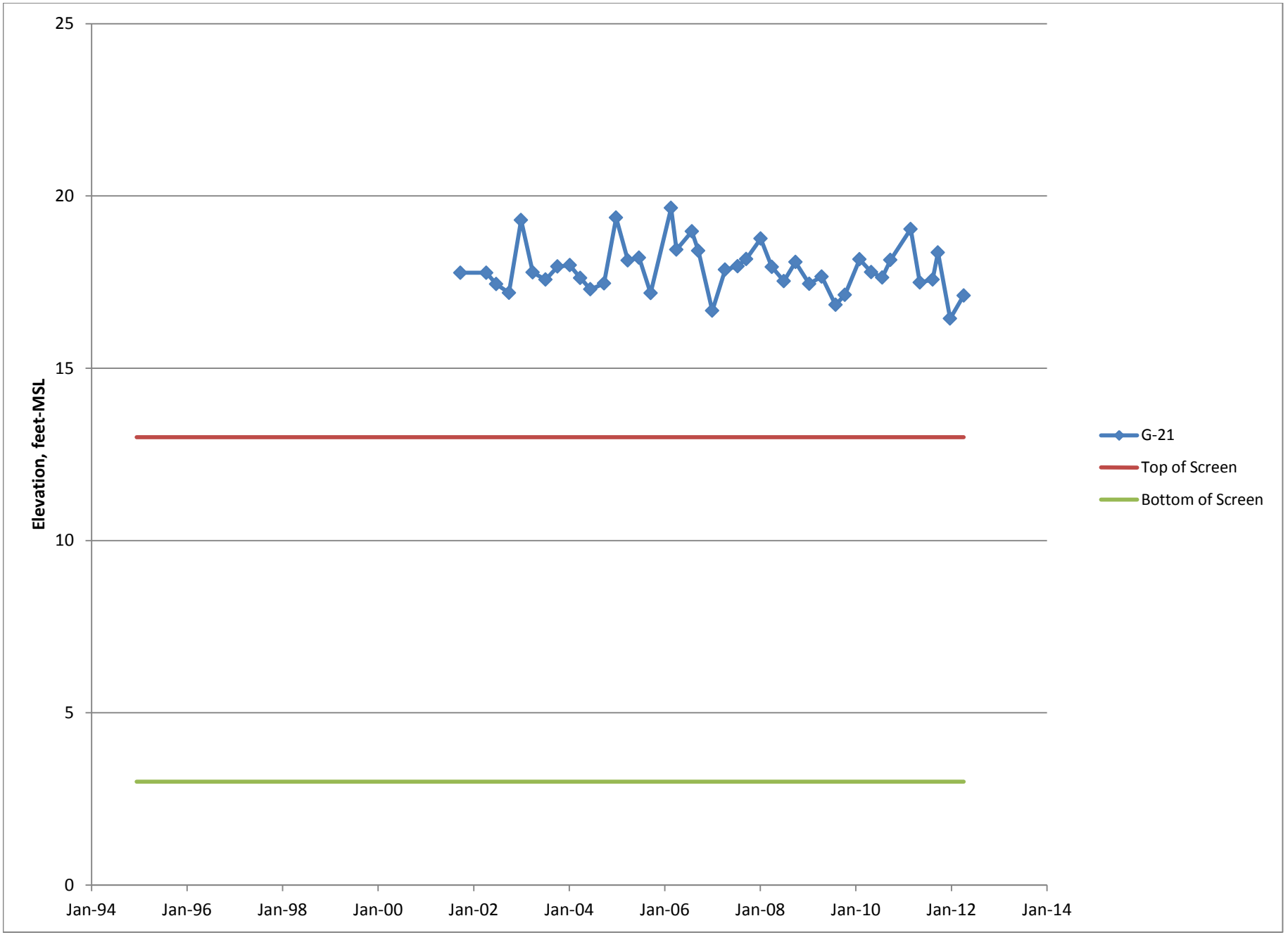
Jan-12
Jan-14
G-22
Top of Screen
Bottom of Screen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Elevation, feet-MSL
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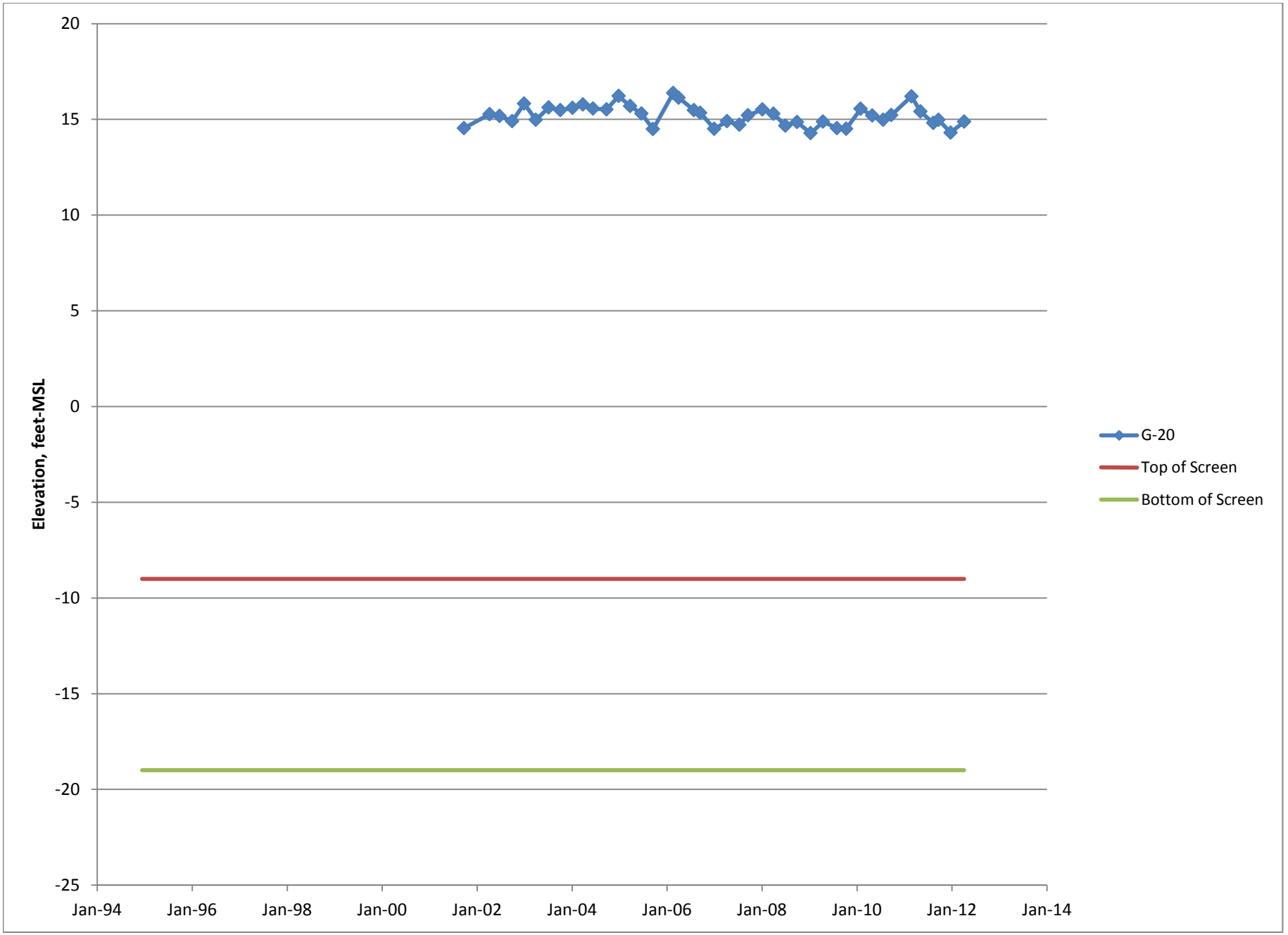
Jan-14
G-21
Top of Screen
Bottom of Screen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-25
Elevation, feet-MSL
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Jan-96
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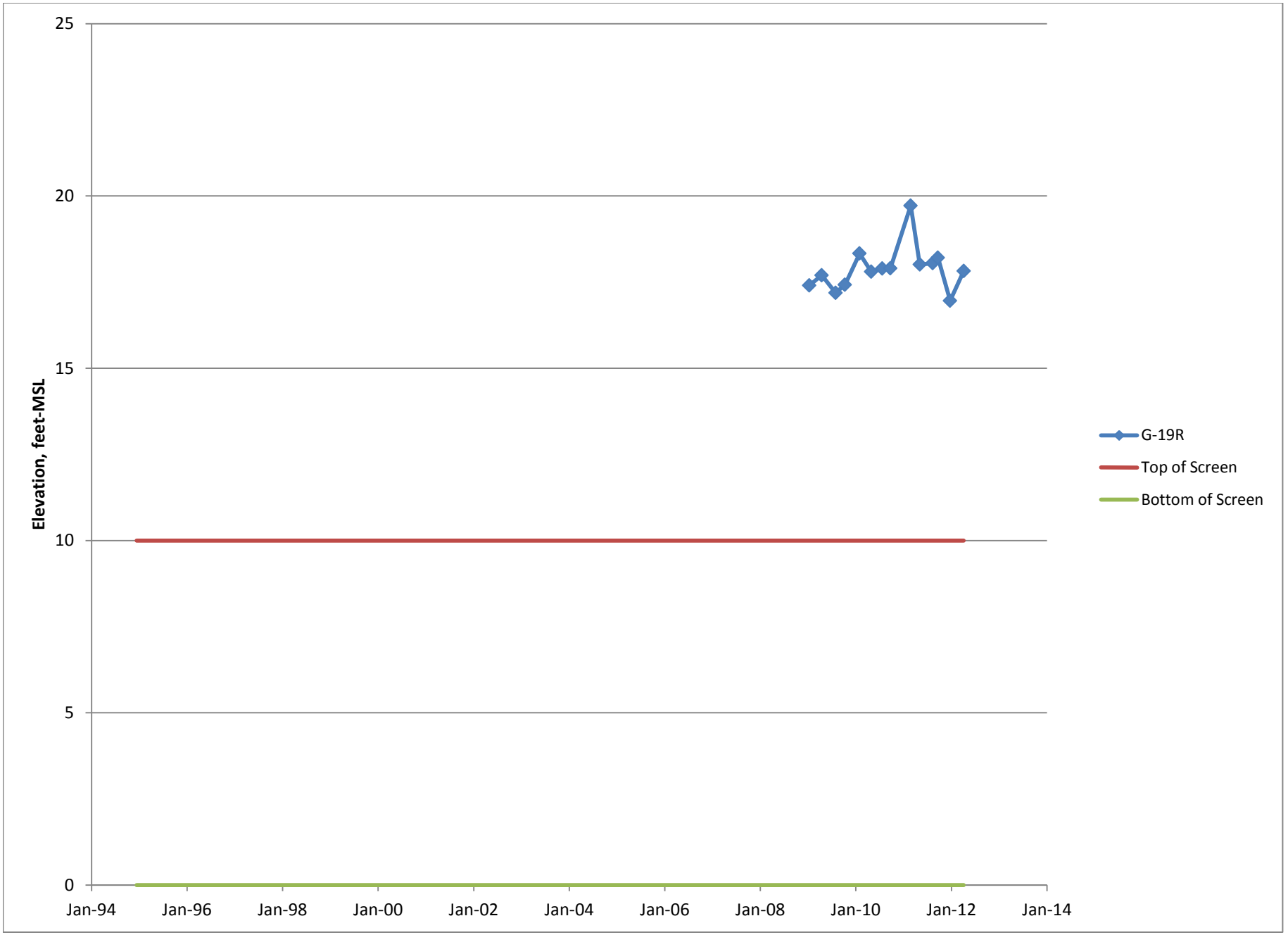
Jan-14
G-20
Top of Screen
Bottom of Screen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Elevation, feet-MSL
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Jan-96
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Jan-12
Jan-14
G-19R
Top of Screen
Bottom of Screen


