Recology
Hay Road
WASTE ZERO

January 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 Second Semi-Annual, Annual 2011 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.

Other than nitrate in well 4B, in the western area, no other inorganic concentration limits were exceeded. For several reasons, well 4B was recommended for replacement:

- The well chemistry may be affected by the shallow well construction,
- The well is located in the middle of the landfill roadway (adjacent to well D-3, which was damaged by a truck earlier this year), and
- The well is difficult to sample, rarely yielding enough water to adequately purge the well prior to sampling.

One VOC (vinyl chloride) was detected at estimated trace concentrations in well 4B. Because this is a single trace VOC detection, no further action is necessary at this time. Note that a landfill gas extraction system was recently installed in disposal module DM-1; well 4B is located adjacent to the southeast corner of DM-1. The addition of landfill gas extraction from DM-1 is anticipated to reduce the potential for VOC impacts to groundwater near DM-1.

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.

Monitoring wells G-14 and G-24 were properly destroyed under Solano County permit. Both wells were located within the construction footprint for new disposal module DM-6.

No other inorganic concentration limits were exceeded in eastern area wells. No VOCs were detected in eastern area wells.

Methane was measured at only one sample point (GP-3A, 1.5 percent and 0.4 percent, respectively). GP-3A is a probe located immediately south of DM-2.2 and there is a perimeter probe (GP-11) at the property line to the south. No methane was detected in GP-11.

LD-3.1, PL-3.3, PL-5.1A, and PL-11.2 had methane concentrations greater than 1 percent and PL-2.2A had organic vapor concentration greater than 1 ppm. As a result of these 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 in the area of LD-3.1 and PL-11.2.

<u>DM-11 Corrective Action Evaluation</u>

The leachate levels were above 1 foot in S-11.1 and S-11.2 in January and S-11.2 in March. Both instances followed large rainfall events, and the leachate levels were below 1 foot when monitored during the following week and for the remainder of the monitoring period. The water levels in PL-11.1 and PL-11.2 were high in January and March 2011 (following high amounts of rainfall) and water was pumped from each pan lysimeter (4,200 and 5,465 gallons, respectively). After March 30th the water levels remained at minimum levels throughout the remainder of 2011. As a continued corrective action measure, any water that enters the pan lysimeters is pumped out immediately.

No VOCs were detected in the water sample obtained from PL-11.1 and six VOCs (5 at trace concentrations) were detected in the PL-11.2 sample. The concentrations of inorganic monitoring parameters are similar to previous monitoring results. Both lysimeters were dry during fourth quarter 2011 monitoring. All of the VOCs detected in PL-11.2 have statistically significant downward trends or do not exhibit a statistically significant trend. To date there is no evidence that the VOCs detected in the pan lysimeters underlying DM-11 have reached groundwater.

<u>WP-9.1 Corrective Action Monitoring Evaluation</u>

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 below 0.2 feet throughout the monitoring period. Therefore, no water was removed from the pan lysimeters.

Approximately 1,053,500 gallons of groundwater were extracted during 2011 using well G-22. The average groundwater extraction rate was over 2 gallons per minute, which is the design extraction rate for the corrective action well. The nitrate concentration in adjacent monitoring well G-21 was equivalent to or below the concentration limit in the last three quarters 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

SECOND SEMI-ANNUAL AND ANNUAL 2011 MONITORING REPORT

RECOLOGY HAY ROAD

Second Semi-annual and Annual 2011 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

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(1) Copy – Greg Pryor, Recology Hay Road
(1) Copy – Ed Padilla, Solano County
(1) Copy – Golder Associates Inc.

January 30, 2012 **Project No. 053-7444-11**

A world of capabilities delivered locally

Golder Associates

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GOLDER ASSOCIATES INC.

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1.0 INTRODUCTION

On behalf of Recology Hay Road (formerly Norcal Waste Systems Hay Road Landfill, Inc), 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 third and fourth quarter 2011 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 (comprised of 2.2A and 2.2B), DM-3, DM-4, DM-5, DM-11.1, and DM-11.2 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).

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[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.

[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] 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 third and fourth quarters, groundwater elevations were measured on September 6 and October 17, 2011. 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. A request to destroy this well was submitted to the RWQCB in January 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 slightly higher than the same period last year, except for wells located near the borrow pit where water levels are substantially lower due to dewatering of the borrow pit. 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 0.015. 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 5×10^{-4} cm/s (500 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 5.9×10^{-5} cm/s (61 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.

[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.

Groundwater seepage velocity for the fine-grained sediments in the area near the active extraction is calculated to be 2.4×10^{-6} cm/s (3 ft/yr). At the eastern portion of the site, where the gradient is more natural, groundwater seepage velocity is calculated to be 2.7×10^{-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 monitoring network consists of 26 shallow monitoring wells, 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 monitoring wells G-14 and G-24 were properly destroyed in July 2011 under Solano County Department of Resource Management permit.[22]

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 [replaces G-10], 4B, 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*[23] 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

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[22] Golder Associates Inc., *Monitoring Well G-14 and G-24 Destructions, Recology Hay Road, Solano County, California,* August 12, 2011.

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

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 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) 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 (transducers were installed in newly constructed PL-3.2, LD-3.2, PL-3.3, and PL-3.3 in January 2011).

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.[24] Therefore, only the western LTU area was sampled during fourth quarter 2011.

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.

[24] 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 (transducers were installed in newly constructed S-3.2 and S-3.3 in January 2011).

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[25] and the Site Specific Sampling and Analysis Plan,[26] 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.[27] 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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25 Conor Pacific, *Second Semi-Annual and 2001 Annual Monitoring Report, Hay Road Landfill, Solano County, California*, January 30, 2002.

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

27 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. Three VOCs were found in the equipment blank, but were not detected in any of the groundwater samples. 1,2,4-trimethylbenzene and tetrachloroethene were detected at trace concentrations of 0.21µg/l and 0.32 µg/l, respectively; chloroform was detected at a concentrations of 1.6 µg/l.

Laboratory analyses generally 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. No 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 third and fourth quarter 2011 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 second quarter 2011 for the western area (Table 4) and fourth quarter 2011 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

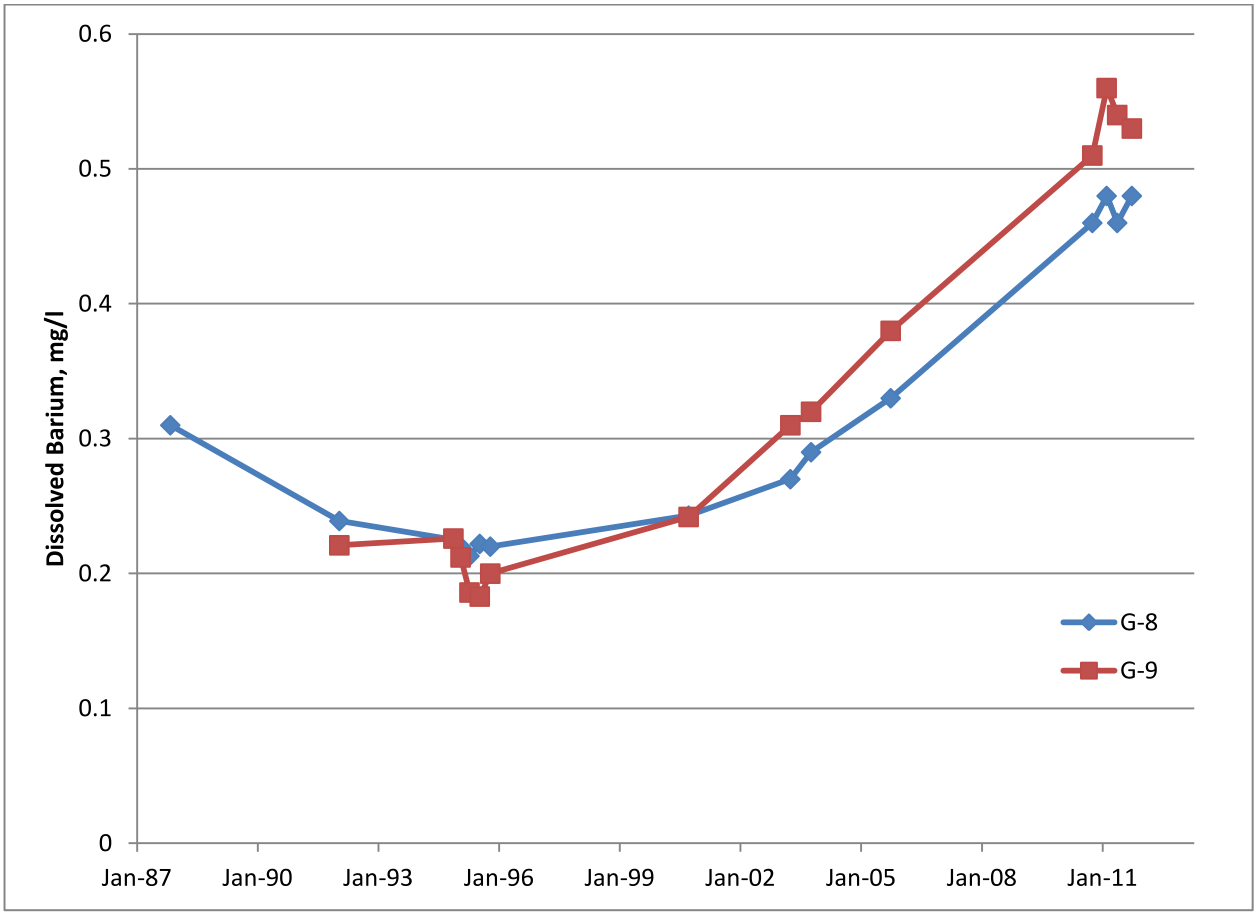
Western area monitoring wells were sampled in October 2011. The disposal modules monitored in the western area include DM-1, DM-2.1, DM-2.2, DM-11.1 and DM-11.2. Samples from all wells were analyzed for routine monitoring parameters.

One VOC (vinyl chloride) was detected at an estimated trace concentration in well 4B. 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.

Nitrate was detected above the concentration limit in well 4B at 4.8 mg/l. The nitrate concentration is lower than the previous monitoring results from well 4B (7.8 mg/l in second quarter 2011, 7.3 and 7.4 mg/l in August 2011). A request was submitted to the RWQCB in January 2012 to replace well 4B due to its location in the middle of the main landfill access roadway and the potential for the groundwater chemistry in the well to be affected by the very shallow well construction.

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. [28] The fourth quarter 2011 barium concentrations were similar to previous results (see chart below). The installation of landfill gas extraction wells in DM-1 is anticipated to reduce the barium concentrations.

[28] 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.*



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*

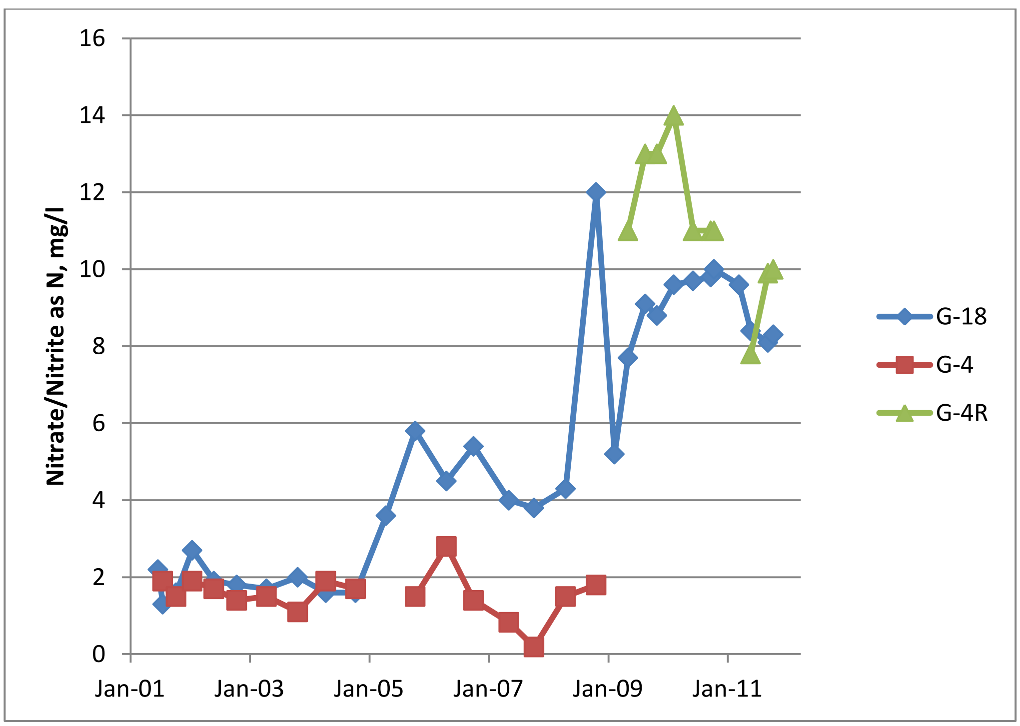
The groundwater monitoring network for the eastern area consists of background wells G-4R, G-6, G-17, and G-18, and downgradient wells G-16, G-19R, G-20, G-21, G-25, G-26, G-28, G-29, and G-30. Each downgradient well is located directly downgradient of leachate sumps (wells G-16, G-19R, G-20, G-21, G-25 and G-28), or the LTU (wells G-14 and G-26).

5.1.2.1 Background Wells

Background wells G-4R, G-6, G-17, and G-18 were sampled in October 2011 for routine monitoring parameters. Wells G-4R and G-18 were also sampled in September 2011 as part of the EMP[29] 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*.[30]

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 data obtained from the past ten years of monitoring was used (2001 - 2011). 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.[31] 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.



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[29] 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.

[30] Einarson Geoscience, Inc. November 1995.

[31] 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 October 2011, and samples were analyzed for routine monitoring parameters (Table 7).

There were no VOC detections in eastern area wells and no 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. The well will be replaced by a new monitoring well to be constructed along the southern edge of DM-6.

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.[32] 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 2.8 mg/l during third and fourth 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 21 and 19 mg/l, substantially lower than historical results. The deeper well (G-23) had low nitrate concentrations (1.9 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 July through December 2011, 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 consists of suction lysimeter monitoring (VZ-2.1), pan lysimeter monitoring (PL-2.2A, PL-2.2B, PL-3.1, PL-3.2, PL-3.3, PL-4.1, PL-5.1A, PL-5.1B, PL-5.2, PL-9.1A, PL-9.1B, PL-11.1, and PL-11.2), and soil sampling at the Land Treatment Unit. Leak detection sump monitoring is performed at LD-3.1, LD-3.2, LD-3.3, LD-4.1, and LD-5.2. Analytical results are summarized in Tables 9 and 10.

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.

[32] 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.

5.2.2 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

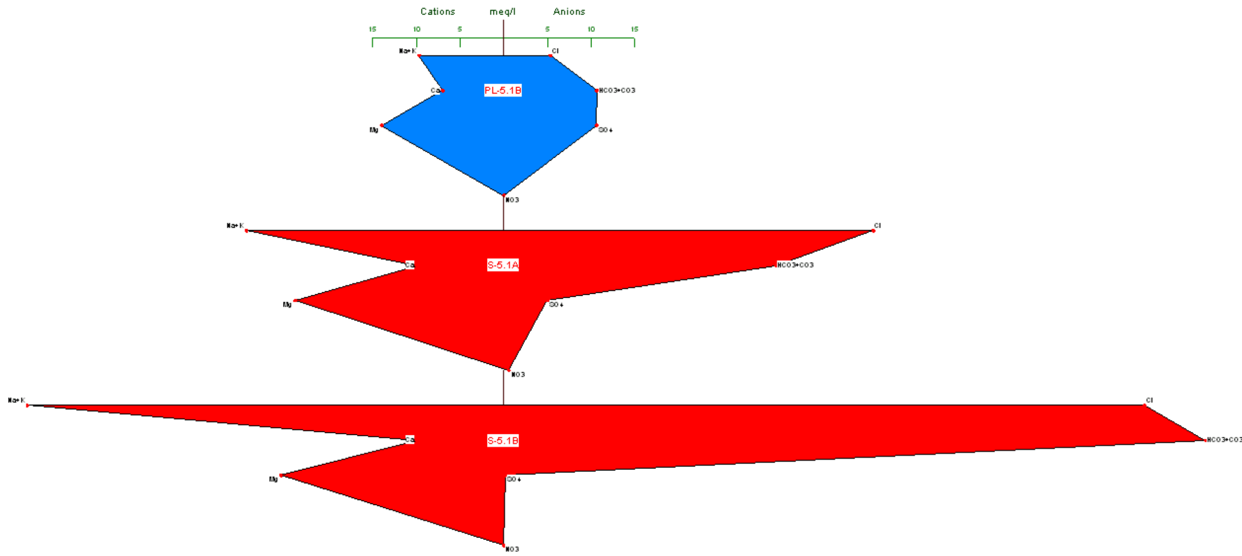
PL-3.1, PL-3.2, PL-3.3, LD-3.1, and LD-3.3 had insufficient water to obtain a sample. The water levels remained at minimum levels throughout the monitoring period. LD-3.2 was sampled for routine monitoring parameters. The chloride concentration in LD-3.2 was 94 mg/l, the bicarbonate alkalinity concentration was 580 mg/l, and the TDS concentration was 800 mg/l. This is the first water sample obtained from LD-3.2 and 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 and LD-4.1 had insufficient water to obtain a sample. The water level in PL-4.1 and LD-4.1 remained at minimum levels throughout the monitoring period.

5.2.2.4 PL-5.1A and PL-5.1B

PL-5.1A was dry and no sample was obtained. PL-5.1B was sampled for routine monitoring parameters on November 3, 2011. The water in PL-5.1A and PL-5.1B remained at minimum levels throughout the monitoring period. Three VOCs were detected at trace concentrations in PL-5.1B (tetrachloroethene, trichloroethene, and acetone); however, as noted previously, the equipment blank also contained tetrachloroethene. The concentrations of most inorganic parameters in PL-5.1B 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. In addition, Stiff diagrams of the pan lysimeter and overlying leachate sump samples have distinct shapes that also show the water in the pan lysimeter to be ionically distinct from the overlying leachate (see Stiff diagrams below).



Stiff Diagrams for PL-5.1B, S-5.1A, and S-5.1B

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 (Appendix A).

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 10.

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 (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

Throughout the monitoring period, PL-11.1 and PL-11.2 were dry and no samples were collected. The water levels in PL-11.1 and PL-11.2 remained at minimum levels throughout the monitoring period (Appendix A).

5.2.3 Land Treatment Unit

Unsaturated zone monitoring was conducted for the LTU in November 2011, following the completion of sludge application for the year. Background borings were drilled and soil samples were collected in May before 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 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 2011 (Table 10). Post-drying soil sample analytical results were compared to the calculated concentration limits. No inorganic concentration limits were exceeded.

5.3 Landfill Gas Monitoring

Landfill gas probes and all pan lysimeters and leak detection sumps were monitored in fourth 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 third and fourth quarters.

During the third and fourth quarter monitoring periods, methane was detected at only one sample point (GP-3A, 1.5 percent and 0.4 percent, respectively). GP-3A is a probe located immediately south of DM-2.2 and there is a perimeter probe (GP-11) at the property line to the south. No methane was detected in GP-11.

LD-3.1, PL-3.3, PL-5.1A, and PL-11.2 had methane concentrations greater than 1 percent and PL-2.2A had organic vapor concentration greater than 1 ppm. As a result of these 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 in the area of LD-3.1 and PL-11.2.

5.4 Surface Water Monitoring

Surface water monitoring locations, SW-3, SW-4, SW-5, and SW-7, were sampled in October 2011. 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 fourth quarter 2011 (Table 12).

No inorganic monitoring parameters were detected above their respective concentration limits. No VOCs were detected in any of the surface water samples.

5.4.1 Compost Area Pond

The compost area pond was sampled on October 24, 2011. The analytical results are summarized in Table 12. The water in the pond has elevated concentrations of nitrate, TKN, and phosphorus.

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 4,222,700 gallons of leachate were removed from the Landfill. The volume of leachate is higher than normal, likely due to nearly 1 million gallons extracted from newly constructed DM-3.2 and DM-3.3. 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 third and fourth quarters. No evidence of a leachate release or leachate seeps were identified.

The LCRS are tested annually to demonstrate proper operation. Disposal modules with accessible LCRS (DM-3.1, DM-3.3, DM-4.1/4.2, DM-5.1A, DM-5.2, DM-9.1A, and DM-11.1) are tested by injecting a measured volume of water (3,500 gallons) into one end of the LCRS and measuring the subsequent LCRS sump liquid levels and volume of liquid pumped from the LCRS sump over time.

For each LCRS test conducted during 2011, the liquid levels in the LCRS sumps were observed to increase after injection (see LCRS test field sheets in Appendix A). Subsequent pumping of the LCRS sumps confirmed the removal of a volume of water roughly equivalent to the volume injected into the LCRS. These test results indicate that the drainage layers are not clogged.

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.

6.1 Landfill

During third and fourth quarter 2011, 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 117,068.57 tons of refuse (not including diverted materials) were disposed of at a minimum elevation of 33 feet MSL. The refuse was placed in DM-3.2 and DM-3.3. In addition, 10,280.51 tons of asbestos were placed in DM-1. The annual waste placement area maps are updated annually in the Spring. The Spring 2011 waste placement maps that cover the period from April 2010 to May 2011 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]), 17,983 wet tons of de-watered sewage sludge were placed. The moisture content was 80% to 85%. At the end of December 2011, the waste pile had 65% capacity remaining.

6.3 Land Treatment Unit

The following monitoring information was recorded by Landfill staff regarding sludge placement in the LTU during July through October 2011.

- Sludge depth: 8 to 12 inches
- Quantity discharged: 36,904 wet tons, or 41,002 cubic yards
- Location: western portion of LTU and top of DM-5
- Quantity removed: 8,683 tons, or 9,649 cubic yards
- Moisture content: approximately 10 - 15 percent
- Disposition: stockpiled
- Final sludge depth: 0 inches
- Total drying cycles: 7 cycles
- Cumulative LTU area covered: 2 acres

6.4 Borrow Pit

From July through December 2011 approximately 52,012,500 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 ANNUAL SUMMARY

A tabular summary of the previous year of historical monitoring data for all parameters and monitoring points in the program is presented in Appendix D. Historical monitoring data are also included on the CD, located on the inside of the binder front cover.

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.
- Wells G-14 and G-24 were properly destroyed in preparation for construction of DM-6.
- Well 4B continued to have nitrate above the concentration limit. The well has been proposed for replacement in a more secure location out of the main landfill roadway.
- There were no other concentration limit exceedances in the monitoring wells.

- No VOCs were detected above the reporting limit in the monitoring wells.
- The eastern portion of the LTU was clean closed in preparation for construction of DM-6.
- Methane was detected at one sample point, GP-3A. GP-3A is a probe located immediately south of DM-2.2 and there is a perimeter probe (GP-11) at the property line to the south. No methane was detected in GP-11.
- Methane was detected above 1 percent in LD-3.1, PL-3.3, and PL-5.1A, and PL-2.2A 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 were above 1 foot in S-11.1 and S-11.2 in January and S-11.2 in March. Both instances followed large rainfall events, and the leachate levels were below 1 foot when monitored during the following week and for the remainder of 2011.
- The water levels in PL-11.1 and PL-11.2 were high in January and March 2011 (following high amounts of rainfall) and water was pumped from each pan lysimeter (4,200 and 5,465 gallons, respectively). After March 30th the water levels remained at minimum levels throughout the remainder of 2011.
- During the first half of 2011, no VOCs were detected in PL-11.1 and six VOCs (5 at trace concentrations) were detected in the PL-11.2 sample. The concentrations of inorganic monitoring parameters are similar to previous monitoring results. All of the VOCs detected in PL-11.2 have statistically significant downward trends or do not exhibit a statistically significant trend. The pan lysimeters were dry during fourth quarter sampling.

7.2.2 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 below 0.2 feet throughout 2011. Therefore, no water was removed from the pan lysimeters.
- Approximately 1,053,500 gallons of groundwater were extracted during this monitoring period using well G-22. The average groundwater extraction rate was 2.0 gallons per minute, which is 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										
	G-1, 2, 6, 8, 9, 10(M&R)[l], 11(M&R)[l], 12, 13, 27, 4B, P-1[i] and MW-4	G-4R*, 6*, 16, 17*, 18*, 19R, 20, 21, 25, 26, 28, 29, and 30	Corrective Action G-21, 22, and 23	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]	S-9.1A S-9.1B[c]	PL-2.2A, 2.2B, PL-3.1 PL-4.1, PL-5.1A PL-5.1B, PL-5.2 PL-11.1, 11.2 VZ-2.1	PL-9.1A PL-9.1B	LTU[f] UZ-1 to UZ-10	GP-1, 6, 7, GP-9 thru 21 PL's LD-3.1, -3.2 -3.3, -4.1 -5.2	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	Twice	-	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	A	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]	S-9.1A S-9.1B[c]	PL-2.2A, 2.2B, PL-3.1 PL-4.1, PL-5.1A PL-5.1B, PL-5.2 PL-11.1, 11.2 VZ-2.1	PL-9.1A PL-9.1B	LTU[f] UZ-1 to UZ-10	GP-1, 6, 7, GP-9 thru 21 PL's LD-3.1, -3.2 -3.3, -4.1 -5.2	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
	G-1, 2, 6, 8, 9, 10(M&R)[l], 11(M&R)[l], 12, 13, 27, 4B, P-1[i] and MW-4	G-4R*, 6*, 16, 17*, 18*, 19R, 20, 21, 25, 26, 28, 29, and 30	Corrective Action G-21, 22, and 23									
(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
Third and Fourth Quarter 2011
Recology Hay Road

Well or Piezometer Number	Top of Casing Elevation (feet, MSL)	Depth to Groundwater (feet) September 6, 2011	Groundwater Elevation (feet, MSL) September 6, 2011	Depth to Groundwater (feet) October 17, 2011	Groundwater Elevation (feet, MSL) October 17, 2011
G-1	24.63	8.04	16.59	8.01	16.62
G-2	22.57	5.21	17.36	5.09	17.48
G-4R	27.53	7.49	20.04	7.43	20.10
G-5R	26.48	4.80	21.68	4.83	21.65
G-6	26.05	3.10	22.95	3.58	22.47
G-7	29.57	7.42	22.15	7.85	21.72
G-8	31.78	14.10	17.68	14.00	17.78
G-9	32.01	30.04	1.97	30.72	1.29
G-10	34.68	dry	-	dry	-
G-10R	33.49	34.70	-1.21	34.73	-1.24
G-10M	34.82	35.85	-1.03	35.89	-1.07
G-11	32.05	dry	-	dry	-
G-11R	32.15	34.68	-2.53	35.42	-3.27
G-11M	32.14	32.78	-0.64	33.78	-1.64
G-12	30.77	19.45	11.32	19.58	11.19
G-13	27.51	12.18	15.33	12.02	15.49
G-14*	26.44	NM	NM	NM	NM
G-16	22.23	7.66	14.57	7.49	14.74
G-17	25.95	7.58	18.37	7.51	18.44
G-18	25.65	8.59	17.06	8.72	16.93
G-19R	25.57	7.52	18.05	7.36	18.21
G-20	23.72	8.91	14.81	8.75	14.97
G-21	25.47	7.90	17.57	7.11	18.36
G-22	27.05	11.90	15.15	8.39	18.66
G-23	26.80	8.65	18.15	8.16	18.64
G-24*	26.40	NM	NM	NM	NM
G-25	22.47	7.99	14.48	7.75	14.72
G-26	25.67	7.68	17.99	7.49	18.18
G-27	26.60	26.71	-0.11	26.92	-0.32
G-28	23.04	8.80	14.24	8.57	14.47
G-29	21.46	7.58	13.88	7.03	14.43
G-30	23.58	6.64	16.94	6.10	17.48
I-6	29.82	NM	NM	NM	NM
I-7	29.46	7.88	21.58	8.20	21.26
MW-4	21.15	10.70	10.45	10.69	10.46
MW-5	21.73	6.82	14.91	7.24	14.49
MW-6	22.08	7.19	14.89	7.59	14.49
MW-7	20.20	5.10	15.10	4.41	15.79
MW-8	19.93	4.75	15.18	4.11	15.82
MW-92-1	39.04	24.88	14.16	25.04	14.00
A-1	33.91	16.10	17.81	16.04	17.87
D-1	32.74	14.96	17.78	14.88	17.86
D-2	25.78	8.08	17.70	7.96	17.82
D-3**	25.63	NM	NM	NM	NM
D-4	20.11	9.25	10.86	9.35	10.76
D-5	21.94	6.94	15.00	7.35	14.59
D-6	21.51	6.48	15.03	5.89	15.62
D-7	26.04	9.05	16.99	9.25	16.79
4B	25.65	9.59	16.06	9.59	16.06
P-1	25.03	7.28	17.75	7.20	17.83

NM = Not measured, well not accessible.
* = well destroyed July 2011
** = well damaged

Table 3
Separation of Groundwater From Lowest Point of Landfill Modules
Third and Fourth Quarter 2011
Recology Hay Road

Module	Sump Elevation (feet-MSL)	September 6, 2011 Groundwater Elevation (feet-MSL)	September 6, 2011 Approximate Separation (feet)	October 17, 2011 Groundwater Elevation (feet-MSL)	October 17, 2011 Approximate Separation (feet)	WDR Required Separation (feet)
1	7	2	5	1	6	5
2.1	24	13	11	13	11	3
2.2A	26	-1	27	-1	27	2.5
2.2B	26	11	15	11	15	2.5
3.1	22	15	7	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	15	5	15	5	2.5
5.1A	24	16	8	16	8	2.5
5.1B	24	16	8	16	8	2.5
5.2	22	17	5	17	5	2.5
9.1A	25	20	5	20	5	2.5
9.1B	25	19	6	19	6	2.5
11.1	25	16	9	16	9	2.5
11.2	25	16	9	16	9	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
Third and Fourth Quarter 2011
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		10/21/11	*Limits*	10/21/11	*Limits*	10/21/11	*Limits*	10/19/11	*Limits*	10/20/11	*Limits*	10/19/11	*Limits*	10/20/11	Limits
Field Parameters	***Units***														
pH	std. units	7.74	-	7.65	-	7.43	-	7.16	-	7.02	-	7.45	-	7.48	-
Specific Conductance	µmhos/cm	1449	-	3581	-	1665	-	1908	-	1707	-	1552	-	1021	-
Temperature	°C	19.1	-	19.6	-	22.1	-	19.3	-	21.1	-	19.8	-	18.9	-
Turbidity	NTU	1	-	1	-	2	-	2	-	1	-	3	-	1	-
Monitoring Parameters															
Arsenic, dissolved	mg/l	<0.0075	*NE*	<0.0075	*NE*	0.0079 t	*NE*	<0.0075	*0.07*	<0.0075	*NE*	<0.0075	*NE*	<0.0075	ND
Barium, dissolved	mg/l	NA		NA		NA		0.48		0.53		NA		NA	
Bicarbonate Alkalinity	mg/l	410	-	880	-	590	-	650	-	630	-	330	-	350	-
Calcium, dissolved	mg/l	49	-	30	-	43	-	95	-	83	-	69	-	44	-
Carbonate Alkalinity	mg/l	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<8.2	-	<4.1	-
Chloride	mg/l	190	-	400	-	120	-	200	-	180	-	260	-	110	-
Chromium, dissolved	mg/l	0.0011 t	*0.02*	<0.0010	*ND*	<0.0010	*NE*	0.0012 t	*NE*	<0.0010	*ND*	0.0017 t	*NE*	<0.0010	NE
Magnesium, dissolved	mg/l	60	-	89	-	68	-	110	-	100	-	74	-	56	-
Nitrate/Nitrite as N	mg/l	0.87	*24*	<0.010	*0.7*	0.53	*3.2*	0.42	*5.6*	<0.010	*3.9*	2.7	*4.1*	0.12	1.7
Potassium, dissolved	mg/l	0.73 t	-	0.94 t	-	0.82 t	-	0.84 t	-	1.1	-	0.87 t	-	0.75 t	-
Sodium, dissolved	mg/l	160	-	640	-	230	-	160	-	120	-	120	-	82	-
Sulfate as SO_4	mg/l	49	-	460	-	120	-	83	-	18	-	38	-	31	-
Total Dissolved Solids	mg/l	840	-	2300	-	1000	-	1200	-	1000	-	940	-	600	-
Volatile Organic Compounds															
Vinyl chloride	µg/l	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*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.
Concentration limits calculated using historical data through second quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Table 4 (continued)
Groundwater Analytical Results Western Detection Wells
Third and Fourth Quarter 2011
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		10/20/11	*Limits*	10/20/11	*Limits*	10/21/11	*Limits*	10/21/11	*Limits*	10/21/11	*Limits*	10/19/11	*Limits*	8/9/11	10/20/11	*Limits*
Field Parameters	*Units*															
pH	std. units	6.71	-	7.34	-	7.86	-	7.62	-	7.31	-	7.30	-	7.45	7.77	-
Specific Conductance	µmhos/cm	1125	-	950	-	1068	-	1132	-	2622	-	2408	-	4300	4521	-
Temperature	°C	20.3	-	19.9	-	19.7	-	21.0	-	21.2	-	20	-	19.9	21.9	-
Turbidity	NTU	92	-	1	-	1	-	1	-	1	-	2	-	21	7	-
Monitoring Parameters																
Arsenic, dissolved	mg/l	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*0.1*	<0.0075	*NE*	<0.0075	*NE*	<0.0075	*0.06*	-	<0.0075	*0.06*
Barium, dissolved	mg/l	NA		NA		NA		NA		NA		NA		-	NA	
Bicarbonate Alkalinity	mg/l	400	-	320	-	330	-	360	-	580	-	490	-	-	800	-
Calcium, dissolved	mg/l	59	-	40	-	35	-	38	-	58	-	76	-	-	100	-
Carbonate Alkalinity	mg/l	<8.2	-	<4.1	-	<8.2	-	<8.2	-	<8.2	-	<8.2	-	-	<8.2	-
Chloride	mg/l	110	-	100	-	120	-	120	-	380	-	450	-	-	680	-
Chromium, dissolved	mg/l	<0.0010	*ND*	<0.0010	*ND*	<0.0010	*0.02*	<0.0010	*0.02*	0.0014 t	*NE*	<0.0010	*NE*	-	0.0015 t	*NE*
Magnesium, dissolved	mg/l	57	-	52	-	47	-	46	-	130	-	140	-	-	220	-
Nitrate/Nitrite as N	mg/l	1.6	*28*	1.9	*2.3*	0.18	*5.0*	0.28	*4.5*	0.49	*1.5*	0.88	*8.3*	**7.3**	**4.8**	*4.4*
Potassium, dissolved	mg/l	0.72 t	-	0.71 t	-	0.65 t	-	0.56 t	-	0.94 t	-	0.87 t	-	-	0.76 t	-
Sodium, dissolved	mg/l	96	-	79	-	120	-	140	-	310	-	210	-	-	570	-
Sulfate as SO_4	mg/l	29	-	26	-	30	-	46	-	230	-	120	-	-	760	-
Total Dissolved Solids	mg/l	670	-	560	-	600	-	650	-	1600	-	1600	-	-	3100	-
Volatile Organic Compounds																
Vinyl chloride	µg/l	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	<0.12	*ND*	-	0.44 t	*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.
Concentration limits calculated using historical data through second quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Table 5
Groundwater Concentration Trends Western Detection Wells
Third and Fourth Quarter 2011
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	-	Up	-	Down	NA
Calcium, Dissolved	-	Down	-	Up	-	-	NA
Chloride	Down	-	Down	-	-	-	NA
Chromium, Dissolved	-	ND	NA	NA	ND	-	ND
Magnesium, Dissolved	-	Down	-	Up	-	-	NA
Nitrate/Nitrite as N	Down	ND	-	-	NA	-	NA
Potassium, Dissolved	-	Down	-	-	-	-	NA
Sodium, Dissolved	-	Down	-	Up	Down	Down	NA
Sulfate as SO4	-	Down	-	-	Down	Down	NA
Total Dissolved Solids	-	Down	-	Up	Up	-	NA

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

Trend analysis covering the previous 5 years (2007-2011).
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
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		G-4R		G-6	G-17	G-18		*Concentration*
Sampling Date		9/15/11	10/21/11	10/21/11	10/19/11	9/15/11	10/18/11	*Limit*
Field Parameters	***Units***							
pH	std. units	7.51	7.39	7.43	7.29	7.39	7.25	-
Specific Conductance	µmhos/cm	3542	3835	1665	2662	2596	2837	-
Temperature	°C	20.1	22.8	22.1	17.8	19.4	20.1	-
Turbidity	NTU	1	2	2	2	1	2	-
Biosolids Parameters								
Ammonia as N	mg/l	-	0.050	0.025 t	<0.025	-	<0.025	*0.9*
Arsenic, dissolved	mg/l	-	<0.0075	0.0079 t	<0.0075	-	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	-	620	590	450	-	400	-
Calcium, dissolved	mg/l	-	70	43	90	-	72	-
Carbonate Alkalinity	mg/l	-	<8.2	<8.2	<8.2	-	<8.2	-
Chloride	mg/l	-	610	120	490	-	620	-
Chromium, dissolved	mg/l	-	<0.0010	<0.0010	0.0015 t	-	0.0035 t	*0.014*
Lead, dissolved	mg/l	-	0.0057 t	<0.0050	<0.0050	-	<0.0050	*0.047*
Magnesium, dissolved	mg/l	-	160	68	150	-	150	-
Nitrate/Nitrite as N	mg/l	**9.9**	**10**	0.53	3.4	**8.1**	**8.3**	*5*
Potassium, dissolved	mg/l	-	1.3	0.82 t	0.86 t	-	1.1	-
Sodium, dissolved	mg/l	-	550	230	220	-	250	-
Sulfate as SO_4	mg/l	-	520	120	250	-	140	-
Total Dissolved Solids	mg/l	-	2500	1000	1600	-	1700	-
Total Kjeldahl Nitrogen	mg/l	-	0.38	0.089 t	0.11 t	-	0.16 t	*5.5*
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 2001 - 2011.

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

Table 7
Groundwater Analytical Results Eastern Detection Wells
Third and Fourth Quarter 2011
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		10/18/11	10/21/11	10/18/11	9/15/11	10/21/11	10/18/11	10/19/11	10/18/11	9/15/11	10/19/11	10/19/11	*Limit*
Field Parameters	***Units***												
pH	std. units	7.33	7.47	7.45	7.38	7.30	7.41	7.5	7.29	8.02	7.90	7.63	-
Specific Conductance	µmhos/cr	3664	3768	1665	2221	2455	2610	2267	3238	1905	2135	2074	-
Temperature	°C	21.3	20	22.7	19.3	19.9	20.8	19.3	19.9	19.3	19.3	19.6	-
Turbidity	NTU	2	1	2	2	1	1	2	1	7	2	2	-
Monitoring Parameters													
Ammonia as N	mg/l	<0.025	<0.025	<0.025	NA	<0.025	<0.025	<0.025	<0.025	NA	<0.025	<0.025	*0.9*
Arsenic, dissolved	mg/l	<0.0075	0.0080 t	<0.0075	NA	<0.0075	<0.0075	<0.0075	<0.0075	NA	<0.0075	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	390	420	340	NA	420	350	460	640	NA	680	600	-
Calcium, dissolved	mg/l	86	60	48	NA	89	71	57	54	NA	13	21	-
Carbonate Alkalinity	mg/l	<8.2	<8.2	<8.2	NA	<8.2	<8.2	<8.2	<8.2	NA	<8.2	<8.2	-
Chloride	mg/l	820	730	280	NA	450	560	320	470	NA	240	220	-
Chromium, dissolved	mg/l	0.0061 t	0.0013 t	0.0011 t	NA	0.0020 t	<0.0010	<0.0010	0.0019 t	NA	<0.0010	0.0014 t	*0.014*
Lead, dissolved	mg/l	<0.0050	<0.0050	<0.0050	NA	0.0058 t	<0.0050	<0.0050	<0.0050	NA	<0.0050	<0.0050	*0.047*
Magnesium, dissolved	mg/l	220	150	88	NA	120	150	120	140	NA	46	59	-
Nitrate/Nitrite as N	mg/l	4.5	3.0	0.18	3.0	2.8	3.0	4.5	1.6	NA	0.085 t	0.023 t	*5*
Potassium, dissolved	mg/l	1.1	1.4	1.4	NA	0.96 t	1.1	1.0	0.95 t	NA	0.80 t	0.90 t	-
Sodium, dissolved	mg/l	340	520	170	NA	240	230	220	450	NA	370	320	-
Sulfate as SO_4	mg/l	360	470	88	NA	200	190	230	410	NA	78	150	-
Total Dissolved Solids	mg/l	2200	2400	930	NA	1400	1500	1400	2100	NA	1300	1200	-
Total Kjeldahl Nitrogen	mg/l	0.11 t	0.084 t	<0.056	NA	0.062 t	<0.056	0.068 t	0.37	NA	0.12 t	<0.056	*5.5*
Volatile Organic Compounds													
t-Butyl alcohol	µg/l	<9.4	<9.4	<9.4	NA	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	
Trichloroethene	µg/l	<0.085	<0.085	<0.085	NA	<0.085	<0.085	<0.085	<0.085	NA	<0.085	0.09 t	*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 centir **Bold** values exceed calculated concentration limit.
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 2000 - 2009.
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.