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8
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0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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Jan-14
G-18
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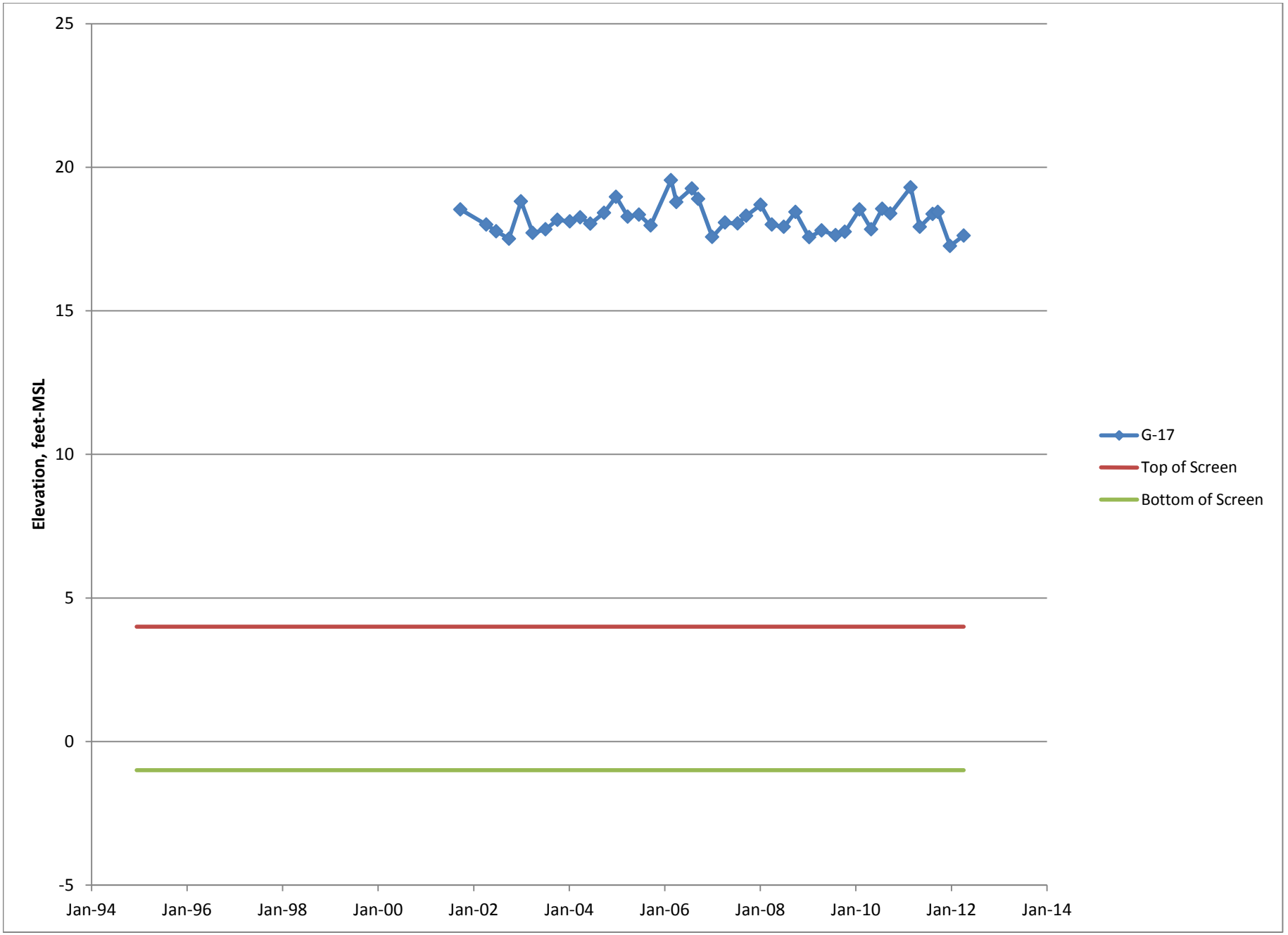
Bottom of Screen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Elevation, feet-MSL
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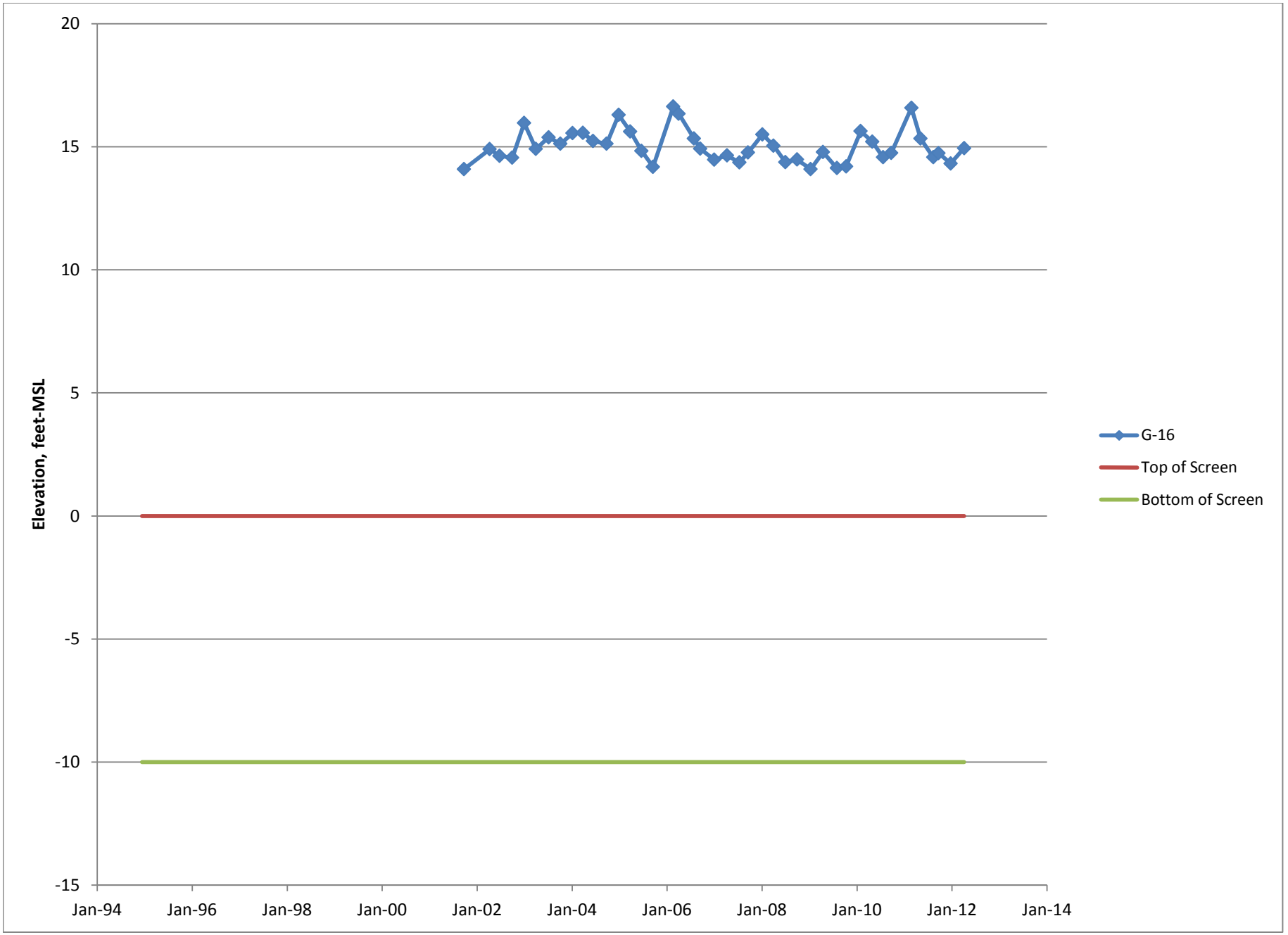
G-17
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
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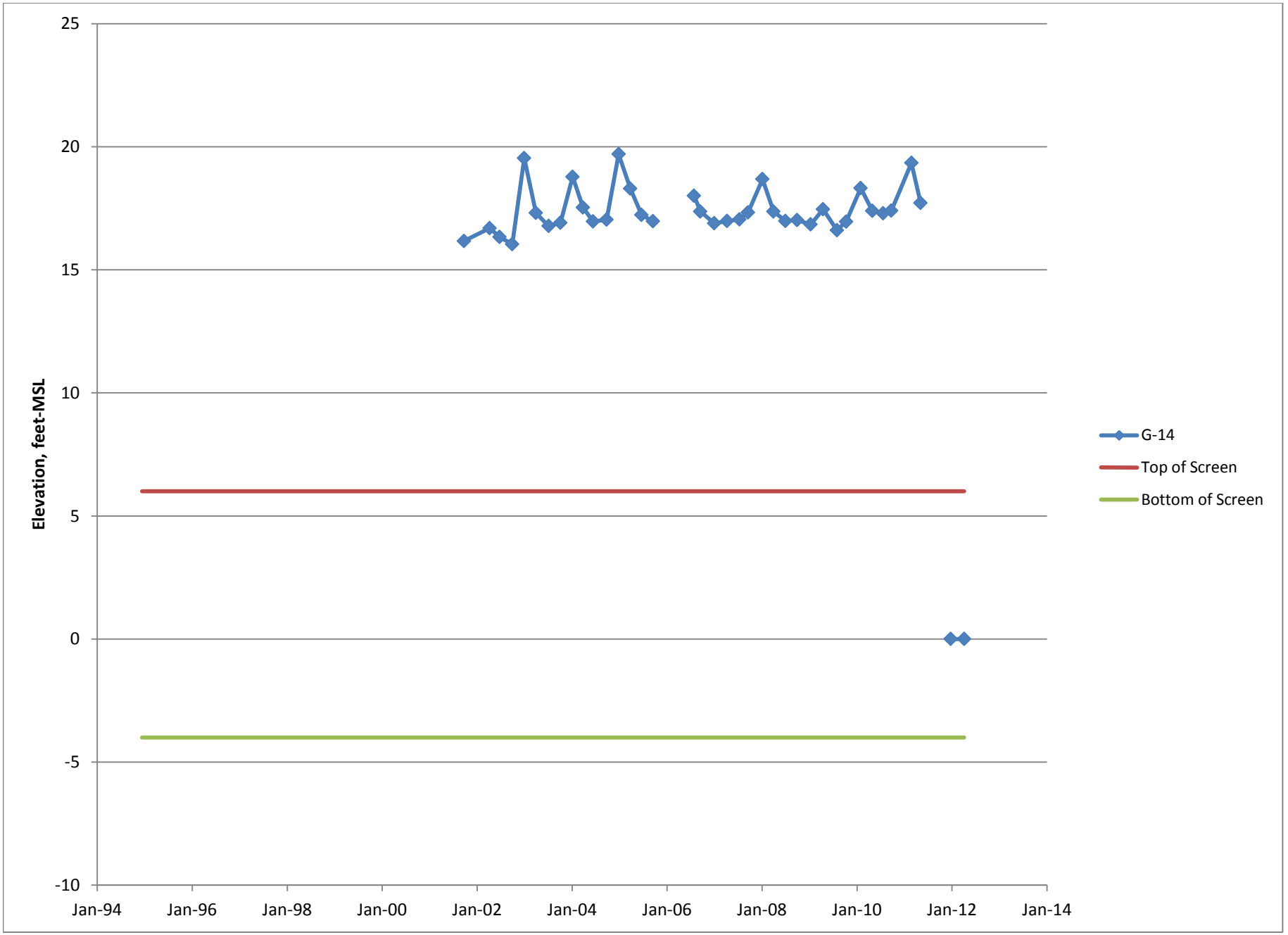
Jan-14
G-16
Top of Screen
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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Jan-12
Jan-14
G-14
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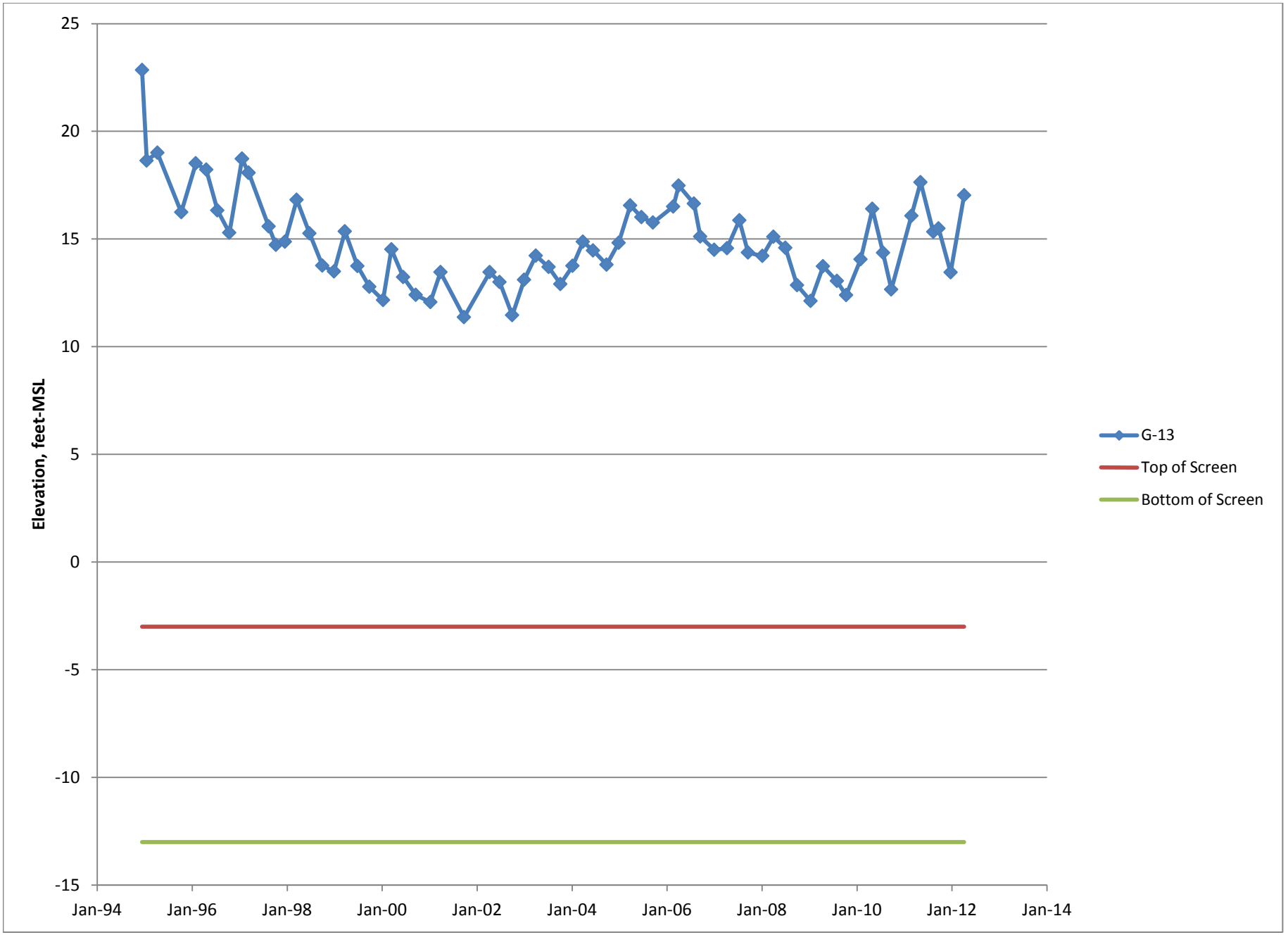
Bottom of Screen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Elevation, feet-MSL