Table 8
Groundwater Analytical Results Corrective Action Wells
Third and Fourth Quarter 2011
Recology Hay Road

				Extraction Well		Deep Well		
Sample Designation		G-21		G-22		G-23		*Concentration*
Sampling Date		9/15/11	10/21/11	9/15/11	10/21/11	9/15/11	10/21/11	*Limit*
Field Parameters	*Units*							
pH	std. units	7.38	7.3	7.23	7.58	7.43	7.37	-
Specific Conductance	µmhos/cm	2221	2455	2376	2645	2116	2328	-
Temperature	°C	19.3	19.9	19.6	22	19.2	20.4	-
Turbidity	NTU	2	1	12	2	3	2	-
Corrective Action Monitoring Parameter								
Nitrate/Nitrite as N	mg/l	3.0	2.8	**21**	**19**	1.9	1.9	*5*

Extraction Well G-22		Jul	Aug	Sep	Oct	Nov	Dec	Total
Volume Pumped*	gallons	96,000	100,500	105,000	87,000	107,000	97,000	592,500
Average Extraction Rate	gpd	3,097	3,242	3,500	2,806	3,567	3,129	3,220
	gpm	2.2	2.3	2.4	1.9	2.5	2.2	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 2000-2009.
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
Third and Fourth Quarter 2011
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		11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
	Units									
General Water Quality Parameters										
pH	std. units	*dry*	*dry*	*dry*	*dry*	*dry*	*dry*	7.37	*dry*	*dry*
Specific Conductance	µmhos/cm	-	-	-	-	-	-	1440	-	-
Temperature	°C	-	-	-	-	-	-	23	-	-
Turbidity	NTU	-	-	-	-	-	-	99	-	-
Monitoring Parameters										
Ammonia as N	mg/l	-	-	-	-	-	-	NR	-	-
Arsenic, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Bicarbonate Alkalinity	mg/l	-	-	-	-	-	-	580	-	-
Calcium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Carbonate Alkalinity	mg/l	-	-	-	-	-	-	NR	-	-
Chloride	mg/l	-	-	-	-	-	-	94	-	-
Chromium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Lead, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Magnesium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Nitrate/Nitrite as N	mg/l	-	-	-	-	-	-	NR	-	-
Potassium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Sodium, dissolved	mg/l	-	-	-	-	-	-	NR	-	-
Sulfate as SO_4	mg/l	-	-	-	-	-	-	NR	-	-
Total Dissolved Solids	mg/l	-	-	-	-	-	-	800	-	-
Total Kjeldahl Nitrogen	mg/l	-	-	-	-	-	-	NR	-	-
VOCs by EPA Method 8260										
Tetrachloroethene	µg/l	-	-	-	-	-	-	NR	-	-
Trichloroethene	µg/l	-	-	-	-	-	-	NR	-	-
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
Third and Fourth Quarter 2011
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		11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
	Units										
General Water Quality Parameters											
pH	std. units	*dry*	*dry*	*dry*	6.73	*dry*	*dry*	7.78	*dry*	*dry*	*dry*
Specific Conductance	µmhos/cm	-	-	-	2510	-	-	1,930	-	-	-
Temperature	°C	-	-	-	26	-	-	20	-	-	-
Turbidity	NTU	-	-	-	12	-	-	0	-	-	-
Monitoring Parameters											
Ammonia as N	mg/l	-	-	-	NR	-	-	0.031 t	-	-	-
Arsenic, dissolved	mg/l	-	-	-	NR	-	-	<0.0075	-	-	-
Bicarbonate Alkalinity	mg/l	-	-	-	650	-	-	510	-	-	-
Calcium, dissolved	mg/l	-	-	-	140	-	-	69	-	-	-
Carbonate Alkalinity	mg/l	-	-	-	<8.2	-	-	<8.2	-	-	-
Chloride	mg/l	-	-	-	190	-	-	68	-	-	-
Chromium, dissolved	mg/l	-	-	-	NR	-	-	0.0035 t	-	-	-
Lead, dissolved	mg/l	-	-	-	NR	-	-	0.0050 t	-	-	-
Magnesium, dissolved	mg/l	-	-	-	170	-	-	56	-	-	-
Nitrate/Nitrite as N	mg/l	-	-	-	0.069 t	-	-	5.5	-	-	-
Potassium, dissolved	mg/l	-	-	-	5.2	-	-	4.3	-	-	-
Sodium, dissolved	mg/l	-	-	-	220	-	-	170	-	-	-
Sulfate as SO_4	mg/l	-	-	-	510	-	-	87	-	-	-
Total Dissolved Solids	mg/l	-	-	-	1700	-	-	800	-	-	-
Total Kjeldahl Nitrogen	mg/l	-	-	-	NR	-	-	0.53	-	-	-
VOCs by EPA Method 8260											
Tetrachloroethene	µg/l	-	-	-	0.68 t	-	-	<0.13	-	-	-
Trichloroethene	µg/l	-	-	-	0.11 t	-	-	<0.085	-	-	-
Acetone	µg/l	-	-	-	8.6 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
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation Sampling Date		UZ-1 11/11/11	UZ-2 11/11/11	UZ-3 11/11/11	UZ-4 11/11/11	UZ-5 11/11/11	UZ-6 11/11/11	UZ-7 11/11/11	UZ-8 11/11/11	UZ-9 11/11/11	UZ-10 11/11/11	*Concentration Limit*
Monitoring												
Parameters	*Units*											
pH	std. units	NS	NS	NS	NS	NS	NS	9.12	8.72	8.74	8.52	*7.6 - 10.0*
% Moisture	%	NS	NS	NS	NS	NS	NS	17.2	18.6	20.8	21.7	-
Chloride	mg/l	NS	NS	NS	NS	NS	NS	3.0	4.5	2.2	1.4	*28*
Sulfate as SO_4	mg/l	NS	NS	NS	NS	NS	NS	19	16	8.5	5.2	*62*
Ammonia	mg/l	NS	NS	NS	NS	NS	NS	0.060	<0.025	0.058 t	0.036 t	*0.22*
Nitrate	mg/l	NS	NS	NS	NS	NS	NS	0.067 t	0.062 t	0.030 t	<0.021	*3.0*
Nitrite	mg/l	NS	NS	NS	NS	NS	NS	0.11 t	0.20 t	<0.015	<0.015	*0.11*
TKN	mg/l	NS	NS	NS	NS	NS	NS	0.53	0.46	0.48	0.44	*1.7*
Arsenic	mg/l	NS	NS	NS	NS	NS	NS	<0.0075	<0.0075	<0.0075	<0.0075	*2.2 (max)*
Chromium	mg/l	NS	NS	NS	NS	NS	NS	0.0015 t	0.0012 t	<0.0010	<0.0010	*0.22 (max)*
Lead	mg/l	NS	NS	NS	NS	NS	NS	<0.0050	<0.0050	<0.0050	<0.0050	*0.39 (max)*

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
Concentration limits calculated using all analytical results from May 4, 2011 samples (arsenic, chromium, lead calculated using all historical results).

Table 11
Landfill Gas Monitoring
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
GP-1	9/6/11	0.0	0.5	20.1	NR	NR
	12/2/11	0.0	0.6	19.8	0.0	NA
GP-2	9/6/11	0.0	5.4	0.3	NR	NR
	12/2/11	0.0	4.0	8.6	NA	NA
GP-3A	9/6/11	1.5	5.9	0.6	NR	NR
	12/2/11	0.4	3.8	9.9	NA	NA
GP-3B	9/6/11	0.0	4.5	17.1	NR	NR
	12/2/11	0.0	2.0	19.4	NA	NA
GP-4A	9/6/11	0.0	3.6	1.6	NR	NR
	12/2/11	0.0	3.2	12.7	NA	NA
GP-4B	9/6/11	0.0	6.7	13.9	NR	NR
	12/2/11	0.0	4.8	15.6	NA	NA
GP-5A	9/6/11	0.0	8.4	0.2	NR	NR
	12/2/11	0.0	2.9	13.6	NA	NA
GP-5B	9/6/11	0.0	0.2	19.3	NR	NR
	12/2/11	0.0	0.4	19.9	NA	NA
GP-6	9/6/11	0.0	0.0	20.1	NR	NR
	12/2/11	0.0	0.0	20.9	0.0	NA
GP-7	9/6/11	0.0	4.3	12.4	NR	NR
	12/2/11	0.0	1.9	19.1	0.0	NA
GP-9	9/6/11	0.0	1.6	19.3	NR	NR
	12/2/11	0.0	0.9	19.6	0.0	NA
GP-10	9/6/11	0.0	2.6	17.2	NR	NR
	12/2/11	0.0	1.2	19.7	0.0	NA
GP-11	9/6/11	0.0	0.5	19.4	NR	NR
	12/2/11	0.0	0.5	20.5	0.0	NA
GP-12	9/6/11	0.0	0.1	20.8	NR	NR
	12/2/11	0.0	0.6	20.9	0.0	NA
GP-13	9/6/11	0.0	0.1	20.3	NR	NR
	12/2/11	0.0	0.6	20.2	0.0	NA
GP-14	9/6/11	0.0	0.8	17.4	NR	NR
	12/2/11	0.0	0.9	17.8	0.0	NA
GP-15	9/6/11	0.0	0.4	20.5	NR	NR
	12/2/11	0.0	0.4	20.4	0.0	NA
GP-16	9/6/11	0.0	0.0	20.5	NR	NR
	12/2/11	0.0	0.6	20.1	0.0	NA
GP-17	9/6/11	0.0	0.2	20.2	NR	NR
	12/2/11	0.0	1.4	20.3	0.0	NA
GP-18	9/6/11	0.0	1.2	13.0	NR	NR
	12/2/11	0.0	0.2	19.9	0.0	NA
GP-19	9/6/11	0.0	2.7	13.4	NR	NR
	12/2/11	0.0	2.9	15.8	0.0	NA
GP-20S	9/6/11	0.0	2.5	18.1	NR	NR
	12/2/11	0.0	1.9	18.5	0.0	NA
GP-20D	9/6/11	0.0	4.6	0.9	NR	NR
	12/2/11	0.0	4.3	6.3	0.0	NA
GP-21S	9/6/11	0.0	3.8	17.0	NR	NR
	12/2/11	0.0	2.1	18.9	0.0	NA
GP-21D	9/6/11	0.0	4.2	3.3	NR	NR
	12/2/11	0.0	3.8	5.1	0.4	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
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
LD-3.1	12/2/11	3.8	8.2	7.2	0.0	see below
LD-3.2	12/2/11	0.0	1.6	14.1	0.0	NA
LD-3.3	12/2/11	0.8	8.1	4.2	0.0	NA
LD-4.1	12/2/11	0.0	7.1	8.9	0.0	NA
LD-5.2	12/2/11	0.0	8.7	7.5	0.0	NA
PL-2.2A	12/2/11	0.0	0.8	19.7	5.0	see below
PL-2.2B	12/2/11	0.0	3.8	15.7	0.0	NA
PL-3.1	12/2/11	0.0	0.1	20.5	0.0	NA
PL-3.2	12/2/11	0.9	9.2	9.5	0.0	NA
PL-3.3	12/2/11	5.7	10.2	12.1	0.0	see below
PL-4.1	12/2/11	0.0	0.8	20.2	0.0	NA
PL-5.1A	12/2/11	3.8	17.8	0.3	0.0	see below
PL-5.1B	12/2/11	0.0	10.8	5.8	0.0	NA
PL-5.2	12/2/11	0.0	0.2	20.6	0.0	NA
PL-9.1A	12/2/11	0.0	0.0	20.8	0.0	NA
PL-9.1B	12/2/11	0.0	0.0	20.8	0.0	NA
PL-11.1	12/2/11	0.0	13.1	2.1	1.0	NA
PL-11.2	12/2/11	0.0	7.3	13.2	0.0	NA

Volatile Organic Compounds by EPA Method TO-15

Sample Designation	units	LD-3.1 12/2/11	PL-3.3 12/2/11	PL-5.1A 12/2/11	PL-2.2A 12/2/11
Freon 12	ppbv	16	26	18	8.5
Freon 114	ppbv	2.0	1.2	3.5	1.9
Vinyl Chloride	ppbv	<0.66	<0.68	9.4	<0.68
Chloroethane	ppbv	<2.7	5.4	<2.7	<2.7
Freon 11	ppbv	24	130	<0.67	<0.68
Ethanol	ppbv	<2.7	4.3	<2.7	<2.7
Acetone	ppbv	23	40	11	10
Methylene Chloride	ppbv	<0.66	3.7	<0.67	<0.68
Hexane	ppbv	2.0	3.6	3.7	<0.68
1,1-Dichloroethane	ppbv	<0.66	<0.68	0.86	<0.68
2-Butanone (Methyl Ethyl Ke	ppbv	<2.7	3.7	<2.7	<2.7
Tetrahydrofuran	ppbv	2.3	1.1	<0.67	2.0
Cyclohexane	ppbv	1.6	1.7	36	<0.68
2,2,4-Trimethylpentane	ppbv	3.8	1.2	17	<0.68
Benzene	ppbv	<0.66	0.79	0.71	<0.68
Heptane	ppbv	2.1	0.68	1.1	<0.68
Trichloroethene	ppbv	<0.66	<0.68	1.6	<0.68
Toluene	ppbv	3.4	3.0	<0.67	3.4
Tetrachloroethene	ppbv	7.2	<0.68	15	<0.68
Ethyl Benzene	ppbv	0.80	<0.68	<0.67	<0.68
m,p-Xylene	ppbv	4.2	2.6	<0.67	4.2
o-Xylene	ppbv	1.6	1.0	<0.67	1.4
4-Ethyltoluene	ppbv	<0.66	<0.68	<0.67	0.75
1,2,4-Trimethylbenzene	ppbv	2.0	1.6	<0.67	2.1

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
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation Sampling Date		SW-3 10/24/11	SW-4 10/24/11	SW-5 10/24/11	SW-7 10/24/11	*Surface Water Concentration Limit*	Compost Area Pond 10/24/11
Field Parameters	*Units*						
pH	std. units	8.09	7.79	8.80	8.41	*6.7 / 9.3*	7.60
Specific Conductance	µmhos/cm	2,401	2,691	1,084	2,374	*3,385*	2,462
Temperature	°C	21.5	22.8	19.8	22.7	-	19.4
Turbidity	NTU	6	12	5	7	-	26
Monitoring Parameters							
Ammonia as N	mg/l	0.23	0.049 t	0.034 t	0.11	*0.76*	0.14
Arsenic	mg/l	<0.0098	<0.0098	<0.0098	0.011 t	*0.075*	NA
Bicarbonate Alkalinity	mg/l	560	380	260	420	-	NA
Calcium	mg/l	77	83	34	64	-	NA
Chloride	mg/l	400	520	140	410	*748*	320
Chromium	mg/l	0.0029 t	0.0078 t	0.0017 t	0.0025 t	*0.014*	NA
Lead	mg/l	<0.0050	0.0058 t	<0.0050	<0.0050	*0.065*	NA
Magnesium	mg/l	120	150	60	120	-	NA
Nitrate/Nitrite as N	mg/l	0.11	0.053 t	<0.010	0.046 t	*12*	3.6
Nitrite as N	mg/l	0.013 t	0.019 t	0.0068 t	0.011 t	*2.1*	NA
Potassium	mg/l	5.4	4.2	2.1	3.6	-	NA
Sodium	mg/l	290	340	130	300	-	NA
Sulfate as SO_4	mg/l	150	230	38	180	*273*	71
Total Dissolved Solids	mg/l	1,500	1,700	620	1,400	*2,065*	1,600
Total Kjeldahl Nitrogen	mg/l	0.95	0.83	0.59	0.92	*4.5*	12
Total Suspended Solids	mg/l	16	130	8.5	100	*350*	NA
Fixed Dissolved Solids	mg/l	NA	NA	NA	NA	*NA*	1,100
Total Phosphorous	mg/l	NA	NA	NA	NA	*NA*	6.4
Volatile Organic Compounds by EPA Method 8260B							
All compounds below method detection limits.			ND	ND	ND	*ND*	NA

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 fourth quarter 2011.

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

ND - Non-detect

Table 13
Leachate Pumping Record
Third and Fourth Quarter 2011
Recology Hay Road

Sump	Jul	Aug	Sep	Oct	Nov	Dec	Total
Gallons pumped							
S-1	86,000	91,000	95,000	15,000	84,500	17,000	388,500
S-2.1	12,000	6,000	25,000	16,000	5,000	1,500	65,500
S-2.2A	2,700	1,500	2,700	5,600	1,500	4,700	18,700
S-2.2B	7,900	14,200	11,100	13,100	9,200	11,100	66,600
S-3.1	0	5,500	1,500	0	2,000	8,500	17,500
S-3.2	6,000	0	4,300	1,500	2,000	5,000	18,800
S-3.3	0	3,000	0	4,000	0	0	7,000
S-4.1	0	3,000	8,000	6,000	7,000	5,200	29,200
S-5.1A	0	0	6,000	0	3,000	0	9,000
S-5.1B	0	0	6,000	0	3,000	0	9,000
S-5.2	3,000	3,000	3,000	7,000	4,000	5,000	25,000
S-9.1A	0	3,000	4,500	28,000	8,000	5,000	48,500
S-9.1B	0	3,000	2,500	3,000	3,000	4,000	15,500
S-11.1	8,000	5,300	6,700	0	2,000	0	22,000
S-11.2	0	11,000	10,000	0	22,500	3,000	46,500
Gallons pumped per day (calculated from total gallons pumped each month above)							
S-1	2,774	2,935	3,167	484	2,817	548	12,532
S-2.1	387	194	833	516	167	48	2,113
S-2.2A	87	48	90	181	50	152	603
S-2.2B	255	458	370	423	307	358	2,148
S-3.1	0	177	50	0	67	274	565
S-3.2	194	0	143	48	67	161	606
S-3.3	0	97	0	129	0	0	226
S-4.1	0	97	267	194	233	168	942
S-5.1A	0	0	200	0	100	0	290
S-5.1B	0	0	200	0	100	0	290
S-5.2	97	97	100	226	133	161	806
S-9.1A	0	97	150	903	267	161	1,565
S-9.1B	0	97	83	97	100	129	500
S-11.1	258	171	223	0	67	0	710
S-11.2	0	355	333	0	750	97	1,500
Maximum Monthly Liquid Level (feet above pressure transducer)							Target (ft)
S-1	1.8	1.8	1.8	1.9	2.0	2.9	NA
S-2.1	0.8	0.7	0.8	0.8	0.8	0.7	<1
S-2.2A	0.4	0.2	0.2	0.2	0.5	0.4	<1
S-2.2B	0.5	0.3	0.4	0.4	0.6	0.5	<1
S-3.1	0.4	0.3	0.3	0.4	0.5	0.4	<1
S-3.2	0.7	0.8	0.8	0.5	0.7	0.4	<1
S-3.3	0.5	0.4	0.3	0.1	0.4	0.2	<1
S-4.1	0.6	0.1	0.1	0.0	0.1	0.3	<1
S-5.1A	0.6	0.4	0.5	0.7	0.6	0.5	<1
S-5.1B	0.4	0.3	0.3	0.8	0.5	0.3	<1
S-5.2	0.5	0.1	0.1	0.7	0.8	0.3	<1
S-9.1A	0.5	0.4	0.3	0.4	0.3	0.3	<1
S-9.1B	0.3	0.3	0.1	0.3	0.2	0.3	<1
S-11.1	0.6	0.2	0.5	0.8	0.7	0.8	<1
S-11.2	0.6	0.6	0.6	0.8	0.8	0.8	<1
Borrow Pit							Total
Discharged (gallons)	24,460,100	7,015,000	7,190,600	4,420,500	1,021,100	7,905,200	52,012,500
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

Table 14
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		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
Sampling Date		11/2/11	12/14/11	12/14/11	11/2/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
Field Parameters	*Unit*									
pH	std. units	6.58	7.24	dry	7.05	7.8	7.25	6.79	7.00	7.04
Specific Conductance	µmhos/cm	3990	7910	-	6460	30800	13500	3490	10200	8,140
Temperature	°C	22.3	18.5	-	29.9	20.2	20.5	17.5	25.4	27.3
Monitoring Parameters										
Ammonia as N	mg/l	13	22	-	50	3700	810	99	760	310
Bicarbonate Alkalinity	mg/l	1,200	1,700	-	1,200	13,000	5,400	1,400	2,300	1,900
Carbonate Alkalinity	mg/l	<8.2	<8.2	-	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2
Chloride	mg/l	820	3,100	-	1,500	6,400	2,200	470	1300	1,500
Nitrate/Nitrite as N	mg/l	0.057 t	0.034 t	-	0.013 t	0.27 t	0.044 t	0.050 t	0.16	36
Sulfate as SO_4	mg/l	9.6	17 t	-	21	11 t	4.7 t	1.4 t	130	240
Total Alkalinity	mg/l	1,200	NA	-	1,200	13,000	5,400	1,400	2,300	1,900
Total Kjeldahl Nitrogen	mg/l	15	27	-	53	4100	860	150	940	310
Total Dissolved Solids	mg/l	2,700	7,700	-	3,900	18,000	8,200	2,600	5,700	4,400
Metals, dissolved	*Unit*									
Arsenic, dissolved	mg/l	NS	NS	-	NS	NS	NS	NS	NS	NS
Calcium, dissolved	mg/l	160	210	-	140	43	93	150	15	200
Chromium, dissolved	mg/l	NS	NS	-	NS	NS	NS	NS	NS	NS
Lead, dissolved	mg/l	NS	NS	-	NS	NS	<0.010	NS	NS	NS
Magnesium, dissolved	mg/l	220	450	-	280	280	420	170	53	290
Potassium, dissolved	mg/l	13	22	-	70	740	520	31	51	29
Sodium, dissolved	mg/l	490	1,400	-	760	3,500	1,400	300	750	660

No samples collected from leachate well LW-2, S-2.2A; insufficient liquid for sampling.
t - trace, estimated value between the method detection limit and the reporting limit.
µmhos/cm - micromhos per centimeter at 25^0C
mg/l - milligrams per liter (parts per million)
NA - not analyzed due to sampling error
- = insuffcient water for all requested analyses

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation Sampling Date		S-1 11/2/11	S-2.1 12/14/11	S-2.2A 12/14/11	S-2.2B 11/2/11	S-3.1 11/3/11	S-3.2 11/3/11	S-3.3 11/3/11	S-4.1 11/3/11	S-5.1A 11/3/11
VOCs by EPA Method 8260, Low Level, Appendix II				dry						
1,1-Dichloroethane	µg/l	0.48 t	<0.11	-	0.23 t	1.2	0.58 t	0.86 t	0.55 t	0.41 t
1,2,4-Trimethylbenzene	µg/l	<0.12	0.17 t	-	0.15 t	1.5	0.58 t	1.2	7.6	0.58 t
1,2-Dichlorobenzene	µg/l	0.39 t	0.13 t	-	<0.072	<0.072	<0.072	<0.072	<0.072	<0.072
1,2-Dichloroethane	µg/l	0.36 t	<0.17	-	<0.17	17	18	2.2	5.3	<0.17
1,2-Dichloropropane	µg/l	<0.13	<0.13	-	<0.13	0.86 t	0.46 t	0.94 t	1	0.15 t
1,3,5-Trimethylbenzene	µg/l	<0.12	<0.12	-	<0.12	0.48 t	0.24 t	0.38 t	2.6	0.31 t
1,4-Dichlorobenzene	µg/l	3.3	2	-	0.61 t	0.57 t	0.24 t	0.42 t	5.9	0.92 t
1,4-Dioxane	µg/l	<42	92 t	-	<42	84 t	<42	<42	500	<42
2-Butanone (MEK)	µg/l	<2.5	<2.5	-	69	63	12	43	8400	<2.5
2-Hexanone	µg/l	<3.4	<3.4	-	<3.4	5.6 t	<3.4	<3.4	87	<3.4
4-methyl-2-pentanone	µg/l	<2.1	<2.1	-	<2.1	24	40	27	570	<2.1
Acetone	µg/l	4.8 t	6.6 t	-	390	92	23	50	11000	11
Benzene	µg/l	1.4	<0.083	-	0.27 t	7.9	5.6	8.4	14	2.4
Carbon disulfide	µg/l	<0.38	<0.38	-	0.4 t	0.95 t	1.4	1.7	<0.38	<0.38
Chlorobenzene	µg/l	1.8	0.39 t	-	<0.093	0.10 t	<0.093	0.16 t	1.3	0.11 t
Chloroethane	µg/l	0.44 t	<0.14	-	<0.14	0.62 t	0.66 t	1.1	0.38 t	<0.14
Chloroform	µg/l	<0.12	<0.12	-	0.27 t	<0.12	<0.12	<0.12	<0.12	<0.12
cis-1,2-Dichloroethene	µg/l	<0.085	0.19 t	-	0.24 t	4.9	16	15	3.3	1.8
Dichlorodifluoromethane	µg/l	<0.099	0.12 t	-	<0.099	0.13 t	<0.099	<0.099	0.19 t	0.31 t
Di-isopropyl ether	µg/l	0.25 t	<0.23	-	<0.23	1.10	2.70	1.8	0.86	0.41 t
Ethyl t-butyl ether	µg/l	<0.18	<0.18	-	<0.18	0.37 t	0.6	0.58	<0.18	0.22 t
Ethanol	µg/l	<50	<50	-	<50	<50	<50	<50	95000	<50
Ethylbenzene	µg/l	<0.098	0.58 t	-	0.99 t	7.8	4.7	7.2	24	1.1
Methyl tert-butyl ether	µg/l	1	1.4	-	3.2	18	2.8	3	8.7	18
Naphthalene	µg/l	<0.36	1.6	-	<0.36	8.8	1.2	0.67 t	160	<0.36
n-Butylbenzene	µg/l	<0.11	0.13 t	-	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
n-Propylbenzene	µg/l	0.16 t	0.16 t	-	<0.11	0.34 t	0.15 t	0.32 t	1.1	0.13 t
Styrene	µg/l	<0.068	<0.068	-	<0.068	1.9	2.7	2.4	2.2	<0.068
tert-Amyl methyl ether	µg/l	<0.25	<0.25	-	<0.25	<0.25	<0.25	<0.25	<0.25	1.1
tert-Butyl alcohol	µg/l	95	540	-	99	1100	240	410	7700	520
Tetrachloroethene	µg/l	<0.13	<0.13	-	<0.13	0.54 t	<0.13	<0.13	0.56 t	0.19 t
Toluene	µg/l	0.25 t	0.27 t	-	1.8	63	50	55	61	1.7
Trichloroethene	µg/l	<0.085	<0.085	-	<0.085	1.4	1	0.24 t	0.69 t	0.59 t
trans-1,2-Dichloroethene	µg/l	<0.15	<0.15	-	<0.15	<0.15	<0.15	0.25 t	<0.15	<0.15
Vinyl chloride	µg/l	<0.12	0.34 t	-	<0.12	0.52 t	<0.12	<0.12	1.6	<0.12
Xylenes (total)	µg/l	0.58 t	1.2	-	2.4	22	12	22	72	5.2

All other compounds below method detection limit.

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

Bold values exceed the reporting limit.

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		S-5.1B	S-5.2	S-9.1A	S-9.1B	S-11.1	S-11.2	LW-1	LW-2	LW-3
Sampling Date		11/3/11	11/3/11	11/3/11	11/3/11	11/2/11	11/3/11	10/19/11	10/19/11	10/19/11
Field Parameters	*Unit*									
pH	std. units	7.4	7.36	7	7.03	6.63	6.89	7.36	dry	7.53
Specific Conductance	µmhos/cm	15000	13500	5500	6680	7390	7490	3310	-	16200
Temperature	°C	27.5	26.2	18.2	19.6	26.2	23.2	26.1	-	25.1
Monitoring Parameters										
Ammonia as N	mg/l	1200	1500	230	140	11	97	430	-	720
Bicarbonate Alkalinity	mg/l	4,900	4,900	1,200	2,700	870	1,800	2,400	-	4,100
Carbonate Alkalinity	mg/l	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	-	<8.2
Chloride	mg/l	2,600	1,600	810	1,300	3,000	2,200	190	-	6,100
Nitrate/Nitrite as N	mg/l	0.020 t	0.14	33	0.063 t	170	0.045 t	0.12	-	0.045 t
Sulfate as SO_4	mg/l	7.2 t	5.1 t	1,100	780	230	220	0.92 t	-	24 t
Total Alkalinity	mg/l	4,900	4,900	1,200	2,700	870	1,800	NA	-	NA
Total Kjeldahl Nitrogen	mg/l	1200	1700	230	180	22	97	420	-	660
Total Dissolved Solids	mg/l	6,200	5,000	4,300	5,900	7,200	6,200	1,400	-	14,000
Metals, dissolved	*Unit*									
Arsenic, dissolved	mg/l	NS	NS	0.026 t	0.034 t	NS	NS	NS	-	NS
Calcium, dissolved	mg/l	200	30	350	530	290	280	74	-	55
Chromium, dissolved	mg/l	NS	NS	0.0054 t	0.012 t	NS	NS	NS	-	NS
Lead, dissolved	mg/l	NS	NS	0.012 t	0.018 t	NS	NS	NS	-	NS
Magnesium, dissolved	mg/l	310	80	260	480	290	300	110	-	230
Potassium, dissolved	mg/l	91	100	67	76	100	48	15	-	610
Sodium, dissolved	mg/l	1200	720	430	760	1,800	1,100	270	-	3,300

No samples collected from leachate well LW-2, S-2.2A; insufficient liquid for sampling.
t - trace, estimated value between the method detection limit and the reporting limit.
µmhos/cm - micromhos per centimeter at 25^0C
mg/l - milligrams per liter (parts per million)
NA - not analyzed due to sampling error
- = insuffcient water for all requested analyses

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

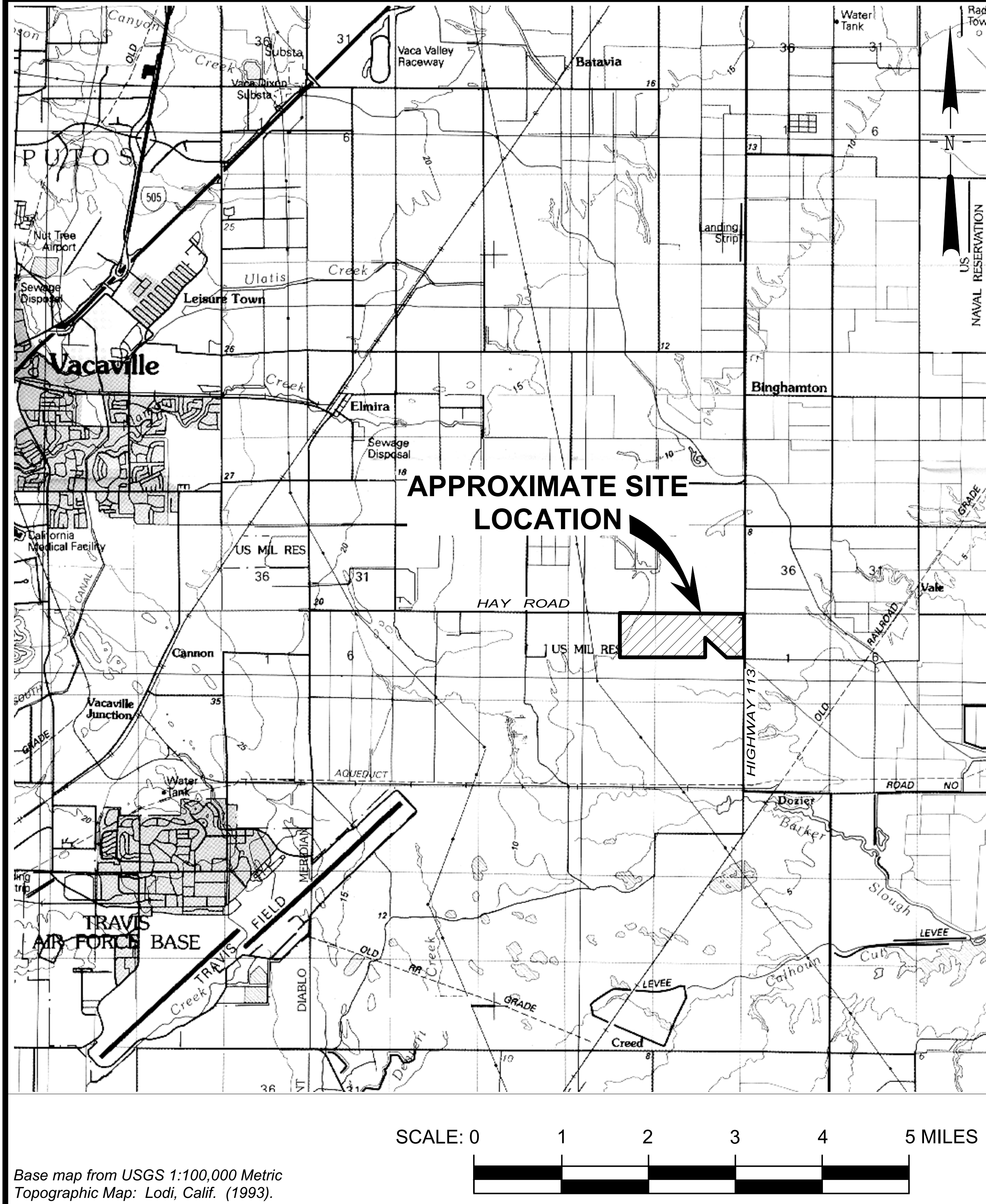
Sample Designation		S-5.1B	S-5.2	S-9.1A	S-9.1B	S-11.1	S-11.2	LW-1	LW-2	LW-3
Sampling Date		11/3/11	11/3/11	11/3/11	11/3/11	11/2/11	11/3/11	10/19/11	10/19/11	10/19/11
VOCs by EPA Method 8260, Low L									dry	
1,1-Dichloroethane	µg/l	0.30 t	0.15 t	<0.11	<0.11	0.41 t	2.1	<0.11	-	0.19 t
1,2,4-Trimethylbenzene	µg/l	<0.12	3.5	<0.12	<0.12	<0.12	<0.12	0.71 t	-	4.9
1,2-Dichlorobenzene	µg/l	<0.072	0.22 t	<0.072	<0.072	<0.072	<0.072	1.2	-	0.52 t
1,2-Dichloroethane	µg/l	0.43 t	1.4	<0.17	<0.17	<0.17	<0.17	<0.17	-	0.40 t
1,2-Dichloropropane	µg/l	0.18 t	0.37 t	<0.13	<0.13	<0.13	<0.13	<0.13	-	0.19 t
1,3,5-Trimethylbenzene	µg/l	0.35 t	1.1	<0.12	<0.12	<0.12	<0.12	0.15 t	-	1.2
1,4-Dichlorobenzene	µg/l	0.67 t	3.2	<0.062	<0.062	2.3	1.2	3.3	-	11
1,4-Dioxane	µg/l	<42	200	<42	<42	<42	73 t	<42	-	69 t
2-Butanone (MEK)	µg/l	2.8 t	9100	<2.5	<2.5	<2.5	860	17	-	2.6 t
2-Hexanone	µg/l	<3.4	65	<3.4	<3.4	<3.4	5.3 t	<3.4	-	<3.4
4-methyl-2-pentanone	µg/l	<2.1	330	<2.1	<2.1	<2.1	48	2.6 t	-	<2.1
Acetone	µg/l	20	9300	15	16	5.1 t	750	30	-	17
Benzene	µg/l	1.4	5.6	0.10 t	0.21 t	1.7	1.3	3.4	-	4.2
Carbon disulfide	µg/l	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	-	<0.38
Chlorobenzene	µg/l	<0.093	0.23 t	<0.093	<0.093	0.19 t	0.41 t	25	-	0.56 t
Chloroethane	µg/l	<0.14	<0.14	<0.14	<0.14	0.32 t	0.86 t	0.15 t	-	<0.14
Chloroform	µg/l	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	-	<0.12
cis-1,2-Dichloroethene	µg/l	<0.085	1.2	<0.085	<0.085	0.55 t	0.53 t	0.95 t	-	0.52 t
Dichlorodifluoromethane	µg/l	<0.099	<0.099	<0.099	<0.099	0.57 t	<0.099	<0.099	-	<0.099
Di-isopropyl ether	µg/l	0.31 t	0.77	<0.23	<0.23	0.43 t	1.50	0.96	-	0.98
Ethyl t-butyl ether	µg/l	0.42 t	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	-	<0.18
Ethanol	µg/l	<50	2300	<50	<50	<50	2400	<50	-	<50
Ethylbenzene	µg/l	1.3	11	<0.098	<0.098	<0.098	0.36 t	4.1	-	18
Methyl tert-butyl ether	µg/l	28	1.7	<0.11	<0.11	17	46	0.86 t	-	1.5
Naphthalene	µg/l	0.81 t	55	<0.36	<0.36	<0.36	20	1.1	-	20
n-Butylbenzene	µg/l	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	-	0.14 t
n-Propylbenzene	µg/l	<0.11	0.45 t	<0.11	<0.11	<0.11	<0.11	0.34 t	-	0.60 t
Styrene	µg/l	0.14 t	1.2	<0.068	<0.068	<0.068	<0.068	<0.068	-	0.80 t
tert-Amyl methyl ether	µg/l	2	<0.25	<0.25	<0.25	0.94	2.9	<0.25	-	<0.25
tert-Butyl alcohol	µg/l	590	6100	12	19	69	890	460	-	290
Tetrachloroethene	µg/l	<0.13	<0.13	<0.13	<0.13	0.14 t	<0.13	<0.13	-	<0.13
Toluene	µg/l	0.65 t	20	<0.093	0.10 t	0.10 t	0.75 t	3.2	-	5.3
Trichloroethene	µg/l	<0.085	0.19 t	<0.085	<0.085	0.14 t	<0.085	<0.085	-	0.090 t
trans-1,2-Dichloroethene	µg/l	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	-	0.15 t
Vinyl chloride	µg/l	0.72 t	<0.12	<0.12	<0.12	<0.12	<0.12	3.2	-	2
Xylenes (total)	µg/l	4.2	27	<0.36	<0.36	<0.36	0.90 t	6.5	-	22

All other compounds below method detection li

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

Bold values exceed the reporting limit.

FIGURES



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

Golder Associates

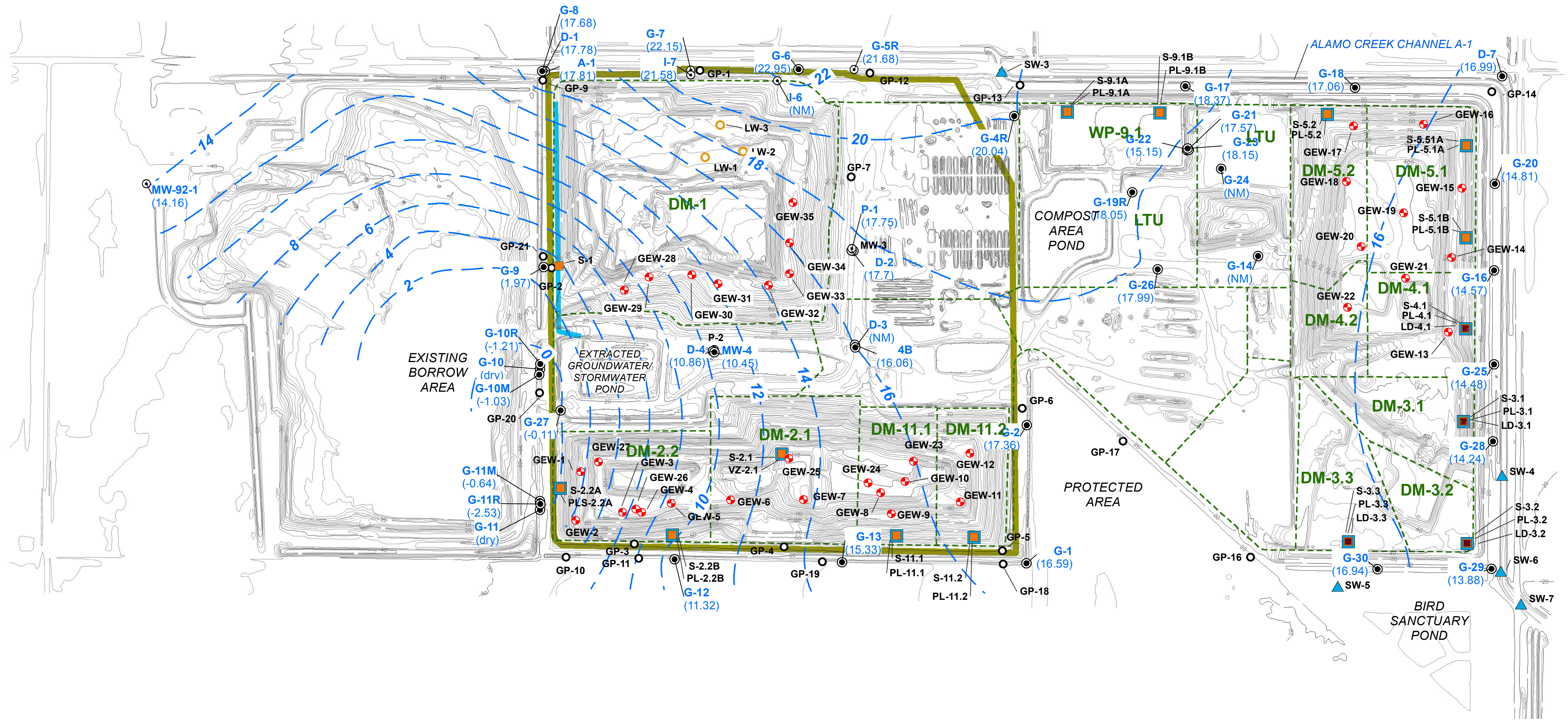
MONITORING AND REPORTING PROGRAM
HAY ROAD LANDFILL
SOLANO COUNTY, CALIFORNIA

SITE LOCATION

FIGURE
1

PROJECT NO.
053-7444

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



LEGEND

- Groundwater monitoring well
- Piezometer
- Surface water sampling location
- Leachate sump
- Lysimeter
- Leak detection sump
- Leachate well
- Landfill gas extraction well
- Landfill gas probe
- (6.09) Groundwater elevation, ft MSL (measured 9/6/2011)
- 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.
- Groundwater elevation contour (ft, MSL)
- Groundwater extraction trench
- Perimeter slurry wall
- Existing Disposal Module Limit/Phase (DM-)

(Locations of Wells MW-5 and D-5 are approximately 1,500 feet southwest of MW-7.)

REFERENCES

Site topography (April 26, 2011)

N

0 250 500
Feet

Golder Associates
Sunnyvale, CA

SCALE	AS SHOWN
DATE	1/27/2011
DESIGN	MM
GIS	MM
CHECK	KJ
REVIEW	KJ

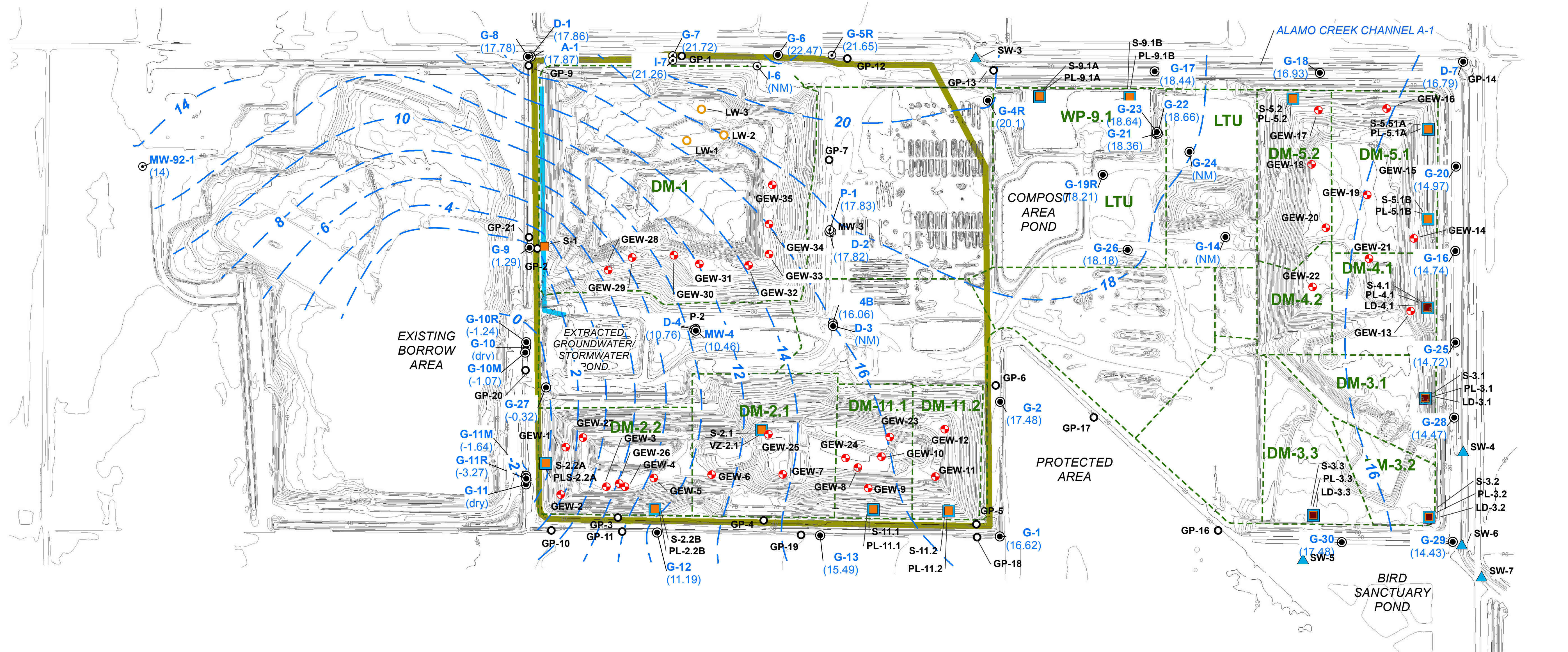
FILE No.
PROJECT No. 053-7444-11 REV. 0

RECOLOGY HAY ROAD
SOLANO COUNTY, CALIFORNIA

GROUNDWATER ELEVATION CONTOURS
SEPTEMBER 2011

FIGURE 2

Path: G:\GIS\Sites\Recology_Hay_Road\mxd\HayRd_gwe_2011Q3.mxd



MW-8 (15.82)
D-6 (15.62)
MW-7 (15.79)

LEGEND

- Groundwater monitoring well
- Piezometer
- Surface water sampling location
- Leachate sump
- Lysimeter
- Leak detection sump
- Leachate well
- Landfill gas extraction well
- Landfill gas probe
- (6.09) Groundwater elevation, ft MSL (measured 10/17/2011)
- 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.
- Groundwater elevation contour (ft, MSL)
- Groundwater extraction trench
- Perimeter slurry wall
- Existing Disposal Module Limit/Phase (DM-)

(Locations of Wells MW-5 and D-5 are approximately 1,500 feet southwest of MW-7.)