Jan-94
Jan-96
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Jan-14
G-13
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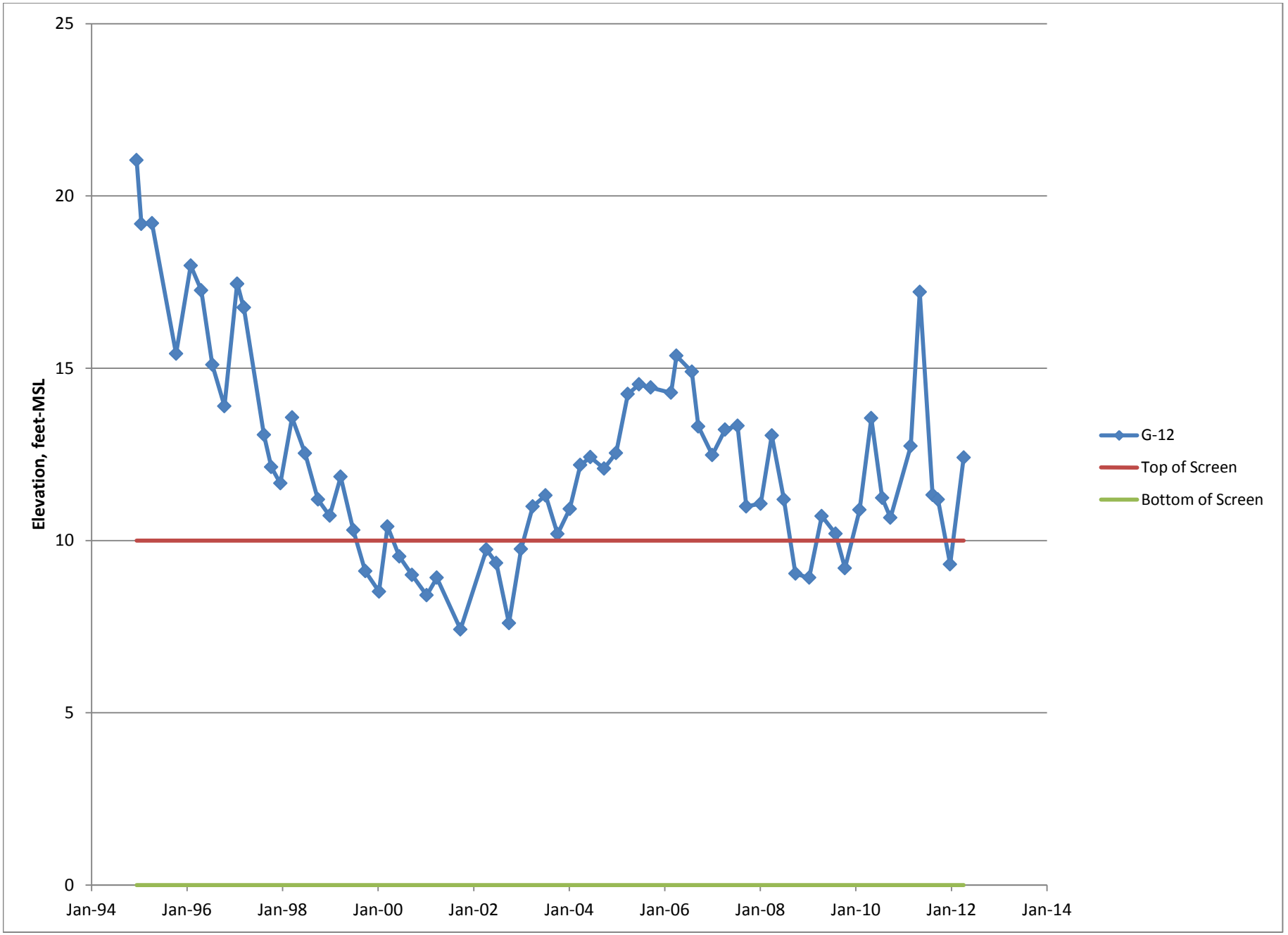
Bottom of Screen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Elevation, feet-MSL
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Jan-96
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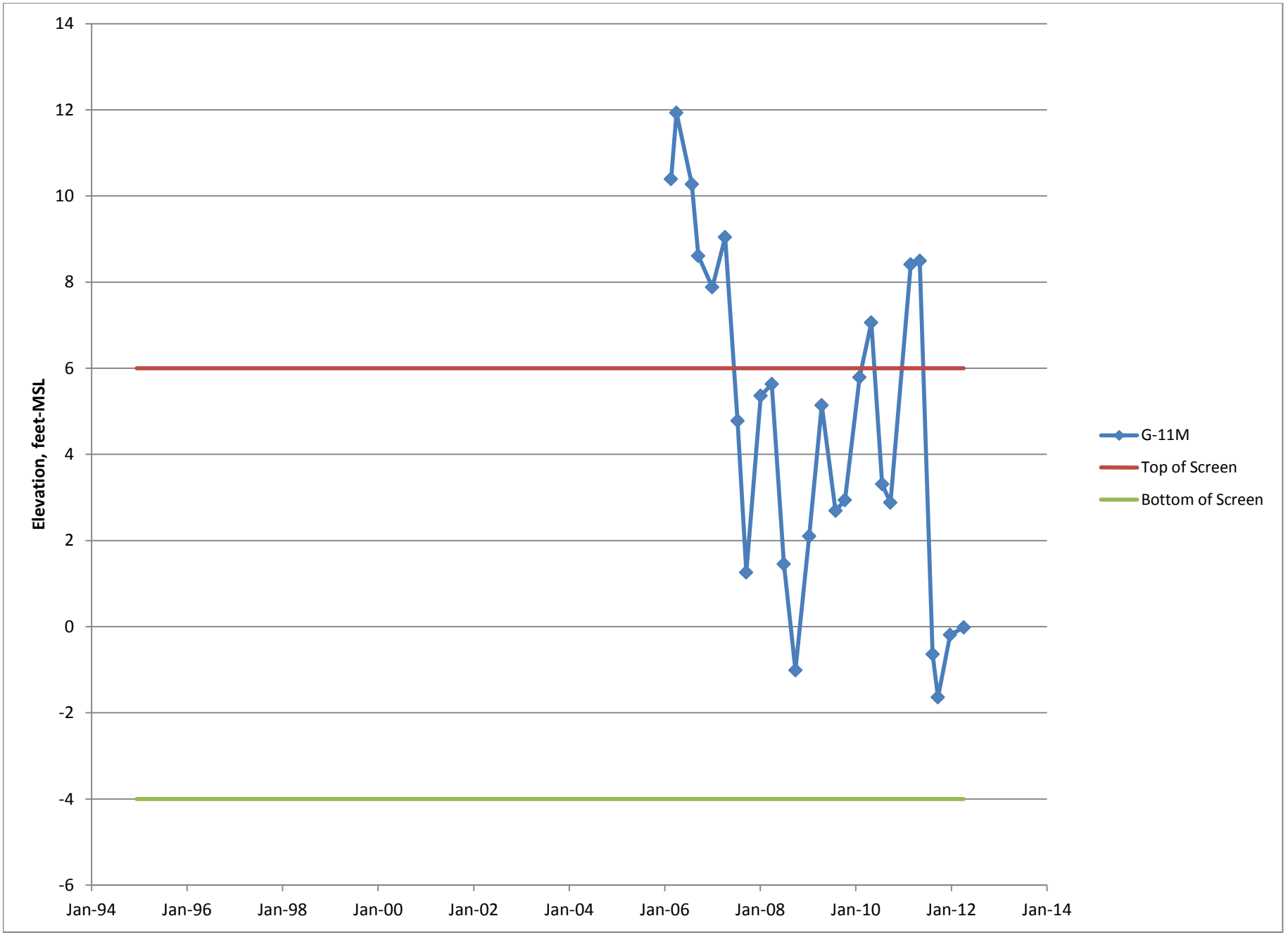
Jan-12
Jan-14
G-12
Top of Screen
Bottom of Screen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-4
-6
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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Jan-14
G-11M
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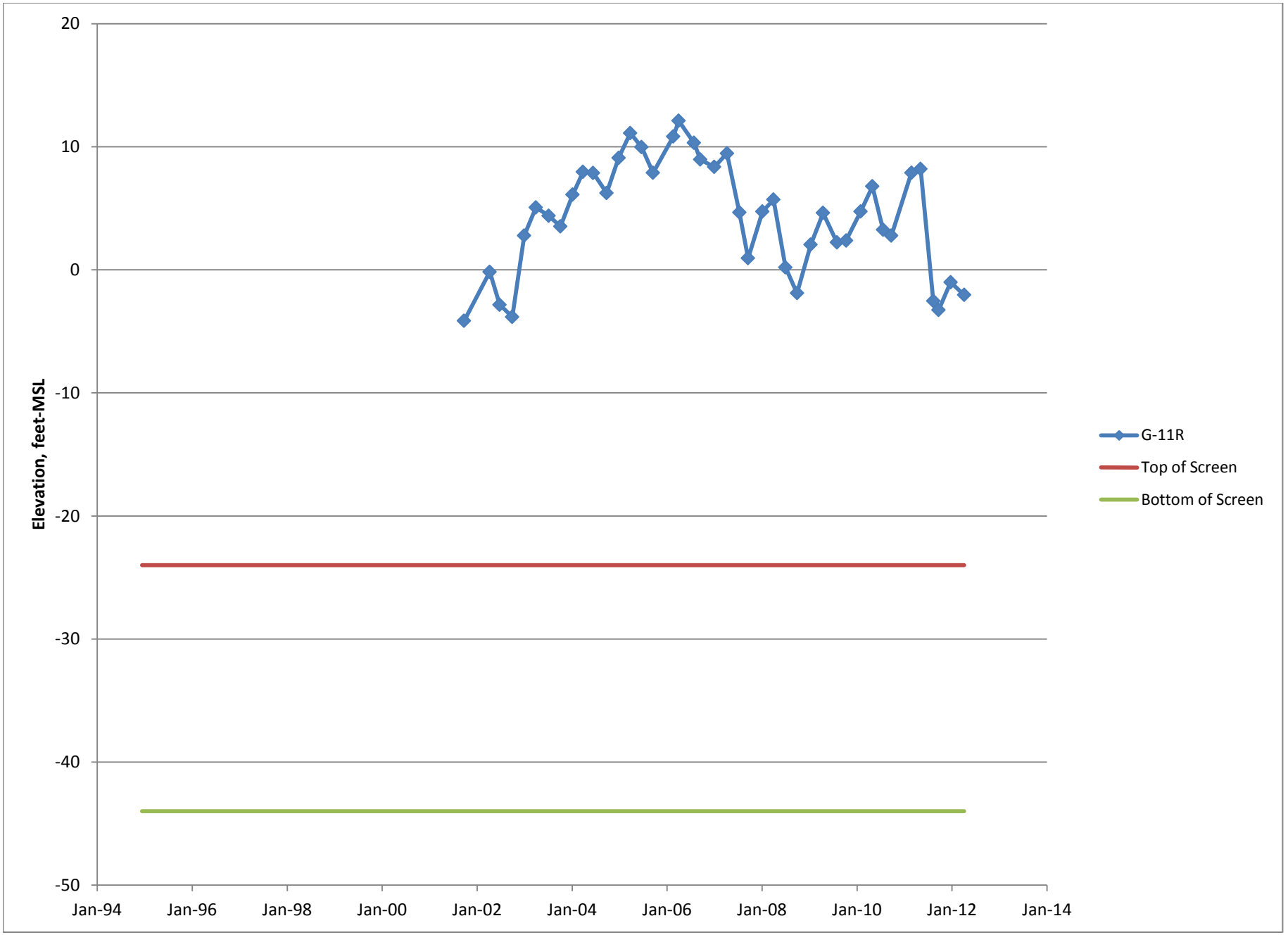
Bottom of Screen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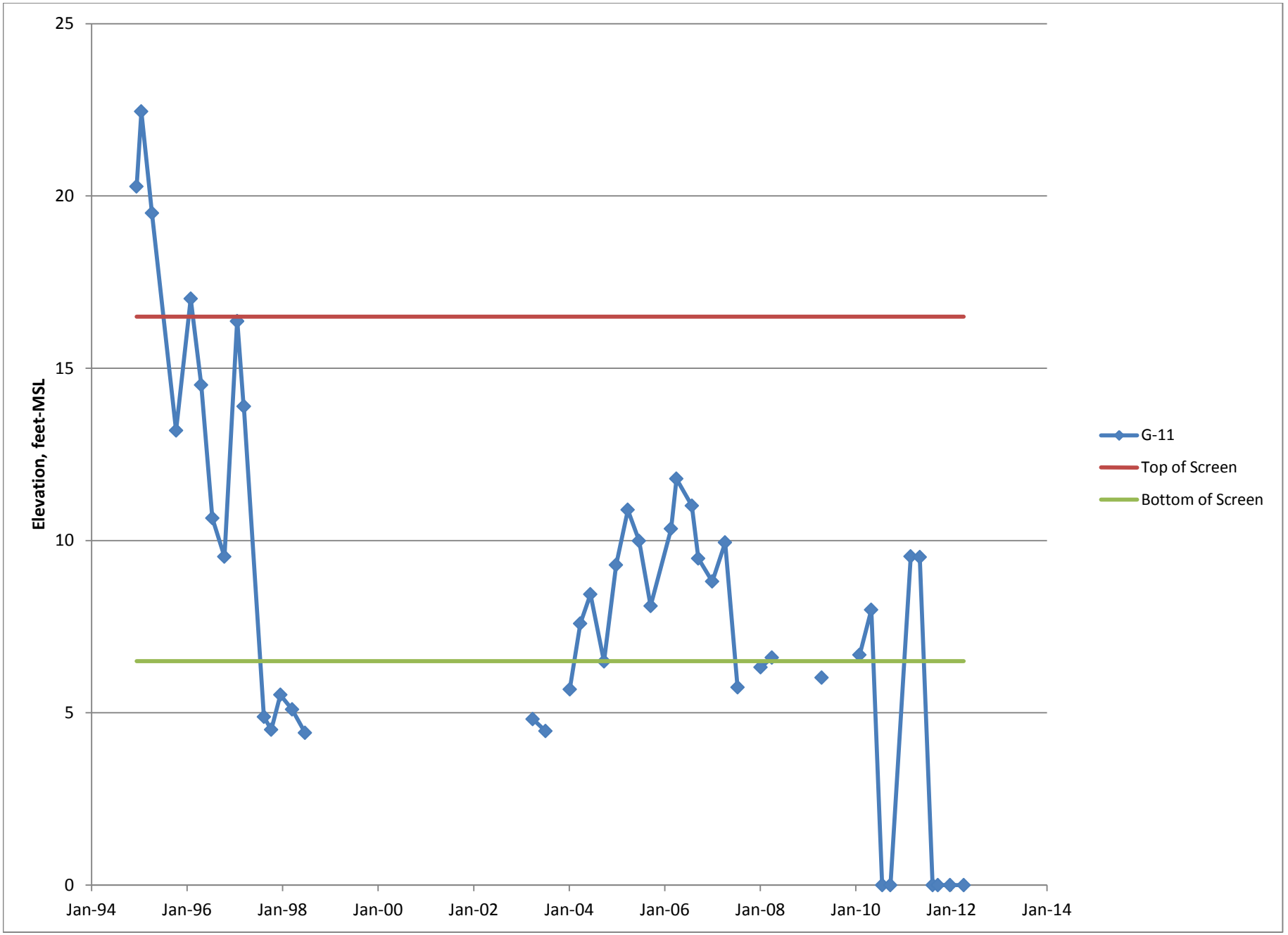
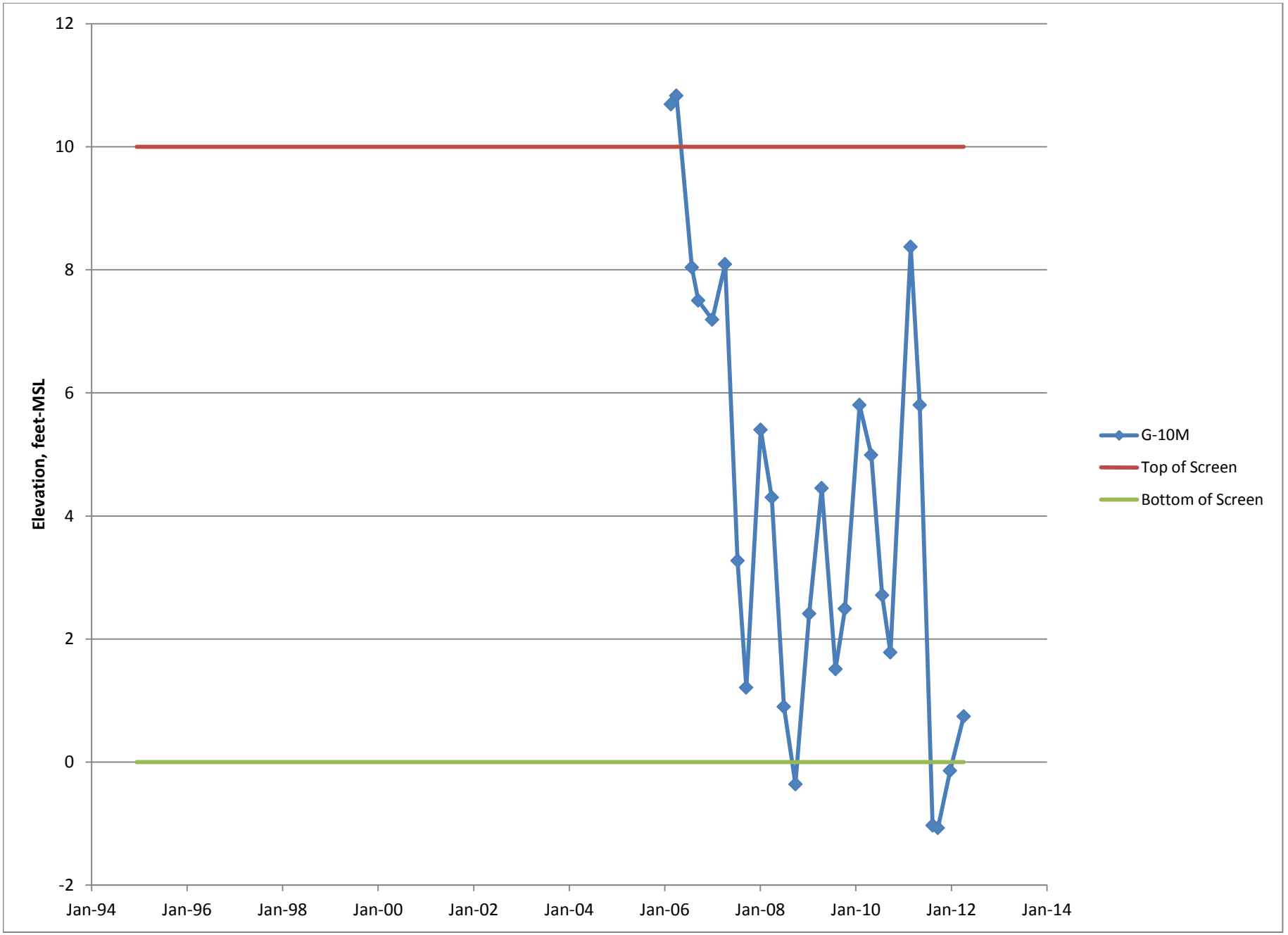
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-11R
Top of Screen
Bottom of Screen


25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-11
Top of Screen
Bottom of Screen


12
10
8
6
4
2
0
-2
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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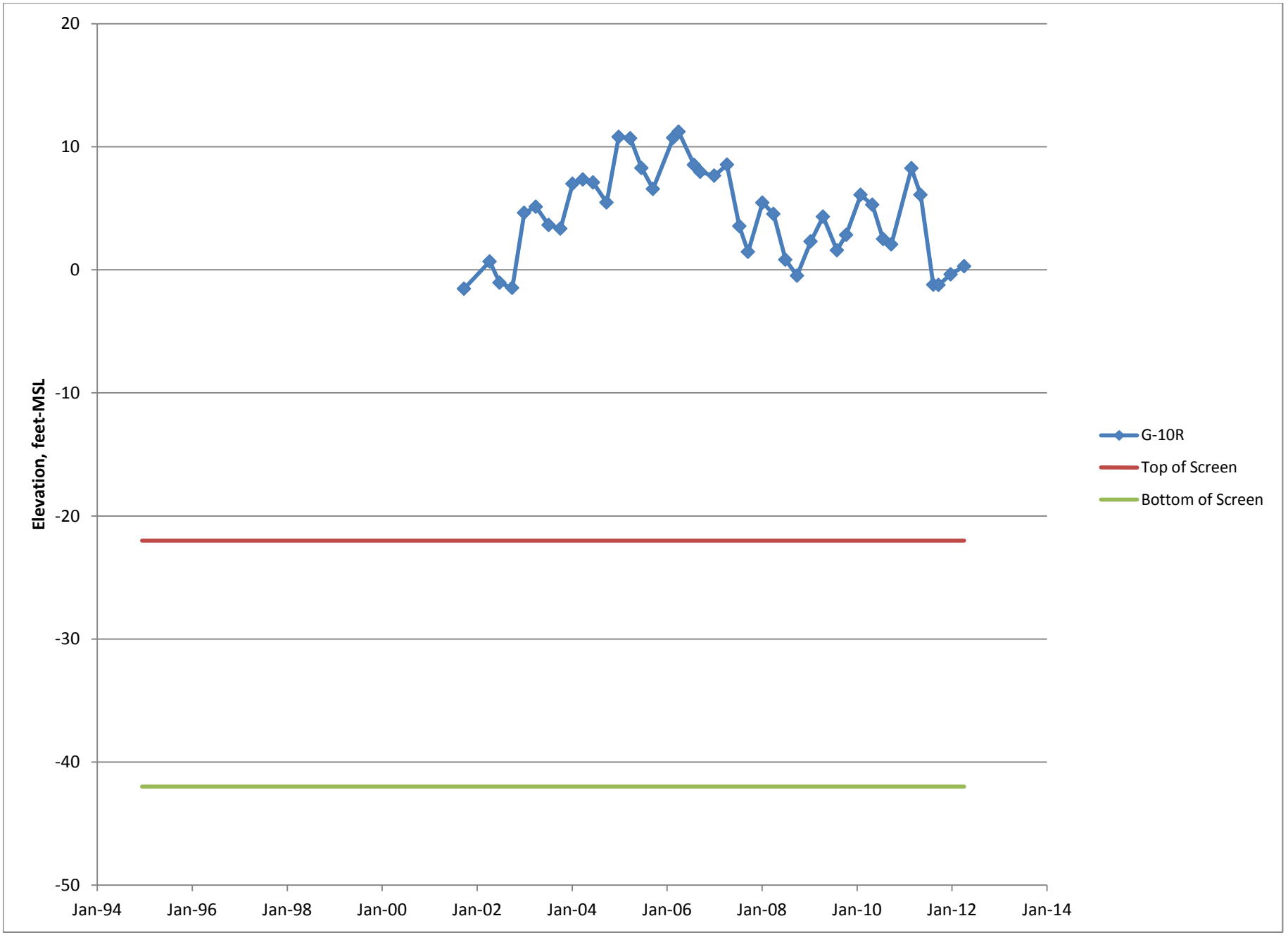
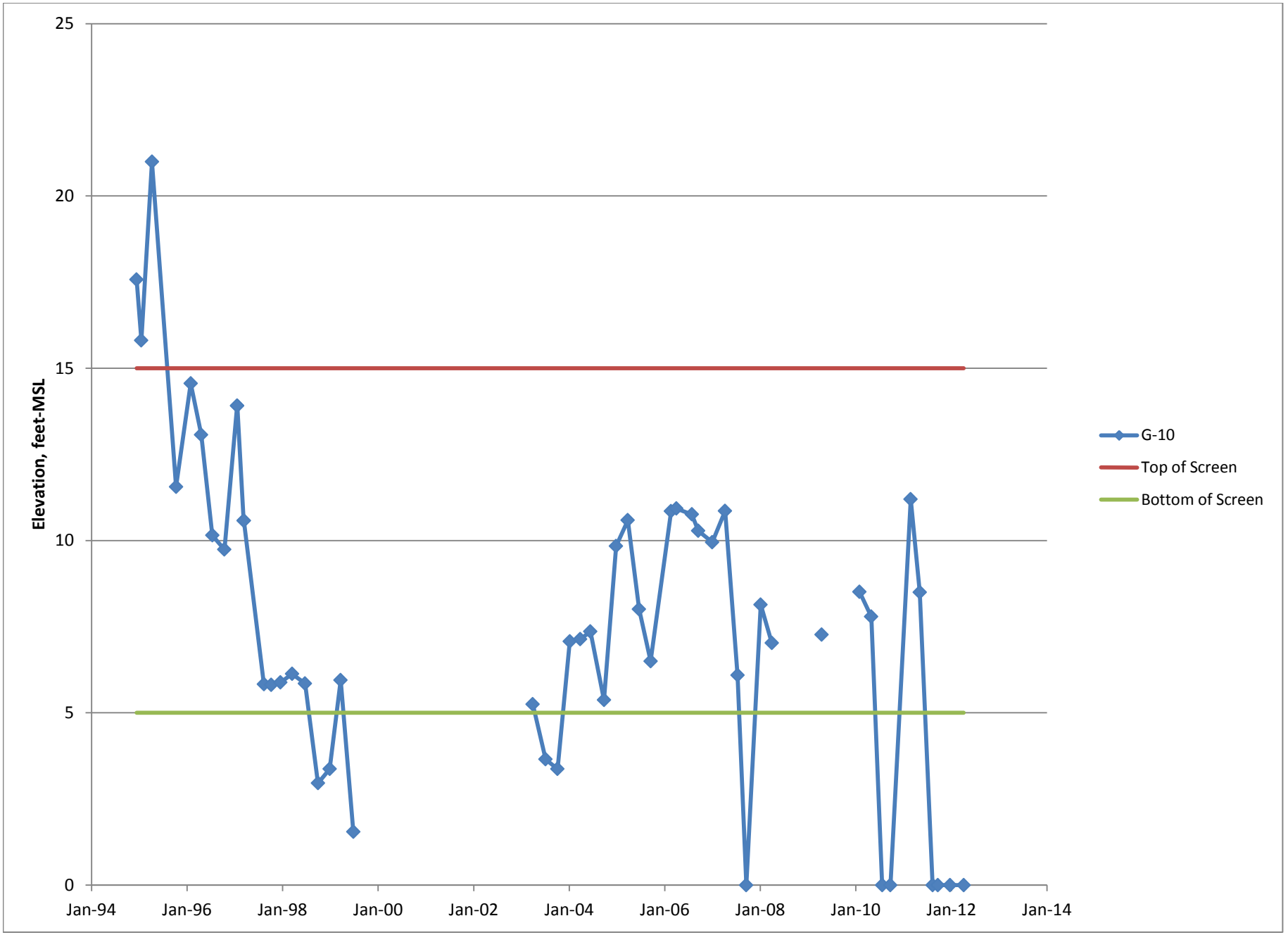
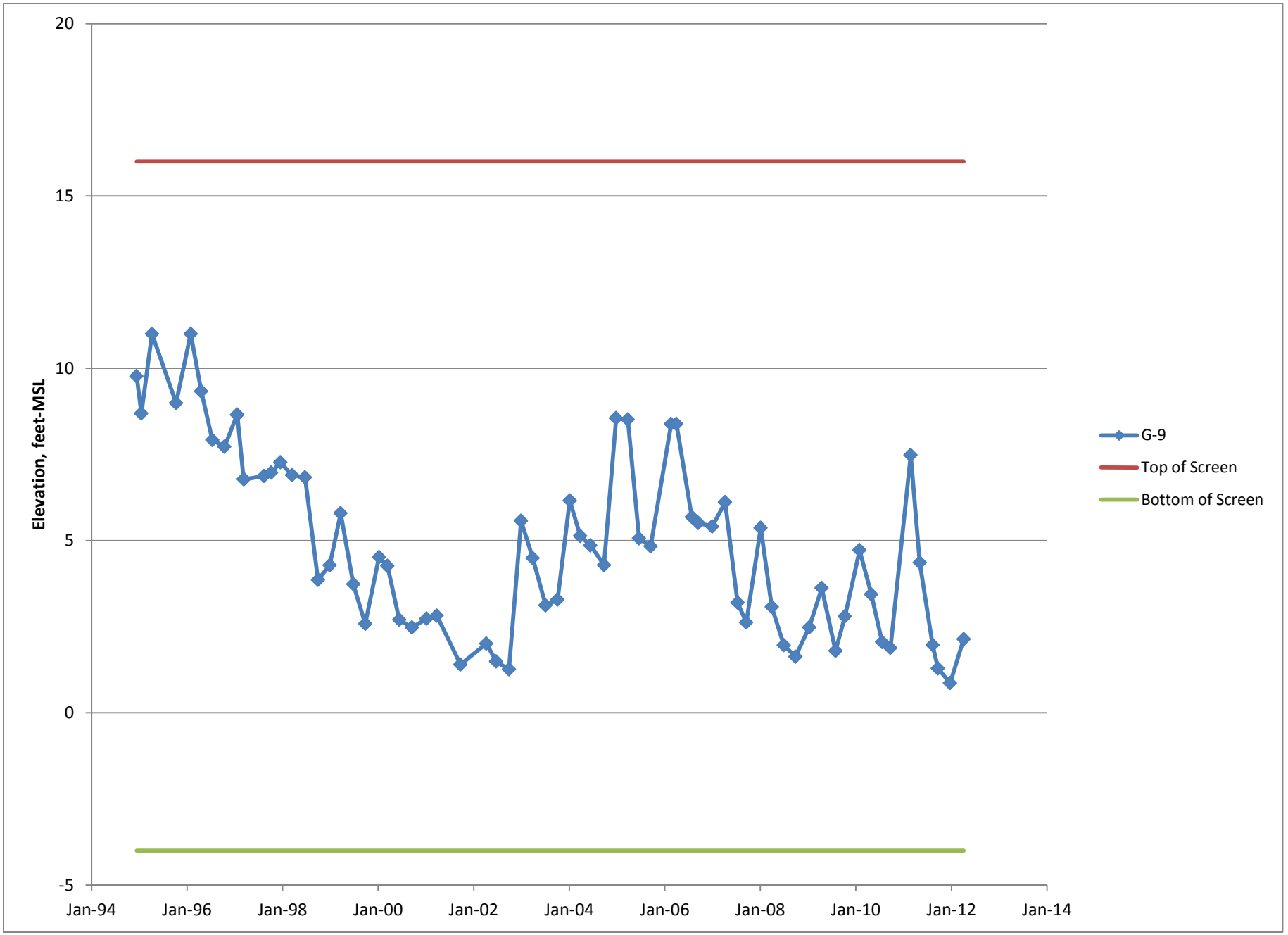
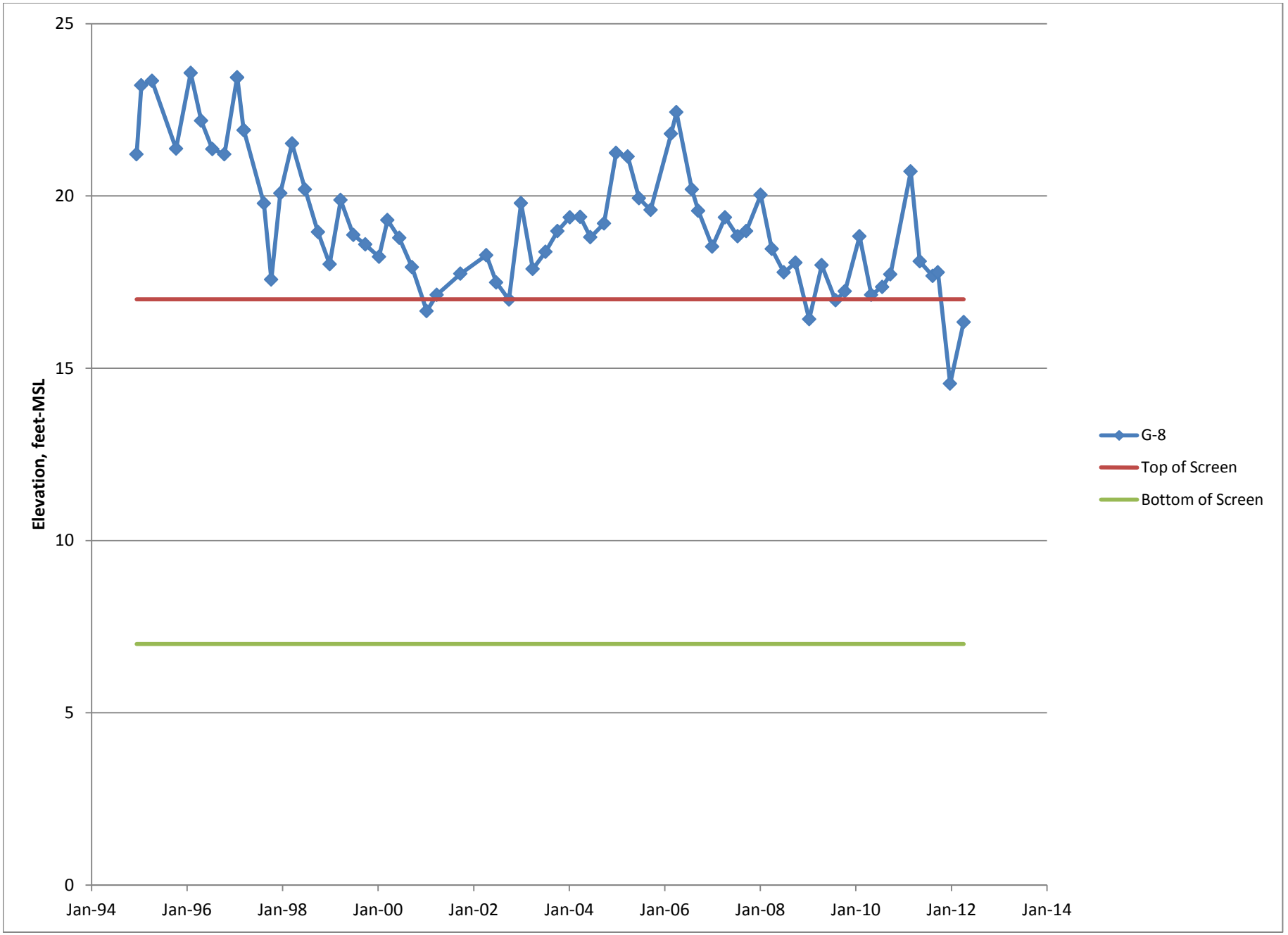
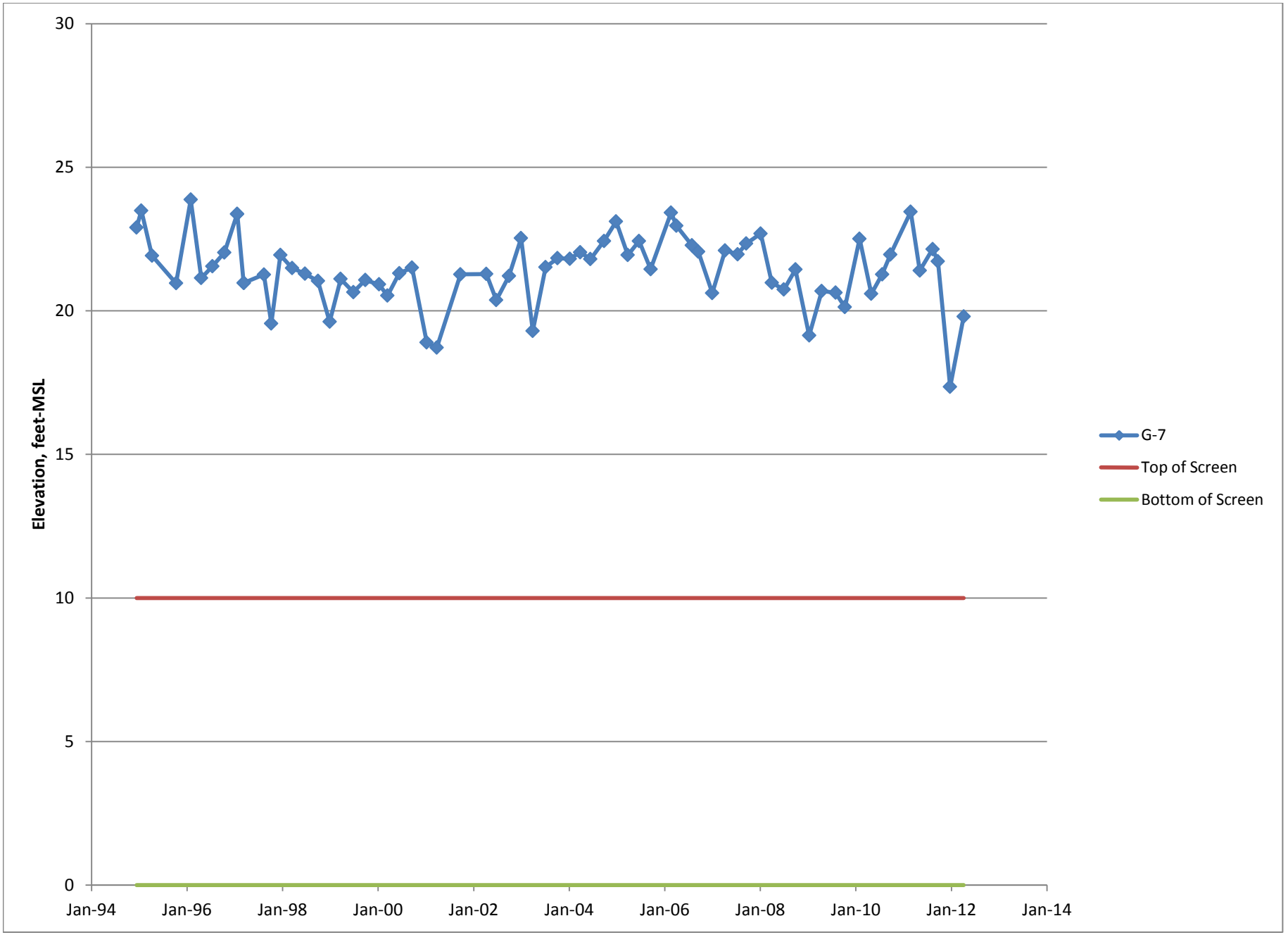
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-10M
Top of Screen
Bottom of Screen