Path: G:\GIS\Sites\Recology_Hay_Road\mxd\HayRd_gwe_2011Q4.mxd

REFERENCES

Site topography (April 26, 2011)

N

0 250 500
Feet

Golder Associates
Sunnyvale, CA

FILE No.		SCALE	AS SHOWN
PROJECT No. 053-7444-11	REV. 0	DATE	1/27/2011
		DESIGN	MM
		GIS	MM
		CHECK	KJ
		REVIEW	KJ

RECOLOGY HAY ROAD
SOLANO COUNTY, CALIFORNIA

GROUNDWATER ELEVATION CONTOURS
OCTOBER 2011

FIGURE 3

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): 9/6/11
Name: Steve Curcamin
Weather: Sunny + hot
Sounder #: 26106

Well	Date	Time	DTW (TOC)	Total Depth	Meas. By	Comments
A-1	9/6/11	1038	16.10	45.6	SG	
G-1		1355	8.04	40.4		
G-2		1445	5.21	26.4		
G-4R		1234	7.49	27.6		
G-6		1127	3.10	37.7		
G-5R		1015	4.80	25.6		
G-7		1027	7.42	21.0		
G-8		1036	14.10	24.4		
G-9		1108	30.04	37.4		
G-10		1503	DM	26.7		
G-10R		1501	34.70	72.9		
G-10M		1459	35.85	36.9		
G-11		1452	DM	26.7		
G-11R		1450	34.68	75.6		
G-11M		1447	32.78	37.4		
G-12		1440	19.45	29.6		
G-13		1416	12.18	29.6		
G-14						well decomissioned July 2011
G-16		1222	7.66	32.8		
G-17		1206	7.58	27.3		
G-18		1212	8.59	22.3		
G-19R		1256	7.52	25.5		
G-20		1220	8.91	42.6		
G-21		1259	7.90	21.9		
G-22		1303	(11.90)	NM		extraction pump in well running
G-23		1301	8.65			
G-24						well decomissioned July 2011
G-25		1225	7.99	21.9		
G-26		1307	7.68	27.6		
G-27		1454	26.71	30.5		
G-28		1228	8.80	33.0		
G-29		1316	7.58	22.1		
G-30		1312	6.64	21.2		
~~I-6~~						
I-7		1025	7.88	29.4		
MW-4		1509	10.70	29.9		
MW-5		1138	6.82	41.9		
MW-6		1140	7.19	41.6		
MW-7		1149	5.10	40.7		
MW-8		1151	4.75	40.8		
MW92-1		1122	24.88	54.9		
D-1		1040	14.96	66.2		
D-2		1244	8.08	69.2		
D-3						Well damaged July 2011
D-4		1511	9.25	67.2		
D-5		1142	6.94	66.9		
D-6		1147	6.88	66.8		
D-7		1130	9.05	67.5		
4B		1248	9.59	12.2		
P-1		1242	7.28	22.5		
P-2		1513	DM	9.2		
LW-1		NM	NM	NM		Wells under vacuum - LFG Extraction wells.
LW-2						
LW-3						

WATER LEVEL DATA SHEET
Golder Associates

Project: Recology Hay Road						
Project No.:053-7444-11						
Date(s): 10/17/11						
Name: Steve Giacomini						
Weather: Sunny, warm				Sounder #: 26225		

	Well	Date	Time	DTW (TOC)	Total Depth	Meas. By	Comments
	A-1	10/17/11	1411	16.04	45.6	SG	
	G-1		1355	8.01	40.4		
	G-2		1328	5.09	26.4		
	G-4R		1143	7.43	27.2		
	G-6		1138	3.58	37.7		
	G-5R		1127	4.83	25.6		
	G-7		1128	7.85	21.0		
	G-8		1409	14.00	24.2		
	G-9		1406	30.72	37.4		
	G-10		1421	DRY	28.7		
	G-10R		1417	34.73	72.9		
	G-10M		1419	35.84	36.9		
	G-11		1352	DRY	26.7		
	G-11R		1357	35.42	75.6		
	G-11M		1354	33.78	37.4		
	G-12		1346	19.58	29.4		
	G-13		1340	12.02	29.6		
	G-16		1224	7.49	32.8		
	G-17		1214	7.51	27.3		
	G-18		1217	8.72	22.3		
	G-19R		1257	7.36	25.5		
	G-20		1221	8.75	42.6		
	G-21		1302	7.11	21.9		
	G-22		1304	8.39	NM		
	G-23		1300	8.16	47.05		
	G-25		1227	7.75	21.9		
	G-26		1323	7.49	27.6		
	G-27		1425	26.92	30.5		
	G-28		1230	8.57	33.0		
	G-29		1317	7.03	22.1		
	G-30		1312	6.10	21.2		
	I-7		1126	8.20	29.4		
	MW-4		1423	10.69	29.9		
	MW-5		1152	7.24	41.9		
	MW-6		1154	7.59	41.6		
	MW-7		1204	4.41	40.7		
	MW-8		1202	4.11	40.8		
	MW92-1		1135	25.04	54.9		
	D-1		1413	14.88	66.2		
	D-2		1250	7.96	69.2		
	D-3		NM				well damaged / destroyed
	D-4		1430	9.35	67.2		
	D-5		1156	7.35	66.9		
	D-6		1200	5.59	66.8		
	D-7		1147	9.25	67.5		
	4B		1254	9.59	12.2		
	P-1		1248	7.20	22.5		
	P-2		1433	DRY	9.2		
10/19/11	LW-1	10/19/11	1310	69.30	70.6		
	LW-2		1250	DRY	67.4		
	LW-3		1355	47.27	49.0		

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

SAMPLE ID: G-1

PROJECT NO: 053-7444-11

SAMPLED BY: R. McCarthy

CLIENT: Recology

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

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

Well Total Depth (ft): 40.4

Screen Length (ft): ____

Depth to Water (ft): 8.01

Total Volume Purged (ml): 3,750

PURGE / SAMPLE:

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

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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	START PURGE								
1055	250	8.02	19.3	7.79	1465	0.48	1	-124.0	clear
1058	250	8.02	19.1	7.75	1451	0.43	1	-122.0	" "
1101	250	8.02	19.1	7.74	1449	0.41	1	-122.6	" "
1105	SAMPLE TAKEN								
	VOA'S SAMPLED W/ BAILER								

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

REMARKS:

SIGNATURE: [signature]

DATE: 10/21/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ~~X~~ 4 X 4.5 ___ 6 ___ 8 ___ Other ___

SAMPLE ID: G-2
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 26.4
Depth to Water (ft): 5.09
Screen Length (ft): ___
Total Volume Purged (ml): 3,500

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1000	START PURGE								
1011	250	5.10	19.6	7.71	3594	0.24	1	-194.0	clear
1014	250	5.10	19.6	7.66	3585	0.19	1	-190.8	" "
1017	250	5.10	19.6	7.65	3581	0.19	1	-189.7	" "
1020	SAMPLE TAKEN								
	VOA'S	SAMPLED	w/ BAILER.						

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___
REMARKS: CAL pH. 4.0, 7.0
EC 2060 µS

SIGNATURE: [signature]
DATE: 10/21/11

C:\Users\sgiacomini\Documents\projects\Hay Road Lf\lowflow-2007.doc

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-4R
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 27.7
Screen Length (ft):
Depth to Water (ft): 7.88
Total Volume Purged (ml): 5,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1450	START PURGING								
1456	250	7.89	23.50	7.53	3862	0.53	3	-113.7	CLEAR
1459	280	7.89	23.0	7.45	3860	0.18	2	-110.7	" "
1502	250	7.89	22.7	7.40	3838	0.16	2	-110.7	" "
1505	250	7.89	22.8	7.39	3835	0.15	2	-110.6	" "
1510	SAMPLE TAKEN								
	VOA'S SAMPLED w/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___
REMARKS:

SIGNATURE: [signature]
DATE: 10/21/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

PROJECT NO: 053-7444-11

CLIENT: Recology

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

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

SAMPLE ID: G-6

SAMPLED BY: R. McCarthy

REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 37.7

Depth to Water (ft): 3.54

Screen Length (ft): ____

Total Volume Purged (ml): 4,000

PURGE / SAMPLE:

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

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1554	START	PURGE							
1559	280	3.55	22.4	7.49	1670	1.51	2	-75.2	CLEAR
1602	280	3.55	22.2	7.44	1667	1.49	2	-75.3	" "
1605	280	3.55	22.1	7.43	1665	1.47	2	-75.1	" "
1610	SAMPLE	TAKEN							
	VOA'S SAMPLED W/ BAILER								

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

REMARKS:

SIGNATURE: [signature]

DATE: 10/21/11

C:\Users\sgiacomini\Documents\projects\Hay Road LF\lowflow-2007.doc

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-8
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCartny
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 X 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 24.4
Screen Length (ft):
Depth to Water (ft): 14.14
Total Volume Purged (ml): 3,750

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE-GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1325	START	PURGE							
1330	250	14.15	19.4	7.29	1936	0.18	2	-126.9	
1333	250	14.15	19.4	7.19	1915	0.16	2	-128.5	
1336	250	14.15	19.3	7.16	1908	0.13	2	-126.9	
1340	SAMPLE	TAKEN							
	VOA'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]
DATE: 10/19/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: G-9
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ✓ Surface Water ___ Leachate ___ Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 X 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): 5.5
Depth to Water (ft): 30.81	Calculated Purge (volumes / gal.): 16.5
Height of Water Column (ft): 6.59	Actual Pre-Sampling Purge (gal): 16.5

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated ___ Other ___
Purge Water Containment: Done - Ground
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1259	5.5	22.2	1716	7.40	clear	low		
1309	11.0	21.5	1716	7.08	clear	low		
1319	16.5	21.2	1704	7.02	clear	low		

Purge Date: 10/20/11

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1325	21.1	1707	7.02	0.44	clear	1	-139.8

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS:

SIGNATURE: [signature]

DATE: 10/20/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-10R
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarthy
CLIENT: Norcal
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ___ Leachate ___ Treatment System ___ 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): 6.5
Depth to Water (ft): 34.73
Calculated Purge (volumes / gal.): 19.5
Height of Water Column (ft): 38.17
Actual Pre-Sampling Purge (gal): ___

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated ___ Other ___
Purge Water Containment: NONE - GROUND
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1347	6.5	19.2	991	7.41	clear	low		
1384	13.0	18.8	1000	7.58				
1400		18.9	1020	7.53				

Purge Date: 10/20/11

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated TUBING Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1405	18.9	1021	7.48	0.28	clear	1	-124.5

Sheen: None Odor: NONE Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit - YSI X LaMotte ___

REMARKS: ___

SIGNATURE: [signature]
DATE: 10/20/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: G-11M
SAMPLED BY: R. McCarty
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Treatment System ____ 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
Depth to Water (ft): 33.62
Height of Water Column (ft): 3.78
Volume in Casing (gal): 0.7
Calculated Purge (volumes / gal.): 2.1
Actual Pre-Sampling Purge (gal): 1.0

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated ____ Other ____
Purge Water Containment: None - Ground
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-____ FB-____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1105	0.6	20.4	1131	6.54	brown	high		
well	dry							

Purge Date: 10/20/11

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1200	20.2	1125	6.71	0.64	cloudy	92	-56.1

Sheen: None Odor: ____ Sample Date: 10/20/11

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Cal pH. 4.0, 7.0 EC 2060 µS
Well dewatered at 1.0 gallons. Allowed well to recharge to 33.94 @ 1200

SIGNATURE: [signature] **DATE:** 10/20/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: G-11R
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ___ Leachate ___ Treatment System ___ 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
Depth to Water (ft): 35.52
Height of Water Column (ft): 40.08
Volume in Casing (gal): 6.8
Calculated Purge (volumes / gal.): 20.4
Actual Pre-Sampling Purge (gal): 21.0

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated tubing Other ___
Purge Water Containment: None - Ground
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	~~Other~~	Observation
1125	7.0	19.8	964	7.38	clear	low		
1129	14.0	19.8	960	7.35	" "	?		
1134	21.0	19.9	951	7.34	" "	↓		

Purge Date: 10/20/11

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated tubing Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1140	19.9	950	7.34	0.64	clear	1	-113.9

Sheen: None Odor: None Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS:

SIGNATURE: [signature] **DATE:** 10/20/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-12
SAMPLED BY: R. McCARTHY
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 X 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 29.6
Screen Length (ft): ___
Depth to Water (ft): 19.55
Total Volume Purged (ml): 4,500

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1202	START PURGE								
1209	250	19.57	20.1	7.90	1077	0.50	1	-121.8	CLEAR
1212	250	19.56	19.6	7.88	1066	0.58	1	-120.6	" "
1215	250	19.56	19.7	7.86	1068	0.51	1	-121.3	" "
1220	SAMPLE TAKEN								
	VOA'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]

DATE: 10/21/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-13
SAMPLED BY: R. McCARTHY
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 X 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 29.6
Screen Length (ft):
Depth to Water (ft): 12.00
Total Volume Purged (ml): 5,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1130	START PURGE								
1137	250	12.01	21.1	7.68	1150	0.59	1	-120.9	Clear
1140	250	12.01	21.0	7.63	1135	0.55	1	-118.6	" "
1143	250	12.01	21.0	7.62	1132	0.56	1	-119.2	" "
1150	SAMPLE TAKEN								
	VOA'S SAMPLED w/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___
REMARKS:

SIGNATURE: [signature] **DATE:** 10/21/14

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-16
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarony
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

Well Total Depth (ft): 32.8
Screen Length (ft): ____
Depth to Water (ft): 7.40
Total Volume Purged (ml): 4,500

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____
Purge Water Containment: NONE – GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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	START	PURGE							
1312	250	7.47	22.3	7.41	3765	0.40	3	-108.8	clear
1315	250	7.49	21.3	7.32	3681	0.15	2	-121.6	" "
1318	250	7.48	21.3	7.33	3664	0.11	2	-126.4	" "
1321	250	7.48	21.3	7.33	3664	0.10	2	-126.2	" "
1325	SAMPLE TAKEN								
	VOA'S	SAMPLED w/ BAILER							

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

REMARKS:

SIGNATURE: [signature]
DATE: 10/18/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

SAMPLE ID: G-17
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 27.3
Depth to Water (ft): 7.64
Screen Length (ft): ___
Total Volume Purged (ml): 5,500

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types Dedicated ___ Other ___
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
0933	Start Purge								
0940	250	7.72	17.9	7.32	2642	0.30	2	-121.9	Clear
0943	250	7.75	17.9	7.31	2656	0.20	2	-127.3	" "
0946	250	7.74	17.8	7.30	2657	0.17	2	-130.5	" "
0949	250	7.71	17.8	7.29	2662	0.16	2	-133.6	" "
0955	Sample	Taken							
	VOA's	Sampled	w/ Bailer						

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___
REMARKS: CAL. pH 4.0, 7.0
EC 2060 µs

SIGNATURE: [signature] **DATE:** 10/19/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-18
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCleary
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater x Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 x 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 22.3
Screen Length (ft):
Depth to Water (ft): 8.72
Total Volume Purged (ml): 6,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump x Tubing Types Dedicated Other ___
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1501	Start Purge								
1510	250	8.82	23.2	7.27	2867	0.56	3	-120.2	clear
1513	250	8.82	20.8	7.27	2886	0.21	2	-137.0	" "
1516	250	8.80	20.2	7.25	2839	0.19	2	-138.9	" "
1519	250	8.80	20.1	7.25	2837	0.18	2	-138.7	" "
1525	Sample taken								
	VOA's sampled w/ bailer								

Field Measurement Devices: Horiba ___ YSI x LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]
DATE: 10/18/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-19R
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarthy
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 25.5
Screen Length (ft): ___
Depth to Water (ft): 7.78
Total Volume Purged (ml): 5,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1250	START	PURGING							
1255	250	7.80	19.8	7.53	3803	0.28	1	-136.8	CLEAR
1258	250	7.80	19.9	7.49	3799	0.16	1	-132.9	" "
1301	250	7.80	20.0	7.47	3773	0.11	1	-126.2	" "
1304	250	7.80	20.0	7.47	3768	0.08	1	-124.8	" "
1310	SAMPLE	TAKEN							
	VOA'S	SAMPLED	W/ BAILER						

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature] **DATE:** 10/21/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-20
PROJECT NO: 053-7444-11
SAMPLED BY: R. MCCARTHY
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 47.6
Screen Length (ft): ___
Depth to Water (ft): 8.68
Total Volume Purged (ml): 5,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump x Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1400	START	PURGE							
1406	250	8.74	23.7	7.61	1767	0.49	2	-115.2	clear
1409	250	8.72	22.9	7.46	1677	0.15	2	-124.3	" "
1412	250	8.72	22.6	7.45	1664	0.14	2	-128.1	" "
1415	250	8.72	22.7	7.45	1665	0.13	2	-129.9	" "
1420	SAMPLE	TAKEN							
	VOA'S	SAMPLED	w/ BAILER						

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___
REMARKS:

SIGNATURE: [signature]
DATE: 10/18/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: ~~G-23~~ G-21
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarthy
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 21.9
Screen Length (ft): ___
Depth to Water (ft): 8.03
Total Volume Purged (ml): 4,500

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1347	START	PURGE							
1353	250	8.05	20.0	7.47	2458	0.46	1	-119.4	CLEAR
1356	250	8.05	19.9	7.34	2455	0.89	1	-121.0	" "
1359	250	8.04	19.9	7.31	2455	0.84	1	-120.4	" "
1402	250	8.04	19.9	7.30	2455	0.83	1	-120.3	" "
1405	SAMPLE	TAKEN							
	VOA'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]
DATE: 10/21/11

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Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-22
SAMPLED BY: R McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ✓ Surface Water ___ Leachate ___ Treatment System ___ 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):	Volume in Casing (gal):
Depth to Water (ft): 11.25	Calculated Purge (volumes / gal.):
Height of Water Column (ft): —	Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment:
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other QCEB-1 @ 1410
CONTAINER # 462008, NO BATCH #

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (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): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer X
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1415	22.0	2645	7.58	0.56	Clear	2	-97.6

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS:

SIGNATURE: [signature] DATE: 10/21/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-23
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCARTY
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater ✓ Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ✓ 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 47.5
Screen Length (ft):
Depth to Water (ft): 8.78
Total Volume Purged (ml): 4,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump ✓ Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ~~QC~~ Time: ___

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
1329	START	PURGING							
1334	250	8.80	20.4	7.40	2327	0.18	2	-120.7	CLEAR
1337	250	8.80	20.5	7.36	2326	0.17	2	-120.9	" "
1340	250	8.80	20.4	7.37	2328	0.16	2	-121.0	" "
1345	SAMPLE	TAKEN							

Field Measurement Devices: Horiba ___ YSI ✓ LaMotte ___ Other ___

REMARKS:

SIGNATURE:
DATE: 10/21/14

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-25
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

Well Total Depth (ft): 21.9
Screen Length (ft):
Depth to Water (ft): 7.65
Total Volume Purged (ml): 5,250

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1224	START	PURGE							
1229	250	7.81	21.3	7.42	~~7.42~~ 2632	0.23	2	-111.5	clear
1232	250	7.82	21.1	7.38	2619	0.12	2	-122.8	" "
1235	250	7.80	20.9	7.40	2619	0.09	1	-123.8	" "
1238	250	7.80	20.8	7.41	2610	0.08	1	-124.0	" "
1245	SAMPLE	TAKEN							
	VOA'S	SAMPLED	w/ BAILER						

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

REMARKS:

SIGNATURE:

DATE: 10/18/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater ______ Leachate ______ Other ______
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other ______

SAMPLE ID: G-26
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 27.6
Depth to Water (ft): 7.54
Screen Length (ft): ______
Total Volume Purged (ml): 4,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ______ Bladder Pump ______
Dedicated ______ Peristaltic Pump x Tubing Types DEDICATED Other ______
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ______ Time: ______

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
1154	START PURGE								
1159	250	7.59	19.5	7.61	2280	0.18	3	-126.0	Clear
1202	250	7.60	19.4	7.56	2273	0.16	2	-130.0	" "
1205	250	7.60	19.3	7.50	2267	0.14	2	-132.0	" "
1210	SAMPLE TAKEN								
	VOA'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba ______ YSI X LaMotte ______ Other ______

REMARKS:

SIGNATURE: [signature] DATE: 10/19/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

SAMPLE ID: G-27
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 30.5
Screen Length (ft): ___
Depth to Water (ft): 26.93
Total Volume Purged (ml): 5,500

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1523	START PURGE								
1529	250	26.99	19.5	7.64	1560	0.59	4	-120.5	Clear
1532	250	27.00	19.7	7.48	1555	0.61	3	-121.1	" "
1535	250	26.98	19.8	7.46	1552	0.57	3	-121.7	" "
1538	250	26.98	19.8	7.45	1552	0.58	3	-122.0	" "
1545	SAMPLE TAKEN								
	VOA'S SAMPLED w/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]

DATE: 10/19/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-28
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarthy
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 33.0
Screen Length (ft): ____
Depth to Water (ft): 8.47
Total Volume Purged (ml): 5,100

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1148	START	PURGE							
1152	300ml	8.54	20.4	7.01	3313	0.26	1	-91.7	clear
1155	300	8.54	20.2	7.24	3274	0.17	1	-101.3	" "
1158	300	8.52	20.0	7.28	3242	0.14	1	-102.7	" "
1201	300	8.50	19.9	7.29	3238	0.14	1	-102.0	" "
1205	SAMPLE	TAKEN							
	VOA'S SAMPLED w/ BAILER.								

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

REMARKS:

CAL. pH. 4.0, 7.0
EC 2060 μS

SIGNATURE: [signature]
DATE: 10/18/11

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Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-29
PROJECT NO: 053-7444-11
SAMPLED BY: R MCCARTHY
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): 21.9
Screen Length (ft): ___
Depth to Water (ft): 7.14
Total Volume Purged (ml): 3,750

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1040	START	PURGE							
1046	250	7.24	19.3	7.92	2137	0.75	2	-112.5	clear
1049	250	7.32	19.3	7.92	2135	0.75	2	-112.9	" "
1052	250	7.30	19.3	7.90	2135	0.70	2	-113.3	" "
1055	SAMPLE	TAKEN							

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]
DATE: 10/19/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater ✓ Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 ✓ 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

SAMPLE ID: G-80
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 18.5
Screen Length (ft): ____
Depth to Water (ft): 6.02
Total Volume Purged (ml): 5,250

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated ____ Peristaltic Pump ✓ Tubing Types Dedicated Other ____
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1114	Start Purge								
1119	250	6.14	19.8	7.79	2078	0.83	2	-125.1	Clear
1122	250	6.12	19.6	7.67	2075	0.15	2	-128.0	" "
1125	250	6.12	19.6	7.64	2075	0.14	2	-127.9	" "
1128	250	6.12	19.6	7.63	2074	0.13	2		" "
1135	Sample taken								
	VOA's sampled w/ bailer								

Field Measurement Devices: Horiba ____ YSI ✓ LaMotte ____ Other ____

REMARKS: ____

SIGNATURE: [signature]

DATE: 10/19/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater x Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

SAMPLE ID: MW-4
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): 29.9
Screen Length (ft): ___
Depth to Water (ft): 10.63
Total Volume Purged (ml): 5,000

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump x Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1445	START PURGE								
1449	250	10.69	20.3	7.61	2460	0.58	2	-193.6	Clear
1452	250	10.71	20.2	7.40	2442	0.24	2	-158.1	" "
1455	250	10.70	20.1	7.32	2413	0.21	2	-154.9	" "
1458	250	10.70	20.0	7.30	2408	0.19	2	-153.6	" "
1505	SAMPLE TAKEN								
	VOA'S SAMPLED W/ BAILER								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature]

DATE: 10/19/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hav Road

SAMPLE ID: P-1

PROJECT NO: 053-7444-11

SAMPLED BY: R. McCARTHY

CLIENT: Recology

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Leachate ____ Other ____

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

Well Total Depth (ft): 22.5

Screen Length (ft): ____

Depth to Water (ft): 7.20

Total Volume Purged (ml): 5,000

PURGE / SAMPLE:

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

Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED Other ____

Purge Water Containment: NONE - GROUND

QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1520	START PURGE								
1526	250	7.20	21.5	7.48	2641	0.22	1	-92.6	CLEAR
1529	250	7.20	21.2	7.33	2628	0.13	1	-96.9	" "
1532	250	7.20	21.2	7.31	2624	0.10	1	-99.9	" "
1535	250	7.20	21.2	7.31	2622	0.09	1	-101.2	" "
1540	SAMPLE TAKEN								
	VOA'S SAMPLED w/ BAILER								

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

REMARKS:

SIGNATURE: [signature]

DATE: 10/21/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: 4B
SAMPLED BY: R. McCARTHY
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ____ Leachate ____ Treatment System ____ 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): 1.7
Depth to Water (ft): 9.59	Calculated Purge (volumes / gal.): 5.1
Height of Water Column (ft): 2.61	Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: NONE-GROUND
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

Time (2400 Hr)	Volume (gallons)	Temp (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	D.O ~~Other~~	ORP ~~Observation~~
1412	1.0	21.9	4927	7.32	Cloudy	low	0.62	-111.0
WELL	DRY							

Purge Date: 10/19/11

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1340	21.9	4521	7.77	1.51	clear	7	-77.5

Sheen: NONE Odor: NONE Sample Date: 10/20/11

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI X LaMotte ____

REMARKS:
ALLOWED TO RE CHARGE OVER NIGHT DTW; 9.58 @ 1340 10/20/11

SIGNATURE: RMcCarthy DATE: 10/20/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: COMPOST POND
SAMPLED BY: R McCARTHY
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water X Leachate ______ Treatment System ______ 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): ______
Depth to Water (ft): ______
Height of Water Column (ft): ______
Volume in Casing (gal): ______
Calculated Purge (volumes / gal): ______
Actual Pre-Sampling Purge (gal): ______

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1130	19.4	2462	7.60	2.94	yellowish	26	-74.1

Sheen: ______ Odor: ______ Sample Date: 10/24

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI X LaMotte ____

REMARKS: CAL. pH 4.0, 7.0

EC 2060 µs

SIGNATURE: [signature]

DATE: 10/24/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: SW-3
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water X ______ Leachate ______ Treatment System ______ 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): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ______

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

Purge Date: ______

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer X
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1330	21.5	2401	8.09	2.62	clear	6	-76.8

Sheen: — Odor: — Sample Date: 10/24/11

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS:

SIGNATURE: [signature] DATE: 10/24/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: SW-4
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water X Leachate ___ Treatment System ___ 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): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: —

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer X
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1230	22.8	269.1	7.79	3.23	clear	12	-68.8

Sheen: — Odor: — Sample Date: 10/24/11

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS:

SIGNATURE: [signature] DATE: 10/24/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: SW-5
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ____ Surface Water X Leachate ____ Treatment System ____ 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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

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

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer X
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1200	19.8	1084	* 8.80	2.98	Clear	5	-78.0

Sheen: — Odor: — Sample Date: 10/24/11

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI X LaMotte ____

REMARKS: * Double checked pH Reading

SIGNATURE: [signature] DATE: 10/24/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: SW-7
PROJECT NO: 053-7444-11
SAMPLED BY: R. MCCARTHY
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water X Leachate ______ Treatment System ______ 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): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump___ Peristaltic Pump___ Centrifugal Pump___ Bladder Pump___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer X
PVC Hand Pump___ Peristaltic Pump___ Centrifugal Pump___ Bladder Pump___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1300	22.7	2374	8.41	2.72	clear	7	-77.7

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X LaMotte ___

REMARKS: ______

SIGNATURE: [signature]

DATE: 10/24/11

Golder Associates

LYSIMETER SAMPLE FIELD DATA

LOCATION: Hay Road Landfill
PROJECT NO: 053-7444-11
CLIENT NAME ~~Norcal~~ Recology

SAMPLE ID: VZ-201
VACUUM BY: S. Giaccomini
SAMPLED BY:

Date	Time	Cup (A or B)	Soil Moisture	Vacuum Reading (Centibars)	Liquid Removed (Milliliters)	Vacuum Applied (Centibars)
12/12/11	1015	A	NM	—	—	70
12/12/11	1015	B	NM	—	—	0
12/14/11	1450	A	NM	0	0	NA
12/14/11	1450	B	NM	0	0	NA

SAMPLE FIELD PARAMETERS:

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

LYSIMETER INTEGRITY: Good A - B - P/V, 9 = 3 / B - green, P/V, B = 5 Lock No: 0901

REMARKS: Cup A does not Hold suction - No leaks noticed above ground.

Applied pressure to P/V tubing - evacuated only air through Sample tubing. Lysimeter Dry
No Samples

SIGNATURE: S—

M\Sampling\Forms\LYSDATA.XLS

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: PL-2-2A
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other 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):	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): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI___ LaMotte___

REMARKS: NO LIQUID DETECTED - PAN LYSIMETER DRY
- NO samples

SIGNATURE: SG

DATE: 11/7/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: PL-2.2B
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other 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): /
Depth to Water (ft):
Height of Water Column (ft): 0.00
Volume in Casing (gal): /
Calculated Purge (volumes / gal.): /
Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment:
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date:

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte

REMARKS: NO LIQUID DETECTED - PAN LYSIMETER DRY
NO SAMPLES

SIGNATURE: [signature]
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: PL-3.1
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ____ Surface Water ____ Leachate ____ Treatment System ____ Other 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): /
Depth to Water (ft): /
Height of Water Column (ft): 0.00
Volume in Casing (gal): /
Calculated Purge (volumes / gal.): /
Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment:
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

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

Purge Date:

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ____ Odor: ____ Sample Date: ____

Field Measurement Devices: Horiba Omega QuickCheck D.O. Test Kit YSI LaMotte

REMARKS: NO LIQUID DETECTED - STARTED pump / no flow
PAN LYSIMETER DRY - NO SAMPLES

SIGNATURE: [signature] DATE: 11/2/16

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology

SAMPLE ID: PL-3.2
SAMPLED BY: S Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other PAN LD

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): Dry	Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

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

Purge Date: ____

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
	~~202~~	~~20800~~					

Sheen: ____ Odor: ____ Sample Date: ____

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: NO Liquid Detected - NO Sample

SIGNATURE: [signature] **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: PL-3.3
SAMPLED BY: S Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other 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): ___
Depth to Water (ft): /
Height of Water Column (ft): 0.00
Volume in Casing (gal): /
Calculated Purge (volumes / gal.): /
Actual Pre-Sampling Purge (gal): ___

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI___ LaMotte___

REMARKS: No liquid detected: pan lysimeter dry
No samples

SIGNATURE: SG
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: PL-4.1
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other 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): ______ /
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): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI____ LaMotte____

REMARKS: NO LIQUID DETECTED. PAN LYSIMETER DRY
— NO SAMPLES —

SIGNATURE: [signature]
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology

SAMPLE ID: PL-5.1 A
SAMPLED BY: S. Giacomin
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other pan lys

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

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer____ Teflon Bailer____ PVC Bailer____ Disp. Bailer____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump____ Electric Submersible Pump____ Dedicated____ Other____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI____ LaMotte____

REMARKS: NO LIQUID DETECTED - STARTED PUMP - NO FLOW
PAN LYSIMETER DRY - NO SAMPLES

SIGNATURE: S[signature]

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: PL-5-1B
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other PAN LYSIME

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): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump X Dedicated X Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1230	26.0	2510	6.73	NM	Colorless	12	

Sheen: none Odor: ___ Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI___ LaMotte___

REMARKS: Collected grab sample

SIGNATURE: [signature] **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

PROJECT NO: 053-7444-11

CLIENT: Recology

SAMPLE ID: PL-5.2

SAMPLED BY: S. Giacomini

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ 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): ______

Depth to Water (ft): ______

Height of Water Column (ft): 0.00

Volume in Casing (gal): ______

Calculated Purge (volumes / gal.): ______

Actual Pre-Sampling Purge (gal): ______

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Purge Water Containment: ______

Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba _____ Omega _____ QuickCheck _____ D.O. Test Kit _____ YSI_____ LaMotte_____

REMARKS: NO LIQUID DETECTED

Pan Lysimeter Dry - No Samples

SIGNATURE: S

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: PL-9.1A
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other Pan Lysimeter

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): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump X Dedicated X Other Truck generator for Pu

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1400	20.3	~~[illegible]~~ 1430	7.78	NM	Colorless	0	

Sheen: none
Odor: None
Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected Grab Sample

SIGNATURE: SL
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: PL-9.1B
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ 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): ______
Depth to Water (ft): ______
Height of Water Column (ft): ______
Volume in Casing (gal): ______
Calculated Purge (volumes / gal.): ______
Actual Pre-Sampling Purge (gal): ______

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Purge Water Containment: ______

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: STARTED pump - pump running Dry - No Flow
PAN lysimeter Dry - No Samples

SIGNATURE: S

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: PL-11.1
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ 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): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: STARTED pump. can hear pump running / cavitating insufficient liquid to pump. NO Samples

SIGNATURE: [signature]

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: PL-11.2
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other PAN L?

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

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: No Liquid detected - pan lysimeter dry
No samples

SIGNATURE: ______ **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: LD-3.1
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giaconi
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other Leak Detec

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):	Actual Pre-Sampling Purge (gal):

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ✓ D.O. Test Kit ____ YSI____ LaMotte____

REMARKS: No liquid detected - ~~[illegible]~~ Dry - No Sample
LEAK Detect riser

SIGNATURE: [signature]

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: LD-3-2
SAMPLED BY: S. Gunn[illegible]
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate ___ Treatment System ___ Other Leak Dete

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): 0

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump X Dedicated X Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1125	23.0	1440	7.37	NA	Sl. Brown ~~Colorless~~	99	

Sheen: none Odor: Slight Sample Date: 11/3/16

Field Measurement Devices: Horiba H5 Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab Sample

SIGNATURE: [signature] **DATE:** 11/3/17

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

SAMPLE ID: LD-3 3

PROJECT NO: 053-7444-11

SAMPLED BY: S. C.-[illegible]

CLIENT: Recology

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate ______ Treatment System ______ Other LEAK Det[illegible]

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): ______

Actual Pre-Sampling Purge (gal): ______

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Purge Water Containment: ______

Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer______ Teflon Bailer______ PVC Bailer______ Disp. Bailer______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump______ Electric Submersible Pump______ Dedicated______ Other______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI____ LaMotte____

REMARKS:

No Liquid Detected. Riser Dry, No Samples.

SIGNATURE: [signature]

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-1
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1240	22.3	3990	6.58	NM	Colorless	7	

Sheen: none Odor: light Sample Date: 11/2/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

H5 cal 11/2/11 1230; pH = 7.03, 4.00; EC = 0, 2060; Turb = 0; DO = N/A; Temp = 16.5 °C

SIGNATURE: SL **DATE:** 11/2/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-2.2B
PROJECT NO: 053-7444-11
SAMPLED BY: S Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ~~X~~ Surface Water ____ Leachate X Treatment System ____ Other ____

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8	Other 18"
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)	

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

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-____ FB-____ Other ____

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

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1320	19.9	6460	7.05	N.M	grey	55	

Sheen: none Odor: Strong Sample Date: 11/2/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

SIGNATURE: [signature] **DATE:** 11/2/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: S-2-1
SAMPLED BY: S Gincanini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ____ Surface Water ____ Leachate ____ Treatment System ____ 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): ____
Depth to Water (ft): ____
Height of Water Column (ft): ____
Volume in Casing (gal): ____
Calculated Purge (volumes / gal.): ____
Actual Pre-Sampling Purge (gal): ____

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ____ Odor: ____ Sample Date: ____

Field Measurement Devices: Horiba ____ Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: insufficient liquid to pump 11/3/11

SIGNATURE: S

DATE: 11/28/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: S-2.1
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other 18"
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): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated X Other Diaphragm Pump.

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1500	18.5	7910	7.24	NM	Colorless	4	

Sheen: none Odor: light Sample Date: 12/14/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected Grab Sample

HS CAL 12/14/11 @ LEACHATE POND

SIGNATURE: S [signature] DATE: 12/14/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-2-2A
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other 18"
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): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: STARTED pump after Being left off since 11/3/11. No Flow - LEACHATE Sump dry - No samples

SIGNATURE: SG

DATE: 11/28/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-10
CLIENT: Norcal

SAMPLE ID: S-2-2A
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate X Treatment System ______ Other ______

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other 15"
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): NA	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): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ______ Odor: ______ Sample Date: ______

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Pump will not run - low liquid level
LEACHATE TANK 2-2A Checked - TANK Completely
Dry.
Sump Dry - NO samples

SIGNATURE: S

DATE: 12/14/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-3.1
PROJECT NO: 053-7444-11
SAMPLED BY: S Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 18"
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): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump X Dedicated X Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1140	20.2	30800	7.80	NA	Dk. Brown	127	

Sheen: none
Odor: moderate
Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample

SIGNATURE: SL
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: S-3.2
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ____

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

Purge Date: ____

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1115	20.5	13500	7.25	NM	Black/yellow	274	

Sheen: None Odor: Moderate Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

SIGNATURE: [signature] **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

PROJECT NO: 053-7444-11

CLIENT: Recology

SAMPLE ID: S-3-3

SAMPLED BY: S. Gueumin

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches):	3/4	1	2	4	4.5	6	8	Other 18"
GALLONS PER LINEAR FOOT :	(0.02)	(0.04)	(0.17)	(0.66)	(0.83)	(1.5)	(2.6)	

Well Total Depth (ft): NM

Depth to Water (ft): |

Height of Water Column (ft): ↓

Volume in Casing (gal): NM

Calculated Purge (volumes / gal.): |

Actual Pre-Sampling Purge (gal): ↓

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Purge Water Containment: ___

Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated X Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1045	17.5	3490	6.79	NM	Yellow	9	

Sheen: none Odor: moderate Sample Date: 11/3/11

Field Measurement Devices: Horiba H5 Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample

H5 Cal: 11/3/11 1040; pH = 7.06/4.00; EC = 0, 2060; Turb = 0; DO = NA; Temp = 10.8°C

SIGNATURE: SL DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-4.1
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Norcal
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date: ____

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1200	25.4	10200	7.00	NM	Brown	181	

Sheen: None
Odor: Moderate
Sample Date: 11/3/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: collected grab sample

SIGNATURE: [signature]
DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: S-5.1A
SAMPLED BY: S Giacomini
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

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

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment:
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date:

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1245	27.3	8140	7.04	NM	Yellow/Amber	9	

Sheen: none Odor: moderate Sample Date: 11/3/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

SIGNATURE: [signature] DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: S-5.1B
SAMPLED BY: S-Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 18"
GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

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

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump___ Dedicated___ Other___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer___ Teflon Bailer___ PVC Bailer___ Disp. Bailer___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump___ Electric Submersible Pump X Dedicated X Other___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1220	27.5	15000	7.40	NM	~~23~~ Yellow	23	

Sheen: none
Odor: moderate
Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample

SIGNATURE: SL

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: S-5.2
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4___ 1___ 2___ 4___ 4.5___ 6___ 8___ Other 18"
GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

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

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment:
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date:

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated X Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1315	26.2	13500	7.36	NM	Dark amber	37	

Sheen: none Odor: Strong Sample Date: 11/3/11

Field Measurement Devices: Horiba H5 Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample

SIGNATURE: SG

DATE: 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-9.1A
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomin
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4 ___ 1 ___ 2 ___ 4 ___ 4.5 ___ 6 ___ 8 ___ Other 18"
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): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___
Purge Water Containment: ___
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated X Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1345	18.2	~~2795~~ 5500	7.00	NM	Yellow/Brown	44	

Sheen: None Odor: light Sample Date: 11/3/11

Field Measurement Devices: Horiba HS Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample

SIGNATURE: SG **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

SAMPLE ID: S-9-1B

PROJECT NO: 053-7444-11

SAMPLED BY: S. Giacomini

CLIENT: Recology

REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"

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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____

Purge Water Containment:

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date:

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated ✓ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (umhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1330	19.6	~~6838~~ 6680	7.03	NM	Brown/yellow	67	

Sheen: none

Odor: light

Sample Date: 11/3/12

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

SIGNATURE: SL

DATE: 11/3/12

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: S-11.1
SAMPLED BY: S. Giacomini
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

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

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date: ____

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated X Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1345	26.2	7390	6.63	NA	Yellow Tint	5	

Sheen: none
Odor: Slight
Sample Date: 11/2/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab sample

SIGNATURE: SG
DATE: 11/2/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: S-11-2
PROJECT NO: 053-7444-11
SAMPLED BY: S. Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

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

CASING DIAMETER (OD-inches): 3/4 ____ 1 ____ 2 ____ 4 ____ 4.5 ____ 6 ____ 8 ____ Other 18"
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): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump ____ Dedicated ____ Other ____
Purge Water Containment: ____
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ____ FB- ____ Other ____

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

Purge Date: ____

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ____ Teflon Bailer ____ PVC Bailer ____ Disp. Bailer ____
PVC Hand Pump ____ Peristaltic Pump ____ Centrifugal Pump ____ Bladder Pump ____
Pneumatic Displacement Pump ____ Electric Submersible Pump X Dedicated ✓ Other ____

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1420	23.2	~~8518~~ 7490	6.89	NM	Black tint	18	

Sheen: none Odor: moderate Sample Date: 11/3/11

Field Measurement Devices: Horiba H5 Omega ____ QuickCheck ____ D.O. Test Kit ____ YSI ____ LaMotte ____

REMARKS: Collected grab Sample

SIGNATURE: ____ **DATE:** 11/3/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: LW-1
SAMPLED BY: S. Guimmin
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ 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): 70.6
Depth to Water (ft): 69.30
Height of Water Column (ft): 1.30
Volume in Casing (gal): NA
Calculated Purge (volumes / gal.): 1
Actual Pre-Sampling Purge (gal): ___

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___ PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___ Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Purge Water Containment: ___

Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer X PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___ Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1320	26.1	3310	7.36*	NM	grey	>999	

Sheen: none Odor: light Sample Date: 10/19/11

Field Measurement Devices: Horiba H5 Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: Collected grab sample
*pH measured w/ YSI meter used for G-8, G-9 = 7.21
H5 Cal 10/19/11 1315 pH = 7.02, 4.00; EC = 0, 2060; turb = 0; Temp = 22.2°C

SIGNATURE: [signature]

DATE: 10/19/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road

SAMPLE ID: ~~[illegible]~~ LW-2

PROJECT NO: 053-7444-11

SAMPLED BY: S. Giacomini

CLIENT: Recology

REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ___ Surface Water ___ Leachate X Treatment System ___ 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): 67.4

Depth to Water (ft): DRY

Height of Water Column (ft): 0

Volume in Casing (gal): ___

Calculated Purge (volumes / gal.): ___

Actual Pre-Sampling Purge (gal): ___

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Purge Water Containment: ___

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

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

Purge Date: ___

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other

Sheen: ___ Odor: ___ Sample Date: ___

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: LEACHATE WELL DRY - NO SAMPLES

SIGNATURE: [signature]

DATE: 10/19/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: LW-3
PROJECT NO: 053-7444-11
SAMPLED BY: S Giacomini
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater ______ Surface Water ______ Leachate X Treatment System ______ 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): 49.0
Volume in Casing (gal): NA
Depth to Water (ft): 47.27
Calculated Purge (volumes / gal.): ______
Height of Water Column (ft): 1.73
Actual Pre-Sampling Purge (gal): ______

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer ______
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______
Purge Water Containment: ______
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ______ FB- ______ Other ______