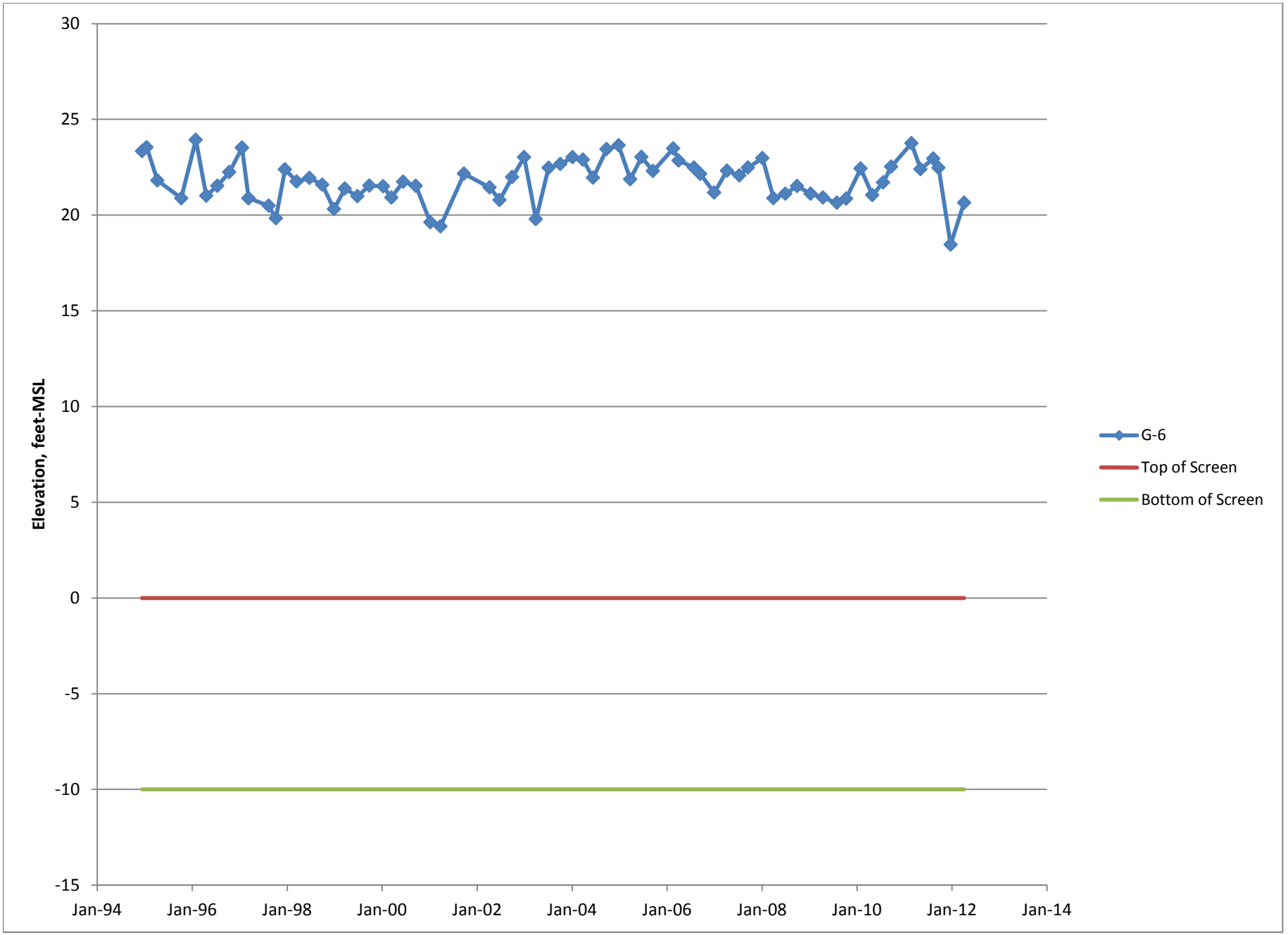

20
10
0
-10
-20
-30
-40
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-10R
Top of Screen
Bottom of Screen

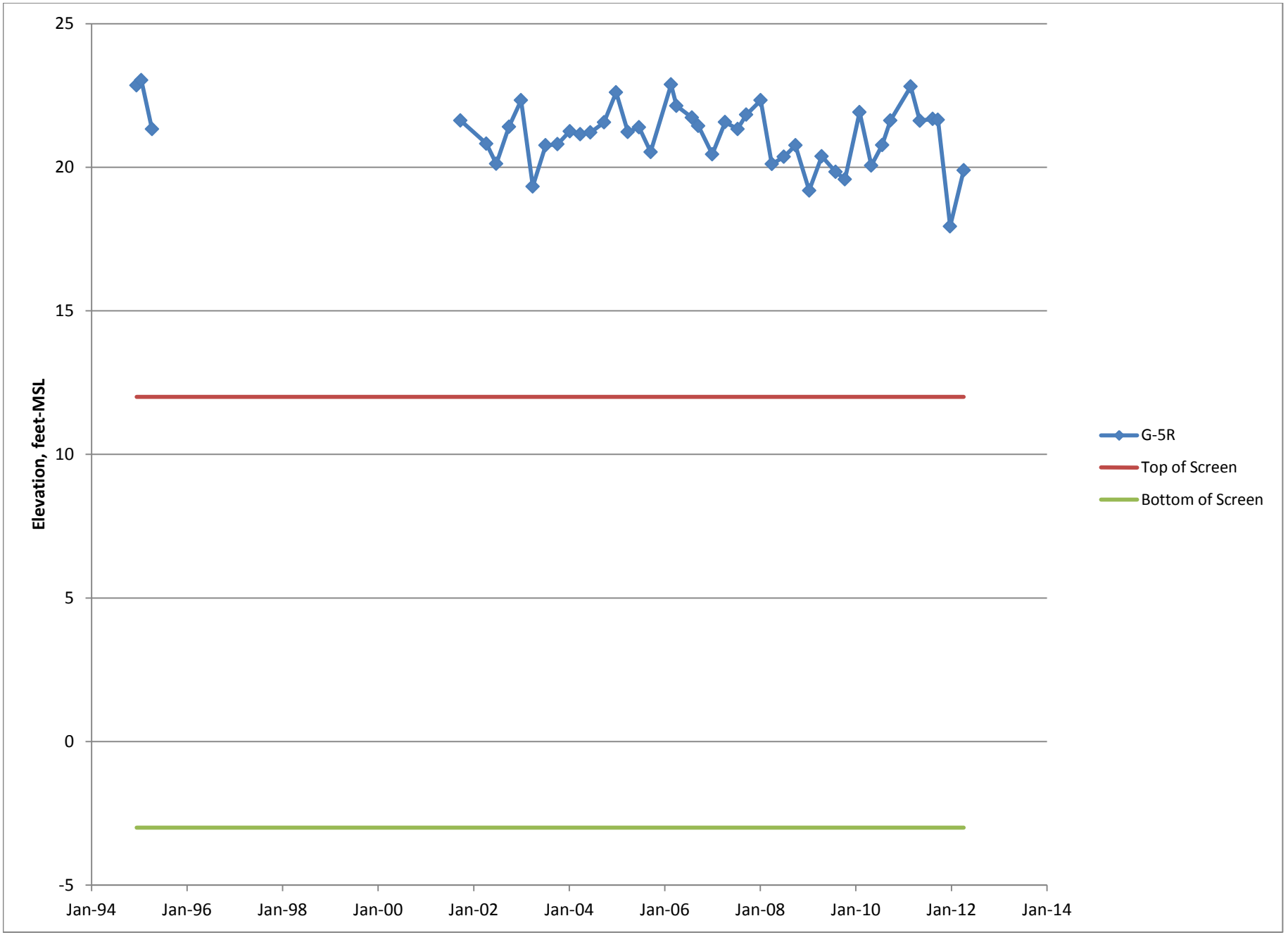

25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-10
Top of Screen
Bottom of Screen


20
15
10
5
0
-5
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-9
Top of Screen
Bottom of Screen

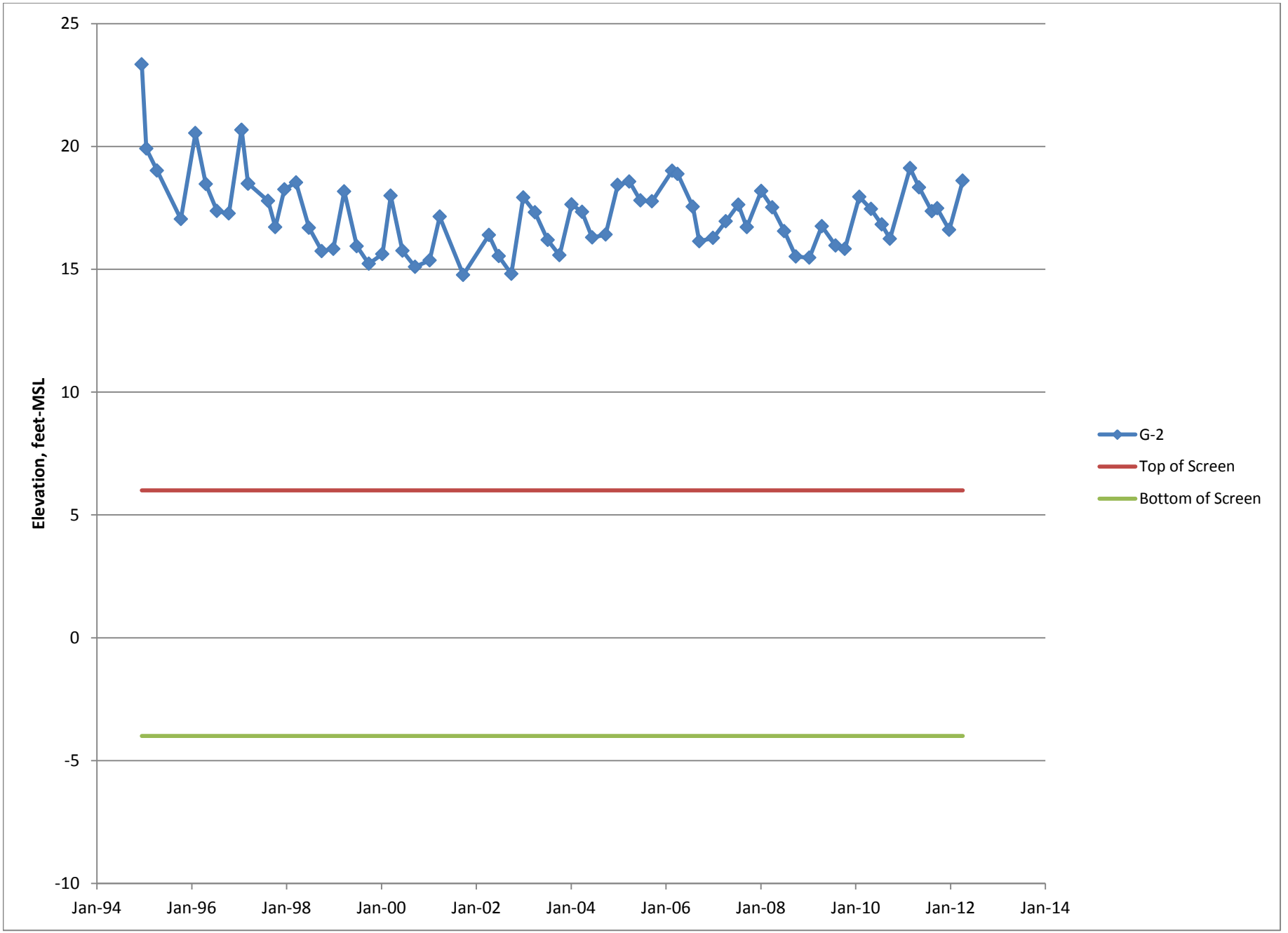

25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-8
Top of Screen
Bottom of Screen

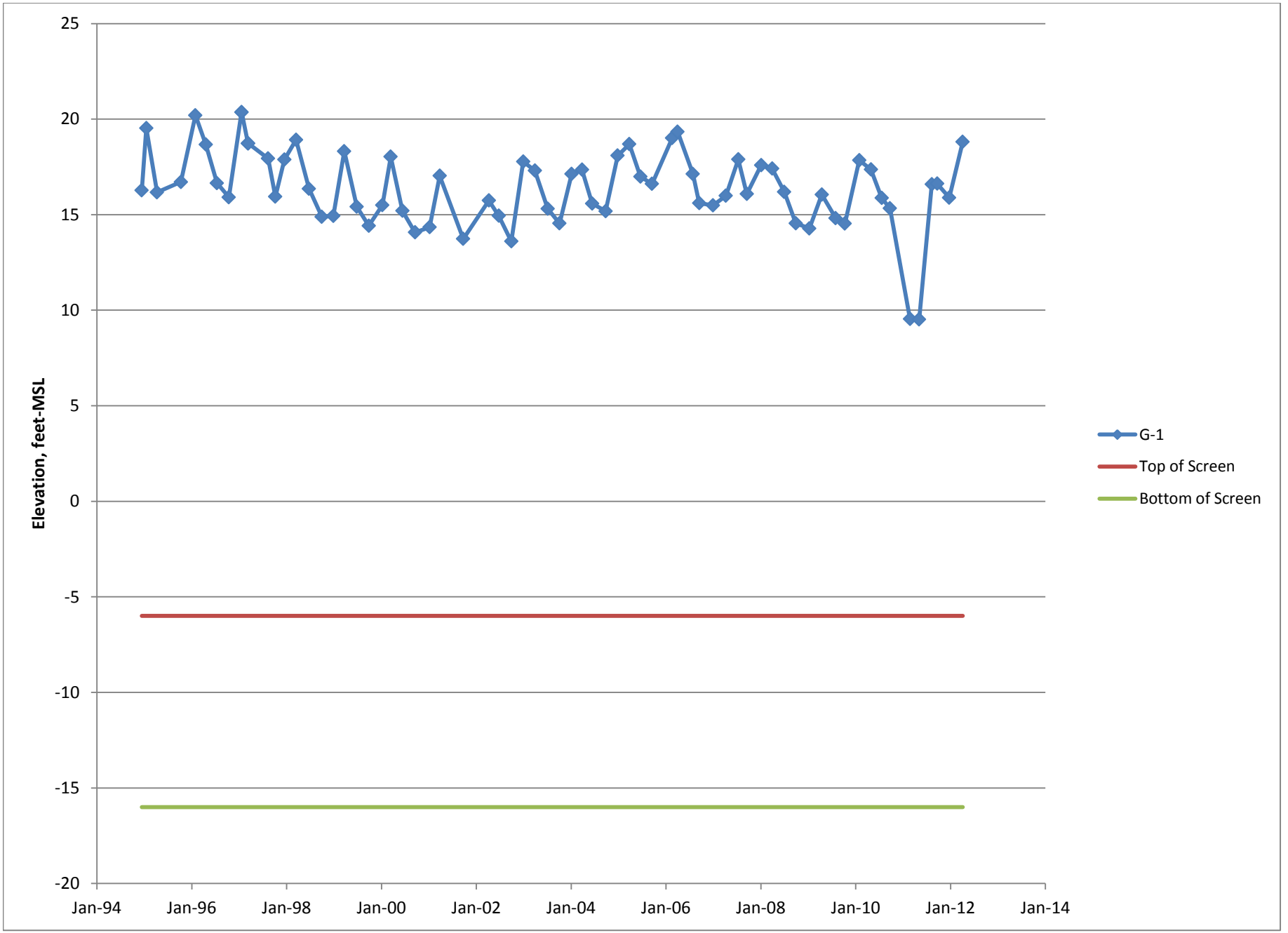

30
25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-7
Top of Screen
Bottom of Screen


30
25
20
15
10
5
0
-5
-10
-15
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-6
Top of Screen
Bottom of Screen


25
20
15
10
5
0
-5
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-5R
Top of Screen
Bottom of Screen


25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-4R
Top of Screen
Bottom of Screen


25
20
15
10
5
0
-5
-10
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-2
Top of Screen
Bottom of Screen


25
20
15
10
5
0
-5
-10
-15
-20
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-1
Top of Screen
Bottom of Screen

Mann-Kendall Trend Test Report

Company:	Hay Road Landfill	**Data Group:**	None
Site:	Hay Road Landfill	**Date Range:**	All
Program:	BJD Groundwater	**Non-detects:**	1/2 detection limit
Permit:		**Duplicates:**	Mean
Minimum Size:	3	**Confidence Level:**	0.95

Parameter	Unit	Size	%NDs	S-value	Tabular Value	Statistically Significant Trend	Direction
G-21							
Nitrate/Nitrite as N	mg/L	47	0.00%	-4.20007	0.0000133418	Yes	Downward
G-22							
Nitrate/Nitrite as N	mg/L	37	2.70%	167	0.0132	Yes	Upward
G-23							
Nitrate/Nitrite as N	mg/L	37	0.00%	-91	0.1165	No	-