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

Purge Date: ______

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer ______ Teflon Bailer ______ PVC Bailer ______ Disp. Bailer X
PVC Hand Pump ______ Peristaltic Pump ______ Centrifugal Pump ______ Bladder Pump ______
Pneumatic Displacement Pump ______ Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1410	25.1	16200	7.53	NM	DK-amber	60	

Sheen: none
Odor: moderate
Sample Date: 10/19/11

Field Measurement Devices: Horiba HS Omega ______ QuickCheck ______ D.O. Test Kit ______ YSI ______ LaMotte ______

REMARKS: Collected Grab Sample

SIGNATURE: S

DATE: 10/19/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-4R
PROJECT NO: 053-7444-11
SAMPLED BY: M. Todi
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): ___ Screen Length (ft): ___
Depth to Water (ft): 7.51 Total Volume Purged (ml): ___

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated tube Peristaltic Pump X Tubing Types 1/4" P/E Other ___
Purge Water Containment: None-Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1148	Start purge								
1152	125	7.51	20.2	7.57	3534	0.80	3	-52.7	clear/None
1155	125	7.51	20.1	7.53	3541	0.46	3	-53.6	" "
1158	125	7.51	20.1	7.52	3540	0.38	1	-53.9	" "
1201	125	7.51	20.1	7.51	3542	0.36	1	-53.8	" "
1202	Sample taken								

Field Measurement Devices: Horiba ___ YSI X ~~LaMotte~~ Oakton X Other ___

REMARKS:

SIGNATURE: [signature] **DATE:** 9/15/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater X Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

SAMPLE ID: G-18
SAMPLED BY: M. Todi
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): ____
Depth to Water (ft): 8.86
Screen Length (ft): ____
Total Volume Purged (ml): ____

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated tube Peristaltic Pump X Tubing Types 1/4" P/E Other ____
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1234	Start purge								
1237	150	8.91	19.2	7.43	2585	0.90	2	-56.1	clear/NONE
1240	150	8.91	19.5	7.41	2590	0.31	1	-45.6	" "
1243	150	8.91	19.5	7.40	2595	0.26	1	-45.8	" "
1246	150	8.91	19.4	7.39	2596	0.24	1	-45.6	" "
1247	Sample taken								

Field Measurement Devices: Horiba ____ YSI X ~~LaMotte~~ Oakton X Other ____

REMARKS:

SIGNATURE: ________ DATE: 9/15/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater ✓ Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 X 4 ___ 4.5 ___ 6 ___ 8 ___ Other ___

SAMPLE ID: G-21
SAMPLED BY: M Todi
REGULATORY AGENCY: CVRWQCB

Well Total Depth (ft): ___
Depth to Water (ft): 7.82
Screen Length (ft): ___
Total Volume Purged (ml): ___

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated tube Peristaltic Pump X Tubing Types 1/4 PE Other ___
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1057	Start purge								
1100	125	7.83	19.6	7.39	2246	2.16	3	-69.6	clear/none
1103	125	7.83	19.5	7.37	2237	1.41	2	-62.1	" "
1106	125	7.83	19.3	7.37	2226	1.15	2	-52.6	" "
1109	125	7.83	19.3	7.38	2221	1.17	2	-49.3	" "
1110	Sample taken								

Field Measurement Devices: Horiba ___ YSI X ~~LaMotte~~ Oakton-100 X Other ___

REMARKS:

SIGNATURE: [signature] DATE: 9/15/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: G-22
SAMPLED BY: M. Todi
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ___ Leachate ___ Treatment System ___ 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): 275
Depth to Water (ft): 11.03
Height of Water Column (ft): ___
Volume in Casing (gal): ___
Calculated Purge (volumes / gal.): ___
Actual Pre-Sampling Purge (gal): ___

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump X Dedicated X Other ___
Purge Water Containment: purged to tank
Field QC Samples Collected at this Well (Equipment or Field Blank): EB- ___ FB- ___ Other ___

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
Grab Sample - pump running								

Purge Date: ___

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer X
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	~~Other~~ ORP
1045	19.6	2376	7.23	1.62	Clear	12	-50

Sheen: NONE Odor: NONE Sample Date: 9/15/11

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI X ~~LaMotte~~ Oakton X

REMARKS:

SIGNATURE: [signature] **DATE:** 9/15/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE ID: G-23
SAMPLED BY: M. Todi
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ____ Other ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 X 4 ____ 4.5 ____ 6 ____ 8 ____ Other ____

Well Total Depth (ft): ____ Screen Length (ft): ____
Depth to Water (ft): 8.64 Total Volume Purged (ml): ____

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated tube Peristaltic Pump X Tubing Types 1/4" B/4 Other ____
Purge Water Containment: None - Ground
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1121	Start purge								
1124	150	8.72	19.2	7.49	2134	1.70	4	-48.5	clear / None
1127	150	8.71	19.1	7.45	2118	0.72	4	-47.4	" "
1130	150	8.69	19.1	7.44	2114	0.53	3	-47.0	" "
1133	150	8.69	19.1	7.43	2114	0.44	4	-46.9	" "
1136	150	8.69	19.2	7.43	2116.	0.43	3	-47.3	" "
1137	Sample taken								

Field Measurement Devices: Horiba ____ YSI X ~~LaMotte~~ Oakton X Other ____

REMARKS: ____

SIGNATURE: ____ **DATE:** 9/15/11

Golder Associates

WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Norcal
SAMPLE ID: G-29
SAMPLED BY: M. Todi
REGULATORY AGENCY: CVRWQCB

SAMPLE TYPE: Groundwater X Surface Water ___ Leachate ___ Treatment System ___ Other ___

CASING DIAMETER (OD-inches): 3/4 ___ (0.02) 1 ___ (0.04) 2 X (0.17) 4 ___ (0.66) 4.5 ___ (0.83) 6 ___ (1.5) 8 ___ (2.6) Other ___
GALLONS PER LINEAR FOOT : (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 24.30
Depth to Water (ft): 7.41
Height of Water Column (ft): 16.89
Volume in Casing (gal): 2.9
Calculated Purge (volumes / gal.): Over purge
Actual Pre-Sampling Purge (gal): 34.0

PURGE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump 12v Dedicated ___ Other ___
Purge Water Containment: None-Ground
Field QC Samples Collected at this Well (Equipment or Field Blank): EB-___ FB-___ Other ___

	Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
21.9	1032	650ml/m	18.0	1815	7.13	Slightly cloudy/clear	Low		
130 mins 34,500 ml	1214 @ 650	22.3gls	19.4	1917	8.04	clear	9	7.67 after PH check	Checked PH7 = ok
845		21.5 @ 630ml/m						New sample	taken for PH
191 x 630	1315 630	31.7	19.1	1898	7.87	clear	7		

Purge Date: 9/15/11

SAMPLE:
Device (Depth of Intake from TOC): S.S. Bailer ___ Teflon Bailer ___ PVC Bailer ___ Disp. Bailer ___
PVC Hand Pump ___ Peristaltic Pump ___ Centrifugal Pump ___ Bladder Pump ___
Pneumatic Displacement Pump ___ Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1329	19.3	1905	8.02		Clear	7	-39.8

Sheen: None Odor: None Sample Date: 9/15/11

Field Measurement Devices: Horiba ___ Omega ___ QuickCheck ___ D.O. Test Kit ___ YSI ___ LaMotte ___

REMARKS: ~~Stabilization start: 1214 @~~ 650ml/m Max purge rate to prevent draw.
Allowed to draw down to pump to 5.8v 6.0 = Too much
Remove water above Checked flow rate ~630/m
Start purge @ 1004
CAL PH 4,7,10 Cond 14Bus/cm

SIGNATURE: [signature] DATE: 9/15/11

Golder Associates

WATER SAMPLE FIELD DATA

Location: Recovery Hay Rd.
Sample ID: 4B
Project No.: 053-7444-11
Sampled By: R. McCarthy
Client: Recovery

Sample Type: Groundwater X Surface Water ______ Leachate ______ Treatment System ______ Other ______

Casing Diameter: 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): 12.00
Volume in Casing (gal): 1.7
Depth to Water (ft): 9.51
~~Calculated~~ Actual Purge Volume (gal.): 1.7
Height of Water Column (ft): 2.49

PURGE:
Device (Depth of Intake from TOC): Bladder Pump ______ Peristaltic Pump ______ Disp Bailer X
Electric Submersible Pump ______ Dedicated ______ Other ______

Purge Water Containment: None / ground

Field Measurement Device: Horiba X sample YSI X purge LaMotte ______ Other ______

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1615	1.7	19.2	5229	7.42	yellowish	low		
← well	dry							

Purge Date: 8/9/11

SAMPLE:
Device (Depth of Intake from TOC): Bladder Pump ______ Peristaltic Pump ______ Disp Bailer X (11')
Electric Submersible Pump ______ Dedicated ______ Other ______

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1225	19.9	4300	7.45	NM	LT. Brown	21	

8/10/11

Sheen: None Odor: None

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

REMARKS: well Dry @ 1.7 gal purged @ 1615 on 8/9/11
Allowed to recharge overnight to 9.22' @ 1220

SIGNATURE: [signature] **SAMPLE DATE:** 8/10/11

Golder Associates

WATER SAMPLE FIELD DATA

Location: Recology Hay Rd. — Sample ID: 48

Project No.: 053-7444.11 — Sampled By: R. McCarthy

Client: Recology

Sample Type: Groundwater X Surface Water ___ Leachate ___ Treatment System ___ Other ___

Casing Diameter: 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): 12.0 — Volume in Casing (gal): 2.0

Depth to Water (ft): 9.06 — Calculated Purge Volume (gal.): 6.0

Height of Water Column (ft): 2.94

PURGE:

Device (Depth of Intake from TOC): Bladder Pump ___ Peristaltic Pump ___ Disp Bailer X

Electric Submersible Pump ___ Dedicated ___ Other ___

Purge Water Containment: None - Ground

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

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (μmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1250	1.8	19.8	5129	7.09	yellowish	low		
Well	Dry	at	first	reading				

Purge Date: 8/9/11

SAMPLE:

Device (Depth of Intake from TOC): Bladder Pump ___ Peristaltic Pump ___ Disp Bailer X

Electric Submersible Pump ___ Dedicated ___ Other ___

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (μmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	ORP Other
1600	20.3	5160	7.51	1.66	clear	6	89.7

Sheen: None — Odor: None

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

REMARKS: CAL pH 4.0 7.0
EC 2060

Lev well recharged to 9.51'

SIGNATURE: [signature] — **SAMPLE DATE:** 8/9/11

\\Sfo1-s-fs2-vm.golder.gds\Data\Sampling\Blank Forms\Water Sample Field Data-2007.DOC

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
SAMPLE ID: G-13
PROJECT NO: 053-7444-11
SAMPLED BY: R. McCarthy
CLIENT: Recology
REGULATORY AGENCY: CVRWQCB
SAMPLE TYPE: Groundwater X Leachate ___ Other ___
CASING DIAMETER (ID-inches): 3/4 ___ 1 ___ 2 ___ 4 X 4.5 ___ 6 ___ 8 ___ Other ___

Well Total Depth (ft): ___ Screen Length (ft): ___
Depth to Water (ft): 11.19 Total Volume Purged (ml): ___

PURGE / SAMPLE:
Device (Depth of Intake from TOC): Electric Submersible Pump ___ Bladder Pump ___
Dedicated ___ Peristaltic Pump X Tubing Types DEDICATED Other ___
Purge Water Containment: NONE - GROUND
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ___ Time: ___

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
1350	START PURGE								
1355	300	11.18	21.6	7.63	1127	0.71	2	156.0	clear
1358	300	11.18	21.6	7.61	1124	0.74	1	157.3	clear
1401	300	11.18	21.4	7.	1120		1	153.4	clear
1405	SAMPLE TAKEN								

Field Measurement Devices: Horiba ___ YSI X LaMotte ___ Other ___

REMARKS:

SIGNATURE: [signature] **DATE:** 8/9/11

Golder Associates

LOW-FLOW WATER SAMPLE FIELD DATA

LOCATION: Recology Hay Road
PROJECT NO: 053-7444-11
CLIENT: Recology
SAMPLE TYPE: Groundwater X Leachate ____
CASING DIAMETER (ID-inches): 3/4 ____ 1 ____ 2 ____ 4 X 4.5 ____ 6 ____ 8 ____ Other ____

SAMPLE ID: G-13
SAMPLED BY: R. McCarthy
REGULATORY AGENCY: CVRWQCB
Other ____

Well Total Depth (ft): ____
Screen Length (ft): ____
Depth to Water (ft): 11.18
Total Volume Purged (ml): 3900 ml

PURGE / SAMPLE:

Device (Depth of Intake from TOC): Electric Submersible Pump ____ Bladder Pump ____
Dedicated ____ Peristaltic Pump X Tubing Types DEDICATED
Purge Water Containment: NONE - GRO Other ____
QC Samples Collected at this Well: EB-___ FB-___ DUP-___ Other ____ Time: ____

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
1332	START	PURGE							
1336	300	11.20	21.6	7.59	1126	1.08	2	159.8	
1339	300	11.19	21.6	7.58	1123	0.96	2	161.5	clear
1342	300	11.19	21.6	7.57	1125	0.94	1	160.7	
1345	SAMPLE	TAKEN							

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

REMARKS:

SIGNATURE: [signature]

DATE: 8/9/11

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: Recology Hay Road

Project No.:10397257

Date: 12/2/11

Technician: R. McCarthy

Sampling Equipment: GEM 2000

Sampling Point	Time	VOC (ppm)	METHANE (%)	CO_2 (%)	O_2 (%)	Comments
PL-2.2A	1221	5.0	0.0	0.8	19.7	
PL-2.2B	1347	0.0	0.0	3.3	15.7	
PL-3.1	1448	0.0	0.0	0.1	20.5	
PL-3.2	1438	0.0	0.9	9.2	9.5	
PL-3.3	1433	0.0	5.7	10.2	12.1	
PL-4.1	1456	0.0	0.0	0.8	20.2	
PL-5.1A	1505	0.0	3.8	17.8	0.3	
PL-5.1B	1459	0.0	0.0	10.8	5.8	
PL-5.2	1510	0.0	0.0	0.2	20.6	
PL-9.1A	1518	0.0	0.0	0.0	20.8	
PL-9.1B	1514	0.0	0.0	0.0	20.8	
PL-11.1	1335	0.1	0.0	13.1	2.1	
PL-11.2	1322	0.0	0.0	7.3	13.2	
LD-3.1	1445	0.0	3.8	8.2	7.2	
LD-3.2	1441	0.0	0.0	1.6	14.1	
LD-3.3	1429	0.0	0.8	8.1	4.2	
LD-4.1	1452	0.0	0.0	7.1	8.9	
LD-5.2	1508	0.0	0.0	8.7	7.5	

NOTES:

LANDFILL GAS MONITORING DATA SHEET
GOLDER ASSOCIATES

Project: **Recology Hay Road**

Project No.:10397257

Date: 12/2/11

Technician: R. McCarthy

Sampling Equipment: Mini RAE 2000

Sampling Point	Time	VOC (ppm)	Comments
GP-1	1151	0.0	
GP-6	1403	0.0	
GP-7	1524	0.0	
GP-9	1143	0.0	
GP-10	1233	0.0	
GP-11	1238	0.0	
GP-12	1535	0.0	
GP-13	1542	0.0	
GP-14	1547	0.0	
GP-15	1425	0.0	
GP-16	1411	0.0	
GP-17	1405	0.0	
GP-18	1306	0.0	
GP-19	1315	0.0	
GP-20S	1206	0.0	
GP-20D	1210	0.0	
GP-21S	1133	0.0	
GP-21D	1135	0.4	

NOTES:

LANDFILL GAS MONITORING DATA SHEET GOLDER ASSOCIATES			
Project: Recology Hay Road			
Project No.: 10397257			
Date: 12/2/14			
Technician: R. McCarthy			
Sampling Equipment: MiniRAE 2000			

Sampling Point	Time	VOC (ppm)	Comments
office trailer	1530	0.0	
scale house	1520	0.0	
Maint. Shop	1522	0.0	
Break Room Trailer	1527	0.0	
Composting Shop	1525	0.0	
Solar shed 2.2	1341	0.0	
Solar shed 3.1	1480	0.0	
solar shed 3.2-3.3	1444	0.0	
Solar shed 4.1	1452	0.0	
Solar shed 5.1	1501	0.0	
Solar shed 5.2	1507	0.0	
Solar shed 9.1	1516	0.0	
Solar shed 11	1334	0.0	

NOTES:

Landfill Gas Migration Monitoring
Recology Hay Road

DATE/TIME: 12/2/11				**TECHNICIAN:** R. McCartney			
EQUIPMENT: GEM 2000				**WEATHER:** WINDY			
TEMPERATURE: 63°				**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	1703	0.0	4.0	8.6	87.4	+0.10	
GP-3A (deep)	1350	0.4	3.8	9.9	85.9	+0.00	
GP-3B (shallow)	1351	0.0	2.0	19.4	78.4	0.00	
GP-4A (deep)	1345	0.0	3.2	12.7	84.1	0.0	
GP-4B (shallow)	1342	0.0	4.8	15.6	79.6	0.0	
GP-5A (deep)	1328	0.0	2.9	13.6	83.5	0.00	
GP-5B (shallow)	1330	0.0	0.4	19.9	79.7	0.00	
PERIMETER							
GP-1	1151	0.0	0.6	19.8	79.6	0.0	
GP-6	1403	0.0	0.0	20.9	79.1	0.0	
GP-7	1524	0.0	1.9	19.1	78.9	0.01	
GP-9	1143	0.0	0.9	19.6	79.5	+0.01	
GP-10	1233	0.0	1.2	19.7	79.1	0.00	
GP-11	1238	0.0	0.5	20.5	79.0	0.00	
GP-12	1535	0.0	0.6	20.9	78.5	0.00	
GP-13	1542	0.0	0.6	20.2	79.2	0.00	
GP14	1547	0.0	0.9	17.8	81.3	0.00	
GP-15	1425	0.0	0.4	20.4	79.2	+0.01	
GP-16	1411	0.0	0.6	20.1	79.3	+0.03	
GP-17	1405	0.0	1.4	20.3	78.3	0.02	
GP-~~18~~ 19	1306	0.0	2.9	15.8	81.3	0.00	
GP-~~19~~ 18	1315	0.0	0.2	19.9	79.9	+0.01	
GP-20S	1206	0.0	1.9	18.5	79.6	0.00	
GP-20D	1210	0.0	4.3	6.3	89.4	0.00	
GP21S	1133	0.0	2.1	18.9	79.0	+0.01	
GP-21D	1135	0.0	3.8	5.1	91.1	+0.04	
STRUCTURES							
Scalehouse	1520	0.0	0.0	20.8	79.2	—	
Office Trailer	1530	0.0	0.0	20.8	79.2	—	
Maintenance Shop	1522	0.0	0.0	20.8	79.2	—	
Composting Shop	1525	0.0	0.0	20.8	79.2	—	
Breakroom	1527	0.0	0.0	20.8	79.2	—	
Leachate SS-2.2	1341	0.0	0.0	20.8	79.2	—	
Leachate SS-3.1	1450	0.0	0.0	20.8	79.2	—	
Leachate SS-3.2-3.3	1444	0.0	0.0	20.8	79.2	—	
Leachate SS-4.1	1452	0.0	0.0	20.8	79.2	—	
Leachate SS-5.1	1501	0.0	0.0	20.8	79.2	—	
Leachate SS-5.2	1507	0.0	0.0	20.8	79.2	—	
Leachate SS-9.1	1510	0.0	0.0	20.8	79.2	—	
Leachate SS-11	1334	0.0	0.0	20.8	79.2	—	

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 Migration Monitoring
Recology Hay Road

DATE/TIME: 9/16/11 1020 - 1605				TECHNICIAN: S. Giacomini			
EQUIPMENT: GEM 2000 #7665				WEATHER: Sunny, Hot			
TEMPERATURE: ~80-90° F				BAROMETRIC PRESSURE: NM			
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	1112	0.0	5.4	6.3		-0.73	
GP-3A (deep)	1425	~~1.25~~ 1.5	~~1.5~~ 5.9	~~5.9~~ 0.6	~~0~~	0.00	E
P-3B (shallow)	1430	0.0	4.5	17.1		0.00	
GP-4A (deep)	1407	0.0	3.6	1.6		0.00	
P-4B (shallow)	1412	0.0	6.7	13.9		0.00	
GP-5A (deep)	1351	0.0	8.4	0.2		0.00	
P-5B (shallow)	1355	0.0	0.2	19.3		0.00	
PERIMETER							
GP-1	1030	0.0	0.5	20.1		0.00	
GP-6	1342	0.0	0.0	20.1		+0.30	
GP-7	1239	0.0	4.3	12.4		+0.01	
GP-9	1042	0.0	1.6	19.3		+0.61	
GP-10	1435	0.0	2.6	17.2		0.00	
GP-11	1443	0.0	0.5	19.4		0.00	
GP-12	1020	0.0	0.1	20.8		+0.84	
GP-13	1202	0.0	0.1	20.3		+0.23	
GP14	1216	0.0	0.8	17.4		-0.23	
GP-15	1317	0.0	0.4	20.5		0.06	
GP-16	1323	0.0	0.0	20.5		+1.28	
GP-17	1328	0.0	0.2	20.2		+0.34	
GP-18	1400	0.0	1.2	13.0		0.00	
GP-19	1418	0.0	2.7	13.4		0.00	
GP-20S	1456	0.0	2.5	18.1		0.00	
GP-20D	1506	0.0	4.6	0.9		0.00	
GP21S	1047	0.0	3.8	17.0		0.00	
GP-21D	1100	0.0	4.2	3.3		-0.02	
TRUCTURES							
Scalehouse	1241	~~[illegible]~~ 0.0	0.0	20.8	NM	NA	
Office Trailer	1559	0.0	0.0	20.8			
ntenance Shop	1555	0.0	0.0	20.8			
mposting Shop	1515	0.0	0.0	20.8			
Breakroom	1603	0.0	0.0	20.8			
achate SS-2.2	1432	0.0	0.0	20.8			
achate SS-3.1	1529	0.0	0.0	20.8			
achate SS-4.1	1533	0.0	0.0	20.8			
achate SS-5.1	1537	0.0	0.0	20.8			
achate SS-5.2	1542	0.0	0.0	20.8			
achate SS-9.1	1546	0.0	0.0	20.8			
achate SS-11	1403	0.0	0.0	20.8			

(CH_4 = 1.5, CO_2 = 5.9, O_2 = 0.6)

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.

LEACHATE SS 3.2/3.3 1526 - CH_4 = 0.0, CO_2 = 0.0, O_2 = 20.8

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)	ME
9-7-11	1.70						
9-21	1.80						
9-29	1.80						
10-3	1.90						
10-11	1.70						
10-17	1.90						
10-28	1.90						
11-3	1.70						
11-7	2.00						
11-15	1.80						
11-22	1.90						
11-29	1.70						
12-6	2.90						
12-13	2.80						
12-20	2.50						
12-29	2.90						

NOTE: Notify site manager when sump levels exceed 1 foot.

S-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)	ME
1-4-11	1.60	NA				
1-10	1.70	NA		NA		
1-18	1.70	NA		NA		
1-24	1.70	NA		NA		
1-31	1.70	NA		NA		
2-4	1.70	NA		NA		
2-14	1.90	NA		NA		
2-22	1.70	NA		NA		
3-2	1.80	NA		NA		
3-9	1.90	NA		NA		
3-15	1.70	NA		NA		
3-23	1.70	NA		NA		
3-30	1.90	NA		NA		
4-5	1.90	NA		NA		
4-12	1.70	NA		NA		
4-19	1.90	NA		NA		
4-26	1.80	NA		NA		
5-3	1.70	NA		NA		
5-10	1.90	NA		NA		
5-18	2.00	NA		NA		
5-31	1.80	NA		NA		
6-7	1.70	NA		NA		
6-14	1.90	NA		NA		
6-21	2.00	NA		NA		
6-30	1.90	NA		NA		
7-5	1.70	NA		NA		
7-12	1.80	NA		NA		
7-24	1.70	NA		NA		
7-30	1.70	NA		NA		
8-6	1.70	NA		NA		
8-13	1.70	NA		NA		
8-24	1.80	NA		NA		
8-31	1.80	NA		NA		

NOTE: Notify site manager when sump levels exceed 1 foot.

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)	ME
8-13	.10	.0		.30	.0		
8-24	.10	.0		.30	.0		
8-31	.20	.0		.30	.0		
9-7	.20	.0		.10	.0		
9-13	.30	.0		.40	.0		
9-21	.10	.0		.20	.0		
9-29	.20	.0		.10	.0		
10-3	.20	.0		.10	.0		
10-11	.20	.0		.10	.0		
10-17	.20	.0		.10	.0		
10-28	.10	.0		.40	.0		
11-3	.10	.0		.30	.0		
11-7	.20	.0		.60	.0		
11-15	.50	.0		.40	.0		
11-22	.40	.0		.50	.0		
11-29	.20	.0		.30	0		
12-6	.30	.0		.10	0		
12-13	.30	.0		.20	.0		
12-20	.30	.0		.40	.0		
12-29	.40	.0		.50	.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

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)	ME
1-4-11	.40	.0		.40	.0		
1-10	.50	.0		.60	.0		
1-18	.20	.0		.10	.0		
1-24	.20	.0		.20	.0		
1-31	.20	.0		.20	.0		
2-9	.20	.0		.40	.0		
2-14	.20	.0		.50	.0		
2-22	.30	.0		.30	.0		
3-2	.50	.0		.20	.0		
3-9	.20	.0		.10	.0		
3-15	.30	.0		.50	.0		
3-23	.20	.0		.30	.0		
3-30	.40	.0		.30	.0		
4-5	.40	.0		.20	.0		
4-12	.50	.0		.30	.0		
4-18	.20	.0		.40	.0		
4-26	.30	.0		.10	.0		
5-3	.50	.0		.30	.0		
5-10	.20	.0		.10	.0		
5-18	.40	.0		.10	.0		
5-31	.40	.0		.10	.0		
6-7	.40	.0		.40	.0		
6-14	.30	.0		.20	.0		
6-21	.30	.0		.10	.0		
6-30	.40	.0		.10	.0		
7-5	.40	.0		.30			
7-12	.30	.0		.50	.0		
7-26	.40	.0		.40	.0		
7-30	.20	.0		.10	.0		
8-6	.30	.0		.10	.0		

NOTE: Notify site manager when sump levels exceed <u>1 foot</u>.

Hay Road Leacha' ump 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
ME								
	8-6-11	N/A	N/A	60	Yes	Yes	Yes	.60
	8-13	N/A	N/A	60	Yes	NO	Yes	.70
	8-24	N/A	N/A	60	Yes	NO	Yes	.60
	8-31	N/A	N/A	60	Yes	NO	Yes	.60
	9-7	N/A	N/A	60	Yes	Yes	Yes	.80
	9-13	N/A	N/A	60	Yes	NO	Yes	.60
	9-21	N/A	N/A	60	Yes	NO	Yes	.70
	9-29	N/A	N/A	60	Yes	NO	Yes	.70
	10-3	N/A	N/A	60	Yes	Yes	Yes	.80
	10-11	N/A	N/A	60	Yes	NO	Yes	.80
	10-17	N/A	N/A	60	Yes	NO	Yes	.60
	10-28	N/A	N/A	60	Yes	Yes	Yes	.80
	11-3	N/A	N/A	60	Yes	NO	Yes	.70
	11-7	N/A	N/A	60	Yes	NO	Yes	.80
	11-15	N/A	N/A	60	Yes	NO	Yes	.60
	11-22	N/A	N/A	60	Yes	Yes	Yes	.80
	11-29	N/A	N/A	60	Yes	NO	Yes	.70
	12-8	N/A	N/A	60	Yes	NO	Yes	.60
	12-13	N/A	N/A	60	Yes	Yes	Yes	.70
	12-20	N/A	N/A	60	Yes	NO	Yes	.70
	12-29	N/A	N/A	60	Yes	NO	Yes	.60

Pump Activated @ 2.5 Inches
Pump Shuts Down @ 2 Inch

Hay Road Leacha[illegible] [illegible]ump 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
ME								
1-4-11		N/A	N/A	60	Yes	Yes	Yes	1.30
1-10		N/A	N/A	60	Yes	Yes	Yes	.50
1-18		N/A	N/A	60	Yes	NO	Yes	.50
1-24		N/A	N/A	60	Yes	NO	Yes	.60
1-31		N/A	N/A	60	Yes	NO	Yes	.70
2-9		N/A	N/A	60	Yes	Yes	Yes	.60
2-14		N/A	N/A	60	Yes	NO	Yes	.70
2-22		N/A	N/A	60	Yes	Yes	Yes	.60
3-2		N/A	N/A	60	Yes	Yes	Yes	.60
3-9		N/A	N/A	60	Yes	Yes	Yes	.90
3-15		N/A	N/A	60	Yes	Yes	Yes	1.00
3-23		N/A	N/A	60	Yes	NO	Yes	1.30
3-30		N/A	N/A	60	Yes	Yes	Yes	1.00
4-5		N/A	N/A	60	Yes	Yes	Yes	.60
4-12		N/A	N/A	60	Yes	Yes	Yes	.60
4-18		N/A	N/A	60	Yes	NO	Yes	.50
4-26		N/A	N/A	60	Yes	NO	Yes	1.00
5-3		N/A	N/A	60	Yes	Yes	Yes	.90
5-10		N/A	N/A	60	Yes	NO	Yes	1.20
5-18		N/A	N/A	60	Yes	Yes	Yes	.80
5-31		N/A	N/A	60	Yes	Yes	Yes	.20
6-7		N/A	N/A	60	Yes	Yes	Yes	.80
6-14		N/A	N/A	60	Yes	NO	Yes	.80
6-21		N/A	N/A	60	Yes	NO	Yes	.90
6-30		NA	NA	60	Yes	NO	Yes	.80
7-5		N/A	N/A	60	Yes	Yes	Yes	.80
7-12		N/A	N/A	60	Yes	NO	Yes	.70
7-26		N/A	N/A	60	Yes	NO	Yes	.70
7-30		N/A	N/A	60	Yes	NO	Yes	.60

Pump Activated @ 2.5 Inches
Pump Shuts Down @ 2 Inch

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)	ME
8-13-11	.10	.20		.40	.10		
8-24	.10	.10		.40	.10		
8-31	.20	.10		.60	.10		
9-7	.40	.10		.30	.10		
9-13	.30	.10		.50	.10		
9-21	.50	.10		.60	.10		
9-29	.20	.10		.30	.10		
10-3	.70	.10		.80	.10		
10-11	.70	.10		.80	.10		
10-17	.70	.10		.80	.10		
10-28	.80	.10		.50	.10		
11-3	.50	.0		.60	.10		
11-7	.60	.0		.80	.10		
11-15	.40	.0		.40	.10		
11-22	.30	.0		.50	.10		
11-29	.70	.0		70	.10		
12-6	.60	.0		.30	.10		
12-13	.50	.0		.40	.10		
12-20	.70	.0		.80	.10		
12-29	.80	.0		.80	.10		

NOTE: Notify site manager when sump levels exceed <u>1 foot</u>.

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)	ME
1-4-11	1.22	2.16	2200	1.59	1.47	1,365	
1-10	.20	1.00	1,100	.30	.50	600	
1-18	.20	.20	.40	.30	.10		
1-24	.20	.20	.	.60	.10		
1-31	.20	.20		.90	.10		
2-9	.30	.20		.30	.10		
2-14	.60	.20		.70	.10		
2-22	.20	.30		.30	.50		
3-2	.50	.20		.90	1.00	1,000	
3-9	.70	.60	900	.80	.10		
3-15	.20	.20		.30	.10		
3-23	.70	.20		.70	3.00	2,500	
3-30	.90	.20		.90	.10		
4-5	.20	.20		.90	.20		
4-12	.50	.20		.70	.20		
4-18	.60	.20		.40	.20		
4-26	.50	.20		.50	.20		
5-3	.30	.20		.60	.20		
5-10	.40	.20		.40	.20		
5-18	.40	.20		.40	.20		
5-31	.10	.20		.30	.20		
6-7	.40	.20		.70	.20		
6-14	.30	.20		.50	.20		
6-21	.30	.20		.20	.10		
6-30	.30	.20		.20	.10		
7-5	.30	.20		.40	.10		
7-12	.50	.20		.60	.10		
7-26	.60	.20		.30	.20		
7-30	.50	.20		.70	.10		
8-6	.20	.20		.40	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

DM-3 LIQUID LEVEL DATA
Recology HAY ROAD

Date	3.2 Sump Depth of Water (ft)	3.2 Lysimeter Depth of Water (ft)	3.2 Lysimeter Volume Removed (gal)	3.2 Leak Detection Depth of Water (ft)	3.2 Leak Detection Volume Removed (gal)	3.3 Sump Depth of Water (ft)	3.3 Lysimeter Depth of Water (ft)	3.3 Lysimeter Volume Removed (gal)	3.3 Leak Detection Depth of Water (ft)	3.3 Leak Detection Volume Removed (gal)	Data Collector Initials
											ME
7-5-11	.40	.0		.0		.30	.0		.0		
7-12	.30	.0		.0		.40	.0		.0		
7-26	.70	.0		.0		.50	.0		.0		
7-30	.20	.0		.0		.10	.0		.0		
8-6	.40	.0		.0		.20	.0		.0		
8-13	.40	.0		.0		.30	.0		.0		
8-24	.20	.0		.0		.40	.0		.0		
8-31	.40	.0		.0		.30	.0		.0		
9-7	.60	.0		.0		.30	.0		.0		
9-13	.80	.0		.0		.10	.0		.0		
9-21	.40	.0		.0		.10	.0		.0		
9-29	.20	.0		.0		.0	.0		.0		
10-3	.20	.0		.0		.0	.0		.0		
10-11	.30	.0		.0		.0	.0		.0		
10-17	.50	.0		.0		.10	.0		.0		
10-28	.30	.0		.0		.0	.0		.0		
11-3	.40	.0		.0		.0	.0		.0		
11-7	.70	.0		.0		.20	.0		.0		
11-15	.40	.0		.0		.10	.0		.0		
11-22	.50	.0		.0		.20	.0		.0		
11-29	.50	.0		.0		.40	.0		.0		
12-6	.30	.0		.0		.10	.0		.0		
12-13	.40	.0		.0		.20	.0		.0		
12-20	.40	.0		.0		.20	.0		.0		
12-29	.40	.0		.0		.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)	ME
7-30-11	.10	.0		.0		
8-6	.10	.0		.0		
8-13	.30	.0		.0		
8-24	.10	.0		.0		
8-31	.20	.0		.0		
9-7	.20	.0		.0		
9-13	.30	.0		.0		
9-21	.10	.0		.0		
9-29	.10	.0		.0		
10-3	.10	.0		.0		
10-11	.20	.0		.0		
10-17	.40	.0		.0		
10-28	.10	.0		.0		
11-3	.10	.0		.0		
11-7	.10	.0		.0		
11-15	.30	.0		.0		
11-22	.30	.0		.0		
11-29	.50	.0		.0		
12-6	.30	.0		.0		
12-13	.30	.0		.0		
12-20	.30	.0		.0		
12-29	.40	.0		.0		

NOTE: Notify site manager when sump levels exceel 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)	ME
1-4-11	.10	.0		.0		
1-10-	.10	.0		.0		
1-18	.20	.0		.0		
1-24	.30	.0		.0		
1-31	.10	.0		.0		
2-9	.60	.0		.0		
2-14	.80	.0		.0		
2-22	.40	.0		.0		
3-2	.50	.0		.0		
3-9	.10	.0		.0		
3-16	.10	.0		.0		
3-23	.10	.0		.0		
3-30	.10	.0		.0		
4-5	.0	.0		.0		
4-12	.30	.0		.0		
4-18	.20	.0		.0		
4-26	.0	.0		.0		
5-3	.20	.0		.0		
5-10	.20	.0		.0		
5-18	.30	.0		.0		
5-31	.10	.0		.0		
6-7	.10	.0		.0		
6-14	.30	.0		.0		
6-21	.10	.0		.0		
6-30	.20	.0		.0		
7-5	.20	.0		.0		
7-12	.20	.0		.0		
7-24	.40	.0		.0		

NOTE: Notify site manager when sump levels exceel 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)	ME
9-7-11	.10	.0		.0		
9-13	.10	.0		.0		
9-21	.0	.0		.0		
9-29	.0	.0		.0		
10-3	.0	.0		.0		
10-11	.0	.0		.0		
10-17	.0	.0		.0		
10-28	.0	.0		.0		
11-3	.0	.0		.0		
11-7	.0	.0		.0		
11-15	.0	.0		.0		
11-22	.10	.0		.0		
11-29	.0	.0		.0		
12-6	.10	.0		.0		
12-13	.10	.0		.0		
12-20	.30	.0		.0		
12-29	.0	.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)	ME
1-4-11	2.30	.0		10.88	450	
1-10-11	1.80	.0		.10		
1-18	.30	.0		.10		
1-24	.80	.0		.10		
1-31	.20	.0		.10		
2-9	.10	.0		.10		
2-14	.10	.0		.10		
2-22	.80	.0		12.80	1,100	
3-2	.40	.0		.20		
3-9	.90	.0		1.30		
3-15	.20	.0		9.80	780	
3-23	1.70	.0		15.80		
3-30	2.00	.0		15.80	1,200	
4-5	1.90	.0		.10		
4-12	2.20	.0		.10		
4-18	2.30	.0		.10		
4-26	.60	.0		.10		
5-3	.40	.0		.10		
5-10	.50	.0		.10		
5-18	.30	.0		.10		
5-31	.30	.0		.10		
6-7	.0	.0		.0		
6-14	.20	.0		.0		
6-21	.20	.0		.0		
6-30	.30	.0		.0		
7-5	.50	.0		.0		
7-12	.60	.0		.0		
7-26	.30	.0		.0		
7-30	.0	.0		.0		
8-6	.0	.0		.0		
8-13	.10	.0		.0		
8-24	.10	.0		.0		
8-31	.0	.0		.0		

NOTE: Notify site manager when sump levels exceed 1 foot.

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)	ME
7-5	.30		.10	40	.10		.50	.0		.0		
7-12	.40		.10	.20	.10		.20	.0		.0		
7-26	.60		.10	70	.10		.10	.0		.0		
8-30	.20		.10	.40	.10		.20	.0		.0		
9-6	.40		.10	.20	.10		10	.0		.0		
9-13	.40		.10	.30	.10		10	.0		.0		
8-24	.40		.10	.20	.10		.10	.0		.0		
8-31	.40		.10	.20	.10		.10	.0		.0		
9-7	.40		.10	.20	.10		.10	.0		.0		
9-13	.40		.10	.30	.10		.10	.0		.0		
9-21	.40		.10	.20	.10		.10	.0		.0		
9-29	.50		.10	.20	.10		.10	.0		.0		
10-3	.40		.10	.20	.10		.0	.0		.0		
10-11	.40		.10	.50	.10		.40	.0		.0		
10-17	.70		.10	.80	.10		.70	.0		.0		
10-29	.50		.10	.60	.10		.10	.0		.0		
11-3	.40		.10	.50	.10		.40	.0		.0		
11-7	.50		.10	.30	.10		.80	.0		.0		
11-15	.60		.10	.50	.10		.30	.0		.0		
11-22	.20		.10	.20	.10		.40	.0		.0		
11-29	.40		.10	.30	.10		.10	.0		.0		
12-4	.40		.10	.20	.10		.10	.0		.0		
12-13	.40		.10	.30	.10		.20	.0		.0		
12-20	.50		.10	.30	.10		.30	.0		.0		
12-29	.40		.10	.30	.10		.0	.0		.0		

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)	ME
12-1-11	.10	.10		.20	.10		
12-2	.10	.10		.30	.10		
12-5	.20	.10		.0	.10		
12-6	.20	.10		.0	.10		
12-7	.20	.10		.0	.10		
12-8	.20	.10		.0	.10		
12-9	.20	.10		.0	.10		
12-12	.20	.10		.0	.10		
12-13	.20	.10		.0	.10		
12-14	.20	.10		.0	.10		
12-15	.20	.10		.0	.10		
12-16	.30	.10		.0	.10		
12-19	.20	.10		.0	.10		
12-20	.20	.10		.0	.10		
12-21	.20	.10		.10	.10		
12-22	.20	.10		.10	.10		
12-23	.20	.10		.0	.10		
12-24	.10	.10		.0	.10		
12-27	.20	.10		.0	.10		
12-28	.20	.10		.0	.10		
12-30	.20	.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)	MG
11-1-11	.20	.10		.10	.10		
11-2	.20	.10		.10	.10		
11-3	.20	.10		.10	.10		
11-4	.10	.10		.10	.10		
11-5	10	10		.0	.10		
11-7	.20	.10		.0	.0		
11-8	.20	.10		.0	.10		
11-9	.20	.10		.0	.10		
11-10	.20	.10		.0	.10		
11-11	.30	.10		.10	.10		
11-14	.10	.10		.10	.10		
11-15	.10	.10		.20	.10		
11-16	.10	.10		.0	.10		
11-17	.20	.10		.0	.10		
11-18	.20	.10		.10	.10		
11-21	.20	.10		.0	.10		
11-22	.30	.10		.0	.10		
11-23	.30	.10		.10	.10		
11-25	.10	.10		.10	.10		
11-28	.10	.10		.10	.10		
11-29	.10	.10		.20	.10		
11-30	.10	.10		.20	.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)	ME
10-3-11	.20	.10		.0	.10		
10-4	.30	.10		.10	.10		
10-5	.20	.10		.10	.10		
10-6	.30	.10		.30	.10		
10-7	.40	.10		.30	.10		
10-10	.20	.10		.40	.10		
10-11	.40	.10		.20	.10		
10-12	.30	.10		.30	.10		
10-13	.30	.10		.10	.10		
10-14	.20	.10		.10	.10		
10-17	.30	.10		.10	.10		
10-18	.20	.10		.20	.10		
10-19	.20	.10		.30	.10		
10-20	.30	.10		.20	.10		
10-21	.30	.10		.30	.10		
10-24	.10	.10		.10	.10		
10-25	.10	.10		.10	.10		
10-26	.10	.10		.20	.10		
10-27	.10	.10		.0	.10		
10-28	.10	.10		.0	.10		
10-31	.10	.10		.10	.10		

NOTE: Notify site manager when sump levels exceed <u>1 foot</u>.

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)	ME
9-1-11	.30	.10		.0	.10		
9-2	.20	.10		.0	.10		
9-5	.20	.10		.0	.10		
9-6	.20	.10		.0	.10		
9-7	.20	.10		.0	.10		
9-8	.20	.10		.10	.10		
9-9	.20	.10		.0	.10		
9-12	.20	.10		.0	.10		
9-13	.20	.10		.0	.10		
9-14	.20	.10		.0	.10		
9-15	.20	.10		.0	.10		
9-16	.30	.10		.10	.10		
9-19	.20	.10		.10	.10		
9-20	.20	.10		.10	.10		
9-21	.20	.10		.10	.10		
9-22	.20	.10		.10	.10		
9-23	.20	.10		.10	.10		
9-26	.20	.10		.20	.10		
9-27	.30	.10		.0	.10		
9-28	.20	.10		.0	.10		
9-29	.20	.10		.0	.10		
9-30	.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)	ME
8-1-11	.30	.10		.10	.10		
8.2	.30	.10		.10	.10		
8-3	.30	.10		.20	.10		
8-4	.30	.10		.20	.10		
8-5	.40	.10		.20	.10		
8-8	.40	.10		.30	.10		
8-9	.20	.10		.30	.10		
8-10	.20	.10		.30	.10		
8-11	.20	.10		.0	.10		
8-12	.20	.10		.0	.10		
8-15	.20	.10		.0	.10		
8-16	.20	.10		.0	.10		
8-17	.20	.10		.0	.10		
8-18	.30	.10		.10	.10		
8-19	.30	.10		.0	.10		
8-22	.30	.10		.0	.10		
8-23	.10	.10		.10	.10		
8-24	.20	.10		.0	.10		
8-25	.20	.10		.0	.10		
8-26	.20	.10		.0	.10		
8-29	.20	.10		.0	.10		
8-30	.30	.10		.0	.10		
8-31	.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)	ME
7-[illegible]	.30	.10		.20	.10		
7-4	.50	.10		.30	.10		
7-5	.20	.10		.10	.10		
7-6	.20	.10		.10	.10		
7-7	.20	.10		.10	.10		
7-8	.30	.10		.30	.10		
7-11	.40	.10		.20	.10		
7-12	.30	.10		.0	.10		
7-13	.50	.10		.0	.10		
7-14	.40	.10		.10	.10		
7-15	.30	.10		.10	.10		
7-18	.30	.10		.10	.10		
7-19	.30	.10		.20	.10		
7-20	.20	.10		.20	.10		
7-21	.30	.10		.20	.10		
7-22	.30	.10		.30	.10		
7-25	.40	.10		.0	.10		
7-26	.50	.10		.0	.10		
7-27	.30	.10		.10	.10		
7-28	.20	.10		.10	.10		
7-29	.20	.10		.10	.10		

NOTE: Notify site manager when sump levels exceed 1 foot.