End of report

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Groundwater
Minimum Size: 3
Date Range: 06-30-2007 to 06-30-2012
Non-detects: 1/2 detection limit
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
4B							
pH	s.u.	12	0.0%	0.5	0.5	No	-
Specific Conductance	µmhos/cm	11	0.0%	11	0.223	No	-
Arsenic, Dissolved	mg/L	9	66.7%	-22	0.012	Yes	Downward
Bicarbonate Alkalinity	mg/L	10	0.0%	30	0.0046	Yes	Upward
Calcium, Dissolved	mg/L	6	0.0%	7	0.136	No	-
Chloride	mg/L	10	0.0%	6	0.3352	No	-
Chromium, Dissolved	mg/L	10	60.0%	7	0.3	No	-
Magnesium, Dissolved	mg/L	6	0.0%	7	0.136	No	-
Nitrate/Nitrite as N	mg/L	12	0.0%	27	0.037	Yes	Upward
Potassium, Dissolved	mg/L	6	0.0%	11	0.028	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	8	0.102	No	-
Sulfate as SO4	mg/L	10	0.0%	23	0.023	Yes	Upward
Total Dissolved Solids	mg/L	10	0.0%	17	0.078	No	-
G-1							
pH	s.u.	9	0.0%	10	0.179	No	-
Specific Conductance	µmhos/cm	9	0.0%	0	0.54	No	-
Arsenic, Dissolved	mg/L	9	88.9%	-5	0.3303	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	17	0.078	No	-
Calcium, Dissolved	mg/L	6	0.0%	-5	0.235	No	-
Chloride	mg/L	10	0.0%	-20	0.049	Yes	Downward
Chromium, Dissolved	mg/L	10	20.0%	1	0.5	No	-
Magnesium, Dissolved	mg/L	6	0.0%	-5	0.235	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	-25	0.014	Yes	Downward
Potassium, Dissolved	mg/L	6	0.0%	9	0.068	No	-
Sodium, Dissolved	mg/L	6	0.0%	8	0.102	No	-
Sulfate as SO4	mg/L	10	0.0%	15	0.108	No	-
Total Dissolved Solids	mg/L	10	0.0%	1	0.5	No	-
G-10M							
pH	s.u.	8	0.0%	-14	0.054	No	-
Specific Conductance	µmhos/cm	7	0.0%	-5	0.281	No	-
Arsenic, Dissolved	mg/L	7	42.9%	-14	0.0155	Yes	Downward
Bicarbonate Alkalinity	mg/L	8	0.0%	-10	0.138	No	-
Calcium, Dissolved	mg/L	5	0.0%	-2	0.408	No	-
Chloride	mg/L	8	0.0%	-5	0.317	No	-
Chromium, Dissolved	mg/L	8	75.0%	2	0.452	No	NA
Magnesium, Dissolved	mg/L	5	0.0%	-1	0.5	No	-
Nitrate/Nitrite as N	mg/L	8	0.0%	-2	0.452	No	-
Potassium, Dissolved	mg/L	5	0.0%	2	0.408	No	-
Sodium, Dissolved	mg/L	5	0.0%	-7	0.0503	No	-
Sulfate as SO4	mg/L	8	0.0%	-11	0.1135	No	-
Total Dissolved Solids	mg/L	8	0.0%	6	0.274	No	-

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Groundwater
Minimum Size: 3
Date Range: 06-30-2007 to 06-30-2012
Non-detects: 1/2 detection limit
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
G-10R							
pH	s.u.	2	0.0%	-1	0	Yes	NA
Specific Conductance	µmhos/cm	2	0.0%	1	0	Yes	NA
Arsenic, Dissolved	mg/L	2	100.0%	0	0	Yes	ND
Bicarbonate Alkalinity	mg/L	2	0.0%	0	0	Yes	NA
Calcium, Dissolved	mg/L	1	0.0%	0	0	Yes	NA
Chloride	mg/L	2	0.0%	-1	0	Yes	NA
Chromium, Dissolved	mg/L	2	100.0%	0	0	Yes	ND
Magnesium, Dissolved	mg/L	1	0.0%	0	0	Yes	NA
Nitrate/Nitrite as N	mg/L	2	0.0%	-1	0	Yes	NA
Potassium, Dissolved	mg/L	1	0.0%	0	0	Yes	NA
Sodium, Dissolved	mg/L	1	0.0%	0	0	Yes	NA
Sulfate as SO4	mg/L	2	0.0%	0	0	Yes	NA
Total Dissolved Solids	mg/L	2	0.0%	-1	0	Yes	NA
G-11M							
pH	s.u.	9	0.0%	-18	0.038	Yes	Downward
Specific Conductance	µmhos/cm	9	0.0%	0	0.54	No	-
Arsenic, Dissolved	mg/L	9	77.8%	-12	0.13	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	-24	0.0213	Yes	Downward
Calcium, Dissolved	mg/L	6	0.0%	0	0.592	No	-
Chloride	mg/L	10	0.0%	-7	0.3	No	-
Chromium, Dissolved	mg/L	10	80.0%	15	0.108	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-1	0.5	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	8	0.2751	No	-
Potassium, Dissolved	mg/L	6	0.0%	9	0.068	No	-
Sodium, Dissolved	mg/L	6	0.0%	-9	0.068	No	-
Sulfate as SO4	mg/L	10	0.0%	-15	0.108	No	-
Total Dissolved Solids	mg/L	10	0.0%	6	0.3352	No	-
G-11R							
pH	s.u.	9	0.0%	-8	0.238	No	-
Specific Conductance	µmhos/cm	9	0.0%	12	0.13	No	-
Arsenic, Dissolved	mg/L	8	87.5%	-2	0.452	No	NA
Bicarbonate Alkalinity	mg/L	9	0.0%	-18	0.038	Yes	Downward
Calcium, Dissolved	mg/L	6	0.0%	5	0.235	No	-
Chloride	mg/L	9	0.0%	22	0.012	Yes	Upward
Chromium, Dissolved	mg/L	9	100.0%	5	0.3303	No	ND
Magnesium, Dissolved	mg/L	6	0.0%	4	0.2975	No	-
Nitrate/Nitrite as N	mg/L	9	0.0%	31	0	Yes	Upward
Potassium, Dissolved	mg/L	6	0.0%	10	0.048	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-8	0.102	No	-

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Groundwater
Minimum Size: 3
Date Range: 06-30-2007 to 06-30-2012
Non-detects: 1/2 detection limit
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
Sulfate as SO4	mg/L	9	0.0%	-25	0.0025	Yes	Downward
Total Dissolved Solids	mg/L	9	0.0%	20	0.022	Yes	Upward
G-12							
pH	s.u.	9	0.0%	5	0.3303	No	-
Specific Conductance	µmhos/cm	9	0.0%	-10	0.179	No	-
Arsenic, Dissolved	mg/L	9	77.8%	-16	0.06	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	9	0.242	No	-
Calcium, Dissolved	mg/L	6	0.0%	-2	0.43	No	-
Chloride	mg/L	10	0.0%	-26	0.0132	Yes	Downward
Chromium, Dissolved	mg/L	10	70.0%	-4	0.3995	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-2	0.43	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	-11	0.19	No	-
Potassium, Dissolved	mg/L	6	0.0%	12	0.018	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-7	0.136	No	-
Sulfate as SO4	mg/L	10	0.0%	-16	0.0979	No	-
Total Dissolved Solids	mg/L	10	0.0%	-14	0.1321	No	-
G-13							
pH	s.u.	9	0.0%	2	0.46	No	-
Specific Conductance	µmhos/cm	9	0.0%	-14	0.09	No	-
Arsenic, Dissolved	mg/L	9	100.0%	3	0.4133	No	ND
Bicarbonate Alkalinity	mg/L	10	0.0%	-5	0.364	No	-
Calcium, Dissolved	mg/L	6	0.0%	-3	0.36	No	-
Chloride	mg/L	10	0.0%	-17	0.078	No	-
Chromium, Dissolved	mg/L	10	80.0%	0	0.54	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-3	0.36	No	-
Nitrate/Nitrite as N	mg/L	12	0.0%	-8	0.319	No	-
Potassium, Dissolved	mg/L	6	0.0%	10	0.048	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-1	0.5	No	-
Sulfate as SO4	mg/L	10	0.0%	-19	0.054	No	-
Total Dissolved Solids	mg/L	10	0.0%	7	0.3	No	-
G-2							
pH	s.u.	9	0.0%	16	0.06	No	-
Specific Conductance	µmhos/cm	9	0.0%	-20	0.022	Yes	Downward
Arsenic, Dissolved	mg/L	9	100.0%	3	0.4133	No	ND
Bicarbonate Alkalinity	mg/L	10	0.0%	31	0.002	Yes	Upward
Calcium, Dissolved	mg/L	6	0.0%	-13	0.008	Yes	Downward
Chloride	mg/L	10	0.0%	-16	0.0979	No	-
Chromium, Dissolved	mg/L	9	100.0%	5	0.3303	No	ND
Magnesium, Dissolved	mg/L	6	0.0%	-13	0.008	Yes	Downward
Nitrate/Nitrite as N	mg/L	10	100.0%	-24	0.0213	Yes	ND

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Groundwater
Minimum Size: 3
Date Range: 06-30-2007 to 06-30-2012
Non-detects: 1/2 detection limit
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
Potassium, Dissolved	mg/L	5	0.0%	-6	0.117	No	-
Sodium, Dissolved	mg/L	6	0.0%	-9	0.068	No	-
Sulfate as SO4	mg/L	10	0.0%	-25	0.014	Yes	Downward
Total Dissolved Solids	mg/L	10	0.0%	-23	0.023	Yes	Downward
G-27							
pH	s.u.	10	0.0%	-17	0.078	No	-
Specific Conductance	µmhos/cm	9	0.0%	12	0.13	No	-
Arsenic, Dissolved	mg/L	9	66.7%	-14	0.09	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	-32	0.0023	Yes	Downward
Calcium, Dissolved	mg/L	6	0.0%	0	0.592	No	-
Chloride	mg/L	10	0.0%	11	0.19	No	-
Chromium, Dissolved	mg/L	10	50.0%	4	0.3995	No	-
Magnesium, Dissolved	mg/L	6	0.0%	-1	0.5	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	6	0.3352	No	-
Potassium, Dissolved	mg/L	6	0.0%	1	0.5	No	-
Sodium, Dissolved	mg/L	6	0.0%	-13	0.008	Yes	Downward
Sulfate as SO4	mg/L	10	0.0%	-31	0.002	Yes	Downward
Total Dissolved Solids	mg/L	10	0.0%	17	0.078	No	-
G-6							
pH	s.u.	10	0.0%	-15	0.108	No	-
Specific Conductance	µmhos/cm	9	0.0%	-2	0.46	No	-
Arsenic, Dissolved	mg/L	8	62.5%	-9	0.1685	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	-26	0.0132	Yes	Downward
Calcium, Dissolved	mg/L	6	0.0%	-5	0.235	No	-
Chloride	mg/L	10	0.0%	-27	0.008	Yes	Downward
Chromium, Dissolved	mg/L	10	80.0%	6	0.3352	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-6	0.1855	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	-1	0.5	No	-
Potassium, Dissolved	mg/L	6	0.0%	10	0.048	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-5	0.235	No	-
Sulfate as SO4	mg/L	10	0.0%	1	0.5	No	-
Total Dissolved Solids	mg/L	10	0.0%	-7	0.3	No	-
G-8							
pH	s.u.	10	0.0%	-10	0.2208	No	-
Specific Conductance	µmhos/cm	9	0.0%	23	0.0053	Yes	Upward
Arsenic, Dissolved	mg/L	9	77.8%	-13	0.0908	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	37	0	Yes	Upward
Calcium, Dissolved	mg/L	6	0.0%	10	0.048	Yes	Upward
Chloride	mg/L	10	0.0%	-13	0.146	No	-
Chromium, Dissolved	mg/L	10	70.0%	9	0.242	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	9	0.068	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	0	0.54	No	-
Potassium, Dissolved	mg/L	6	0.0%	13	0.008	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	8	0.102	No	-
Sulfate as SO4	mg/L	10	0.0%	23	0.023	Yes	Upward
Total Dissolved Solids	mg/L	10	0.0%	25	0.014	Yes	Upward
G-9							
pH	s.u.	10	0.0%	-17	0.078	No	-
Specific Conductance	µmhos/cm	9	0.0%	16	0.06	No	-
Arsenic, Dissolved	mg/L	9	77.8%	-16	0.06	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	0	0.54	No	-
Calcium, Dissolved	mg/L	6	0.0%	5	0.235	No	-

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Groundwater
Minimum Size: 3
Date Range: 06-30-2007 to 06-30-2012
Non-detects: 1/2 detection limit
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
Chloride	mg/L	10	0.0%	18	0.0705	No	-
Chromium, Dissolved	mg/L	10	100.0%	8	0.2751	No	ND
Magnesium, Dissolved	mg/L	6	0.0%	5	0.235	No	-
Nitrate/Nitrite as N	mg/L	10	90.0%	-23	0.023	Yes	NA
Potassium, Dissolved	mg/L	6	0.0%	8	0.102	No	-
Sodium, Dissolved	mg/L	6	0.0%	-12	0.018	Yes	Downward
Sulfate as SO4	mg/L	10	0.0%	-25	0.014	Yes	Downward
Total Dissolved Solids	mg/L	10	0.0%	14	0.1321	No	-
MW-4							
pH	s.u.	10	0.0%	-19	0.054	No	-
Specific Conductance	µmhos/cm	9	0.0%	-8	0.238	No	-
Arsenic, Dissolved	mg/L	9	66.7%	-14	0.09	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	-27	0.008	Yes	Downward
Calcium, Dissolved	mg/L	6	0.0%	-9	0.068	No	-
Chloride	mg/L	10	0.0%	-18	0.0705	No	-
Chromium, Dissolved	mg/L	10	80.0%	6	0.3352	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-9	0.068	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	-9	0.242	No	-
Potassium, Dissolved	mg/L	6	0.0%	10	0.048	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-10	0.048	Yes	Downward
Sulfate as SO4	mg/L	10	0.0%	28	0.008	Yes	Upward
Total Dissolved Solids	mg/L	10	0.0%	-13	0.146	No	-
P-1							
pH	s.u.	10	0.0%	-25	0.014	Yes	Downward
Specific Conductance	µmhos/cm	9	0.0%	6	0.306	No	-
Arsenic, Dissolved	mg/L	9	77.8%	-7	0.2543	No	NA
Bicarbonate Alkalinity	mg/L	10	0.0%	-10	0.2208	No	-
Calcium, Dissolved	mg/L	6	0.0%	-6	0.1855	No	-
Chloride	mg/L	10	0.0%	-30	0.0046	Yes	Downward
Chromium, Dissolved	mg/L	10	80.0%	10	0.2208	No	NA
Magnesium, Dissolved	mg/L	6	0.0%	-9	0.068	No	-
Nitrate/Nitrite as N	mg/L	10	0.0%	-9	0.242	No	-
Potassium, Dissolved	mg/L	6	0.0%	13	0.008	Yes	Upward
Sodium, Dissolved	mg/L	6	0.0%	-10	0.048	Yes	Downward
Sulfate as SO4	mg/L	10	0.0%	1	0.5	No	-
Total Dissolved Solids	mg/L	10	0.0%	3	0.431	No	-

End of report

Descriptive Statistics Report

Site: Hay Road Landfill **Date Range:** 01-01-1980 to 12-31-2012
Program: BJD Groundwater **Non-detects:** 1/2 detection limit

Parameter	Unit	Size	% NDs	Mean	Standard Deviation	Variance	Min	Max	K(95%)	Conc. Limit calculated	Conc. Limit actual
4B											
Nitrate/Nitrite as N	mg/L	64	4.70%	1.866	1.708	2.916	0	7.8	2.010	5.3	
Arsenic, Dissolved	mg/L	23	82.60%	0.012	0.018	0	0	0.05	2.329	0.054	
Chromium, Dissolved	mg/L	26	80.80%	0.003	0.002	0	0	0.008	2.278	0.008	
G-1											
Nitrate/Nitrite as N	mg/L	50	0.00%	9.382	7.136	50.92	0.75	38	2.065	24.118	
Arsenic, Dissolved	mg/L	26	92.30%	0.011	0.017	0	0	0.05	2.278	0.050	NE
Chromium, Dissolved	mg/L	29	72.40%	0.005	0.006	0	0	0.035	2.234	0.018	
G-10R											
Nitrate/Nitrite as N	mg/L	11	0.00%	0.678	0.358	0.128	0.12	1.5	2.815	1.686	
Arsenic, Dissolved	mg/L	8	100.00%	0.009	0.017	0	0	ND	3.188	0.063	ND
Chromium, Dissolved	mg/L	10	90.00%	0.005	0.003	0	0	0.014	2.911	0.0	NE
G-11M											
Nitrate/Nitrite as N	mg/L	13	0.00%	3.54	8.563	73.327	0.18	32	2.670	26.403	
Arsenic, Dissolved	mg/L	12	83.30%	0.02	0.022	0	0	0.05	2.736	0.1	NE
Chromium, Dissolved	mg/L	13	92.30%	0.002	0.002	0	0	0.005	2.670	0.007	NE
G-11R											
Nitrate/Nitrite as N	mg/L	18	0.00%	1.454	0.341	0.116	0.93	2.3	2.453	2.3	
Arsenic, Dissolved	mg/L	15	93.30%	0.007	0.012	0	0	0.05	2.566	0.038	NE
Chromium, Dissolved	mg/L	17	100.00%	0.003	0.002	0	0	ND	2.486	0.008	ND
G-12											
Nitrate/Nitrite as N	mg/L	65	0.00%	2.171	1.395	1.946	0.095	4.6	2.008	4.972	
Arsenic, Dissolved	mg/L	25	80.00%	0.016	0.032	0.001	0	0.15	2.292	0.089	
Chromium, Dissolved	mg/L	27	85.20%	0.004	0.006	0	0	0.03	2.263	0.018	NE
G-13											
Nitrate/Nitrite as N	mg/L	67	0.00%	2.133	1.143	1.307	0.063	5.6	2.002	4.421	
Arsenic, Dissolved	mg/L	25	96.00%	0.011	0.018	0	0	0.05	2.292	0.052	NE
Chromium, Dissolved	mg/L	27	70.40%	0.005	0.007	0	0	0.035	2.263	0.02	
G-2											
Nitrate/Nitrite as N	mg/L	55	49.10%	0.202	0.25	0.063	0	1.4	2.044	0.713	
Arsenic, Dissolved	mg/L	25	96.00%	0.011	0.018	0	0	0.05	2.292	0.1	NE
Chromium, Dissolved	mg/L	28	100.00%	0.003	0.002	0	0	ND	2.249	0.007	ND
G-27											
Nitrate/Nitrite as N	mg/L	13	0.00%	2.369	0.621	0.386	1.1	3.3	2.670	4.0	
Arsenic, Dissolved	mg/L	12	75.00%	0.023	0.022	0	0	0.05	2.736	0.083	NE
Chromium, Dissolved	mg/L	13	61.50%	0.002	0.002	0	0	0.005	2.670	0.007	

Descriptive Statistics Report

Site: Hay Road Landfill **Date Range:** 01-01-1980 to 12-31-2012

Program: BJD Groundwater **Non-detects:** 1/2 detection limit

Parameter	Unit	Size	% NDs	Mean	Standard Deviation	Variance	Min	Max	K(95%)	Conc. Limit calculated	Conc. Limit actual
G-6											
Nitrate/Nitrite as N	mg/L	66	3.00%	0.795	1.204	1.449	0	8	2.005	3.209	
Arsenic, Dissolved	mg/L	24	83.30%	0.013	0.018	0	0	0.05	2.309	0.055	
Chromium, Dissolved	mg/L	29	89.70%	0.004	0.004	0	0	0.02	2.234	0.013	NE
G-8											
Nitrate/Nitrite as N	mg/L	66	0.00%	2.509	1.767	3.122	0.057	5.6	2.005	6.051	
Arsenic, Dissolved	mg/L	27	85.20%	0.013	0.023	0.001	0	0.1	2.263	0.065	NE
Chromium, Dissolved	mg/L	30	86.70%	0.003	0.002	0	0	0.01	2.220	0.0	NE
G-9											
Nitrate/Nitrite as N	mg/L	65	38.50%	1.181	1.347	1.813	0	5.2	2.008	3.885	
Arsenic, Dissolved	mg/L	25	88.00%	0.011	0.017	0	0	0.05	2.292	0.0	NE
Chromium, Dissolved	mg/L	28	100.00%	0.003	0.002	0	0	ND	2.249	0.007	ND
MW-4											
Nitrate/Nitrite as N	mg/L	65	0.00%	2.931	2.64	6.972	0.3	10.1	2.008	8.2	
Arsenic, Dissolved	mg/L	24	79.20%	0.013	0.018	0	0	0.05	2.309	0.055	
Chromium, Dissolved	mg/L	28	89.30%	0.003	0.002	0	0	0.011	2.249	0.007	NE
P-1											
Nitrate/Nitrite as N	mg/L	19	0.00%	0.659	0.315	0.099	0.44	1.6	2.423	1.422	
Arsenic, Dissolved	mg/L	15	86.70%	0.019	0.021	0	0	0.05	2.566	0.073	NE
Chromium, Dissolved	mg/L	18	88.90%	0.003	0.002	0	0	0.005	2.453	0.008	NE

End of report.

Note:The statistics are replaced by the corresponding minimum variance unbiased estimates for the log normal distribution.

Descriptive Statistics Report

Site: Hay Road Landfill **Date Range:** 01-01-2001 to 06-30-2012

Program: BJD Groundwater **Non-detects:** 1/2 detection limit

Parameter	Unit	Size	% NDs	Mean	Standard Deviation	Variance	Min	Max	K(95%)	Conc. Limit calculated	Conc. Limit actual
Background(G4,6,17,18)											
Ammonia as N	mg/L	96	78.10%	0.124	0.404	0.163	0	3.9	1.9346	0.9	
Arsenic, Dissolved	mg/L	84	91.70%	0.013	0.018	0	0	0.05	1.9574	0.05	
Chromium, Dissolved	mg/L	93	88.20%	0.004	0.005	0	0	0.035	1.9403	0.014	
Lead, Dissolved	mg/L	91	87.90%	0.012	0.017	0	0	0.05	1.9441	0.045	
Nitrate/Nitrite as N	mg/L	83	1.10%	2.095	1.399	8.305	0	14	1.9593	5	
Total Kjeldahl Nitrogen	mg/L	96	45.80%	0.805	2.355	5.545	0	18	1.9346	5.4	

End of report.

Note:The statistics are replaced by the corresponding minimum variance unbiased estimates for the log normal distribution.

Descriptive Statistics Report

Site:	Hay Road Landfill					**Date Range:**			All		
Program:	BJD Surface Water					**Non-detects:**			1/2 detection limit		
Parameter	**Unit**	**Size**	**% NDs**	**Mean**	**Median**	**Standard Deviation**	**Variance**	**Min**	**Max**	**Conc. Limit calculated**	
SW-4											
pH	s.u.	23	0.00%	7.944	7.98	0.53	0.281	6.79	8.93	6.5	9.4
Specific Conductance	µmhos/cm	23	0.00%	1438	1110	807.798	652537.182	427	2810	3319	
Ammonia as N	mg/L	22	22.70%	0.267	0.215	0.205	0.042	0	0.68	0.75	
Arsenic	mg/L	22	63.60%	0.024	0.013	0.02	0	0	0.05	0.071	
Chloride	mg/L	22	0.00%	249.818	140	205.223	42116.442	43	610	732	
Chromium	mg/L	22	63.60%	0.005	0.005	0.004	0	0	0.015	0.014	
Lead	mg/L	24	79.20%	0.017	0.006	0.02	0	0	0.05	0.063	
Nitrate/Nitrite as N	mg/L	22	9.10%	2.282	0.715	4.087	16.702	0	17	12	
Nitrite as N	mg/L	22	45.50%	0.335	0.12	0.71	0.505	0	2.5	2.0	
Sulfate as SO4	mg/L	22	0.00%	118.636	94	63.573	4041.481	19	240	268	
Total Dissolved Solids	mg/L	22	0.00%	897.727	675	479.533	229951.732	210	1700	2025	
Total Kjeldahl Nitrogen	mg/L	22	0.00%	2.002	1.75	1.038	1.078	0.57	4.2	4.4	
Total Suspended Solids	mg/L	20	10.00%	71.95	45	86.457	7474.892	0	350	279	

Note:The statistics are replaced by the corresponding minimum variance unbiased estimates for the log normal distribution.

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Vadose Zone
Permit:
Minimum Size: 3
Date Range: All
Non-detects: 1/2 detection limit
Duplicates: Mean
Confidence Level: 0.95

Parameter	Unit	Size	%NDs	S Value	Tabular Value	Statistically Significant Trend	Direction
PL-9.1A							
pH	s.u.	29	0.0%	0.0561		No	-
Specific Conductance	µmhos/cm	29	0.0%	-320	0	Yes	Downward
Ammonia as N	mg/L	28	21.4%	-54	0.149	No	-
Chloride	mg/L	30	0.0%	-301	0	Yes	Downward
Nitrate/Nitrite as N	mg/L	31	0.0%	-355	0	Yes	Downward
Nitrite as N	mg/L	24	87.5%	-86	0.017	Yes	Downward
Sulfate as SO4	mg/L	30	0.0%	-341	0	Yes	Downward
Total Dissolved Solids	mg/L	30	0.0%	-357	0	Yes	Downward
Total Kjeldahl Nitrogen	mg/L	27	40.7%	69	0.079	No	-
Arsenic, Dissolved	mg/L	21	85.7%	66	0.024	Yes	Upward
Chromium, Dissolved	mg/L	22	63.6%	-37	0.157	No	-
Lead, Dissolved	mg/L	22	95.5%	38	0.1505	No	-
Bicarbonate Alkalinity	mg/L	19	0.0%	-1	0.5	No	-
Potassium, Dissolved	mg/L	17	17.60%	-41	0.0428	Yes	Downward
Sodium, Dissolved	mg/L	17	0.00%	-85	0	Yes	Downward
Bicarbonate Alkalinity	mg/L	18	0.00%	14	0.3195	No	-
Carbonate Alkalinity	mg/L	18	100.00%	-45	0.048	Yes	Downward
PL-9.1B							
pH	s.u.	31	0.0%	77	0.099	No	-
Specific Conductance	µmhos/cm	31	0.0%	-134	0.0108	Yes	Downward
Ammonia as N	mg/L	30	30.0%	73	0.1	No	-
Chloride	mg/L	31	0.0%	-139	0.009	Yes	Downward
Nitrate/Nitrite as N	mg/L	32	3.1%	-143	0.0111	Yes	Downward
Nitrite as N	mg/L	28	78.6%	-85	0.0518	No	-
Sulfate as SO4	mg/L	31	0.0%	-138	0.0088	Yes	Downward
Total Dissolved Solids	mg/L	31	0.0%	-136	0.0098	Yes	Downward
Total Kjeldahl Nitrogen	mg/L	29	37.9%	157	0.0014	Yes	Upward
Arsenic, Dissolved	mg/L	23	82.6%	93	0.007	Yes	Upward
Chromium, Dissolved	mg/L	23	91.3%	-75	0.025	Yes	Downward
Lead, Dissolved	mg/L	23	100.0%	59	0.063	No	-
Bicarbonate Alkalinity	mg/L	20	0.0%	-24	0.23	No	-
Potassium, Dissolved	mg/L	19	5.30%	44	0.067	No	-
Sodium, Dissolved	mg/L	19	0.00%	47	0.054	No	-
Bicarbonate Alkalinity	mg/L	20	0.00%	-24	0.23	No	-
Carbonate Alkalinity	mg/L	20	100.00%	-63	0.0215	Yes	Downward

End of report

APPENDIX D

ANNUAL STORMWATER REPORT

Recology
Hay Road
WASTE ZERO

June 28, 2012

Robert Ditto
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670

RE: 2011-2012 Annual Storm Water Report, Recology Hay Road, WDID: 5S48I010514

Dear Mr. Ditto,

On behalf of Recology Hay Road, Recology Environmental Solutions is submitting the enclosed 2011-2012 Annual Storm Water Report for Storm Water Discharges Associated with Industrial Activities.

Attachment A has been included with an explanation of all "no" responses in the annual report and with additional information on the authorized non-storm water discharge from the facility's borrow pit, clarification on parameters analyzed during the first sampling event, and additional BMPs implemented at the facility. In addition, a report prepared by SCS Engineers has been attached that addresses the slightly elevated specific conductance, iron, and aluminum in the facility's storm water discharge. The report is titled "Site Soil Analytical Results and Implications for Storm Water Benchmark Exceedances", Recology Hay Road, June 2011 and is being submitted as part of the facility's annual comprehensive site compliance evaluation.

If you have any questions or require additional information, please contact me at (707) 693-2108.

Sincerely,

Greg Pryor
General Manager

Enclosure

cc: Bryan Clarkson, Environmental Compliance Manager, Recology Environmental Solutions

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
2011-2012 ANNUAL REPORT
FOR STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2011 through June 30, 2012

An Annual Report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers, and e-mail addresses of the Regional Board contacts, as well as the Regional Board Offices addresses are indicated below.

REGIONAL BOARD INFORMATION:

Central Valley Region
11020 Sun Center Dr. Ste. 200
Rancho Cordova, CA 95670

Contact: Robert Ditto
Tel: (916) 464-4841
Email: rditto@waterboards.ca.gov

GENERAL INFORMATION

A. Facility Information:

Recology Hay Rd
6426 Hay Rd
Vacaville, CA 95687
WDID No: 5S48I010514

Facility Contact: Greg Pryor
Email:
Phone: 707-678-4718

SIC Code(s):

4953	Refuse Systems
5093	Scrap and Waste Materials
4212	Local Trucking Without Storage
* 2875	COMPOST FACILITY

B. Facility Operator Information:

Recology Hay Rd
6426 HAY RD
VACAVILLE, CA 95687

Operator Contact: Greg Pryor
Email:
Phone: 916-678-4718

C. Facility Billing Information:

Recology Hay Rd
235 N 1st St
Dixon, CA 95620

Billing Contact: Marchell Nelson
Email:
Phone: 707-678-1492

Additional Table D Parameters: Fe,Fe,Pb,Al,Cu,Zn,COD
(Hazardous Waste Facilities, see Table D, Sector K of the Permit for Additional Parameters)

2011-2012

ANNUAL REPORT

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

1. For the reporting period, was your facility exempt from collecting and analyzing samples from **two** storm events in accordance with sections B.12 or 15 of the General Permit?

☐ **YES** Go to Item D.2 ☒ **NO** Go to Section E

2. Indicate the reason your facility is exempt from collecting and analyzing samples from **two** storm events. Attach a copy of the first page of the appropriate certification if you check boxes ii, iii, iv, or v.

i. ☐ Participating in an Approved Group Monitoring Plan **Group Name:** _____

_____

ii. ☐ Submitted **No Exposure Certification (NEC)** Date Submitted: _____

Re-evaluation Date: _____

Does facility continue to satisfy NEC conditions? ☐ YES ☐ NO

iii. ☐ Submitted **Sampling Reduction Certification (SRC)** Date Submitted: _____

Re-evaluation Date: _____

Does facility continue to satisfy SRC conditions? ☐ YES ☐ NO

iv. ☐ Received Regional Board Certification Certification Date: _____

v. ☐ Received Local Agency Certification Cetification Date: _____

3. If you checked boxes i or iii above, were you scheduled to sample **one** storm event during the reporting year?

☐ **YES** Go to Section E ☐ **NO** Go to Section F

4. If you checked boxes ii, iv, or v, go to Section F.

E. SAMPLING AND ANALYSIS RESULTS

1. How many storm events did you sample? 2 If less than 2, **attach explanation** (if you checked item D.2.i or iii. above, only attach explanation if you answer "0").

2. Did you collect storm water samples from the first storm of the wet season that produced a discharge during scheduled facility operating hours? (Section B.5 of the General Permit)

☒ **YES** ☐ **NO, attach explanation** **(Please note that if you do not sample the first storm event, you are still required to sample 2 storm events)**

3. How many storm water discharge locations are at your facility? 1

4. For each storm event sampled, did you collect and analyze a sample from each of the facilitys' storm water discharge locations? ☒ YES, go to Item E.6 ☐ NO

5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☐ YES ☐ NO, **attach explanation**

   If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

   Date facility's drainage areas were last evaluated _____

6. Were all samples collected during the first hour of discharge? ☒ YES ☐ NO, **attach explanation**

7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☐ YES ☒ NO, **attach explanation**

8. Were there any discharges of stormwater that had been temporarily stored or contained? (such as from a pond) ☒ YES ☐ NO, go to Item E.10

9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☒ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

    a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☒ YES ☐ NO, Go to Item E.11

    b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☒ YES ☐ NO

    c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

    _____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

    _____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

    _____ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- Date and time of sample collection
- Name and title of sampler.
- Parameters tested.
- Name of analytical testing laboratory.
- Discharge location identification.
- Testing results.
- Test methods used.
- Test detection limits.
- Date of testing.
- Copies of the laboratory analytical results.

F. QUARTERLY VISUAL OBSERVATIONS

1. **Authorized Non-Storm Water Discharges**
Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

a. Do authorized non-storm water discharges occur at your facility? Authorized under General Order R5-2008-0082-019 & NPDES permit no. CAG995002 issued 5/19/2011

☒ **YES** ☐ **NO** Go to Item F.2

b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers**. Indicate "N/A" for quarters without any authorized non-storm water discharges.