Recology Hay Road
LCRS Test
Sump: 3.3

Date/Time	Gallons Injected	Depth of Water	
10/18/11 9:00A	3500	.10	
10/18/11 2:30P	0	.10	
10/19/11 10:00A	0	.30	
10/19/11 3:30P	0	.40	
10/20/11 8:00A	~~[illegible]~~ 0	.20	+/-2500 removed
10/20/11 3:00P	0	.20	+/- 500 removed

Recology Hay Road
LCRS Test
Sump: 5.2

Date/Time	Gallons Injected	Depth of Water	
7/5/2011 10:00A	3500	.30	
7/5 3:00P	0	.50	
~~7/6~~ 7/6/11 10:00A	0	.70	+/- 2000 removed
7/6/11 3:30P	0	.40	+/- 1000 removed
7/7/11 9:00AM	0	.30	

Recology Hay Road
LCRS Test
Sump: 9.1A

Date/Time	Gallons Injected	Depth of Water
10/3/11 9:00 AM	3500	.20
10/3 2:00 PM	0	.30
10/4 9:00 AM	0	.50
10/4 1:30 PM	0	.70
10/5 9:00 AM	0	.20

+
+/- 3000 removed

Recology Hay Road
LCRS Test
Sump: 4.1/4.2

Date/Time	Gallons Injected	Depth of Water	
8/22/11 8:00A	3500	.10	
8/22 4:00P	0	.30	
8/23 9:00A	0	.50	
8/23 1:30P	0	.60	
8/24 9:15A	0	.40	+/- 2000 removed
8/24 3:45P	0	.20	+/- 1000 removed

Recology Hay Road
LCRS Test
Sump: 11.1

Date/Time	Gallons Injected	Depth of Water	
9-7-11 9:00A	3500	.40	
9-7-11 4:15P	0	.50	
9-8-11 - 9:30A	0	.70	
9-8-11 - 4:00P	0	.80	
9-9-11 9:30A	0	.60	+/- 2000 removed
9-9-11 4:45P	0	.40	+/- 2000 removed

Recology Hay Road
LCRS Test
Sump: 5.1A

Date/Time	Gallons Injected	Depth of Water	
7-12-11 10:00A	3500	.40	
7-12-11 4:30P	0	.50	
7-13-11 11:00A	0	.70	
7-13-11 4:15P	0	.80	
7-14-11 10:00A	0	.60	+/- 2000 removed
7-14-11-3:45P	0	.50	+/- 1000 removed

Recology Hay Road
LCRS Test
Sump: 3.1

Date/Time	Gallons Injected	Depth of Water	
9/7/2011 8:30A	3500	.20	
9/7/2011 4:30P	0	.30	
9/8/2011 10:00A	0	.50	
9/8/2011 3:30P	0	.60	
9/9/2011 10:00A	0	.60	
9/9 3:00P	0	.40	+/- 1500 removed
9/12 8:00A	0	.10	+/- 2000 removed

RECOLOGY HAY ROAD

DAILY OBSERVATION

Month December 2011

Inspector JT

OBSERVATION	WEEK OF 12-4-11	WEEK OF 12-11	WEEK OF 12-18	WEEK OF 12-25	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	waterfowl	water Fowl	Water Fowl	
Wind direction and estimated velocity	N/O	N 4/3	N-25	S/W 5	
Flow reate and total precipitation	0	1/4"	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					
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 November 2011 Inspector JT

OBSERVATION	WEEK OF	WEEK OF	WEEK OF	WEEK OF	WEEK OF
1. Receving waters	10/31/11	11-6	11-13	11-20	11-27
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	N-25	S/W 5	S/W 25	S/W 10	N to 45
Flow reate and total precipitation	0	0	1/2"	1/2"	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 October 2011

Inspector JT

OBSERVATION	10-2 WEEK OF	10-9 WEEK OF	10-16 WEEK OF	10-23 WEEK OF	10-30 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 15	S/W 5	N-3 S/W 10	N 20 S/W 5	N-15
Flow reate and total precipitation	1 1/4"	1/10"	0	0	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 Sept-2011

Inspector JT

OBSERVATION	WEEK OF 9-4-11	WEEK OF 9-11	WEEK OF 9-18	WEEK OF 9-25	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	S/w15	S/w10	S/w20	S/w10	
Flow reate and total precipitation	~~0~~	~~0~~	0	9-25 TRACE	
2. Perimeter of Unit					
Evidence of liquid leaving or entering the unit	NO	NO	NO	NO	
Evidence of odors					
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 Aug. 2011

Inspector JT

OBSERVATION	WEEK OF 8-8-11	WEEK OF 8-15-11	WEEK OF 8-21	WEEK OF 8-28	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	S/W 10	S/W 20	S/W 10	S/W 10	
Flow reate and total precipitation	Ø	Ø	Ø	Ø	
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 July 2011 Inspector JT

OBSERVATION	WEEK OF 7-3	WEEK OF 7-10	WEEK OF 7-17	WEEK OF 7-24	WEEK OF 7-31
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 25	S/W 10	calm	S/W 15	S/W 20
Flow reate and total precipitation	0	0	0	0	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				

Leachate Pumping Data
Recology Hay Road
Second Semi-Annual 2011

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
July Total	86,000	2700	7,900	12,000	8000	0	0	0	0	0	3000	0	0	6000	0
Gallons per Day	2774	87	255	387	258	0	0	0	0	0	97	0	0	194	0
Depth of Water	1.80	0.40	0.50	0.80	0.60	0.60	0.50	0.30	0.60	0.40	0.50	0.60	0.40	0.70	0.50
August Total	91,000	1500	14,200	6000	5300	11000	3000	3000	0	0	3000	3000	5500	0	3000
Gallons per Day	2936	48	458	194	171	355	97	97	0	0	97	97	177	0	97
Depth of Water	1.8	0.20	0.30	0.70	0.20	0.60	0.40	0.30	0.40	0.30	0.10	0.10	0.30	0.80	0.40
September Total	95000	2700	11100	25,000	6700	10000	4500	2500	6000	6000	3000	8000	1500	4300	0
Gallons per Day	3167	90	370	833	223	333	150	83	200	200	100	267	50	143	0
Depth of Water	1.8	0.20	0.40	0.80	0.50	0.60	0.30	0.10	0.50	0.30	0.10	0.10	0.30	0.80	0.30
October Total	15000	5600	13100	16000	0	0	28000	3000	0	0	7000	6000	0	1500	4000
Gallons per Day	484	181	423	516	0	0	903	97	0	0	226	194	0	48	129
Depth of Water	1.9	0.20	0.40	0.80	0.80	0.80	0.40	0.30	0.70	0.80	0.70	0.00	0.40	0.50	0.10
November Total	84500	1500	9,200	5000	2000	22500	8000	3000	3000	3000	4000	7000	2000	2000	0
Gallons per Day	2817	50	307	167	67	750	267	1000	100	100	133	233	67	67	0
Depth of Water	2.00	0.50	0.60	0.80	0.70	0.80	0.30	0.20	0.60	0.50	0.80	0.10	0.50	0.70	0.40
December Total	17000	4700	11,100	1,500	0	3000	5,000	4000	0	0	5000	5200	8500	5000	0
Gallons per Day	548	152	358	48	0	97	161	129	0	0	161	167	274	161	0
Depth of Water	2.90	0.40	0.50	0.70	0.80	0.80	0.30	0.30	0.50	0.30	0.30	0.30	0.40	0.40	0.20

Depths to water in feet

	Jul	Aug	Sept	Oct	Nov	Dec	Total
GR-22	96,000	100,500	105,000	87,000	107,000	97,000	592,500

Operations Data

Recology Hay Road

Second Semi-Annual 2011

Asbestos Disposal	10,280.51 tons in DM-1
Refuse Disposal	117,068.57 tons in DM's 3.2 and 3.3
Lowest waste placement	33.00 ft msl

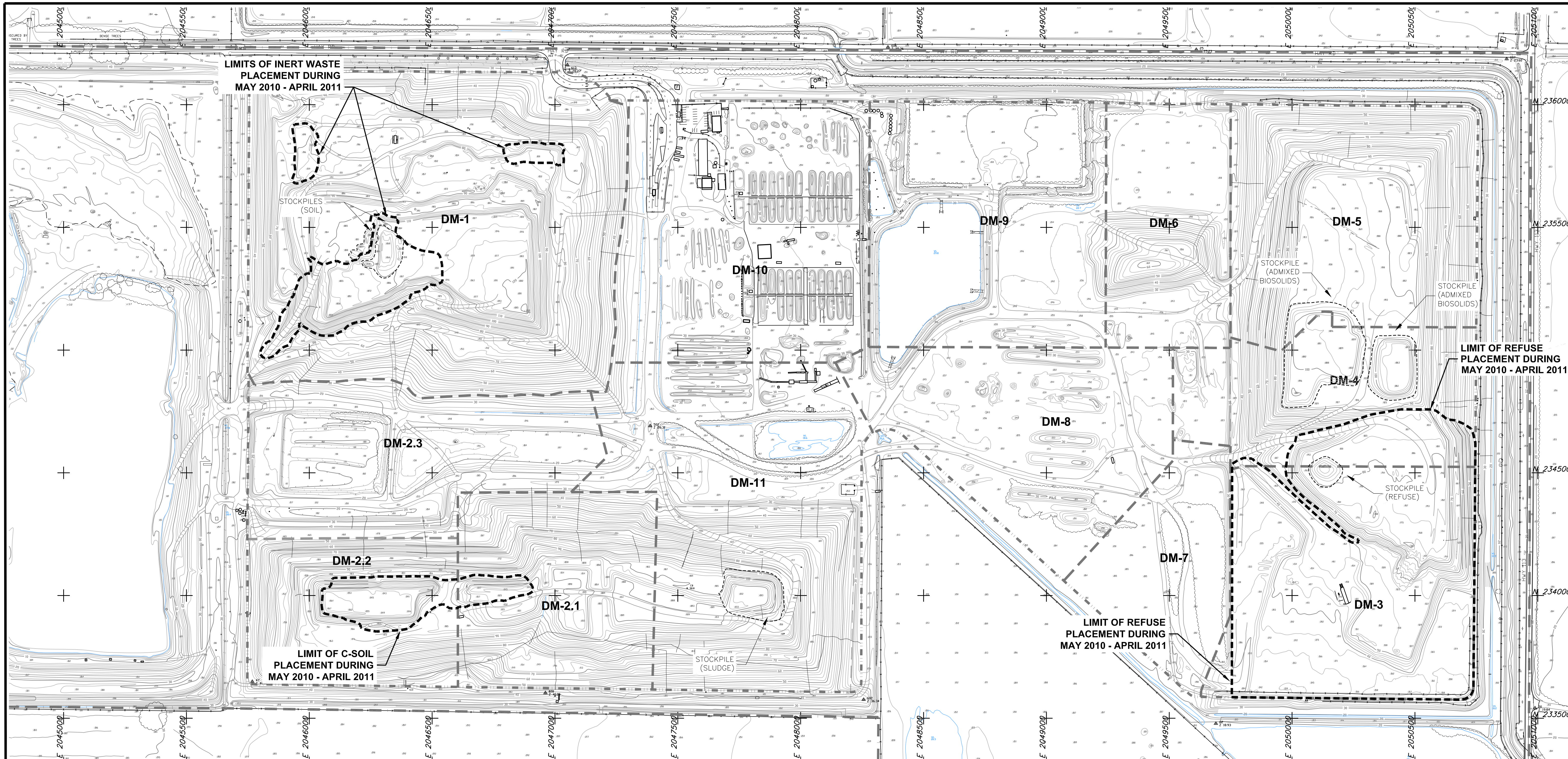
Waste Pile Data

Type of Material	dewatered sludges
Quantity Discharged	17,983 tons or 19,981 cubic yards
Moisture Content	80-85 percent
Capacity Remaining	65%

Land Treatment Unit

Initial Depth	8-12 inches
Number of lifts	July lift 2 lifts
	August 2 lifts
	September 2 lifts
	October 1 lift
Quantity Discharged	July - 10,544 tons or 11,715 cubic yards
	August - 10,544 tons or 11,715 cubic yards
	September - 10,544 tons or 11,715 cubic yards
	October - 5272 tons or 5857 cubic yards

Location	Western portion of LTU and top of Disposal Module 5
Quantity Removed	July- 2481 tons or 2757 cubic yards
	August –2481 tons or 2757 cubic yards
	September- 2481 tons or 2757 cubic yards
	October – 1240 tons or 1378 cubic yards
Moisture Content	10-15 percent
Disposition	Stockpiled
Final Sludge Depth	0 inches
Area Covered	2 acres
Total Drying cycles	7
Cumulative LTU	2 acres



NOTES

1) TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY AERO-GEODETIC CORP. DATE OF PHOTOGRAPHY: APRIL 26, 2011.

LEGEND

- PROPERTY LINE
- LANDFILL LIMIT
- DISPOSAL MODULE LIMIT
- STOCKPILE BOUNDARY
- LIMITS OF CUT AND FILL

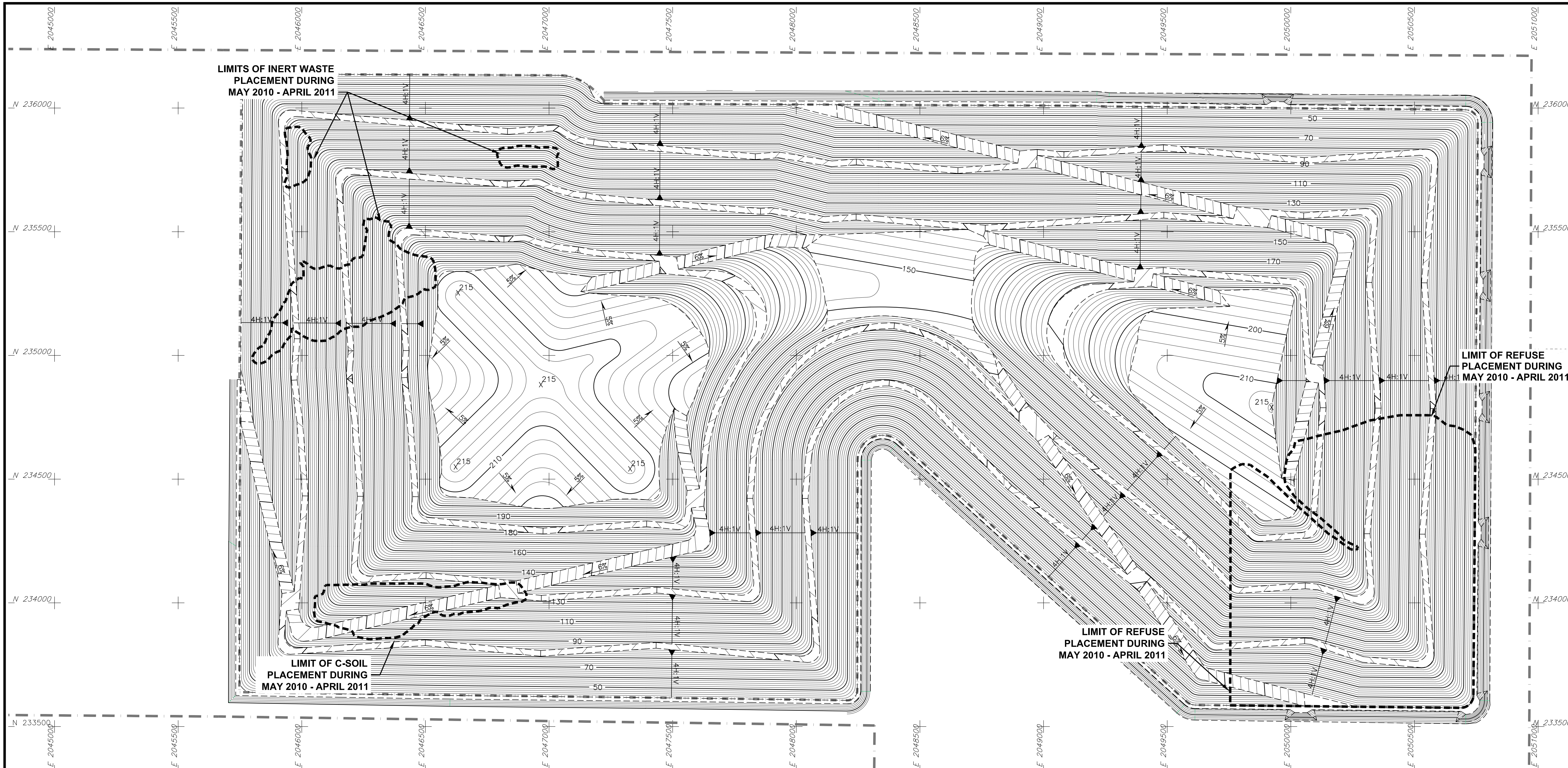
200 0 200
SCALE FEET

Golder Associates
Sunnyvale, California

PROJECT No. 053744411 FILE No. RHR Cap2011 CADD kmm DATE 7/29/11

ANNUAL FILL AREAS

RECOLOGY HAY ROAD



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
LIMITS OF CUT AND FILL
2H:1V SLOPE INDICATOR
2% GRADE INDICATOR

200 0 200
SCALE FEET

Golder Associates
Sunnyvale, California

PROJECT No. 053744411 FILE No. RHR Cap2011 CADDkmm DATE 06/08/11

Drawing file: 11397326 RHR Cap2011 Dwgs-Draft.dwg Jul 29, 2011 - 1:27pm

ANNUAL FILL AREAS AND SITE FINAL GRADING PLAN

RECOLOGY HAY ROAD

APPENDIX B

CERTIFIED ANALYTICAL REPORT COVER SHEETS (CARS ON ATTACHED CD)

12/26/2011
Mr. Steve Giacomini
Golder Associates, Inc.
425 Lakeside Drive

Sunnyvale CA 94085

Project Name: Recology - Hay Rd
Project #: 053-7444-11
Workorder #: 1112415

Dear Mr. Steve Giacomini

The following report includes the data for the above referenced project for sample(s) received on 12/19/2011 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

Kyle Vagadori
Project Manager

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 PST

WORK ORDER #: 1112415

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 #**	053-7444-11 Recology - Hay Rd
DATE RECEIVED:	12/19/2011	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/26/2011		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	PL-2.2A	Modified TO-15	0.4 "Hg	5 psi
02A	PL-3.3	Modified TO-15	0.4 "Hg	5 psi
03A	PL-5.1A	Modified TO-15	0.0 "Hg	5 psi
04A	LD-3.1	Modified TO-15	0.1 psi	5 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda L. Freeman DATE: 12/26/11

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# 1112415

Four 6 Liter Summa Canister samples were received on December 19, 2011. 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

The reported results for Acetone in samples PL-3.3, PL-5.1A, and LD-3.1 may be biased high due to co-elution with a non target compound with similar characteristic ions. Both the primary and secondary ions for Acetone exhibited potential interference.

All Quality Control Limit exceedences 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

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: PL-2.2A

Lab ID#: 1112415-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	8.5	3.4	42
Freon 114	0.68	1.9	4.8	13
Acetone	2.7	10	6.5	24
Tetrahydrofuran	0.68	2.0	2.0	5.8
Toluene	0.68	3.4	2.6	13
m,p-Xylene	0.68	4.2	3.0	18
o-Xylene	0.68	1.4	3.0	6.2
4-Ethyltoluene	0.68	0.75	3.3	3.7
1,2,4-Trimethylbenzene	0.68	2.1	3.3	10

Client Sample ID: PL-3.3

Lab ID#: 1112415-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	26	3.4	130
Freon 114	0.68	1.2	4.8	8.8
Chloroethane	2.7	5.4	7.2	14
Freon 11	0.68	130	3.8	730
Ethanol	2.7	4.3	5.1	8.1
Acetone	2.7	40	6.5	96
Methylene Chloride	0.68	3.7	2.4	13
Hexane	0.68	3.6	2.4	12
2-Butanone (Methyl Ethyl Ketone)	2.7	3.7	8.0	11
Tetrahydrofuran	0.68	1.1	2.0	3.2
Cyclohexane	0.68	1.7	2.3	5.8
2,2,4-Trimethylpentane	0.68	1.2	3.2	5.6
Benzene	0.68	0.79	2.2	2.5
Heptane	0.68	0.68	2.8	2.8
Toluene	0.68	3.0	2.6	11
m,p-Xylene	0.68	2.6	3.0	11
o-Xylene	0.68	1.0	3.0	4.5

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: PL-3.3

Lab ID#: 1112415-02A

1,2,4-Trimethylbenzene	0.68	1.6	3.3	8.1

Client Sample ID: PL-5.1A

Lab ID#: 1112415-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.67	18	3.3	91
Freon 114	0.67	3.5	4.7	24
Vinyl Chloride	0.67	9.4	1.7	24
Acetone	2.7	11	6.4	27
Hexane	0.67	3.7	2.4	13
1,1-Dichloroethane	0.67	0.86	2.7	3.5
Cyclohexane	0.67	36	2.3	120
2,2,4-Trimethylpentane	0.67	17	3.1	78
Benzene	0.67	0.71	2.1	2.3
Heptane	0.67	1.1	2.7	4.5
Trichloroethene	0.67	1.6	3.6	8.8
Tetrachloroethene	0.67	15	4.5	100

Client Sample ID: LD-3.1

Lab ID#: 1112415-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.66	16	3.3	81
Freon 114	0.66	2.0	4.6	14
Freon 11	0.66	24	3.7	130
Acetone	2.7	23	6.3	54
Hexane	0.66	2.0	2.3	7.0
Tetrahydrofuran	0.66	2.3	2.0	6.7
Cyclohexane	0.66	1.6	2.3	5.5
2,2,4-Trimethylpentane	0.66	3.8	3.1	18
Heptane	0.66	2.1	2.7	8.7
Toluene	0.66	3.4	2.5	13

Laboratory Services Since 1989

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

Client Sample ID: LD-3.1

Lab ID#: 1112415-04A

Tetrachloroethene	0.66	7.2	4.5	49
Ethyl Benzene	0.66	0.80	2.9	3.5
m,p-Xylene	0.66	4.2	2.9	18
o-Xylene	0.66	1.6	2.9	6.9
1,2,4-Trimethylbenzene	0.66	2.0	3.3	9.9

Golder Associates
CHAIN OF CUSTODY

1112415

Page 1 of 1

Quotation No.

PROJECT NO.: 053-7444-11

SITE NAME: Regency - Hwy 14

SAMPLER(S): K. McCarthy (printed) (signature)

CONTRACT LABORATORY: Air Toxics

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	TO-15	Cont. Qty.	Remarks
						Type/Vol.	Summa 6-L		
						Filter	Y		
						Preserv	None		
01A PL-2.2A		12/19/11	1200	A			1	1	Report Trace
02A PL-3.3			1245				1	1	
03A PL-5.1A			1350				1	1	
04A LO-3.1			1330				1	1	

Hand Del

CUSTODY SEAL INTACT? Y N NONE TEMP N/A

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]		12/19/11 1600
	[signature] ATL	12/19/11 1600

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

Date of Report: 08/24/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1113000
Invoice ID:	B106211

Enclosed are the results of analyses for samples received by the laboratory on 8/11/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

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Executive Summary - Detections

Constituent		Result	PQL	MDL	Units	Method	Lab Quals
1113000-01	**Hay Road LF, G-13, G-13, 8/9/2011 1:45:00PM**						
Nitrate/Nitrite as N		0.67	0.10	0.010	mg/L	EPA-353.2	
1113000-02	**Hay Road LF, G-13, G-13, 8/9/2011 2:05:00PM**						
Nitrate/Nitrite as N		0.70	0.10	0.010	mg/L	EPA-353.2	
1113000-03	**Hay Road LF, 4B, 4B, 8/9/2011 4:00:00PM**						
Nitrate/Nitrite as N		7.3	0.50	0.050	mg/L	EPA-353.2	A01
1113000-04	**Hay Road LF, 4B, 4B, 8/10/2011 12:25:00PM**						
Nitrate/Nitrite as N		7.4	0.50	0.050	mg/L	EPA-353.2	A01

Chain of Custody and Cooler Receipt Form for 1113000 Page 1 of 2

Golder Associates 11-13000

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1
Quotation No.

PROJECT NO.: 053-7444-11
SITE NAME: Recology Hay Rd
SAMPLER(S): R. McCarthy / S. Giacomin (printed) (signature)
CONTRACT LABORATORY: BC LABS
TURN-AROUND TIME: Standard

EDD required? ☒ Yes ☐ No
EDF required? ☒ Yes ☐ No

ANALYSES: NO_3+NO_2-N

Container Info: Type/Vol.: PE 250 / Filter: N / Preserv.: H_2SO_4

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	NO_3+NO_2-N	Cont. Qty.	Remarks
G-13	-1	8/9/11	1345	water	/	1	1	Report [illegible]
G-13	-2	8/9/11	1405		/	1	1	
4B	-3	8/9/11	1600		/	1	1	
4B	-4	8/10/11	1225		/	1	1	

CHK BY | DISTRIBUTION | SUB-OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	[signature]	8-11-11 1745
Relinquished by: (signature)	Received by: (signature) [signature]	Date/Time: 8-11-11 2300
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

Date of Report: 09/28/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1115051
Invoice ID:	B108250

Enclosed are the results of analyses for samples received by the laboratory on 9/16/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

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Executive Summary - Detections

Constituent		Result	PQL	MDL	Units	Method	Lab Quals
1115051-01	**Hay Road - Recology, G-4R, G-4R, 9/15/2011 12:02:00PM**						
Nitrate/Nitrite as N		9.9	0.50	0.050	mg/L	EPA-353.2	A01
1115051-02	**Hay Road - Recology, G-18, G-18, 9/15/2011 12:47:00PM**						
Nitrate/Nitrite as N		8.1	0.50	0.050	mg/L	EPA-353.2	A01
1115051-03	**Hay Road - Recology, G-21, G-21, 9/15/2011 11:10:00AM**						
Nitrate/Nitrite as N		3.0	0.10	0.010	mg/L	EPA-353.2	
1115051-04	**Hay Road - Recology, G-22, G-22, 9/15/2011 10:45:00AM**						
Nitrate/Nitrite as N		21	2.5	0.25	mg/L	EPA-353.2	A01
1115051-05	**Hay Road - Recology, G-23, G-23, 9/15/2011 11:37:00AM**						
Nitrate/Nitrite as N		1.9	0.10	0.010	mg/L	EPA-353.2	

Chain of Custody and Cooler Receipt Form for 1115051 Page 1 of 2

Golder Associates # 11-15051

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1
Quotation No. ____

PROJECT NO.: 053-7444-11 PH 1
SITE NAME: Hay Rd-Recology
SAMPLER(S): M. Todi (printed) (signature)
CONTRACT LABORATORY: BC Labs
TURN-AROUND TIME: Standard

EDD required? ☒ Yes ☐ No
EDF required? ☒ Yes ☐ No

ANALYSES: Nitrate+Nitrite as N; TBA (8260)

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	Nitrate+Nitrite as N	TBA (8260)	Cont. Qty.	Remarks
						Type/Vol.	DE 500-1	VOA		
						Filter	N	N		
						Preserv.	H2SO4	HCL		
G-42	-1	9/15/11	1202	W			1		1	Report trace
G-18	-2		1247				1		1	
G-21	-3		1110				1		1	
G-22	-4		1045				1		1	
G-23	-5		1137				1		1	
G-29	-6		1214					3	3	
G-29	-7		1329					3	3	

CHK BY: [signature] DISTRIBUTION: MA JR SUB-OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	[signature] PBINS BCL	9/15/11 1605
[signature] PBINS BCL VIA GSO 9/15/11 1705	[signature]	9/16 8:15

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

Date of Report: 01/16/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1117403
Invoice ID:	B110804

Enclosed are the results of analyses for samples received by the laboratory on 10/20/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

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Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-01 Hay Road LF, G-28, G-28, 10/18/2011 12:05:00PM						
Dissolved Calcium	54	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	140	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	450	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.95	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	640	8.2	8.2	mg/L	SM-2320B	
Chloride	470	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	1.6	0.10	0.010	mg/L	EPA-353.2	
Sulfate	410	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2100	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.37	0.20	0.056	mg/L	EPA-351.2	
Dissolved Chromium	0.0019	0.010	0.0010	mg/L	EPA-6010B	J
1117403-02 Hay Road LF, G-25, G-25, 10/18/2011 12:45:00PM						
Dissolved Calcium	71	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	150	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	230	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.1	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	350	8.2	8.2	mg/L	SM-2320B	
Chloride	560	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	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
1117403-03 Hay Road LF, G-16, G-16, 10/18/2011 1:25:00PM						
Dissolved Calcium	86	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	220	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	340	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.1	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	390	8.2	8.2	mg/L	SM-2320B	
Chloride	820	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	4.5	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	360	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2200	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.11	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Chromium	0.0061	0.010	0.0010	mg/L	EPA-6010B	J
1117403-04 Hay Road LF, G-20, G-20, 10/18/2011 2:20:00PM						
Dissolved Calcium	48	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	88	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	170	0.50	0.050	mg/L	EPA-6010B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-04	**Hay Road LF, G-20, G-20, 10/18/2011 2:20:00PM**					
Dissolved Potassium	1.4	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	340	8.2	8.2	mg/L	SM-2320B	
Chloride	280	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.18	0.10	0.010	mg/L	EPA-353.2	
Sulfate	88	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	930	50	50	mg/L	SM-2540C	
Dissolved Chromium	0.0011	0.010	0.0010	mg/L	EPA-6010B	J
1117403-05	**Hay Road LF, G-18, G-18, 10/18/2011 3:25:00PM**					
Dissolved Calcium	72	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	150	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	250	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.1	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	400	8.2	8.2	mg/L	SM-2320B	
Chloride	620	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	8.3	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	140	2.0	0.24	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 Chromium	0.0035	0.010	0.0010	mg/L	EPA-6010B	J
1117403-06	**Hay Road LF, G-17, G-17, 10/19/2011 9:55:00AM**					
Dissolved Calcium	90	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	150	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	220	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.86	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	450	8.2	8.2	mg/L	SM-2320B	
Chloride	490	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.4	0.10	0.010	mg/L	EPA-353.2	
Sulfate	250	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	0.11	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Chromium	0.0015	0.010	0.0010	mg/L	EPA-6010B	J
1117403-07	**Hay Road LF, G-29, G-29, 10/19/2011 10:55:00AM**					
Dissolved Calcium	13	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	46	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	370	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.80	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	680	8.2	8.2	mg/L	SM-2320B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-07 **Hay Road LF, G-29, G-29, 10/19/2011 10:55:00AM**						
Chloride	240	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.085	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	78	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1300	50	50	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.12	0.20	0.056	mg/L	EPA-351.2	J
1117403-08 **Hay Road LF, G-30, G-30, 10/19/2011 11:35:00AM**						
Dissolved Calcium	21	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	59	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	320	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.90	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	600	8.2	8.2	mg/L	SM-2320B	
Chloride	220	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.023	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	150	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1200	50	50	mg/L	SM-2540C	
Dissolved Chromium	0.0014	0.010	0.0010	mg/L	EPA-6010B	J
1117403-09 **Hay Road LF, G-26, G-26, 10/19/2011 12:10:00PM**						
Dissolved Calcium	57	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	120	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	220	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.0	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	460	8.2	8.2	mg/L	SM-2320B	
Chloride	320	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	4.5	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	230	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1400	50	50	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.068	0.20	0.056	mg/L	EPA-351.2	J
1117403-10 **Hay Road LF, G-8, G-8, 10/19/2011 1:40:00PM**						
Dissolved Calcium	95	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	110	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	160	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.84	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate 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	0.42	0.10	0.010	mg/L	EPA-353.2	
Sulfate	83	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1200	50	50	mg/L	SM-2540C	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-10 **Hay Road LF, G-8, G-8, 10/19/2011 1:40:00PM**						
Dissolved Barium	0.48	0.010	0.0012	mg/L	EPA-6010B	
Dissolved Chromium	0.0012	0.010	0.0010	mg/L	EPA-6010B	J
1117403-11 **Hay Road LF, MW-4, MW-4, 10/19/2011 3:05:00PM**						
Dissolved Calcium	76	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	140	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	210	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.87	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	490	8.2	8.2	mg/L	SM-2320B	
Chloride	450	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.88	0.10	0.010	mg/L	EPA-353.2	
Sulfate	120	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1600	50	50	mg/L	SM-2540C	
1117403-12 **Hay Road LF, G-27, G-27, 10/19/2011 3:45:00PM**						
Dissolved Calcium	69	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	74	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	120	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.87	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	330	8.2	8.2	mg/L	SM-2320B	
Chloride	260	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	2.7	0.10	0.010	mg/L	EPA-353.2	
Sulfate	38	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	940	50	50	mg/L	SM-2540C	
Dissolved Chromium	0.0017	0.010	0.0010	mg/L	EPA-6010B	J
1117403-13 **Hay Road LF, G-11R, G-11R, 10/20/2011 11:40:00AM**						
Dissolved Calcium	40	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	52	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	79	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.71	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	320	4.1	4.1	mg/L	SM-2320B	
Chloride	100	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	560	33	33	mg/L	SM-2540C	
1117403-14 **Hay Road LF, G-11M, G-11M, 10/20/2011 12:00:00PM**						
Dissolved Calcium	59	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	57	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	96	0.50	0.050	mg/L	EPA-6010B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-14 **Hay Road LF, G-11M, G-11M, 10/20/2011 12:00:00PM**						
Dissolved Potassium	0.72	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	400	8.2	8.2	mg/L	SM-2320B	
Chloride	110	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	1.6	0.10	0.010	mg/L	EPA-353.2	
Sulfate	29	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	670	33	33	mg/L	SM-2540C	
1117403-15 **Hay Road LF, G-9, G-9, 10/20/2011 1:25:00PM**						
Dissolved Calcium	83	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	100	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	120	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.1	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	630	8.2	8.2	mg/L	SM-2320B	
Chloride	180	1.0	0.13	mg/L	EPA-300.0	A01
Sulfate	18	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1000	50	50	mg/L	SM-2540C	
Dissolved Barium	0.53	0.010	0.0012	mg/L	EPA-6010B	
1117403-16 **Hay Road LF, G-10R, G-10R, 10/20/2011 2:05:00PM**						
Dissolved Calcium	44	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	56	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	82	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.75	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	350	4.1	4.1	mg/L	SM-2320B	
Chloride	110	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	31	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	600	33	33	mg/L	SM-2540C	Z1
1117403-17 **Hay Road LF, 4B, 4B, 10/20/2011 1:40:00PM**						
Vinyl chloride	0.44	1.0	0.12	ug/L	EPA-8260	J
Dissolved Calcium	100	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	220	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	570	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.76	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	800	8.2	8.2	mg/L	SM-2320B	
Chloride	680	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	4.8	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	760	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	3100	100	100	mg/L	SM-2540C	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117403-17 Hay Road LF, 4B, 4B, 10/20/2011 1:40:00PM						
Dissolved Chromium	0.0015	0.010	0.0010	mg/L	EPA-6010B	J

Golder Associates
CHAIN OF CUSTODY

1117403

Page 1 of 2

Quotation No. ______

PROJECT NO.:	SITE NAME:
053-7444-11	Recology · Hay Road

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	EPA 8260 / 8260 Short List	TDS, Cl, SO_4	Carbonate, Bicarbonate, NO_3+NO_2-N, TKN, Ammonia-N	As, Cr, Pb, Ca, Mg, Na, K		NO_3+NO_2-N	As, Cr, Ca, Mg, Na, K				Cont. Qty.	Remarks
					Type/Vol.	40 ml VOA	16oz PE	16oz PE	16oz PE		2oz PE	16oz PE					
					Filter	N	N	N	Y		N	Y					
					Preserv.	HCl	None	H_2SO_4	HNO_3		H_2SO_4	HNO_3					
G-28	-1	10/18/11	1205	W		3	1	1	1							6	REPORT TRACE
G-25	-2	↓	1245	↓		3	1	1	1							6	
G-16	-3		1325			3	1	1	1							6	
G-20	-4		1420			3	1	1	1							6	
G-18	-5		1525			3	1	1	1							6	
G-17	-6	10/19/11	0955			3	1	1	1							6	
G-29	-7	↓	1055			3	1	1	1							6	
G-30	-8		1185			3	1	1	1							6	
G-26	-9		1210			3	1	1	1							6	
G-8	-10		1340			3	1				1	1				6	
MW-4	-11		1505			3	1				1	1				6	
G-27	-12		1545			3	1				1	1				6	
G-11R	-13	10/20/11	1140			3	1				1	1				6	
G-11M	-14	↓	1200			3	1				1	1				6	
G-9	-15		1325			3	1				1	1				6	

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Dickey	10·20·11 1535
Ross Dickey 10·20·11	Gary Bogan	10-20-11 17:30
Gary Bogan 18:30 10-20-11	R. Rueger	10·20·11 ~~18~~ 1830

white: lab copy yellow: project file

R. Rueger 10·20·11 2200 [signature] 10·20·11 2200

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

Golder Associates

Golder Associates
CHAIN OF CUSTODY

11-17403

Page 2 of 2

Quotation No.

PROJECT NO.: 053-7444-11	SITE NAME: Recology - Hay Road
SAMPLER(S): K. McCarthy (printed)	(signature)
CONTRACT LABORATORY: BC Labs	
TURN-AROUND TIME: Standard	

EDD required? ☒ Yes ☐ No

EDF required? ☒ Yes ☐ No

							ANALYSES								
						Container Info	EPA 8260	BJD Short List TDS, Cl, SO4, Carbonate, Bicarbonate	NO3+N2-N, TKN, Ammonia-N	As, Cr, Pb, Ca, Mg, Na, K		NO3+N2-N	As, Cr, Ca, Mg, Na, K		
		Collection				Type/Vol.	40ml VOA	16oz PE	16oz PE	16oz PE		2oz	16oz PE		
						Filter	N	N	N	Y		N	Y		
Sample I.D.	Lab I.D.	Date	Time	Matrix	Depth	Preserv.	HCL	None	H_2SO_4	HNO_3		H_2SO_4	HNO_3	Cont. Qty.	Remarks
G-10R	-16	10/20/11	1405	W			3	1				1	1	6	Report Trace
4B	-17	10/20/11	1340	W			3	1				1	1	6	

CHK BY: MRM2 DISTRIBUTION: SUB-OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
(signature)	Ross Dickey	10-20-11 1535
Ross Dickey 10-20-11 1730	Gary Bogen	10-20-11 1730
Gary Bogen 10-20-11	R C (signature)	10-20-11 1830

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

10-20-11 2200 10-20-11 2200

Date of Report: 11/14/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1117523
Invoice ID:	B111264

Enclosed are the results of analyses for samples received by the laboratory on 10/24/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117523-01 **Hay Road LF, LW-1, LW-1, 10/19/2011 1:20:00PM**						
Benzene	3.4	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	25	1.0	0.093	ug/L	EPA-8260	
Chloroethane	0.15	1.0	0.14	ug/L	EPA-8260	J
1,2-Dichlorobenzene	1.2	1.0	0.072	ug/L	EPA-8260	
1,4-Dichlorobenzene	3.3	1.0	0.062	ug/L	EPA-8260	
cis-1,2-Dichloroethene	0.95	1.0	0.085	ug/L	EPA-8260	J
Ethylbenzene	4.1	1.0	0.098	ug/L	EPA-8260	
Methyl t-butyl ether	0.86	1.0	0.11	ug/L	EPA-8260	J
Naphthalene	1.1	1.0	0.36	ug/L	EPA-8260	
n-Propylbenzene	0.34	1.0	0.11	ug/L	EPA-8260	J
Toluene	3.2	1.0	0.093	ug/L	EPA-8260	
1,2,4-Trimethylbenzene	0.71	1.0	0.12	ug/L	EPA-8260	J
1,3,5-Trimethylbenzene	0.15	1.0	0.12	ug/L	EPA-8260	J
Vinyl chloride	3.2	1.0	0.12	ug/L	EPA-8260	
Total Xylenes	6.5	1.0	0.36	ug/L	EPA-8260	
Acetone	30	10	4.6	ug/L	EPA-8260	
t-Butyl alcohol	460	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	0.96	0.50	0.23	ug/L	EPA-8260	
2-Butanone	17	10	2.5	ug/L	EPA-8260	
4-Methyl-2-pentanone	2.6	10	2.1	ug/L	EPA-8260	J
Dissolved Calcium	74	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	110	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	270	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	15	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	2400	8.2	8.2	mg/L	SM-2320B	
Chloride	190	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	0.92	1.0	0.12	mg/L	EPA-300.0	J
Total Dissolved Solids @ 180 C	1400	200	200	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	420	25	7.0	mg/L	EPA-351.2	A01
Ammonia as N	430	20	10	mg/L	EPA-350.1	A01
1117523-02 **Hay Road LF, LW-3, LW-3, 10/19/2011 2:10:00PM**						
Benzene	4.2	1.0	0.083	ug/L	EPA-8260	
n-Butylbenzene	0.14	1.0	0.11	ug/L	EPA-8260	J
Chlorobenzene	0.56	1.0	0.093	ug/L	EPA-8260	J
1,2-Dichlorobenzene	0.52	1.0	0.072	ug/L	EPA-8260	J
1,4-Dichlorobenzene	11	1.0	0.062	ug/L	EPA-8260	
1,1-Dichloroethane	0.19	1.0	0.11	ug/L	EPA-8260	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117523-02 **Hay Road LF, LW-3, LW-3, 10/19/2011 2:10:00PM**						
1,2-Dichloroethane	0.40	1.0	0.17	ug/L	EPA-8260	J
cis-1,2-Dichloroethene	0.52	1.0	0.085	ug/L	EPA-8260	J
trans-1,2-Dichloroethene	0.15	1.0	0.15	ug/L	EPA-8260	J
1,2-Dichloropropane	0.19	1.0	0.13	ug/L	EPA-8260	J
Ethylbenzene	18	1.0	0.098	ug/L	EPA-8260	
Methyl t-butyl ether	1.5	1.0	0.11	ug/L	EPA-8260	
Naphthalene	20	1.0	0.36	ug/L	EPA-8260	
n-Propylbenzene	0.60	1.0	0.11	ug/L	EPA-8260	J
Styrene	0.80	1.0	0.068	ug/L	EPA-8260	J
Toluene	5.3	1.0	0.093	ug/L	EPA-8260	
Trichloroethene	0.090	1.0	0.085	ug/L	EPA-8260	J
1,2,4-Trimethylbenzene	4.9	1.0	0.12	ug/L	EPA-8260	
1,3,5-Trimethylbenzene	1.2	1.0	0.12	ug/L	EPA-8260	
Vinyl chloride	2.0	1.0	0.12	ug/L	EPA-8260	
Total Xylenes	22	1.0	0.36	ug/L	EPA-8260	
Acetone	17	10	4.6	ug/L	EPA-8260	
t-Butyl alcohol	290	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	0.98	0.50	0.23	ug/L	EPA-8260	
1,4-Dioxane	69	100	42	ug/L	EPA-8260	J
2-Butanone	2.6	10	2.5	ug/L	EPA-8260	J
Dissolved Calcium	55	0.50	0.090	mg/L	EPA-6010B	A01
Dissolved Magnesium	230	0.25	0.080	mg/L	EPA-6010B	A01
Dissolved Sodium	3300	2.5	0.25	mg/L	EPA-6010B	A01
Dissolved Potassium	610	5.0	0.50	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	4100	8.2	8.2	mg/L	SM-2320B	
Chloride	6100	25	3.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.045	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	24	50	6.0	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	14000	1000	1000	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	660	50	14	mg/L	EPA-351.2	A01
Ammonia as N	720	20	10	mg/L	EPA-350.1	A01

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

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Page 1 of 1

11-17523 Quotation No.

PROJECT NO.: 053-7444-11

SITE NAME: Recology Hay Road

SAMPLER(S): Steve Cummin (printed) (signature)

CONTRACT LABORATORY: BC LABS

TURN-AROUND TIME: Standard

EDD required? ☒ Yes ☐ No

EDF required? ☒ Yes ☐ No

ANALYSES: 8260; Short List; TDS, Cl, SO_4; Carbonate, Bicarbonate; NO_3+NO_2-N; TKN, NH_3-N; Na, K, Ca, Mg

Container Info				
Type/Vol.	VOA 40ml	PE 16oz	PE 16oz	PE 16oz
Filter	N	N	N	Y
Preserv.	HCl	none	H_2SO_4	HNO_3

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth					Cont. Qty.	Remarks
LW-1	-1	10/19/11	1320	W	–	3	1	1	1	6	
LW-3	-2	↓	1410	↓	/	3	1	1	1	6	
										6	

CHK BY: JW — DISTRIBUTION: INE MA NH — SUB OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Dickey	10-24-11 1605
Ross Dickey 10-24-11	I. Allg 10-24-11 17:30	
I. Allg 10-24-11 21:25	[signature]	10-24-11 2125

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

Date of Report: 01/26/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1117559
Invoice ID:	B111376

Enclosed are the results of analyses for samples received by the laboratory on 10/24/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117559-01 **Hay Road LF, Compost Pond, Compost Pond, 10/24/2011 11:30:00AM**						
Chloride	320	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	3.6	0.10	0.010	mg/L	EPA-353.2	
Sulfate	71	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1600	100	100	mg/L	SM-2540C	
Fixed Dissolved Solids	1100	100	100	mg/L	EPA-160.4	
Total Kjeldahl Nitrogen	12	0.50	0.14	mg/L	EPA-351.2	A01
Ammonia as N	0.14	0.050	0.025	mg/L	EPA-350.1	
Total Phosphorus	6.4	0.62	0.20	mg/L	EPA-365.4	A01
1117559-02 **Hay Road LF, SW-5, SW-5, 10/24/2011 12:00:00PM**						
Total Calcium	34	0.10	0.023	mg/L	EPA-6010B	
Total Magnesium	60	0.050	0.016	mg/L	EPA-6010B	
Total Sodium	130	0.50	0.077	mg/L	EPA-6010B	
Total Potassium	2.1	1.0	0.14	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	260	8.2	8.2	mg/L	SM-2320B	
Carbonate Alkalinity as CaCO3	62	8.2	8.2	mg/L	SM-2320B	
Chloride	140	0.50	0.066	mg/L	EPA-300.0	
Sulfate	38	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	620	50	50	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	8.5	2.5	2.5	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	0.59	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.034	0.050	0.025	mg/L	EPA-350.1	J
Nitrite as N	0.0068	0.050	0.0015	mg/L	EPA-353.2	J
Total Chromium	0.0017	0.010	0.0010	mg/L	EPA-6010B	J
1117559-03 **Hay Road LF, SW-4, SW-4, 10/24/2011 12:30:00PM**						
Total Calcium	83	0.10	0.023	mg/L	EPA-6010B	
Total Magnesium	150	0.050	0.016	mg/L	EPA-6010B	
Total Sodium	340	0.50	0.077	mg/L	EPA-6010B	
Total Potassium	4.2	1.0	0.14	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	380	8.2	8.2	mg/L	SM-2320B	
Carbonate Alkalinity as CaCO3	62	8.2	8.2	mg/L	SM-2320B	
Chloride	520	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.053	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	230	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1700	67	67	mg/L	SM-2540C	Z1
Total Suspended Solids (Glass Fiber)	130	2.5	2.5	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	0.83	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.049	0.050	0.025	mg/L	EPA-350.1	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117559-03 **Hay Road LF, SW-4, SW-4, 10/24/2011 12:30:00PM**						
Nitrite as N	0.019	0.050	0.0015	mg/L	EPA-353.2	J
Total Chromium	0.0078	0.010	0.0010	mg/L	EPA-6010B	J
Total Lead	0.0058	0.050	0.0050	mg/L	EPA-6010B	J
1117559-04 **Hay Road LF, SW-7, SW-7, 10/24/2011 1:00:00PM**						
Total Calcium	64	0.10	0.023	mg/L	EPA-6010B	
Total Magnesium	120	0.050	0.016	mg/L	EPA-6010B	
Total Sodium	300	0.50	0.077	mg/L	EPA-6010B	
Total Potassium	3.6	1.0	0.14	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	420	8.2	8.2	mg/L	SM-2320B	
Carbonate Alkalinity as CaCO3	47	8.2	8.2	mg/L	SM-2320B	
Chloride	410	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.046	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	180	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1400	100	100	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	100	2.5	2.5	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	0.92	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.11	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.011	0.050	0.0015	mg/L	EPA-353.2	J
Total Arsenic	0.011	0.050	0.0098	mg/L	EPA-6010B	J
Total Chromium	0.0025	0.010	0.0010	mg/L	EPA-6010B	J
1117559-05 **Hay Road LF, SW-3, SW-3, 10/24/2011 1:30:00PM**						
Total Calcium	77	0.10	0.023	mg/L	EPA-6010B	
Total Magnesium	120	0.050	0.016	mg/L	EPA-6010B	
Total Sodium	290	0.50	0.077	mg/L	EPA-6010B	
Total Potassium	5.4	1.0	0.14	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	560	8.2	8.2	mg/L	SM-2320B	
Chloride	400	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.11	0.10	0.010	mg/L	EPA-353.2	
Sulfate	150	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1500	100	100	mg/L	SM-2540C	
Total Suspended Solids (Glass Fiber)	16	2.5	2.5	mg/L	SM-2540D	
Total Kjeldahl Nitrogen	0.95	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.23	0.050	0.025	mg/L	EPA-350.1	
Nitrite as N	0.013	0.050	0.0015	mg/L	EPA-353.2	J
Total Chromium	0.0029	0.010	0.0010	mg/L	EPA-6010B	J

Chain of Custody and Cooler Receipt Form for 1117559 Page 1 of 3

Golder Associates
CHAIN OF CUSTODY

Golder Associates # 11-17559

Page 1 of 1

Quotation No.________

PROJECT NO.: 053-7444-11

SITE NAME: Recology Hay Road

SAMPLER(S): R. McCarthy (printed) (signature)

CONTRACT LABORATORY: BC Labs

TURN-AROUND TIME: Standard

EDD required? ☒ Yes ☐ No

EDF required? ☒ Yes ☐ No

ANALYSES

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	EPA 8260 8260 Short List	TDS, TSS, Cl, SO4, Carbonate, Bicarbonate	NO3 + N2-N, TKN, Ammonia-N, Nitrite-N, Nitrate	As, Cr, Pb, Cu, Mg, K, Na		TDS, Cl, SO4	NO3 + N2-N, TKN, Ammonia	Total Fixed Dissolved Solids	Total Phosphorus	Cont. Qty.	Remarks
Container Info: Type/Vol.						40ml VOA	16oz PE	16oz PE	16oz PE		16oz PE	16oz PE	16oz PE	16oz PE		
Filter						N	N	N	N		N	N	N	N		
Preserv.						HCL	None	H_2SO_4	HNO_3		None	H_2SO_4	None	HNO_3		
Compost Pond	-1	10/24/11	1130	W		~~3~~					1	1	1	1	4	Report Trace
SW-5	-2		1200			3	1	1	1						6	
SW-4	-3		1230			3	1	1	1						6	
SW-7	-4		1300			3	1	1	1						6	
SW-3	-5		1330			3	1	1	1						6	

CHK BY: COR
DISTRIBUTION: MR MT JR
SUB-OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
	Ross Dickey	10-24-11 1410
Ross Dickey 10-24-11	I. Falls 10-24-11 17:30	
I. Falls 10-24-11 21:25	10-24-11 2125	

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

Date of Report: 11/09/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1117560
Invoice ID:	B110964

Enclosed are the results of analyses for samples received by the laboratory on 10/24/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

Table of Contents

Table of Contents

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117560-01	**Hay Road LF, G-2, G-2, 10/21/2011 10:20:00AM**					
Dissolved Calcium	30	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	89	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	640	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.94	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	880	8.2	8.2	mg/L	SM-2320B	
Chloride	400	2.5	0.33	mg/L	EPA-300.0	A01
Sulfate	460	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2300	100	100	mg/L	SM-2540C	
1117560-02	**Hay Road LF, G-1, G-1, 10/21/2011 11:05:00AM**					
Dissolved Calcium	49	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	60	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	160	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.73	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	410	8.2	8.2	mg/L	SM-2320B	
Chloride	190	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.87	0.10	0.010	mg/L	EPA-353.2	
Sulfate	49	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	840	50	50	mg/L	SM-2540C	
Dissolved Chromium	0.0011	0.010	0.0010	mg/L	EPA-6010B	J
1117560-03	**Hay Road LF, G-13, G-13, 10/21/2011 11:50:00AM**					
Dissolved Calcium	38	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	46	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	140	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.56	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	360	8.2	8.2	mg/L	SM-2320B	
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.28	0.10	0.010	mg/L	EPA-353.2	
Sulfate	46	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	650	50	50	mg/L	SM-2540C	
1117560-04	**Hay Road LF, G-12, G-12, 10/21/2011 12:20:00PM**					
Dissolved Calcium	35	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	47	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	120	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.65	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	330	8.2	8.2	mg/L	SM-2320B	
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.18	0.10	0.010	mg/L	EPA-353.2	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117560-04 **Hay Road LF, G-12, G-12, 10/21/2011 12:20:00PM**						
Sulfate	30	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	600	33	33	mg/L	SM-2540C	
1117560-05 **Hay Road LF, G-19R, G-19R, 10/21/2011 1:10:00PM**						
Dissolved Calcium	60	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	150	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	520	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.4	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	420	8.2	8.2	mg/L	SM-2320B	
Chloride	730	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	470	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2400	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.084	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Arsenic	0.0080	0.050	0.0075	mg/L	EPA-6010B	J
Dissolved Chromium	0.0013	0.010	0.0010	mg/L	EPA-6010B	J
1117560-06 **Hay Road LF, G-23, G-23, 10/21/2011 1:45:00PM**						
Nitrate/Nitrite as N	1.9	0.10	0.010	mg/L	EPA-353.2	
1117560-07 **Hay Road LF, G-21, G-21, 10/21/2011 2:05:00PM**						
Dissolved Calcium	89	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	120	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	240	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.96	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	420	8.2	8.2	mg/L	SM-2320B	
Chloride	450	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	2.8	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	1400	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.062	0.20	0.056	mg/L	EPA-351.2	J
Dissolved Chromium	0.0020	0.010	0.0010	mg/L	EPA-6010B	J
Dissolved Lead	0.0058	0.050	0.0050	mg/L	EPA-6010B	J
1117560-08 **Hay Road LF, G-22, G-22, 10/21/2011 2:15:00PM**						
Nitrate/Nitrite as N	19	1.0	0.10	mg/L	EPA-353.2	A01
1117560-09 **Hay Road LF, G-4R, G-4R, 10/21/2011 3:10:00PM**						
Dissolved Calcium	70	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	160	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	550	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	1.3	1.0	0.10	mg/L	EPA-6010B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1117560-09 Hay Road LF, G-4R, G-4R, 10/21/2011 3:10:00PM						
Bicarbonate Alkalinity as CaCO3	620	8.2	8.2	mg/L	SM-2320B	
Chloride	610	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	10	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	520	5.0	0.60	mg/L	EPA-300.0	A01
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	0.050	0.050	0.025	mg/L	EPA-350.1	
Dissolved Lead	0.0057	0.050	0.0050	mg/L	EPA-6010B	J
1117560-10 Hay Road LF, P-1, P-1, 10/21/2011 3:40:00PM						
Dissolved Calcium	58	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	130	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	310	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.94	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	580	8.2	8.2	mg/L	SM-2320B	
Chloride	380	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.49	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	
Dissolved Chromium	0.0014	0.010	0.0010	mg/L	EPA-6010B	J
1117560-11 Hay Road LF, G-6, G-6, 10/21/2011 4:10:00PM						
Dissolved Calcium	43	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	68	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	230	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	0.82	1.0	0.10	mg/L	EPA-6010B	J
Bicarbonate Alkalinity as CaCO3	590	8.2	8.2	mg/L	SM-2320B	
Chloride	120	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	0.53	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	
Total Kjeldahl Nitrogen	0.089	0.20	0.056	mg/L	EPA-351.2	J
Ammonia as N	0.025	0.050	0.025	mg/L	EPA-350.1	J
Dissolved Arsenic	0.0079	0.050	0.0075	mg/L	EPA-6010B	J
1117560-12 Hay Road LF, QCEB-1, QCEB-1, 10/21/2011 2:10:00PM						
Chloroform	1.6	1.0	0.12	ug/L	EPA-8260	
Tetrachloroethene	0.32	1.0	0.13	ug/L	EPA-8260	J
1,2,4-Trimethylbenzene	0.21	1.0	0.12	ug/L	EPA-8260	J

Golder Associates
CHAIN OF CUSTODY

Golder Associates # 11-17560

Page 1 of 1
Quotation No.

PROJECT NO.: 053-7444-11
SITE NAME: Recology Hay Road
SAMPLER(S): R. McCarthy (printed) (signature)
CONTRACT LABORATORY:
TURN-AROUND TIME:

EDD required? ☒ Yes ☐ No
EDF required? ☒ Yes ☐ No

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	EPA 8260	8015 Short List / TDS, Cl, SO4 / Carbonate, Bicarbonate	NO3+NO2-N, TKN / Ammonia-N	As, Cr, Pb, Ca, Mg, Na, K		NO3+NO2-N	As, Cr, Ca, Mg, Na, K	Cont. Qty.	Remarks
Container Info: Type/Vol.						40ml VOA	16oz Pe	16oz Pe	16oz Pe		2oz Pe	16oz Pe		
Filter						N	N	N	Y		N	Y		
Preserv.						HCL	None	H_2SO_4	HNO_3		H_2SO_4	HNO_3		
G-2	-1	10/21/11	1020	W		3	1				1	1	6	Report Trace
G-1	-2		1105			3	1				1	1	6	
G-13	-3		1150			3	1				1	1	6	
G-12	-4		1220			3	1				1	1	6	
G-19R	-5		1310			3	1	1	1				6	
G-23	-6		1345			30					1		1	
G-21	-7		1405			3	1	1	1				6	
G-22	-8		1415			30					1		1	
G-4R	-9		1510			3	1	1	1				6	
P-1	-10		1540			3	1				1	1	6	
G-6	-11		1610			3	1	1	1				6	
QCEB-1	-12	10/21/11	1410	W		3							3	

CHK BY | DISTRIBUTION: MA, MT, JK, JES2 | SUB-OUT ☐

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Dickey	10.24.11 1410
Ross Dickey 10.24.11	[signature] 10.24.11 17:30	
[signature] 10-24-11 21:25	[signature] 10.24.11 2125	

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

Date of Report: 12/02/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1118256
Invoice ID:	B112342

Enclosed are the results of analyses for samples received by the laboratory on 11/4/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

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Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-01 **Recology Hay Road, S-1, S-1, 11/2/2011 12:40:00PM**						
Benzene	1.4	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	1.8	1.0	0.093	ug/L	EPA-8260	
Chloroethane	0.44	1.0	0.14	ug/L	EPA-8260	J
1,2-Dichlorobenzene	0.39	1.0	0.072	ug/L	EPA-8260	J
1,4-Dichlorobenzene	3.3	1.0	0.062	ug/L	EPA-8260	
1,1-Dichloroethane	0.48	1.0	0.11	ug/L	EPA-8260	J
1,2-Dichloroethane	0.36	1.0	0.17	ug/L	EPA-8260	J
Methyl t-butyl ether	1.0	1.0	0.11	ug/L	EPA-8260	
n-Propylbenzene	0.16	1.0	0.11	ug/L	EPA-8260	J
Toluene	0.25	1.0	0.093	ug/L	EPA-8260	J
Total Xylenes	0.58	1.0	0.36	ug/L	EPA-8260	J
Acetone	4.8	10	4.6	ug/L	EPA-8260	J
t-Butyl alcohol	95	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	0.25	0.50	0.23	ug/L	EPA-8260	J
Dissolved Calcium	160	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	220	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	490	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	13	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Chloride	820	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.057	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	9.6	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	2700	100	100	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	15	1.0	0.28	mg/L	EPA-351.2	A01
Ammonia as N	13	1.0	0.50	mg/L	EPA-350.1	A01
1118256-02 **Recology Hay Road, S-2.2B, S-2.2B, 11/2/2011 1:20:00PM**						
Benzene	0.27	1.0	0.083	ug/L	EPA-8260	J
Chloroform	0.27	1.0	0.12	ug/L	EPA-8260	J
1,4-Dichlorobenzene	0.61	1.0	0.062	ug/L	EPA-8260	J
1,1-Dichloroethane	0.23	1.0	0.11	ug/L	EPA-8260	J
cis-1,2-Dichloroethene	0.24	1.0	0.085	ug/L	EPA-8260	J
Ethylbenzene	0.99	1.0	0.098	ug/L	EPA-8260	J
Methyl t-butyl ether	3.2	1.0	0.11	ug/L	EPA-8260	
Toluene	1.8	1.0	0.093	ug/L	EPA-8260	
1,2,4-Trimethylbenzene	0.15	1.0	0.12	ug/L	EPA-8260	J
Total Xylenes	2.4	1.0	0.36	ug/L	EPA-8260	
Acetone	390	10	4.6	ug/L	EPA-8260	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-02	**Recology Hay Road, S-2.2B, S-2.2B, 11/2/2011 1:20:00PM**					
t-Butyl alcohol	99	10	9.4	ug/L	EPA-8260	
Carbon disulfide	0.40	1.0	0.38	ug/L	EPA-8260	J
2-Butanone	69	10	2.5	ug/L	EPA-8260	
Dissolved Calcium	140	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	280	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	760	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	70	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Chloride	1500	5.0	0.66	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.013	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	21	10	1.2	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	3900	200	200	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	53	5.0	1.4	mg/L	EPA-351.2	A01
Ammonia as N	50	5.0	2.5	mg/L	EPA-350.1	A01
1118256-03	**Recology Hay Road, S-3.1, S-3.1, 11/3/2011 11:40:00AM**					
Benzene	7.9	1.0	0.083	ug/L	EPA-8260	A39
Chlorobenzene	0.10	1.0	0.093	ug/L	EPA-8260	J,A39
Chloroethane	0.62	1.0	0.14	ug/L	EPA-8260	J,A39
1,4-Dichlorobenzene	0.57	1.0	0.062	ug/L	EPA-8260	J,A39
Dichlorodifluoromethane	0.13	1.0	0.099	ug/L	EPA-8260	J,A39
1,1-Dichloroethane	1.2	1.0	0.11	ug/L	EPA-8260	A39
1,2-Dichloroethane	17	1.0	0.17	ug/L	EPA-8260	A39
cis-1,2-Dichloroethene	4.9	1.0	0.085	ug/L	EPA-8260	A39
1,2-Dichloropropane	0.86	1.0	0.13	ug/L	EPA-8260	J,A39
Ethylbenzene	7.8	1.0	0.098	ug/L	EPA-8260	A39
Methyl t-butyl ether	18	1.0	0.11	ug/L	EPA-8260	A39
Naphthalene	8.8	1.0	0.36	ug/L	EPA-8260	A39
n-Propylbenzene	0.34	1.0	0.11	ug/L	EPA-8260	J,A39
Styrene	1.9	1.0	0.068	ug/L	EPA-8260	A39
Tetrachloroethene	0.54	1.0	0.13	ug/L	EPA-8260	J,A39
Toluene	63	1.0	0.093	ug/L	EPA-8260	A39
Trichloroethene	1.4	1.0	0.085	ug/L	EPA-8260	A39
1,2,4-Trimethylbenzene	1.5	1.0	0.12	ug/L	EPA-8260	A39
1,3,5-Trimethylbenzene	0.48	1.0	0.12	ug/L	EPA-8260	J,A39
Vinyl chloride	0.52	1.0	0.12	ug/L	EPA-8260	J,A39
Total Xylenes	22	1.0	0.36	ug/L	EPA-8260	A39

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-03 **Recology Hay Road, S-3.1, S-3.1, 11/3/2011 11:40:00AM**						
Acetone	92	10	4.6	ug/L	EPA-8260	A39
t-Butyl alcohol	1100	10	9.4	ug/L	EPA-8260	A39
Carbon disulfide	0.95	1.0	0.38	ug/L	EPA-8260	J,A39
Diisopropyl ether	1.1	0.50	0.23	ug/L	EPA-8260	A39
1,4-Dioxane	84	100	42	ug/L	EPA-8260	J,A39
Ethyl t-butyl ether	0.37	0.50	0.18	ug/L	EPA-8260	J,A39
2-Hexanone	5.6	10	3.4	ug/L	EPA-8260	J,A39
2-Butanone	63	10	2.5	ug/L	EPA-8260	A39
4-Methyl-2-pentanone	24	10	2.1	ug/L	EPA-8260	A39
Dissolved Calcium	43	0.50	0.090	mg/L	EPA-6010B	A01
Dissolved Magnesium	280	0.25	0.080	mg/L	EPA-6010B	A01
Dissolved Sodium	3500	2.5	0.25	mg/L	EPA-6010B	A01
Dissolved Potassium	740	5.0	0.50	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	13000	82	82	mg/L	SM-2320B	A01
Total Alkalinity as CaCO3	13000	82	82	mg/L	SM-2320B	A01
Chloride	6400	25	3.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.27	1.0	0.10	mg/L	EPA-353.2	J,A10
Sulfate	11	50	6.0	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	18000	1000	1000	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	4100	250	70	mg/L	EPA-351.2	A01
Ammonia as N	3700	100	50	mg/L	EPA-350.1	A01
1118256-04 **Recology Hay Road, S-3.2, S-3.2, 11/3/2011 11:15:00AM**						
Benzene	5.6	1.0	0.083	ug/L	EPA-8260	A39
Chloroethane	0.66	1.0	0.14	ug/L	EPA-8260	J,A39
1,4-Dichlorobenzene	0.24	1.0	0.062	ug/L	EPA-8260	J,A39
1,1-Dichloroethane	0.58	1.0	0.11	ug/L	EPA-8260	J,A39
1,2-Dichloroethane	18	1.0	0.17	ug/L	EPA-8260	A39
cis-1,2-Dichloroethene	16	1.0	0.085	ug/L	EPA-8260	A39
1,2-Dichloropropane	0.46	1.0	0.13	ug/L	EPA-8260	J,A39
Ethylbenzene	4.7	1.0	0.098	ug/L	EPA-8260	A39
Methyl t-butyl ether	2.8	1.0	0.11	ug/L	EPA-8260	A39
Naphthalene	1.2	1.0	0.36	ug/L	EPA-8260	A39
n-Propylbenzene	0.15	1.0	0.11	ug/L	EPA-8260	J,A39
Styrene	2.7	1.0	0.068	ug/L	EPA-8260	A39
Toluene	50	1.0	0.093	ug/L	EPA-8260	A39
Trichloroethene	1.0	1.0	0.085	ug/L	EPA-8260	A39
1,2,4-Trimethylbenzene	0.58	1.0	0.12	ug/L	EPA-8260	J,A39
1,3,5-Trimethylbenzene	0.24	1.0	0.12	ug/L	EPA-8260	J,A39

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-04 **Recology Hay Road, S-3.2, S-3.2, 11/3/2011 11:15:00AM**						
Total Xylenes	12	1.0	0.36	ug/L	EPA-8260	A39
Acetone	23	10	4.6	ug/L	EPA-8260	A39
t-Butyl alcohol	240	10	9.4	ug/L	EPA-8260	A39
Carbon disulfide	1.4	1.0	0.38	ug/L	EPA-8260	A39
Diisopropyl ether	2.7	0.50	0.23	ug/L	EPA-8260	A39
Ethyl t-butyl ether	0.60	0.50	0.18	ug/L	EPA-8260	A39
2-Butanone	12	10	2.5	ug/L	EPA-8260	A39
4-Methyl-2-pentanone	40	10	2.1	ug/L	EPA-8260	A39
Dissolved Calcium	93	0.20	0.036	mg/L	EPA-6010B	A01
Dissolved Magnesium	420	0.10	0.032	mg/L	EPA-6010B	A01
Dissolved Sodium	1400	1.0	0.10	mg/L	EPA-6010B	A01
Dissolved Potassium	520	2.0	0.20	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	5400	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	5400	8.2	8.2	mg/L	SM-2320B	
Chloride	2200	10	1.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.044	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	4.7	20	2.4	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	8200	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	860	50	14	mg/L	EPA-351.2	A01
Ammonia as N	810	50	25	mg/L	EPA-350.1	A01
1118256-05 **Recology Hay Road, S-3.3, S-3.3, 11/3/2011 10:45:00AM**						
Benzene	8.4	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	0.16	1.0	0.093	ug/L	EPA-8260	J
Chloroethane	1.1	1.0	0.14	ug/L	EPA-8260	
1,4-Dichlorobenzene	0.42	1.0	0.062	ug/L	EPA-8260	J
1,1-Dichloroethane	0.86	1.0	0.11	ug/L	EPA-8260	J
1,2-Dichloroethane	2.2	1.0	0.17	ug/L	EPA-8260	
cis-1,2-Dichloroethene	15	1.0	0.085	ug/L	EPA-8260	
trans-1,2-Dichloroethene	0.25	1.0	0.15	ug/L	EPA-8260	J
1,2-Dichloropropane	0.94	1.0	0.13	ug/L	EPA-8260	J
Ethylbenzene	7.2	1.0	0.098	ug/L	EPA-8260	
Methyl t-butyl ether	3.0	1.0	0.11	ug/L	EPA-8260	
Naphthalene	0.67	1.0	0.36	ug/L	EPA-8260	J
n-Propylbenzene	0.32	1.0	0.11	ug/L	EPA-8260	J
Styrene	2.4	1.0	0.068	ug/L	EPA-8260	
Toluene	55	1.0	0.093	ug/L	EPA-8260	
Trichloroethene	0.24	1.0	0.085	ug/L	EPA-8260	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-05	**Recology Hay Road, S-3.3, S-3.3, 11/3/2011 10:45:00AM**					
1,2,4-Trimethylbenzene	1.2	1.0	0.12	ug/L	EPA-8260	
1,3,5-Trimethylbenzene	0.38	1.0	0.12	ug/L	EPA-8260	J
Total Xylenes	22	1.0	0.36	ug/L	EPA-8260	
Acetone	50	10	4.6	ug/L	EPA-8260	
t-Butyl alcohol	410	10	9.4	ug/L	EPA-8260	
Carbon disulfide	1.7	1.0	0.38	ug/L	EPA-8260	
Diisopropyl ether	1.8	0.50	0.23	ug/L	EPA-8260	
Ethyl t-butyl ether	0.58	0.50	0.18	ug/L	EPA-8260	
2-Butanone	43	10	2.5	ug/L	EPA-8260	
4-Methyl-2-pentanone	27	10	2.1	ug/L	EPA-8260	
Dissolved Calcium	150	0.20	0.036	mg/L	EPA-6010B	A10
Dissolved Magnesium	170	0.10	0.032	mg/L	EPA-6010B	A10
Dissolved Sodium	300	1.0	0.10	mg/L	EPA-6010B	A10
Dissolved Potassium	31	2.0	0.20	mg/L	EPA-6010B	A10
Bicarbonate Alkalinity as CaCO3	1400	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	1400	8.2	8.2	mg/L	SM-2320B	
Chloride	470	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.050	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	1.4	5.0	0.60	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	2600	100	100	mg/L	SM-2540C	Z1
Total Kjeldahl Nitrogen	150	10	2.8	mg/L	EPA-351.2	A01
Ammonia as N	99	5.0	2.5	mg/L	EPA-350.1	A01
1118256-06	**Recology Hay Road, S-4.1, S-4.1, 11/3/2011 12:00:00PM**					
Benzene	14	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	1.3	1.0	0.093	ug/L	EPA-8260	
Chloroethane	0.38	1.0	0.14	ug/L	EPA-8260	J
1,4-Dichlorobenzene	5.9	1.0	0.062	ug/L	EPA-8260	
Dichlorodifluoromethane	0.19	1.0	0.099	ug/L	EPA-8260	J
1,1-Dichloroethane	0.55	1.0	0.11	ug/L	EPA-8260	J
1,2-Dichloroethane	5.3	1.0	0.17	ug/L	EPA-8260	
cis-1,2-Dichloroethene	3.3	1.0	0.085	ug/L	EPA-8260	
1,2-Dichloropropane	1.0	1.0	0.13	ug/L	EPA-8260	
Ethylbenzene	24	1.0	0.098	ug/L	EPA-8260	
Methyl t-butyl ether	8.7	1.0	0.11	ug/L	EPA-8260	
Naphthalene	160	50	18	ug/L	EPA-8260	A01
n-Propylbenzene	1.1	1.0	0.11	ug/L	EPA-8260	
Styrene	2.2	1.0	0.068	ug/L	EPA-8260	
Tetrachloroethene	0.56	1.0	0.13	ug/L	EPA-8260	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-06	**Recology Hay Road, S-4.1, S-4.1, 11/3/2011 12:00:00PM**					
Toluene	61	1.0	0.093	ug/L	EPA-8260	
Trichloroethene	0.69	1.0	0.085	ug/L	EPA-8260	J
1,2,4-Trimethylbenzene	7.6	1.0	0.12	ug/L	EPA-8260	
1,3,5-Trimethylbenzene	2.6	1.0	0.12	ug/L	EPA-8260	
Vinyl chloride	1.6	1.0	0.12	ug/L	EPA-8260	
Total Xylenes	72	1.0	0.36	ug/L	EPA-8260	
Acetone	11000	500	230	ug/L	EPA-8260	A01
t-Butyl alcohol	7700	500	470	ug/L	EPA-8260	A01
Diisopropyl ether	0.86	0.50	0.23	ug/L	EPA-8260	
1,4-Dioxane	500	100	42	ug/L	EPA-8260	
Ethanol	95000	12000	2500	ug/L	EPA-8260	A01
2-Hexanone	87	10	3.4	ug/L	EPA-8260	
2-Butanone	8400	500	120	ug/L	EPA-8260	A01
4-Methyl-2-pentanone	570	500	100	ug/L	EPA-8260	A01
Dissolved Calcium	15	0.20	0.036	mg/L	EPA-6010B	A10
Dissolved Magnesium	53	0.10	0.032	mg/L	EPA-6010B	A10
Dissolved Sodium	750	1.0	0.10	mg/L	EPA-6010B	A10
Dissolved Potassium	51	2.0	0.20	mg/L	EPA-6010B	A10
Bicarbonate Alkalinity as CaCO3	2300	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	2300	8.2	8.2	mg/L	SM-2320B	
Chloride	1300	5.0	0.66	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.16	0.10	0.010	mg/L	EPA-353.2	
Sulfate	130	10	1.2	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	5700	500	500	mg/L	SM-2540C	Z1
Total Kjeldahl Nitrogen	940	50	14	mg/L	EPA-351.2	A01
Ammonia as N	760	50	25	mg/L	EPA-350.1	A01
1118256-07	**Recology Hay Road, S-5.1A, S-5.1A, 11/3/2011 12:45:00PM**					
Benzene	2.4	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	0.11	1.0	0.093	ug/L	EPA-8260	J
1,4-Dichlorobenzene	0.92	1.0	0.062	ug/L	EPA-8260	J
Dichlorodifluoromethane	0.31	1.0	0.099	ug/L	EPA-8260	J
1,1-Dichloroethane	0.41	1.0	0.11	ug/L	EPA-8260	J
cis-1,2-Dichloroethene	1.8	1.0	0.085	ug/L	EPA-8260	
1,2-Dichloropropane	0.15	1.0	0.13	ug/L	EPA-8260	J
Ethylbenzene	1.1	1.0	0.098	ug/L	EPA-8260	
Methyl t-butyl ether	18	1.0	0.11	ug/L	EPA-8260	
n-Propylbenzene	0.13	1.0	0.11	ug/L	EPA-8260	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-07	**Recology Hay Road, S-5.1A, S-5.1A, 11/3/2011 12:45:00PM**					
Tetrachloroethene	0.19	1.0	0.13	ug/L	EPA-8260	J
Toluene	1.7	1.0	0.093	ug/L	EPA-8260	
Trichloroethene	0.59	1.0	0.085	ug/L	EPA-8260	J
1,2,4-Trimethylbenzene	0.58	1.0	0.12	ug/L	EPA-8260	J
1,3,5-Trimethylbenzene	0.31	1.0	0.12	ug/L	EPA-8260	J
Total Xylenes	5.2	1.0	0.36	ug/L	EPA-8260	
Acetone	11	10	4.6	ug/L	EPA-8260	
t-Amyl Methyl ether	1.1	0.50	0.25	ug/L	EPA-8260	
t-Butyl alcohol	520	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	0.41	0.50	0.23	ug/L	EPA-8260	J
Ethyl t-butyl ether	0.22	0.50	0.18	ug/L	EPA-8260	J
Dissolved Calcium	200	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	290	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	660	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	29	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	1900	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	1900	8.2	8.2	mg/L	SM-2320B	
Chloride	1500	5.0	0.66	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	36	2.0	0.20	mg/L	EPA-353.2	A01
Sulfate	240	10	1.2	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	4400	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	310	12	3.5	mg/L	EPA-351.2	A01
Ammonia as N	310	12	6.2	mg/L	EPA-350.1	A01
1118256-08	**Recology Hay Road, S-5.1B, S-5.1B, 11/3/2011 12:20:00PM**					
Benzene	1.4	1.0	0.083	ug/L	EPA-8260	A39
1,4-Dichlorobenzene	0.67	1.0	0.062	ug/L	EPA-8260	J,A39
1,1-Dichloroethane	0.30	1.0	0.11	ug/L	EPA-8260	J,A39
1,2-Dichloroethane	0.43	1.0	0.17	ug/L	EPA-8260	J,A39
1,2-Dichloropropane	0.18	1.0	0.13	ug/L	EPA-8260	J,A39
Ethylbenzene	1.3	1.0	0.098	ug/L	EPA-8260	A39
Methyl t-butyl ether	28	1.0	0.11	ug/L	EPA-8260	A39
Naphthalene	0.81	1.0	0.36	ug/L	EPA-8260	J,A39
Styrene	0.14	1.0	0.068	ug/L	EPA-8260	J,A39
Toluene	0.65	1.0	0.093	ug/L	EPA-8260	J,A39
1,2,4-Trimethylbenzene	0.30	1.0	0.12	ug/L	EPA-8260	J,A39
1,3,5-Trimethylbenzene	0.35	1.0	0.12	ug/L	EPA-8260	J,A39
Vinyl chloride	0.72	1.0	0.12	ug/L	EPA-8260	J,A39
Total Xylenes	4.2	1.0	0.36	ug/L	EPA-8260	A39

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-08	**Recology Hay Road, S-5.1B, S-5.1B, 11/3/2011 12:20:00PM**					
Acetone	20	10	4.6	ug/L	EPA-8260	A39
t-Amyl Methyl ether	2.0	0.50	0.25	ug/L	EPA-8260	A39
t-Butyl alcohol	590	10	9.4	ug/L	EPA-8260	A39
Diisopropyl ether	0.31	0.50	0.23	ug/L	EPA-8260	J,A39
Ethyl t-butyl ether	0.42	0.50	0.18	ug/L	EPA-8260	J,A39
2-Butanone	2.8	10	2.5	ug/L	EPA-8260	J,A39
Dissolved Calcium	200	0.20	0.036	mg/L	EPA-6010B	A01
Dissolved Magnesium	310	0.10	0.032	mg/L	EPA-6010B	A01
Dissolved Sodium	1200	1.0	0.10	mg/L	EPA-6010B	A01
Dissolved Potassium	91	2.0	0.20	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	4900	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	4900	8.2	8.2	mg/L	SM-2320B	
Chloride	2600	10	1.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.020	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	7.2	20	2.4	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	6200	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	1200	120	35	mg/L	EPA-351.2	A01
Ammonia as N	1200	50	25	mg/L	EPA-350.1	A01
1118256-09	**Recology Hay Road, S-5.2, S-5.2, 11/3/2011 1:15:00PM**					
Benzene	5.6	1.0	0.083	ug/L	EPA-8260	A39
Chlorobenzene	0.23	1.0	0.093	ug/L	EPA-8260	J,A39
1,2-Dichlorobenzene	0.22	1.0	0.072	ug/L	EPA-8260	J,A39
1,4-Dichlorobenzene	3.2	1.0	0.062	ug/L	EPA-8260	A39
1,1-Dichloroethane	0.15	1.0	0.11	ug/L	EPA-8260	J,A39
1,2-Dichloroethane	1.4	1.0	0.17	ug/L	EPA-8260	A39
cis-1,2-Dichloroethene	1.2	1.0	0.085	ug/L	EPA-8260	A39
1,2-Dichloropropane	0.37	1.0	0.13	ug/L	EPA-8260	J,A39
Ethylbenzene	11	1.0	0.098	ug/L	EPA-8260	A39
Methyl t-butyl ether	1.7	1.0	0.11	ug/L	EPA-8260	A39
Naphthalene	55	1.0	0.36	ug/L	EPA-8260	A39
n-Propylbenzene	0.45	1.0	0.11	ug/L	EPA-8260	J,A39
Styrene	1.2	1.0	0.068	ug/L	EPA-8260	A39
Toluene	20	1.0	0.093	ug/L	EPA-8260	A39
Trichloroethene	0.19	1.0	0.085	ug/L	EPA-8260	J,A39
1,2,4-Trimethylbenzene	3.5	1.0	0.12	ug/L	EPA-8260	A39
1,3,5-Trimethylbenzene	1.1	1.0	0.12	ug/L	EPA-8260	A39
Total Xylenes	27	1.0	0.36	ug/L	EPA-8260	A39

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-09 **Recology Hay Road, S-5.2, S-5.2, 11/3/2011 1:15:00PM**						
Acetone	9300	200	92	ug/L	EPA-8260	A01,A39
t-Butyl alcohol	6100	200	190	ug/L	EPA-8260	A01,A39
Diisopropyl ether	0.77	0.50	0.23	ug/L	EPA-8260	A39
1,4-Dioxane	200	100	42	ug/L	EPA-8260	A39
Ethanol	2300	250	50	ug/L	EPA-8260	A39
2-Hexanone	65	10	3.4	ug/L	EPA-8260	A39
2-Butanone	9100	500	120	ug/L	EPA-8260	A01,A39
4-Methyl-2-pentanone	330	10	2.1	ug/L	EPA-8260	A39
Dissolved Calcium	30	0.20	0.036	mg/L	EPA-6010B	A10
Dissolved Magnesium	80	0.10	0.032	mg/L	EPA-6010B	A10
Dissolved Sodium	720	1.0	0.10	mg/L	EPA-6010B	A10
Dissolved Potassium	100	2.0	0.20	mg/L	EPA-6010B	A10
Bicarbonate Alkalinity as CaCO3	4900	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	4900	8.2	8.2	mg/L	SM-2320B	
Chloride	1600	5.0	0.66	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.14	0.10	0.010	mg/L	EPA-353.2	
Sulfate	5.1	10	1.2	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	5000	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	1700	120	35	mg/L	EPA-351.2	A01
Ammonia as N	1500	50	25	mg/L	EPA-350.1	A01
1118256-10 **Recology Hay Road, S-9.1A, S-9.1A, 11/3/2011 1:45:00PM**						
Benzene	0.10	1.0	0.083	ug/L	EPA-8260	J
Acetone	15	10	4.6	ug/L	EPA-8260	
t-Butyl alcohol	12	10	9.4	ug/L	EPA-8260	
Dissolved Calcium	350	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	260	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	430	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	67	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	1200	8.2	8.2	mg/L	SM-2320B	
Chloride	810	2.5	0.33	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	33	5.0	0.50	mg/L	EPA-353.2	A01
Sulfate	1100	5.0	0.60	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	4300	200	200	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	230	12	3.5	mg/L	EPA-351.2	A01
Ammonia as N	230	20	10	mg/L	EPA-350.1	A01
Dissolved Arsenic	0.026	0.050	0.0075	mg/L	EPA-6010B	J
Dissolved Chromium	0.0054	0.010	0.0010	mg/L	EPA-6010B	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-10 **Recology Hay Road, S-9.1A, S-9.1A, 11/3/2011 1:45:00PM**						
Dissolved Lead	0.012	0.050	0.0050	mg/L	EPA-6010B	J
1118256-11 **Recology Hay Road, S-9.1B, S-9.1B, 11/3/2011 1:30:00PM**						
Benzene	0.21	1.0	0.083	ug/L	EPA-8260	J,A39
Toluene	0.10	1.0	0.093	ug/L	EPA-8260	J,A39
Acetone	16	10	4.6	ug/L	EPA-8260	A39
t-Butyl alcohol	19	10	9.4	ug/L	EPA-8260	A39
Dissolved Calcium	530	0.20	0.036	mg/L	EPA-6010B	A10
Dissolved Magnesium	480	0.10	0.032	mg/L	EPA-6010B	A10
Dissolved Sodium	760	1.0	0.10	mg/L	EPA-6010B	A10
Dissolved Potassium	76	2.0	0.20	mg/L	EPA-6010B	A10
Bicarbonate Alkalinity as CaCO3	2700	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	2700	8.2	8.2	mg/L	SM-2320B	
Chloride	1300	5.0	0.66	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.063	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	780	10	1.2	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	5900	200	200	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	180	12	3.5	mg/L	EPA-351.2	A01
Ammonia as N	140	5.0	2.5	mg/L	EPA-350.1	A01
Dissolved Arsenic	0.034	0.10	0.015	mg/L	EPA-6010B	J,A10
Dissolved Chromium	0.012	0.020	0.0020	mg/L	EPA-6010B	J,A10
Dissolved Lead	0.018	0.10	0.010	mg/L	EPA-6010B	J,A10
1118256-12 **Recology Hay Road, S-11.1, S-11.1, 11/2/2011 1:45:00PM**						
Benzene	1.7	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	0.19	1.0	0.093	ug/L	EPA-8260	J
Chloroethane	0.32	1.0	0.14	ug/L	EPA-8260	J
1,4-Dichlorobenzene	2.3	1.0	0.062	ug/L	EPA-8260	
Dichlorodifluoromethane	0.57	1.0	0.099	ug/L	EPA-8260	J
1,1-Dichloroethane	0.41	1.0	0.11	ug/L	EPA-8260	J
cis-1,2-Dichloroethene	0.55	1.0	0.085	ug/L	EPA-8260	J
Methyl t-butyl ether	17	1.0	0.11	ug/L	EPA-8260	
Tetrachloroethene	0.14	1.0	0.13	ug/L	EPA-8260	J
Toluene	0.10	1.0	0.093	ug/L	EPA-8260	J
Trichloroethene	0.14	1.0	0.085	ug/L	EPA-8260	J
Acetone	5.1	10	4.6	ug/L	EPA-8260	J
t-Amyl Methyl ether	0.94	0.50	0.25	ug/L	EPA-8260	
t-Butyl alcohol	69	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	0.43	0.50	0.23	ug/L	EPA-8260	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-12 **Recology Hay Road, S-11.1, S-11.1, 11/2/2011 1:45:00PM**						
Dissolved Calcium	290	0.20	0.036	mg/L	EPA-6010B	A01
Dissolved Magnesium	290	0.10	0.032	mg/L	EPA-6010B	A01
Dissolved Sodium	1800	1.0	0.10	mg/L	EPA-6010B	A01
Dissolved Potassium	100	2.0	0.20	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	870	8.2	8.2	mg/L	SM-2320B	
Total Alkalinity as CaCO3	870	8.2	8.2	mg/L	SM-2320B	
Chloride	3000	10	1.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	170	10	1.0	mg/L	EPA-353.2	A01
Sulfate	230	20	2.4	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	7200	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	22	1.0	0.28	mg/L	EPA-351.2	A01
Ammonia as N	11	0.50	0.25	mg/L	EPA-350.1	A01
1118256-13 **Recology Hay Road, S-11.2, S-11.2, 11/3/2011 2:20:00PM**						
Benzene	1.3	1.0	0.083	ug/L	EPA-8260	
Chlorobenzene	0.41	1.0	0.093	ug/L	EPA-8260	J
Chloroethane	0.86	1.0	0.14	ug/L	EPA-8260	J
1,4-Dichlorobenzene	1.2	1.0	0.062	ug/L	EPA-8260	
1,1-Dichloroethane	2.1	1.0	0.11	ug/L	EPA-8260	
cis-1,2-Dichloroethene	0.53	1.0	0.085	ug/L	EPA-8260	J
Ethylbenzene	0.36	1.0	0.098	ug/L	EPA-8260	J
Methyl t-butyl ether	46	1.0	0.11	ug/L	EPA-8260	
Naphthalene	20	1.0	0.36	ug/L	EPA-8260	
Toluene	0.75	1.0	0.093	ug/L	EPA-8260	J
Total Xylenes	0.90	1.0	0.36	ug/L	EPA-8260	J
Acetone	750	100	46	ug/L	EPA-8260	A01
t-Amyl Methyl ether	2.9	0.50	0.25	ug/L	EPA-8260	
t-Butyl alcohol	890	10	9.4	ug/L	EPA-8260	
Diisopropyl ether	1.5	0.50	0.23	ug/L	EPA-8260	
1,4-Dioxane	73	100	42	ug/L	EPA-8260	J
Ethanol	2400	250	50	ug/L	EPA-8260	
2-Hexanone	5.3	10	3.4	ug/L	EPA-8260	J
2-Butanone	860	100	25	ug/L	EPA-8260	A01
4-Methyl-2-pentanone	48	10	2.1	ug/L	EPA-8260	
Dissolved Calcium	280	0.20	0.036	mg/L	EPA-6010B	A01
Dissolved Magnesium	300	0.10	0.032	mg/L	EPA-6010B	A01
Dissolved Sodium	1100	1.0	0.10	mg/L	EPA-6010B	A01
Dissolved Potassium	48	2.0	0.20	mg/L	EPA-6010B	A01
Bicarbonate Alkalinity as CaCO3	1800	8.2	8.2	mg/L	SM-2320B	