July -September ☒ **YES** ☐ **NO** ☐ **N/A** October-December ☒ **YES** ☐ **NO** ☐ **N/A**

January-March ☒ **YES** ☐ **NO** ☐ **N/A** April-June ☒ **YES** ☐ **NO** ☐ **N/A**

c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information.

i. name of each authorized non-storm water discharge
ii. date and time of observation
iii. source and location of each authorized non-storm water discharge
iv. characteristics of the discharge at its source and impacted drainage area/discharge location
v. name, title, and signature of observer
vi. **any** new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges. Provide new or revised BMP implementation date.

2. **Unauthorized Non-Storm Water Discharges**
Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources. **Attach an explanation for any "NO" answers**.

July -September ☒ **YES** ☐ **NO** October-December ☒ **YES** ☐ **NO**

January-March ☒ **YES** ☐ **NO** April-June ☒ **YES** ☐ **NO**

b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

☐ **YES** ☒ **NO** Go to item F.2.d

c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

☐ **YES** ☐ **NO** **Attach explanation**

d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information.

i. name of each unauthorized non-storm water discharge.
ii. date and time of observation.
iii. source and location of each unauthorized non-storm water discharge.
iv. characteristics of the discharge at its source and impacted drainage area/discharge location.
v. name, title, and signature of observer.
vi. **any** corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas. Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers.** Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	☒	☐	February	☒	☐
November	☒	☐	March	☒	☐
December	☒	☐	April	☒	☐
January	☒	☐	May	☒	☐

2. Report monthly wet season visual observations using **Form 4** or provide the following information.

   a. date, time, and location of observation
   b. name and title of observer
   c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed.
   d. **any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1-June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? ☒ YES ☐ NO
   The following areas should be inspected:

   - areas where spills and leaks have occured during the last year.
   - outdoor wash and rinse areas.
   - process/manufacturing areas.
   - loading, unloading, and transfer areas.
   - waste storage/disposal areas.
   - dust/particulate generating areas.
   - erosion areas.
   - building repair, remodeling, and construction
   - material storage areas
   - vehicle/equipment storage areas
   - truck parking and access areas
   - rooftop equipment areas
   - vehicle fueling/maintenance areas
   - non-storm water discharge generating areas

2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? ☒ YES ☐ NO

3. Have you inspected the entire facility to verify that the SWPPP's site map, is up-to-date? The following site map items should be verified: ☒ YES ☐ NO

   - facility boundaries
   - outline of all storm water drainage areas
   - areas impacted by run-on
   - storm water discharges locations
   - storm water collection and conveyance system
   - structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation? ☒ YES ☐ NO

The following records should be reviewed:

- quarterly authorized non-storm water discharge visual observations
- monthly storm water discharge visual observation
- records of spills/leaks and associated clean-up/response activities
- quarterly unauthorized non-storm water discharge visual observations
- Sampling and Analysis records
- preventative maintenance inspection and maintenance records

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit? ☒ YES ☐ NO

The following SWPPP items should be reviewed:

- pollution prevention team
- list of significant materials
- description of potential pollutant sources
- assessment of potential pollutant sources
- identification and description of the BMPs to be implemented for each potential pollutant source

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented? ☒ YES ☐ NO

The following BMP categories should be reviewed:

- good housekeeping practices
- spill response
- employee training
- erosion control
- quality assurance
- preventative maintenance
- material handling and storage practices
- waste handling/storage
- structural BMPs

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected? ☒ YES ☐ NO

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:

- identification of personnel performing the evaluation
- the date(s) of the evaluation
- necessary SWPPP revisions
- schedule for implementing SWPPP revisions
- any incidents of non-compliance and the corrective actions taken.

Use **Form 5** to report the results of your evaluation or develop an equivalent form.

J. ACSCE CERTIFICATION

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit? ☒ YES ☐ NO

If you answered "NO" **attach an explanation** to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent?	☒ YES (Mandatory)		
2. If you conducted sampling and analysis, have you attached the laboratory analytical reports?	☒ YES	☐ NO	☐ NA
3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications?	☐ YES	☐ NO	☒ NA
4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J?	☒ YES	☐ NO	☐ NA

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: GREG [illegible]

Signature: [signature] Date: 6/28/2012

Title: GENERAL MANAGER

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DESCRIPTION OF BASIC ANALYTICAL PARAMETERS

The Industrial Activities Storm Water General Permit (General Permit) requires you to analyze storm water samples for at least four parameters. These are pH, Total Suspended Solids (TSS), Specific Conductance (SC),and Total Organic Carbon (TOC). Oil and Grease (O&G) may be substituted for TOC. In addition, you must monitor for any other pollutants which you believe to be present in your storm water discharge as a result of industrial activity and analytical parameters listed in Table D of the General Permit. There are no numeric limitations for the parameters you test for.

The four parameters which the General Permit requires to be tested are considered *indicator* parameters. In other words, regardless of what type of facility you operate, these parameters are nonspecific and general enough to usually provide some indication whether pollutants are present in your storm water discharge. The following briefly explains what each of these parameters mean:

pH is a numeric measure of the hydrogen-ion concentration. The neutral, or acceptable, range is within 6.5 to 8.5. At values less than 6.5, the water is considered acidic; above 8.5 it is considered alkaline or basic. An example of an acidic substance is vinegar, and a alkaline or basic substance is liquid antacid. Pure rainfall tends to have a pH of a little less than 7. There may be sources of materials or industrial activities which could increase or decrease the pH of your storm water discharge. If the pH levels of your storm water discharge are high or low, you should conduct a thorough evaluation of all potential pollutant sources at your site.

Total Suspended Solids (TSS) is a measure of the undissolved solids that are present in your storm water discharge. Sources of TSS include sediment from erosion of exposed land, and dirt from impervious (i.e. paved) areas. Sediment by itself can be very toxic to aquatic life because it covers feeding and breeding grounds, and can smother organisms living on the bottom of a water body. Toxic chemicals and other pollutants also adhere to sediment particles. This provides a medium by which toxic or other pollutants end up in our water ways and ultimately in human and aquatic life. TSS levels vary in runoff from undisturbed land. It has been shown that TSS levels increase significantly due to land development.

Specific Conductance (SC) is a numerical expression of the ability of the water to carry an electric current. SC can be used to assess the degree of mineralization, salinity, or estimate the total dissolved solids concentration of a water sample. Because of air pollution, most rain water has a SC a little above zero. A high SC could affect the usability of waters for drinking, irrigation, and other commercial or industrial use.

Total Organic Carbon (TOC) is a measure of the total organic matter present in water. (All organic matter contains carbon) This test is sensitive and able to detect small concentrations of organic matter. Organic matter is naturally occurring in animals, plants, and man. Organic matter may also be man made (so called synthetic organics). Synthetic organics include pesticides, fuels, solvents, and paints. Natural organic matter utilizes the oxygen in a receiving water to biodegrade. Too much organic matter could place a significant oxygen demand on the water, and possibly impact its quality. Synthetic organics either do not biodegrade or biodegrade very slowly. Synthetic organics are a source of toxic chemicals that can have adverse affects at very low concentrations. Some of these chemicals bioaccumulate in aquatic life. If your levels of TOC are high, you should evaluate all sources of natural or synthetic organics you may use at your site.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in your storm water discharge. At very low concentrations, O&G can cause a sheen (that floating "rainbow") on the surface of water (1 qt. of oil can pollute 250,000 gallons of water). O&G can adversely affect aquatic life and create unsightly floating material and film on water, thus making it undrinkable. Sources of O&G include maintenance shops, vehicles, machines and roadways.

If you have any questions regarding whether or not your constituent concentrations are too high, please contact your local Regional Board office. The United States Environmental Protection Agency (USEPA) has published stormwater discharge benchmarks for a number of parameters. These benchmarks may be helpful when evaluating whether additional BMPs are appropriate. These benchmarks can be accessed at our website at http://www.swrcb.ca.gov. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

http://www.waterboards.ca.gov/water_issues/programs/stormwater/contact.shtml

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Chris Taylor **TITLE:** Site Manager **SIGNATURE:** CT

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	TSS	SC	O&G	~~COD~~ TOC	Al	Cu	Fe	Pb	Zn
SW 1	01/21/12 7:10 ☒ AM ☐ PM	~7:00 ☒ AM ☐ PM	8.33	8	1150	ND	14	.18	ND	.22	ND	.0037
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	mg/L	mg/L	mg/L	mg/L	mg/L
TEST METHOD DETECTION LIMIT:			.05	1.7	1.00	1.2	4.5	.026	.0023	.0065	.0050	.0029
TEST METHOD USED:			4500 $^{H}_{B}$	2540 D	120.1	1664 $^{H}_{Em}$	410.4	200.7	200.7	200.7	200.7	200.7
ANALYZED BY (SELF/LAB):			LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB

CONTINUED NEXT PAGE

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT (CONTINUED)

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Chris Taylor **TITLE:** Site Manager **SIGNATURE:** [signature]

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	TSS	SC	O&G	TOC	N+N	P			
SW 1	01/21/12 7:10 ☒ AM ☐ PM	~7:00 ☒ AM ☐ PM	SEE	PREVIOUS		PAGE	—	.26	.15			
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	mg/l	mg/l			
TEST METHOD DETECTION LIMIT:								.010	.016			
TEST METHOD USED:								353.2	365.4			
ANALYZED BY (SELF/LAB):								LAB	LAB			

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Chris Taylor **TITLE:** Site Manager **SIGNATURE:** CT

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			pH	TSS	SC	O&G	~~TOC~~ COD	Al	Cu	Fe	Pb	Zn	
SW 1	3/13/12 2:00 ☐ AM ☒ PM	~1:00 ☐ AM ☒ PM	8.68	48	1040	—	48	.75	ND	.74	ND	ND	CONTINUED NEXT PAGE
SW 1	3/14/12 2:15 ☐ AM ☒ PM	~1:30 ☐ AM ☒ PM				ND							
	☐ AM ☐ PM	☐ AM ☐ PM											
	☐ AM ☐ PM	☐ AM ☐ PM				mg/L							
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	~~mg/L~~ mg/L	~~mg/L~~ mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
TEST METHOD DETECTION LIMIT:			.05	1.2	1.00	1.3	4.5	.026	.0023	.0065	.0050	.0029	
TEST METHOD USED:			4500HB	2540D	120.1	1664+HEM	410.4	200.7	200.7	200.7	200.7	200.7	
ANALYZED BY (SELF/LAB):			LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT (CONTINUED)

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Chris Taylor **TITLE:** Site Manager **SIGNATURE:** CT

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	TSS	SC	O&G	TOC	N+N	P			
SW1	03/13/12 2:00 ☐ AM ☒ PM	~1:00 ☐ AM ☒ PM	SEE PREVIOUS PAGE				—	ND	.21			
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	mg/L	mg/L			
TEST METHOD DETECTION LIMIT:								.010	.016			
TEST METHOD USED:								353.2	365.4			
ANALYZED BY (SELF/LAB):								LAB	LAB			

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE A

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** DATE: 7/28/11	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** CTT	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: 12/29/11	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** CTT	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: 01/25/12	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** CTT	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: 05/31/12	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** CTT	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.

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SIDE B

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
7/28/11 10:30 ☒ AM ☐ PM	A-1 CHANNEL PERMIT NO. CAG995002	BORROW PIT WATER - WDR R5-2008-0082-09	CLEAR	DISCHARGE: CLEAR A-1 CHANNEL: LT. BROWN	N/A
12/29/11 4:45 ☐ AM ☒ PM	↓	↓	CLEAR	CLEAR	N/A
1/25/12 4:15 ☐ AM ☒ PM	↓	↓	CLEAR	CLEAR	N/A
5/31/12 11:10 ☒ AM ☐ PM	↓	↓	CLEAR	DISCHARGE: CLEAR A-1 CHANNEL: MURKY	N/A
____ ____ ☐ AM ☐ PM					

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SIDE A

FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDs are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDs.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWD source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDs that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** 7/28/11 3 ☐ AM ☒ PM	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** C Taylor	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** 12/20/11 11:00 ☒ AM ☐ PM	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** C Taylor	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** 1/12/12 2 ☐ AM ☒ PM	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** C Taylor	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** 5/31/12 2 ☐ AM ☒ PM	**Observers Name:** Chris Taylor **Title:** Site Manager **Signature:** C Taylor	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.

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NOT APPLICABLE

SIDE B

FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
_____ ____ ☐ AM ☐ PM					
_____ ____ ☐ AM ☐ PM					
_____ ____ ☐ AM ☐ PM					
_____ ____ ☐ AM ☐ PM					

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF

SIDE A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

		#1	#2	#3	#4
Observation Date: October 31 2011 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	SW 1			
	Observation Time	3:00 ☒P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Time Discharge Began	No discharge ☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: November 30 2011 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	SW 1			
	Observation Time	3:15 ☒P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Time Discharge Began	No discharge ☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: December 29 2011 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	SW 1			
	Observation Time	3:00 ☒P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Time Discharge Began	no discharge ☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: January 21 2012 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	SW 1			
	Observation Time	7:00 ☐P.M. ☒A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Time Discharge Began	~7:00 ☐P.M. ☒A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.	☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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NOT APPLICABLE

SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
_____ ____ ☐ AM ☐ PM				
_____ ____ ☐ AM ☐ PM				
_____ ____ ☐ AM ☐ PM				
_____ ____ ☐ AM ☐ PM				
_____ ____ ☒ AM ☐ PM				

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FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF

SIDE A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

		#1	#2	#3	#4
Observation Date: February 29 2012 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	SW1			
	Observation Time	3:00 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Time Discharge Began	No discharge ☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: March 13 2012 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	#1 SW1	#2	#3	#4
	Observation Time	2:00 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Time Discharge Began	1:30 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: April 12 2012 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	#1 SW1	#2	#3	#4
	Observation Time	1:30 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Time Discharge Began	1:00 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: May 31 2012 Observers Name: Chris Taylor Title: Site Manager Signature: CTT	Drainage Location Description	#1 SW1	#2	#3	#4
	Observation Time	2 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Time Discharge Began	1:15 ☒ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.	☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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ANNUAL REPORT

NOT APPLICABLE

SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
_____ _____ ☐ AM ☐ PM				
_____ _____ ☐ AM ☐ PM				
_____ _____ ☐ AM ☐ PM				
_____ _____ ☐ AM ☐ PM				
_____ _____ ☐ AM ☐ PM				

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ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 6/14/12 INSPECTOR NAME: Brian Clarkson TITLE: Env. Compliance Manager SIGNATURE:

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Industrial processes	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form		
Material, loading, unloading and access areas	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form		
Outdoor Storage and maintance activities	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form		
Dust and particulate generating activities	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form		01/2012 additional rumble strip was added to minimize track out

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ANNUAL REPORT

SIDE B

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 6/14/12 **INSPECTOR NAME:** Brian Clarissa **TITLE:** Env. Compliance Manager **SIGNATURE:**

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Non-stormwater discharge (Borrow Pit)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	Elevated EC is addressed in attached SCS Engineers Report	
Soil Erosion locations	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	Elevated EC is addressed in attached SCS Engineers Report	
Bird Sanctuary (Soil Erosion)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	elevated EC is addressed in attached SCS Engineers Report	Concrete wing dams were installed either side of the discharge pipe to minimize erosion.
Significant spills & leaks	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☐NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☐NO	If yes, to either question, complete the next two columns of this form		

Recology Hay Road
WDID No. 5S48I010514

2011-2012 Annual Report for Storm Water Discharges Associated with Industrial Activities

Attachment A

Explanations:

Item E-7 – Was all storm water sampling preceded by three working days of dry weather without a storm water discharge?

The 3/14/12 sampling event occurred during the second day of discharge due to the Oil & Grease bottle from the previous day's sampling (3/13/12) breaking in the cooler during transport.

Item F-1 – Authorized Non-Storm Water Discharges

The facility was authorized for dewatering of the site's borrow pit under a Limited Threat General WDR Order No. R5-2008-0082-019 and NPDES Permit No. CAG995002 (issued 5/19/11). Quarterly monitoring and sampling are submitted to the RWQCB in accordance with the General Order by the 1st day of the 2nd month following the calendar quarter.

Form 1 – Second Sampling Event

Due to breakage of the Oil & Grease bottle in the cooler during transport of the 3/13/12 sample, another sample was obtained the following day (3/14/12).

Form 5 – Annual Comprehensive Site Compliance Evaluation

The slightly elevated SC during both sample events is addressed in the attached report prepared by SCS Engineers (Site Soil Analytical Results and Implications for Storm Water Benchmark Exceedances, Recology Hay Road, June 2011).