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-13	**Recology Hay Road, S-11.2, S-11.2, 11/3/2011 2:20:00PM**					
Total Alkalinity as CaCO3	1800	8.2	8.2	mg/L	SM-2320B	
Chloride	2200	10	1.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.045	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	220	20	2.4	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	6200	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	97	5.0	1.4	mg/L	EPA-351.2	A01
Ammonia as N	97	5.0	2.5	mg/L	EPA-350.1	A01
1118256-14	**Recology Hay Road, PL-5.1B, PL-5.1B, 11/3/2011 12:30:00PM**					
Tetrachloroethene	0.68	1.0	0.13	ug/L	EPA-8260	J
Trichloroethene	0.11	1.0	0.085	ug/L	EPA-8260	J
Acetone	8.6	10	4.6	ug/L	EPA-8260	J
Dissolved Calcium	140	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	170	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	220	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	5.2	1.0	0.10	mg/L	EPA-6010B	
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	190	1.0	0.13	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.069	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	510	2.0	0.24	mg/L	EPA-300.0	A01
Total Dissolved Solids @ 180 C	1700	100	100	mg/L	SM-2540C	
1118256-15	**Recology Hay Road, PL-9.1A, PL-9.1A, 11/3/2011 2:00:00PM**					
Dissolved Calcium	69	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	56	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	170	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	4.3	1.0	0.10	mg/L	EPA-6010B	
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	68	0.50	0.066	mg/L	EPA-300.0	
Nitrate/Nitrite as N	5.5	0.50	0.050	mg/L	EPA-353.2	A01
Sulfate	87	1.0	0.12	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	800	50	50	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	0.53	0.20	0.056	mg/L	EPA-351.2	
Ammonia as N	0.031	0.050	0.025	mg/L	EPA-350.1	J
Dissolved Chromium	0.0035	0.010	0.0010	mg/L	EPA-6010B	J
Dissolved Lead	0.0050	0.050	0.0050	mg/L	EPA-6010B	J
1118256-16	**Recology Hay Road, LD-3.2, LD-3.2, 11/3/2011 11:25:00AM**					

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118256-16 **Recology Hay Road, LD-3.2, LD-3.2, 11/3/2011 11:25:00AM**						
Bicarbonate Alkalinity as CaCO3	580	8.2	8.2	mg/L	SM-2320B	
Chloride	94	0.50	0.066	mg/L	EPA-300.0	
Total Dissolved Solids @ 180 C	800	50	50	mg/L	SM-2540C	

Chain of Custody and Cooler Receipt Form for 1118256 Page 1 of 4

Golder Associates 11-18256

Golder Associates CHAIN OF CUSTODY

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Page 1 of 2

Quotation No. ______

PROJECT NO.: 053-7444-11

SITE NAME: Recology - Hay Road

SAMPLER(S): Steve Cwecmin (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	B30 8260 SIM/TT 457	TDS, Cl, SO4, Alk, Carb, Bicarb	NO3+NO2-N, TKN, NH3-N	Ca, Mg, Na, K	Pb.	As, Cr, Pb	Cont. Qty.	Remarks
Type/Vol.						VOA 40ml	PE 1L	PE 1L	1L PE	1L PE	1L PT		
Filter						N	No	No	Yes	Yes	Yes		
Preserv.						HCl	None	H2SO4	HNO3	HNO3	HNO3		
S-1	-1	11/2/11	1240	WATER	-	3	1	1	1			6	Report Trace for 8260
S-2.2B	-2	11/2/11	1320		-	3	1	1	1			6	
S-3.1	-3	11/3/11	1140		-	3	1	1	1			6	
S-3.2	-4	11/3/11	1115		-	3	1	1	1	X		6	
S-3.3	-5	11/3/11	1045		-	3	1	1	1			6	
S-4.1	-6	11/3/11	1200		-	3	1	1	1			6	
S-5.1A	-7	11/3/11	1245		-	3	1	1	1			6	
S-5.1B	-8	11/3/11	1220		-	3	1	1	1			6	
S-5.2	-9	11/3/11	1315		-	3	1	1	1			6	
S-9.1A	-10	11/3/11	1345		-	3	1	1	1		X	6	
S-9.1B	-11	11/3/11	1330		-	3	1	1	1		X	6	
S-11.1	-12	11/2/11	1345		-	3	1	1	1			6	
S-11.2	-13	11/3/11	1420		-	3	1	1	1			6	

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Dickey	11/4/11 1232
Ross Dickey 11-4-11	[signature]	11-4-11 1437
[signature] 11-4-11 1830	[signature]	11-4-11 1830

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

Golder Associates

11-118256

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CHAIN OF CUSTODY

Page 2 of 2

Quotation No. ____

PROJECT NO.: 053-7444-11

SITE NAME: Recology-Hay Rd

SAMPLER(S): S. Giacomini (printed) SL (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	8260 Short List	TDS, Cl, SO4, Alk (Carb, Bicarb)	NO3+NO2-N	Ca, Mg, Na, K	NO3+NO2-N, TKN, NH3-N	Ca, Mg, Na, K, As, Cr, Pb	TDS, Cl, Bicarbonate				Cont. Qty.	Remarks
Container Info: Type/Vol.						VOA 40ml	PE 1L	PE 250	PE 1L	PE 1L	PE 1L	PE 1L					
Filter						N	N	N	Y	N	Y	N					
Preserv.						HCl	none	H2SO4	HNO3	H2SO4	HNO3	none					
PL-5.1B	74	11/3/11	1230	W	—	3	1	1	1							6	Report trace for 8260
PL-9.1A	75	11/3/11	1400	W	—	3	1			1	1					6	
LD-3.2-16	76	11/3/11	1125	W	—							1				1	

Relinquished by: (signature)	Received by: (signature)	Date/Time:
SL	Ross Dickey	11/4/11 1232
Ross Dickey 11-4-11	[signature]	11-4-11 1437
[signature] 11-4-11 1830	B. Hammel	11-4-11 1830

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

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Date of Report: 11/30/2011

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1118730
Invoice ID:	B112115

Enclosed are the results of analyses for samples received by the laboratory on 11/11/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118730-01 **Hay Road LF, UZ-7, UZ-7, 11/11/2011 8:20:00AM**						
Moisture	17.2	0.05	0.05	%	Calc	
pH	9.12	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	25.0	0.1	0.1	C	EPA-9045	
Solids	82.8	0.05	0.05	%	SM-2540G	
Chromium	0.0015	0.010	0.0010	mg/L	EPA-6010B (Mod. STLC)	J
Chloride	3.0	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.067	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	J
Sulfate	19	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Ammonia as N	0.060	0.050	0.025	mg/L	EPA-350.1 (Mod. STLC)	
Nitrite as N	0.11	0.50	0.015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	0.53	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1118730-02 **Hay Road LF, UZ-8, UZ-8, 11/11/2011 8:30:00AM**						
Moisture	18.6	0.05	0.05	%	Calc	
pH	8.72	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	25.0	0.1	0.1	C	EPA-9045	
Solids	81.4	0.05	0.05	%	SM-2540G	
Chromium	0.0012	0.010	0.0010	mg/L	EPA-6010B (Mod. STLC)	J
Chloride	4.5	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.062	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	J
Sulfate	16	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Nitrite as N	0.20	0.50	0.015	mg/L	EPA-353.2 (Mod. STLC)	J
Total Kjeldahl Nitrogen	0.46	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1118730-03 **Hay Road LF, UZ-9, UZ-9, 11/11/2011 8:50:00AM**						
Moisture	20.8	0.05	0.05	%	Calc	
pH	8.74	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	25.0	0.1	0.1	C	EPA-9045	
Solids	79.2	0.05	0.05	%	SM-2540G	
Chloride	2.2	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Nitrate as N	0.030	0.10	0.021	mg/L	EPA-300.0 (Mod. STLC)	J

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1118730-03 **Hay Road LF, UZ-9, UZ-9, 11/11/2011 8:50:00AM**						
Sulfate	8.5	1.0	0.12	mg/L	EPA-300.0 (Mod. STLC)	
Ammonia as N	0.058	0.050	0.025	mg/L	EPA-350.1 (Mod. STLC)	
Total Kjeldahl Nitrogen	0.48	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	
1118730-04 **Hay Road LF, UZ-10, UZ-10, 11/11/2011 8:40:00AM**						
Moisture	21.7	0.05	0.05	%	Calc	
pH	8.52	0.05	0.05	pH Units	EPA-9045	pH1:1
pH Measurement Temperature	24.9	0.1	0.1	C	EPA-9045	
Solids	78.3	0.05	0.05	%	SM-2540G	
Chloride	1.4	0.50	0.066	mg/L	EPA-300.0 (Mod. STLC)	
Sulfate	5.2	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
Total Kjeldahl Nitrogen	0.44	0.20	0.056	mg/L	EPA-351.2 (Mod. STLC)	

Golder Associates
CHAIN OF CUSTODY

Golder Associates 11-18730

Page 1 of 1
Quotation No.

PROJECT NO.: 053-
SITE NAME: 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

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	pH (9045C)	STLC Chloride (300)	STLC Sulfate (300)	STLC Nitrate, Nitrite (300)	STLC As, Cr, Pb	Ammonia as N (450.0, 350.3)	TKN (351.2)	% Soil Moisture (2540G)	Cont. Qty.	Remarks
Container Info: Type/Vol.						tube	tube	tube	tube	tube	tube	tube	tube		
Filter						N	N	N	N	N	N	N	N		
Preserv.						—	—	—	—	—	—	—	—		
UZ-7	-1	11/11/11	0820	SOIL	5.5-6.0'	X	X	X	X	X	X	X	X	1	
UZ-8	-2	↓	0830	↓	5.5-6.0'	X	X	X	X	X	X	X	X	1	
UZ-9	-3	↓	0850	↓	5.5-6.0'	X	X	X	X	X	X	X	X	1	
UZ-10	-4	↓	0840	↓	5.5-6.0'	X	X	X	X	X	X	X	X	1	

CHK BY | DISTRIBUTION | SUB-OUT [ ]

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Dickey	11-11-11 1204
Ross Dickey 11-11-11	Gary Bogan	11-11-11 - 1500
Gary Bogan 11-11-11 1830	[signature]	11-11-11 1830

white: lab copy yellow: project file

Rel - [signature] 11-11-11 22:45 M. [signature] 11/11/11 2245

SEND RESULTS TO:
Attn: KRIS JOHNSON
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

Date of Report: 01/05/2012

Kris Johnson

Golder Associates
425 Lakeside Drive
Sunnyvale, CA 94085

Project:	Hay Road LF
BC Work Order:	1120576
Invoice ID:	B114173

Enclosed are the results of analyses for samples received by the laboratory on 12/14/2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Linda Phoudamneun
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

Table of Contents

Executive Summary - Detections

Constituent	Result	PQL	MDL	Units	Method	Lab Quals
1120576-01	**Recology Hay Road, S-2-1, S-2-1, 12/14/2011 3:00:00PM**					
n-Butylbenzene	0.13	1.0	0.11	ug/L	EPA-8260	J
Chlorobenzene	0.39	1.0	0.093	ug/L	EPA-8260	J
1,2-Dichlorobenzene	0.13	1.0	0.072	ug/L	EPA-8260	J
1,4-Dichlorobenzene	2.0	1.0	0.062	ug/L	EPA-8260	
Dichlorodifluoromethane	0.12	1.0	0.099	ug/L	EPA-8260	J
cis-1,2-Dichloroethene	0.19	1.0	0.085	ug/L	EPA-8260	J
Ethylbenzene	0.58	1.0	0.098	ug/L	EPA-8260	J
Methyl t-butyl ether	1.4	1.0	0.11	ug/L	EPA-8260	
Naphthalene	1.6	1.0	0.36	ug/L	EPA-8260	
n-Propylbenzene	0.16	1.0	0.11	ug/L	EPA-8260	J
Toluene	0.27	1.0	0.093	ug/L	EPA-8260	J
1,2,4-Trimethylbenzene	0.17	1.0	0.12	ug/L	EPA-8260	J
Vinyl chloride	0.34	1.0	0.12	ug/L	EPA-8260	J
Total Xylenes	1.2	1.0	0.36	ug/L	EPA-8260	
Acetone	6.6	10	4.6	ug/L	EPA-8260	J
t-Butyl alcohol	540	10	9.4	ug/L	EPA-8260	
1,4-Dioxane	92	100	42	ug/L	EPA-8260	J
Dissolved Calcium	210	0.10	0.018	mg/L	EPA-6010B	
Dissolved Magnesium	450	0.050	0.016	mg/L	EPA-6010B	
Dissolved Sodium	1400	0.50	0.050	mg/L	EPA-6010B	
Dissolved Potassium	22	1.0	0.10	mg/L	EPA-6010B	
Bicarbonate Alkalinity as CaCO3	1700	8.2	8.2	mg/L	SM-2320B	
Chloride	3100	10	1.3	mg/L	EPA-300.0	A01
Nitrate/Nitrite as N	0.034	0.10	0.010	mg/L	EPA-353.2	J
Sulfate	17	20	2.4	mg/L	EPA-300.0	J,A01
Total Dissolved Solids @ 180 C	7700	500	500	mg/L	SM-2540C	
Total Kjeldahl Nitrogen	27	5.0	1.4	mg/L	EPA-351.2	A01
Ammonia as N	22	1.0	0.50	mg/L	EPA-350.1	A01

Golder Associates 11-20576

Golder Associates
CHAIN OF CUSTODY

Page 1 of 1
Quotation No. ____

EDD required? [X] Yes [ ] No
EDF required? [X] Yes [ ] No

PROJECT NO.: 053-7444-11
SITE NAME: Recology Hay Rd
SAMPLER(S): Steve Gincumin (printed) SG (signature)
CONTRACT LABORATORY: BC LABS
TURN-AROUND TIME: Standard

ANALYSES: 8260 short list; TDS, Cl, SO4, carbonate, Bicarb; TKN, NH3-N, NO3+NO2-N; Ca, Mg, Na, K

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	8260 short list	TDS, Cl, SO4, carbonate, Bicarb	TKN, NH3-N, NO3+NO2-N	Ca, Mg, Na, K	Cont. Qty.	Remarks
						Type/Vol.	VOA 40ml	PE 1640z	PE 16oz	PE 16oz		
						Filter	N	N	N	Y		
						Preserv.	HCl	none	H2SO4	HNO3		
S-21	-1	12-14-11	1500	W	/		3	1	1	1	6	report trace

CHK BY: BLT
DISTRIBUTION
SUB-OUT [ ]

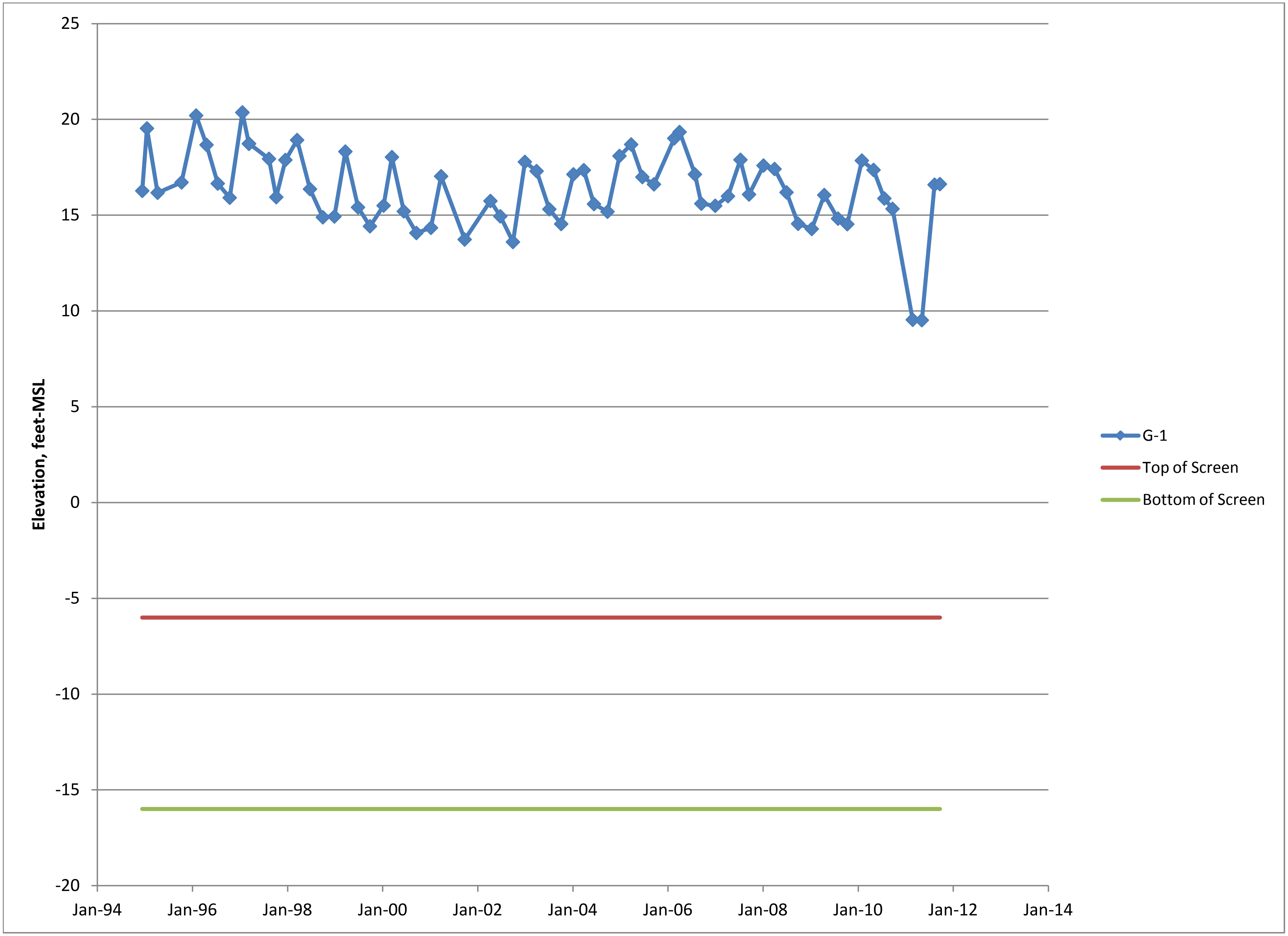
Relinquished by: (signature)	Received by: (signature)	Date/Time:
SG	Ross Dickey	12/14/11 1533
Ross Dickey 12-14-11	R. [signature]	12.14.11 1900
R. [signature] 12.14.11 2130		

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, PIPER/STIFF DIAGRAMS, HISTORICAL GRAPHS, AND STATISTICAL CALCULATIONS



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-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
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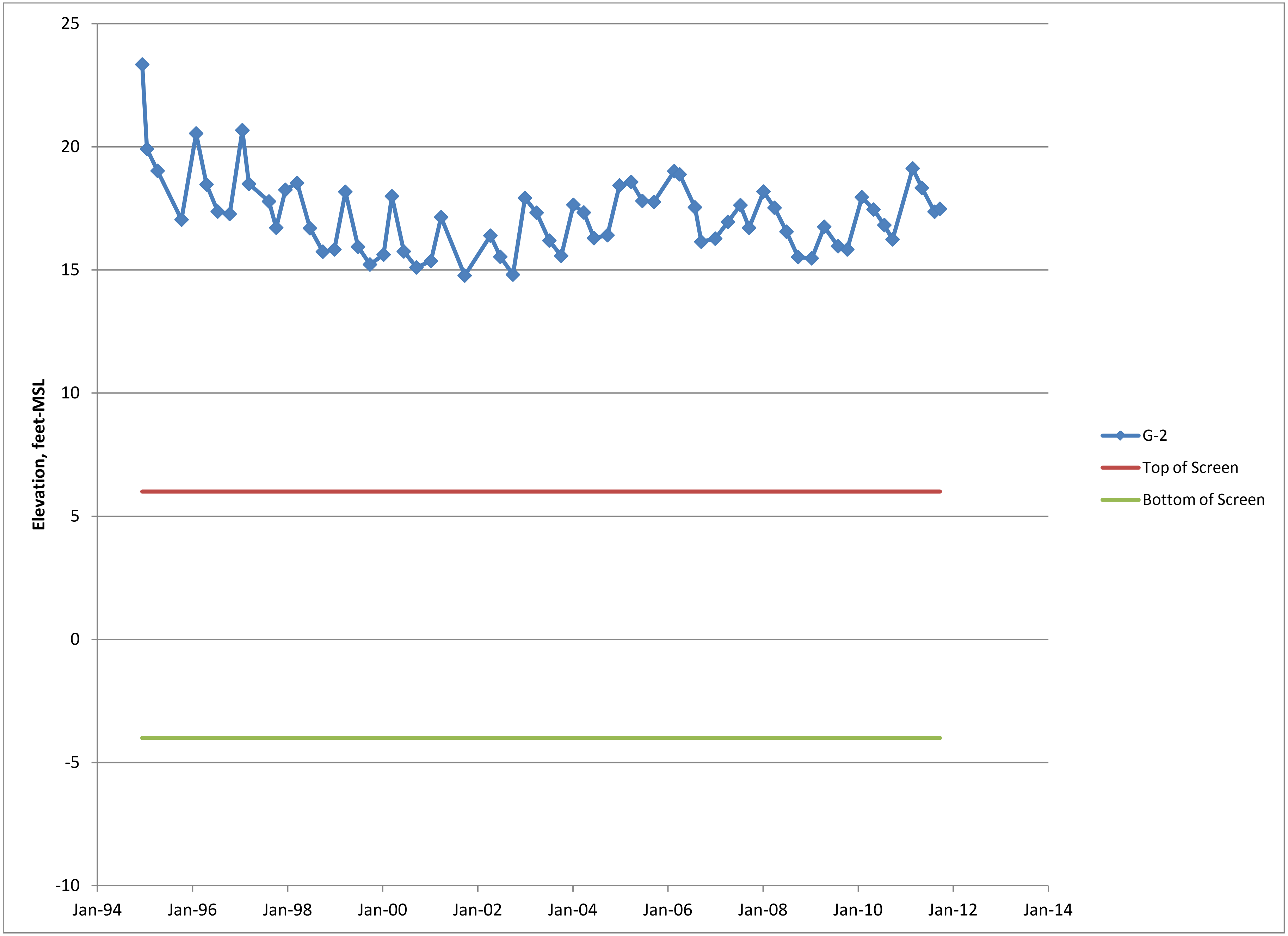
Bottom of Screen



Elevation, feet-MSL
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G-2
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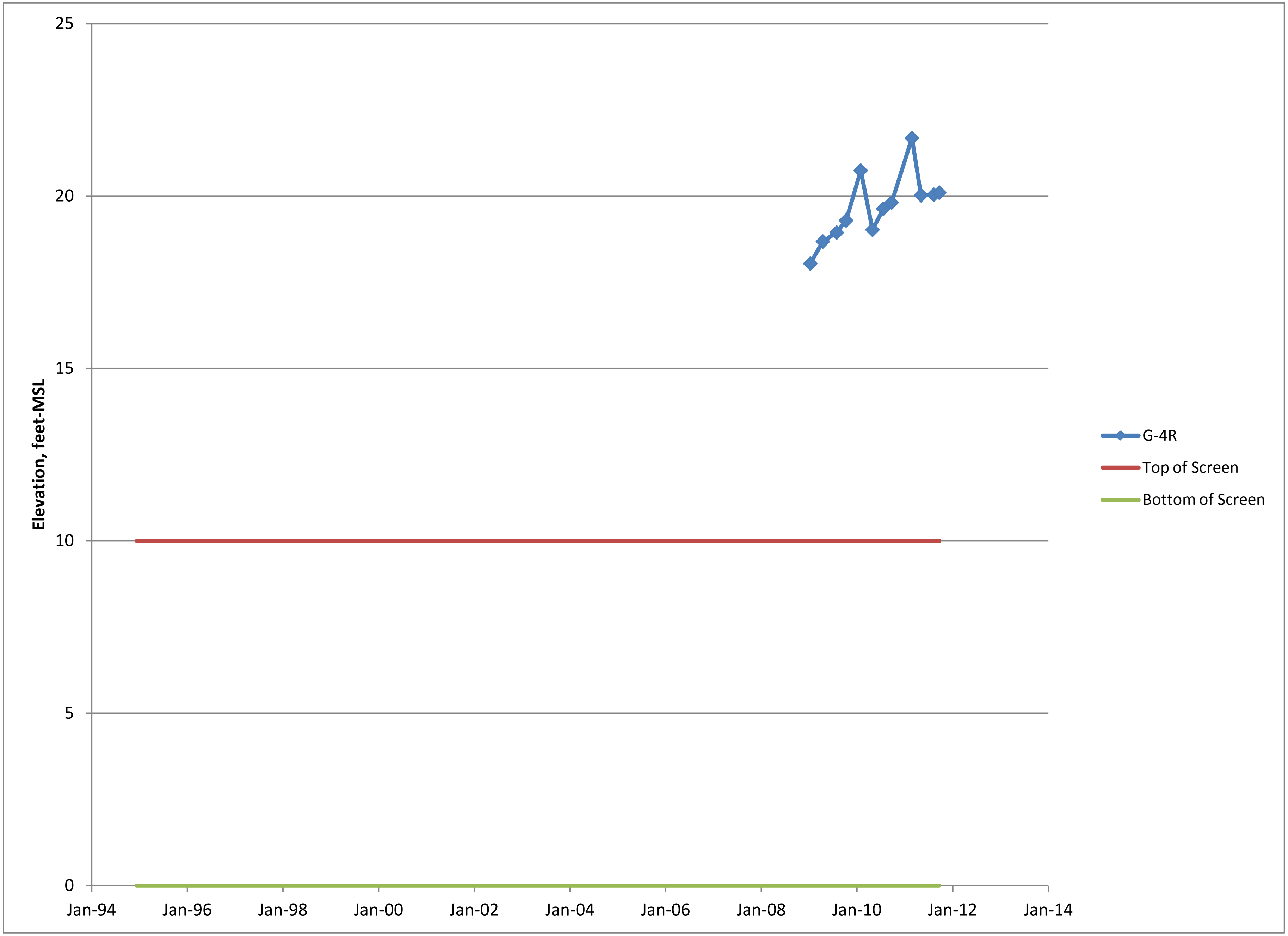
Bottom of Screen



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Elevation, feet-MSL
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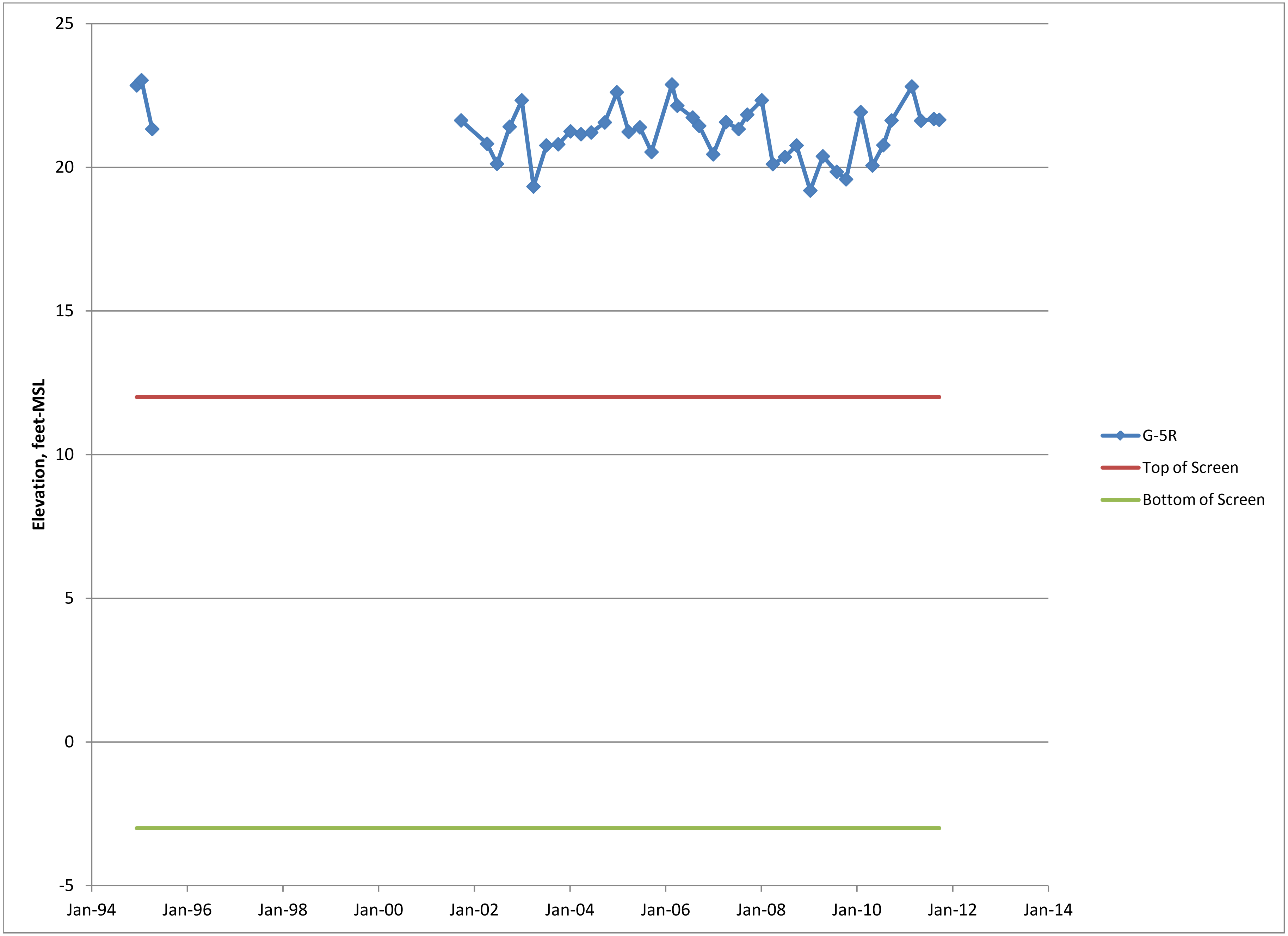
Jan-12
Jan-14
G-4R
Top of Screen
Bottom of Screen



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Elevation, feet-MSL
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Jan-96
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Jan-14
G-5R
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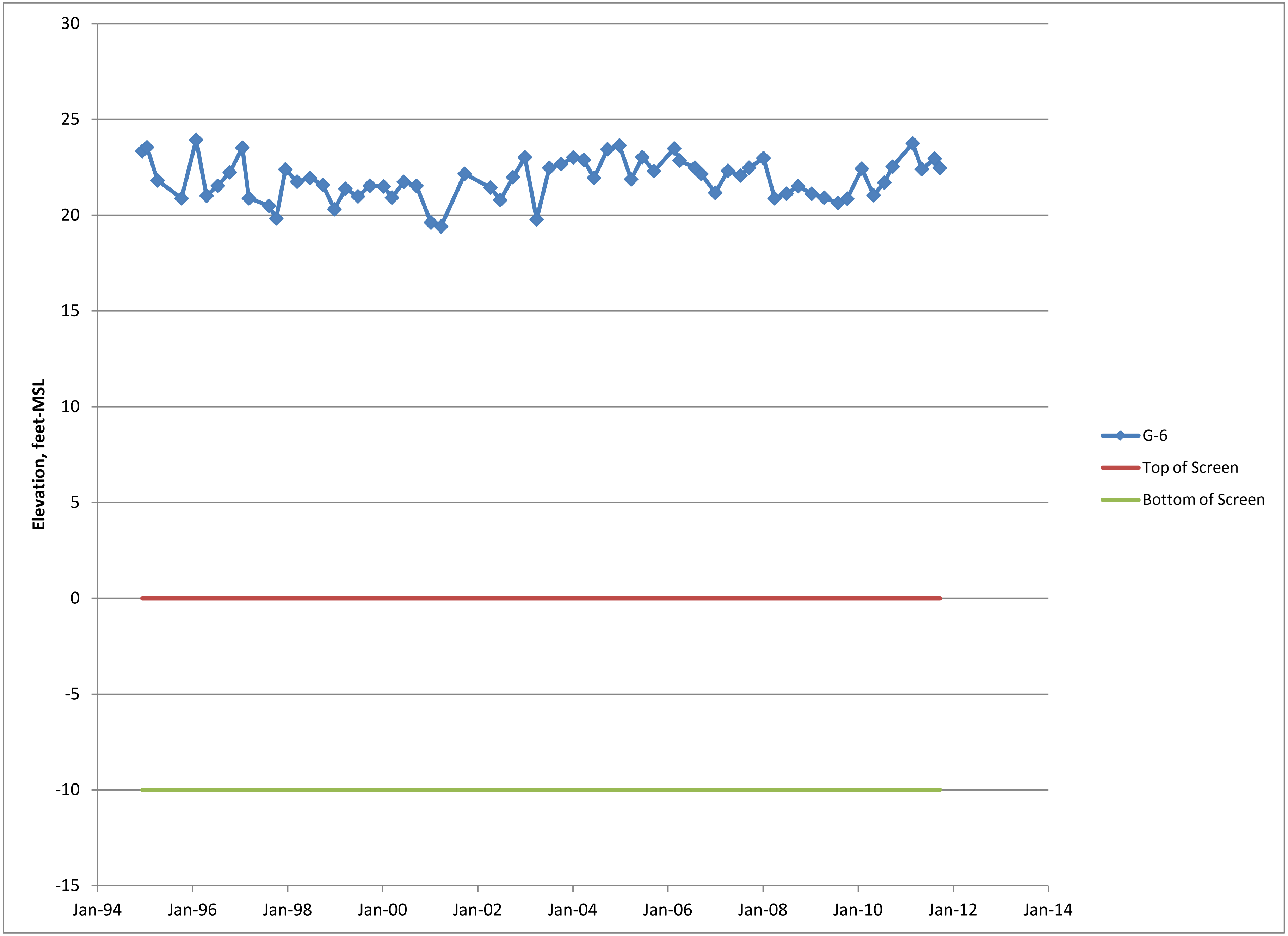
Bottom of Screen



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-15
Elevation, feet-MSL
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Jan-96
Jan-98
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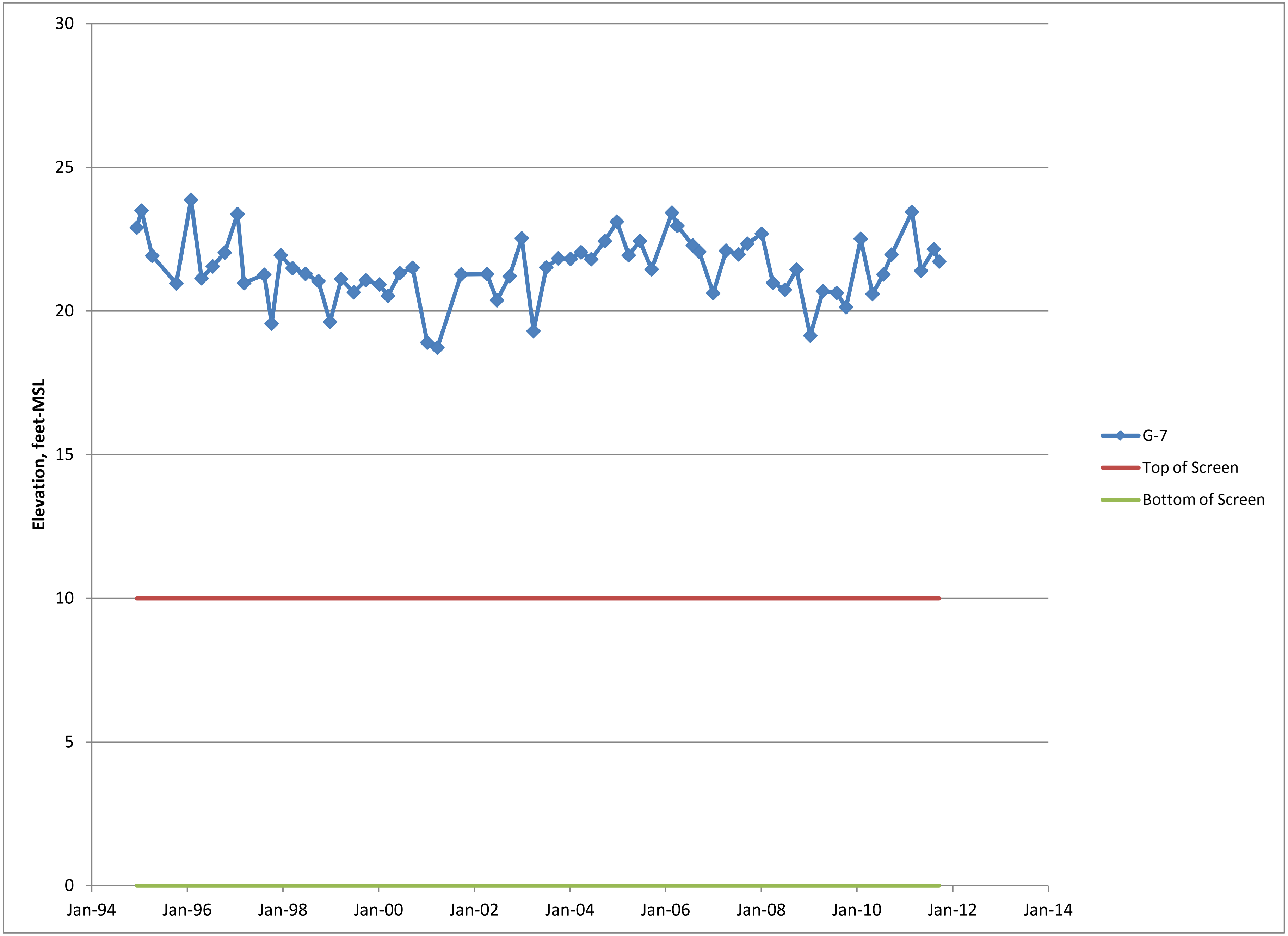
Jan-12
Jan-14
G-6
Top of Screen
Bottom of Screen



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Jan-96
Jan-98
Jan-00
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Jan-12
Jan-14
G-7
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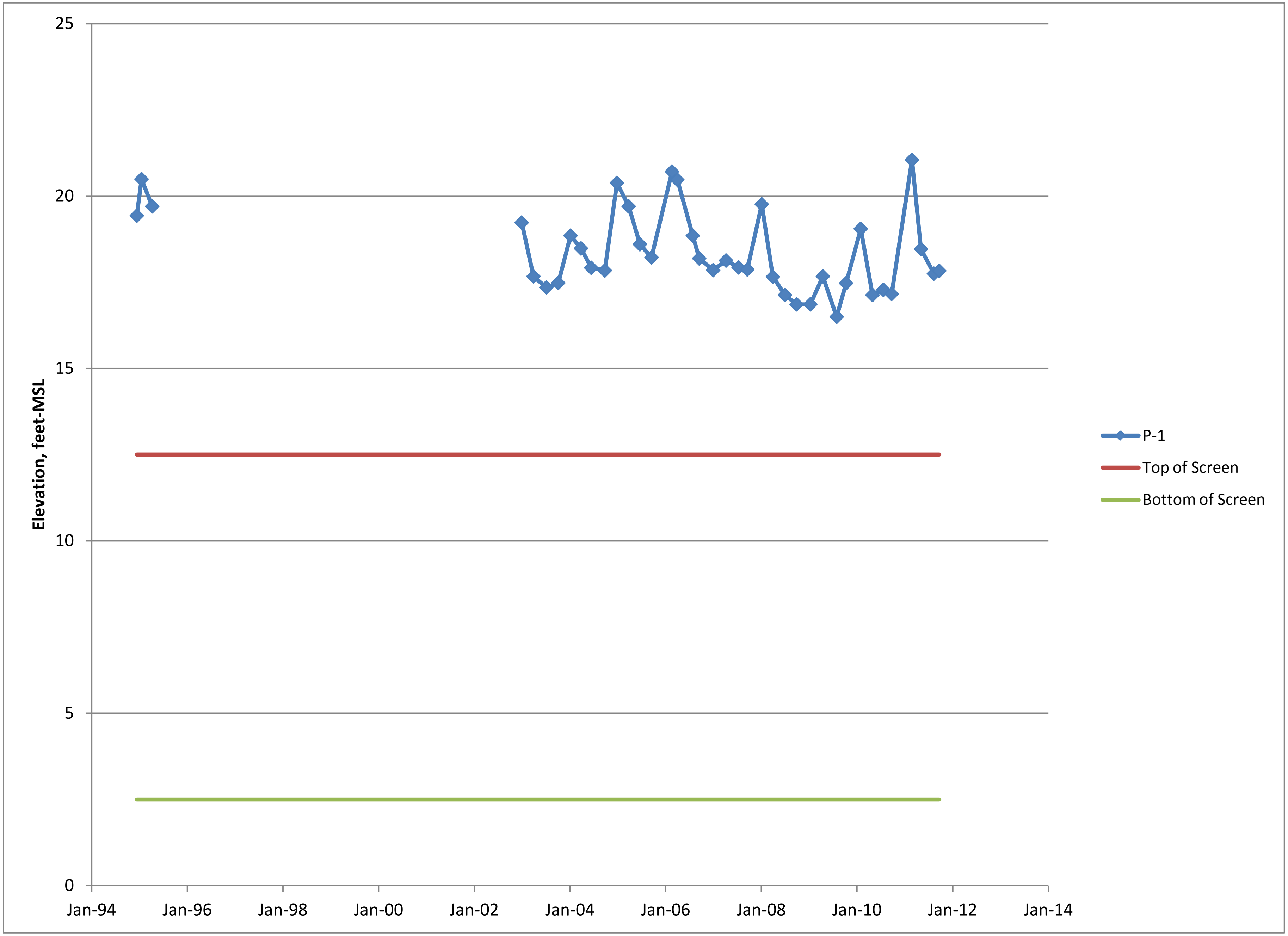
Bottom of Screen



Elevation, feet-MSL
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Jan-94
Jan-96
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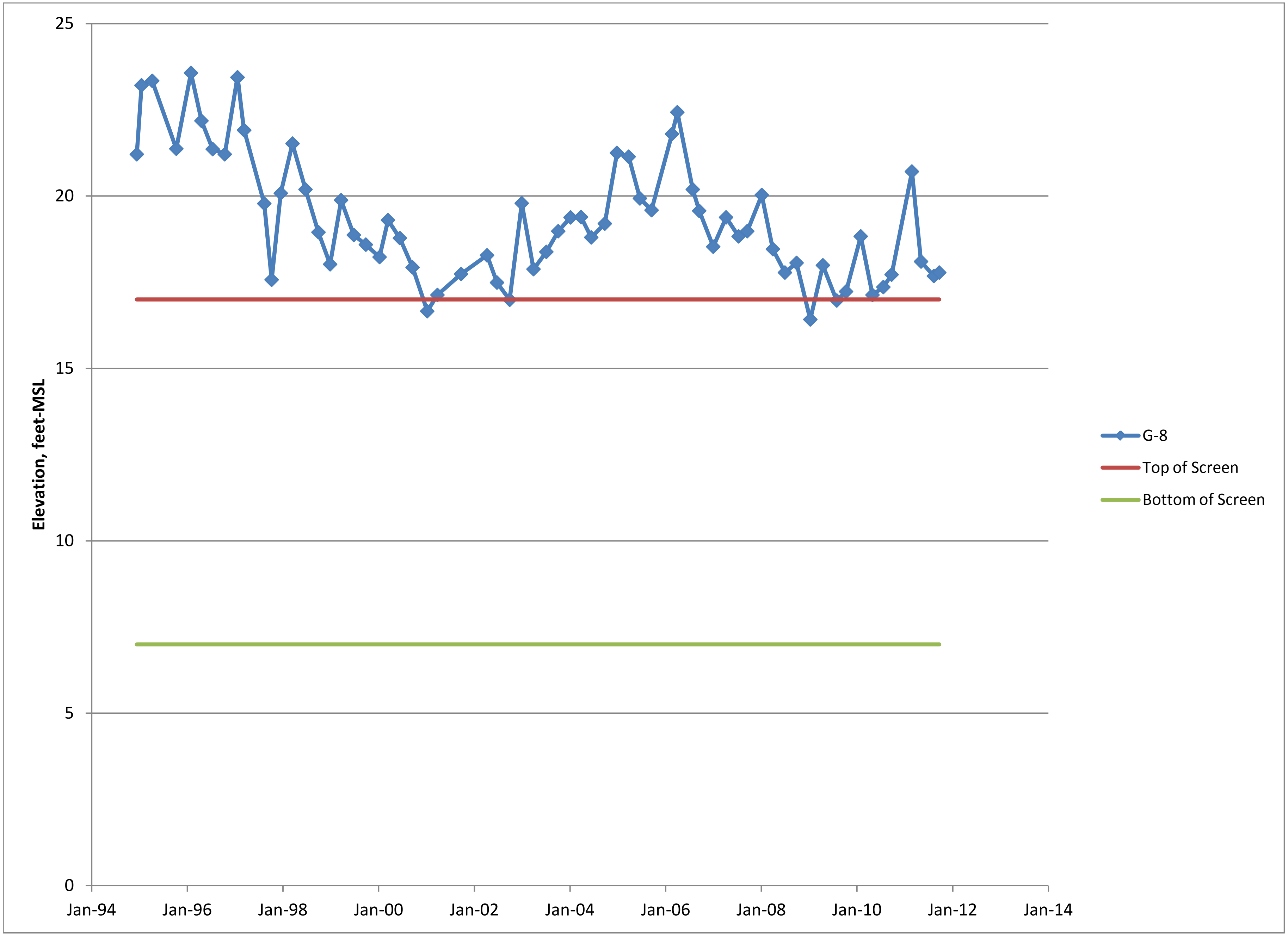
Jan-12
Jan-14
P-1
Top of Screen
Bottom of Screen



Elevation, feet-MSL
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Jan-94
Jan-96
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Jan-12
Jan-14
G-8
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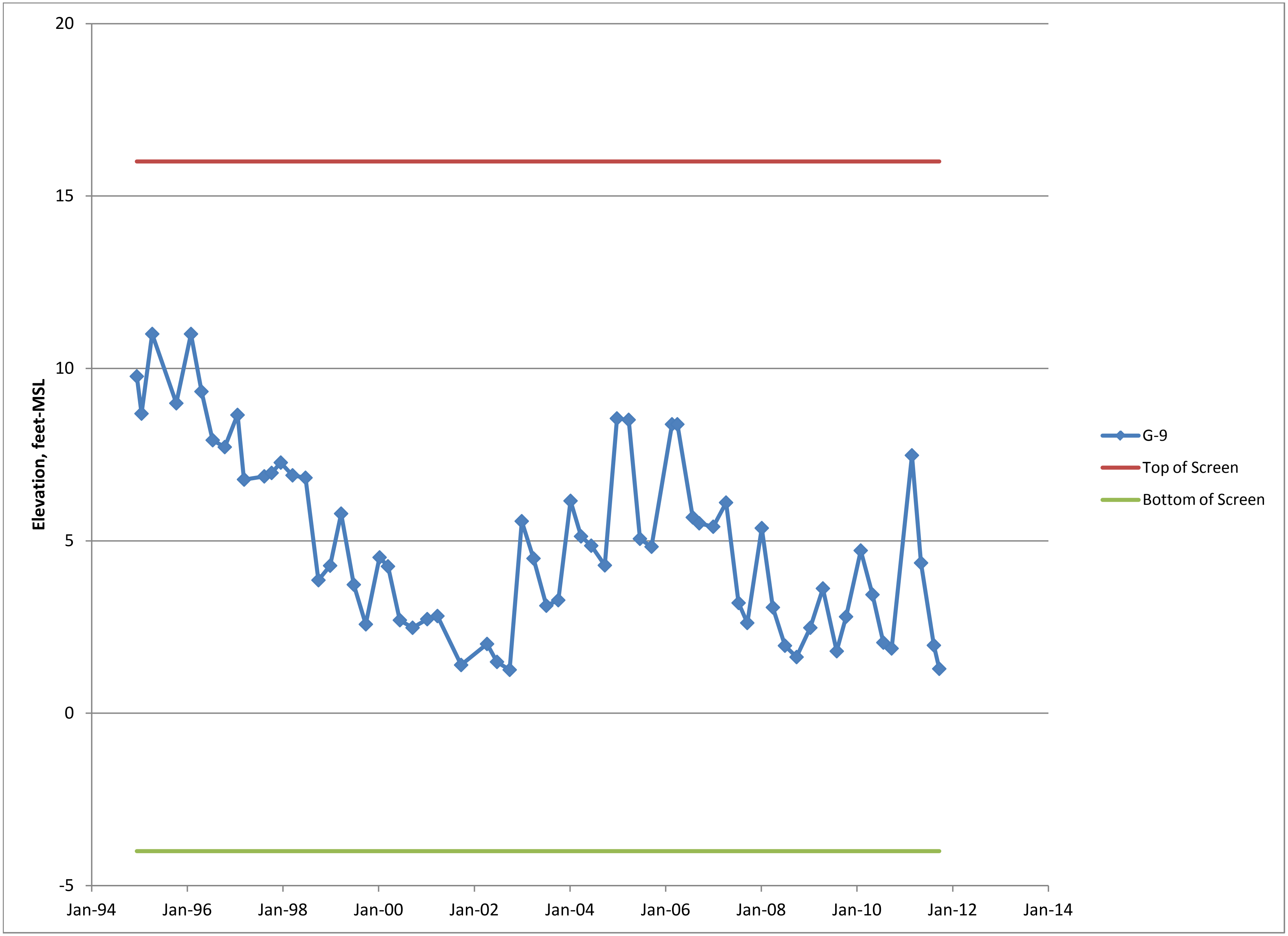
Bottom of Screen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15
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5
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-5
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
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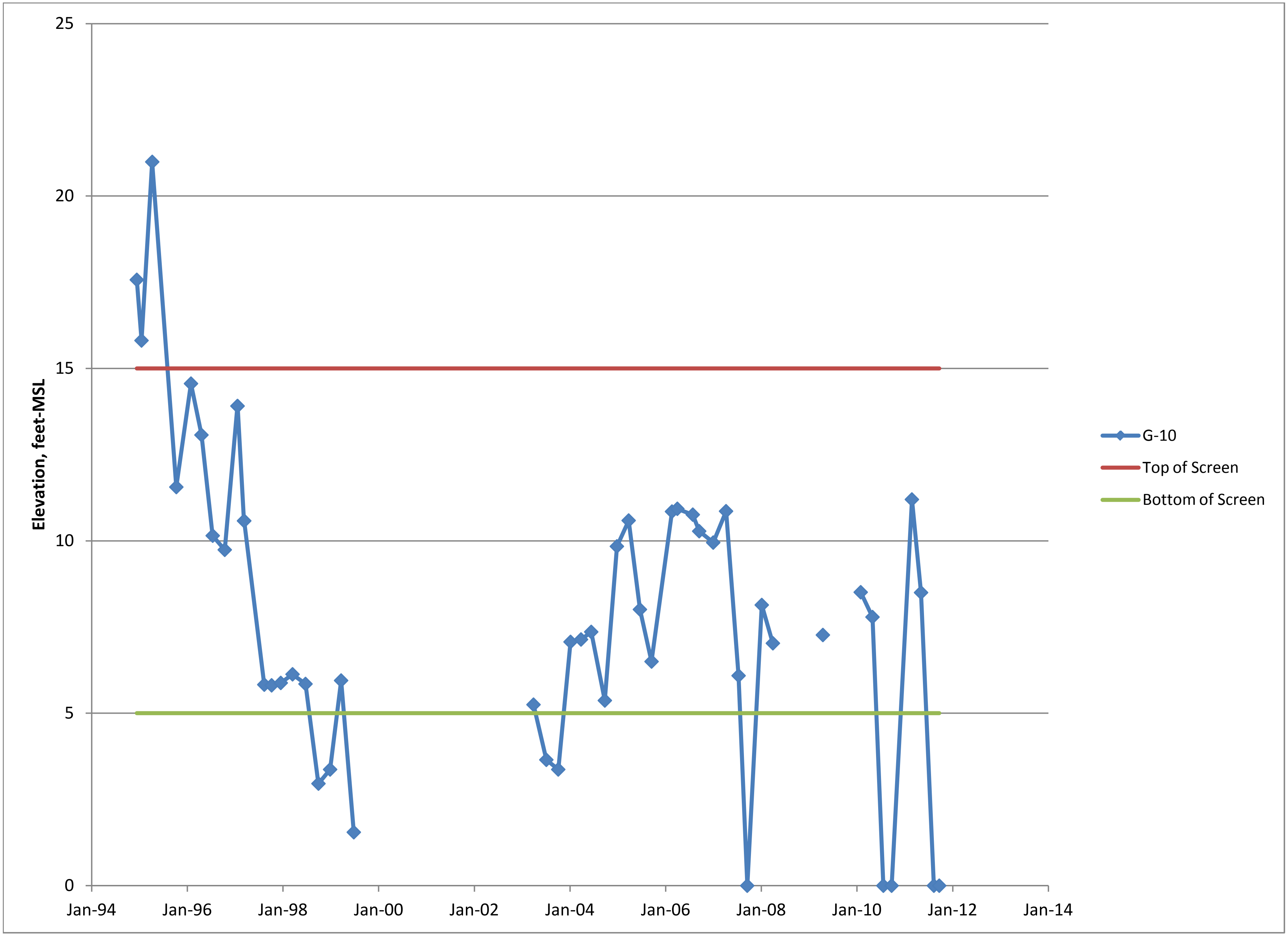
Jan-12
Jan-14
G-9
Top of Screen
Bottom of Screen



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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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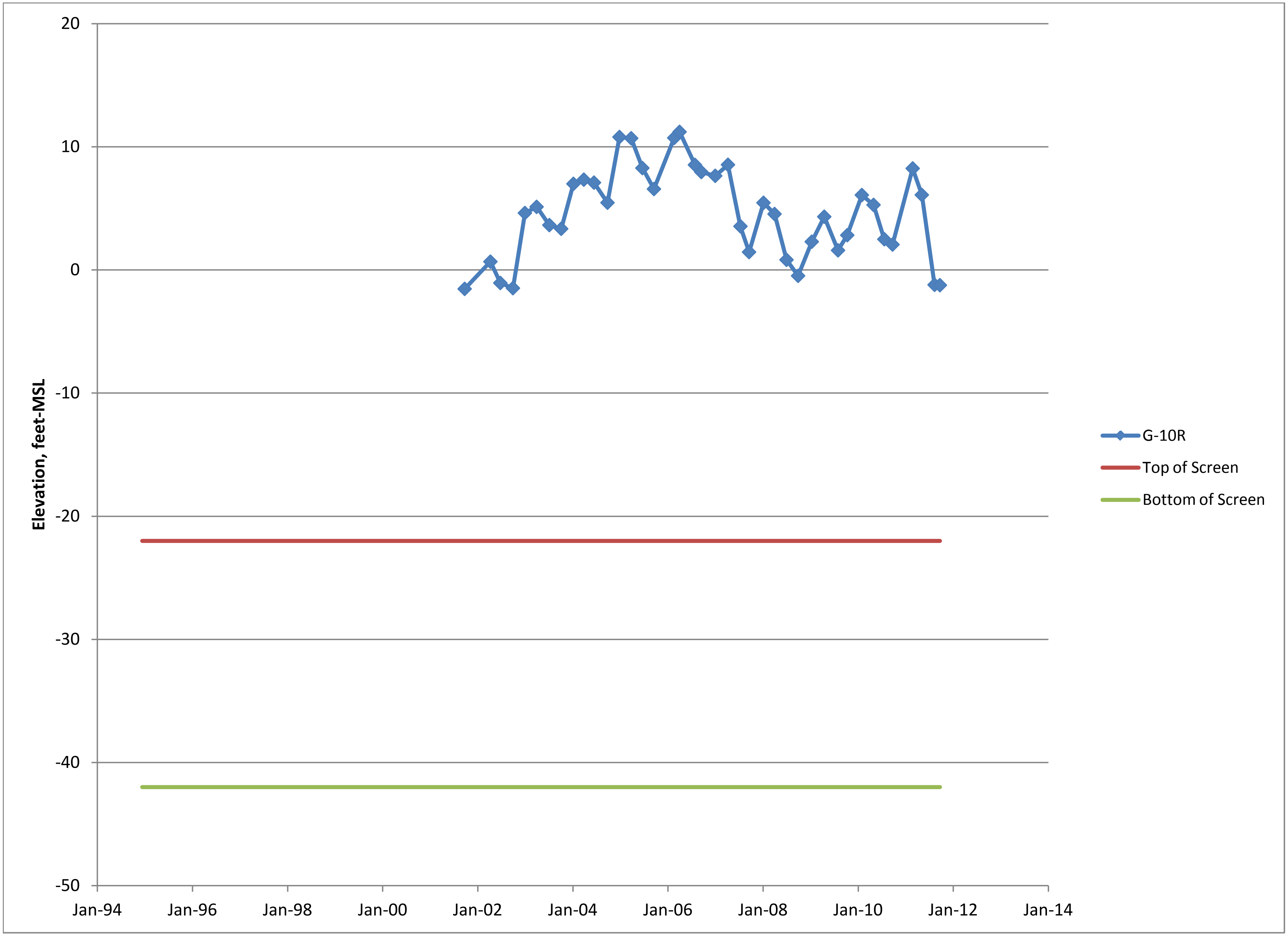
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-10
Top of Screen
Bottom of Screen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10
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-10
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-30
-40
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Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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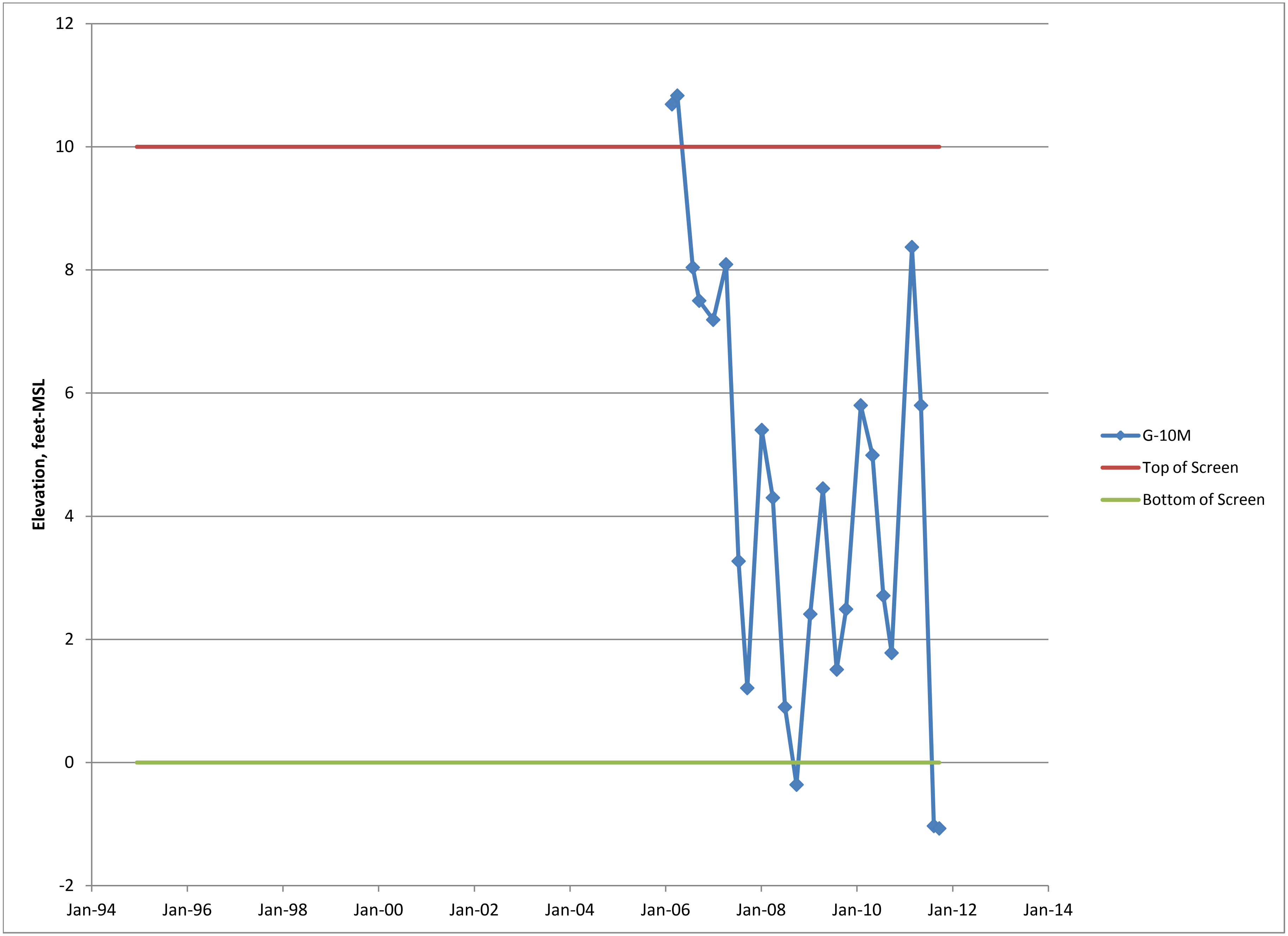
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-10R
Top of Screen
Bottom of Screen


Elevation, feet-MSL
12
10
8
6
4
2
0
-2
Jan-94
Jan-96
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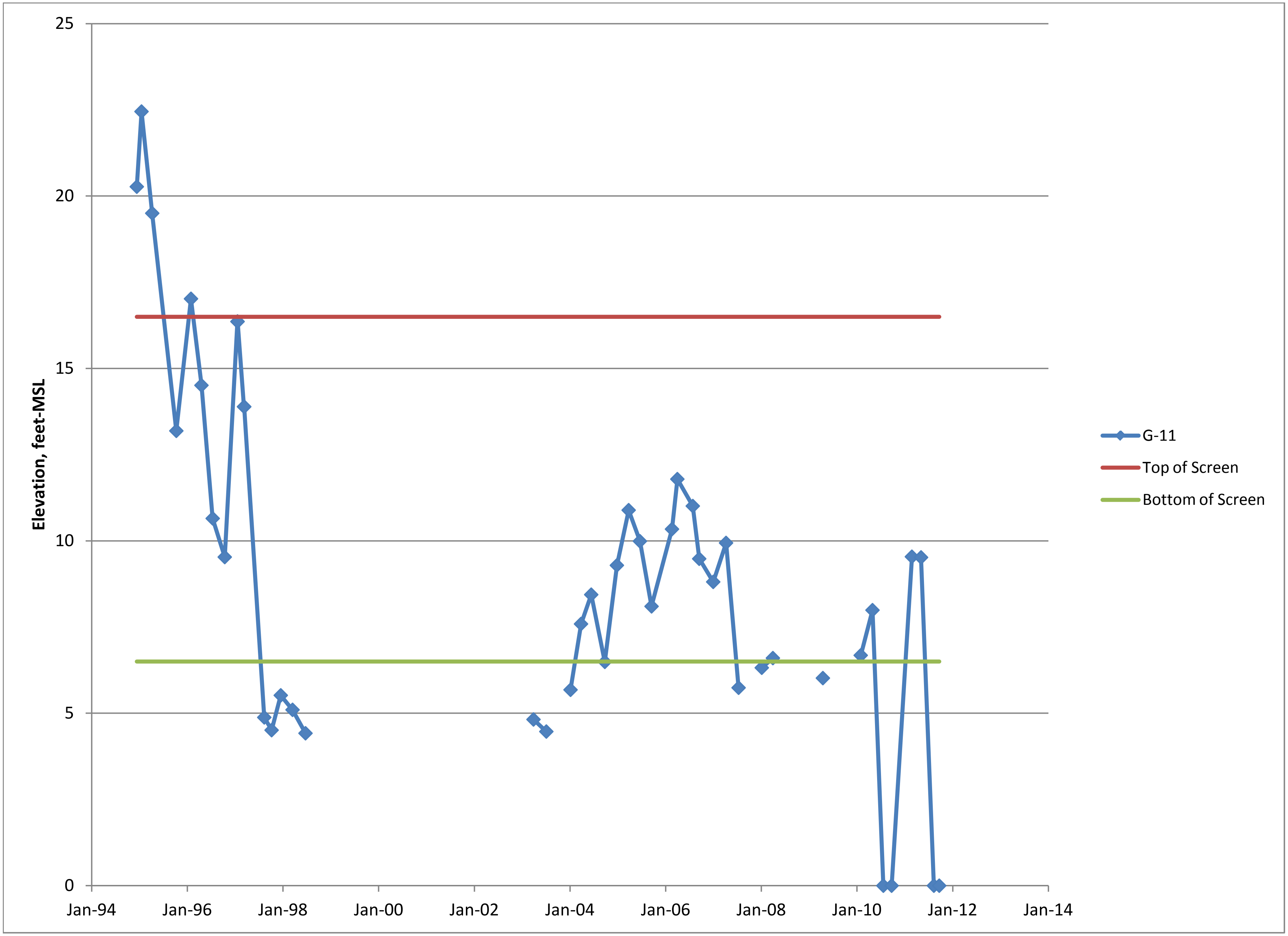
Jan-12
Jan-14
G-10M
Top of Screen
Bottom of Screen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5
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Elevation, feet-MSL
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Jan-96
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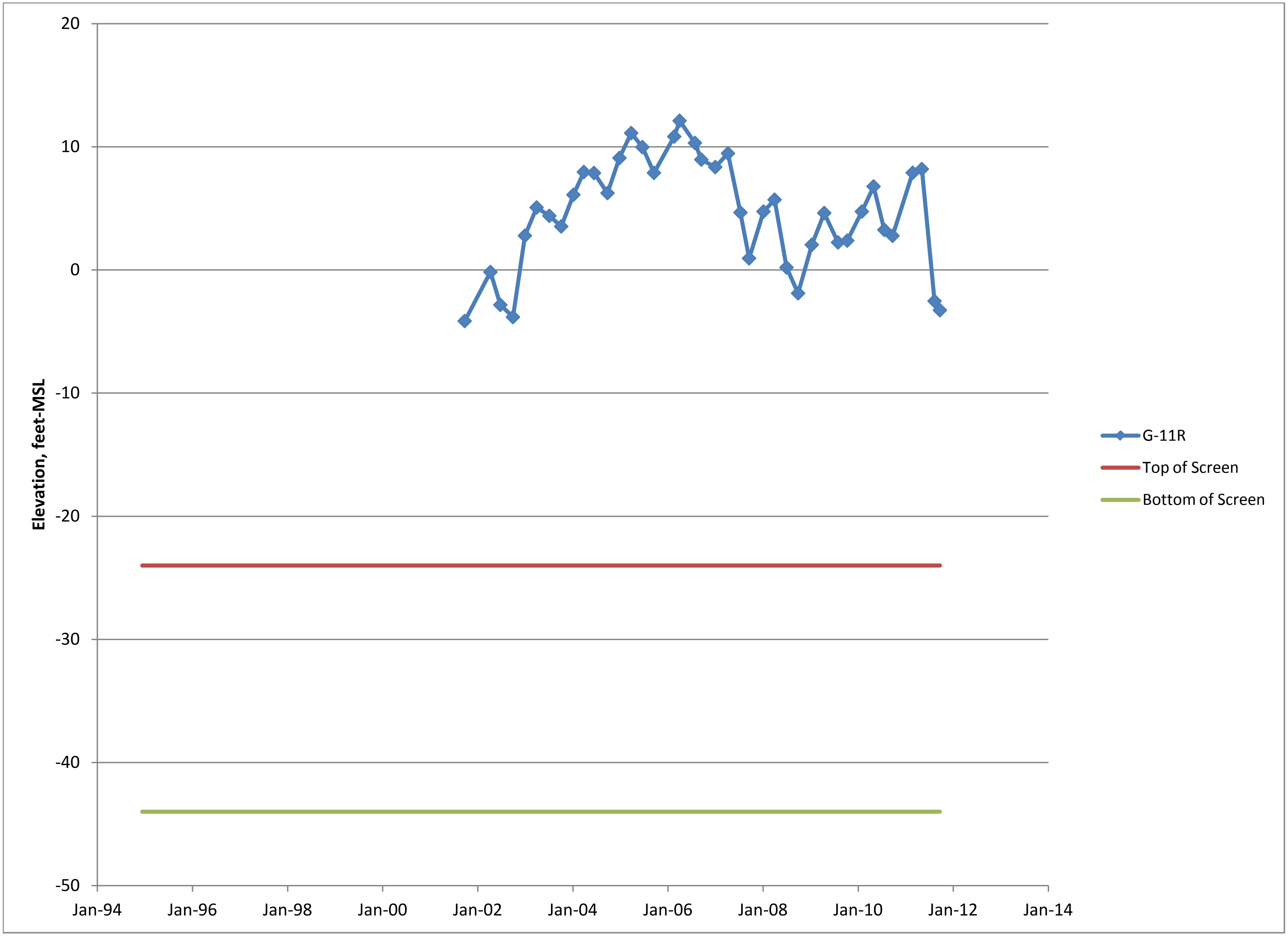
Jan-12
Jan-14
G-11
Top of Screen
Bottom of Screen



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Elevation, feet-MSL
Jan-94
Jan-96
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Jan-14
G-11R
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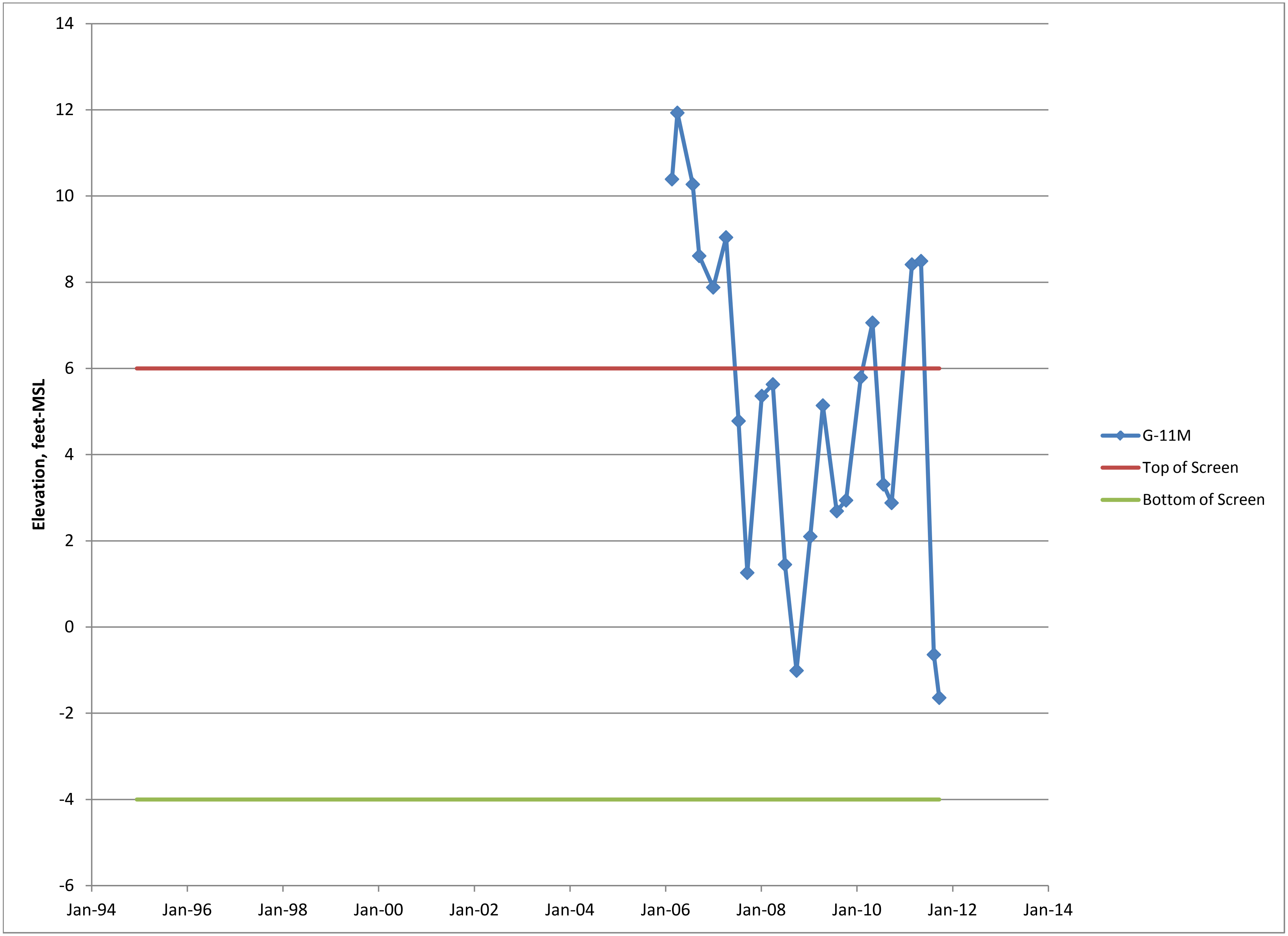
Bottom of Screen



Elevation, feet-MSL
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Jan-94
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Jan-14
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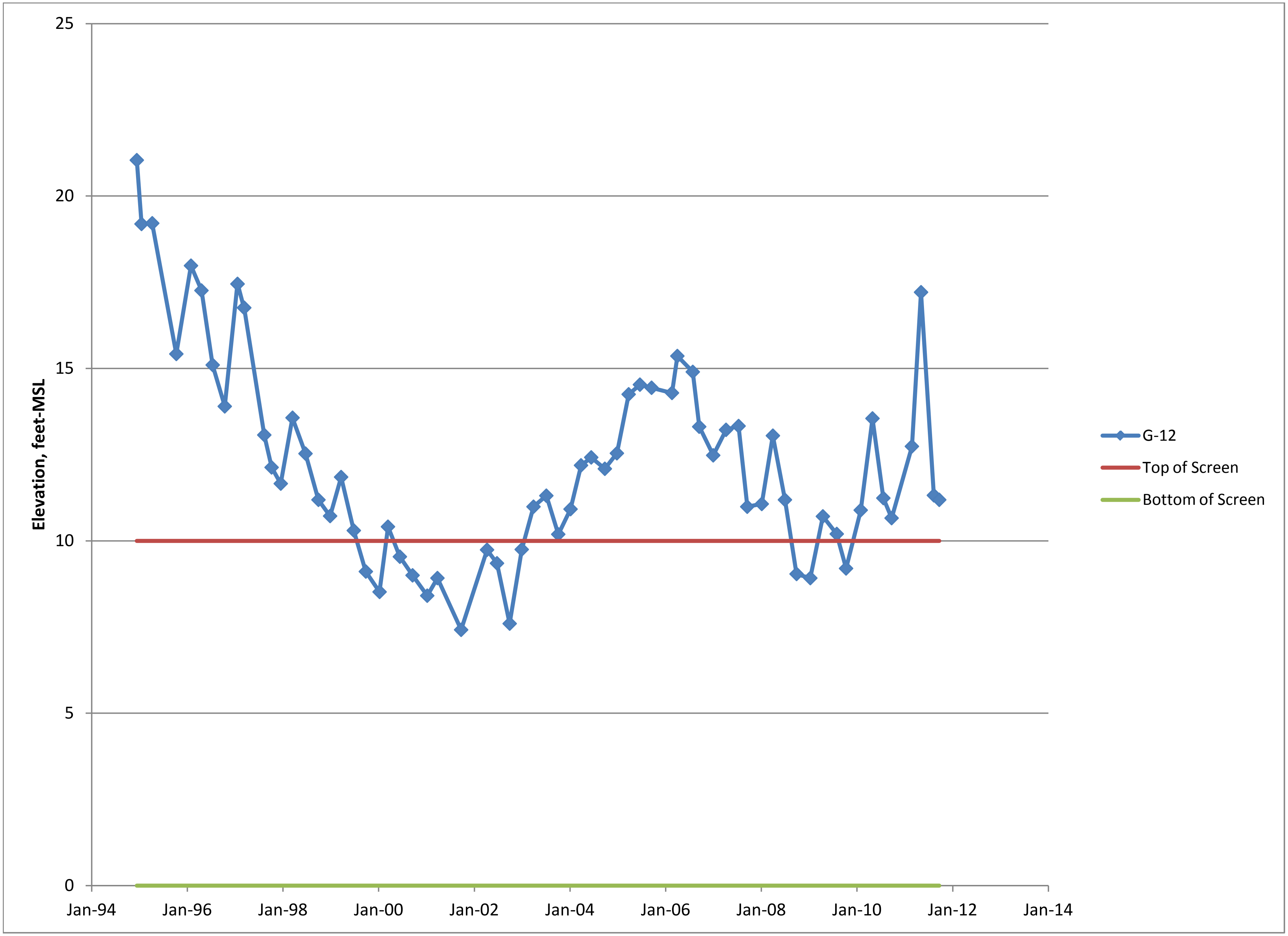
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Elevation, feet-MSL
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Jan-96
Jan-98
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Jan-12
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G-12
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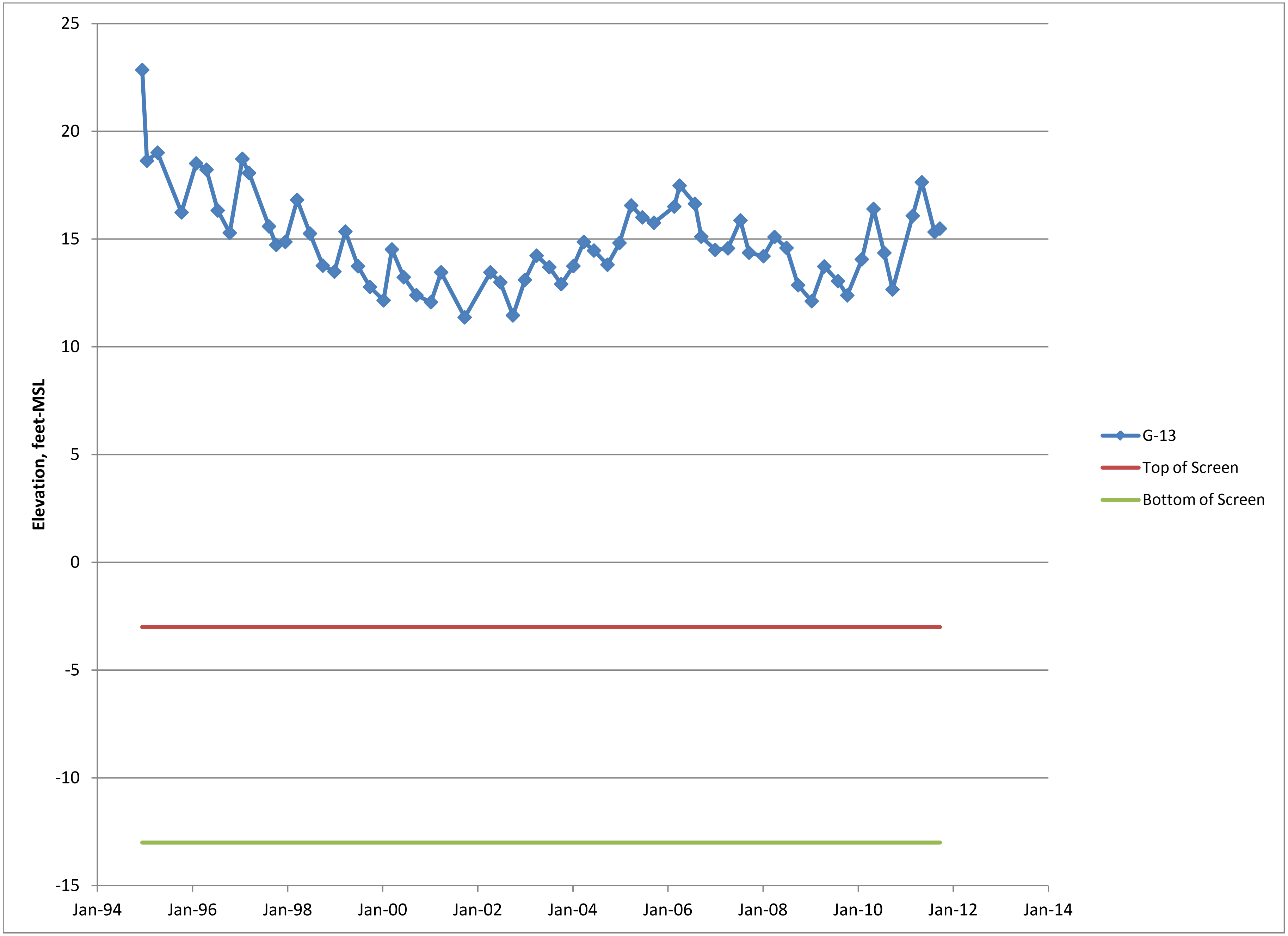
Bottom of Screen



Elevation, feet-MSL
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-15
Jan-94
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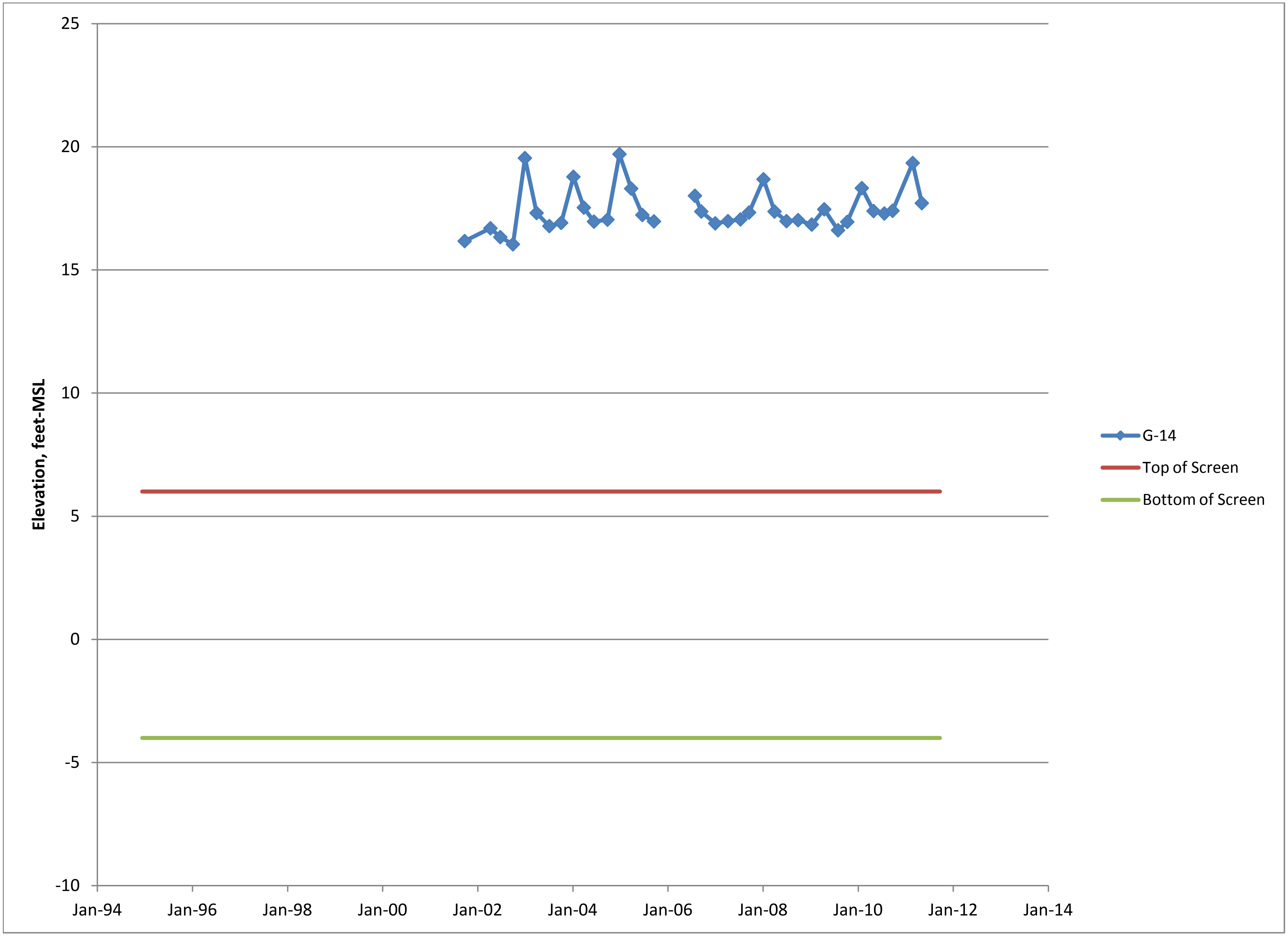
Bottom of Screen



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Elevation, feet-MSL
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Jan-96
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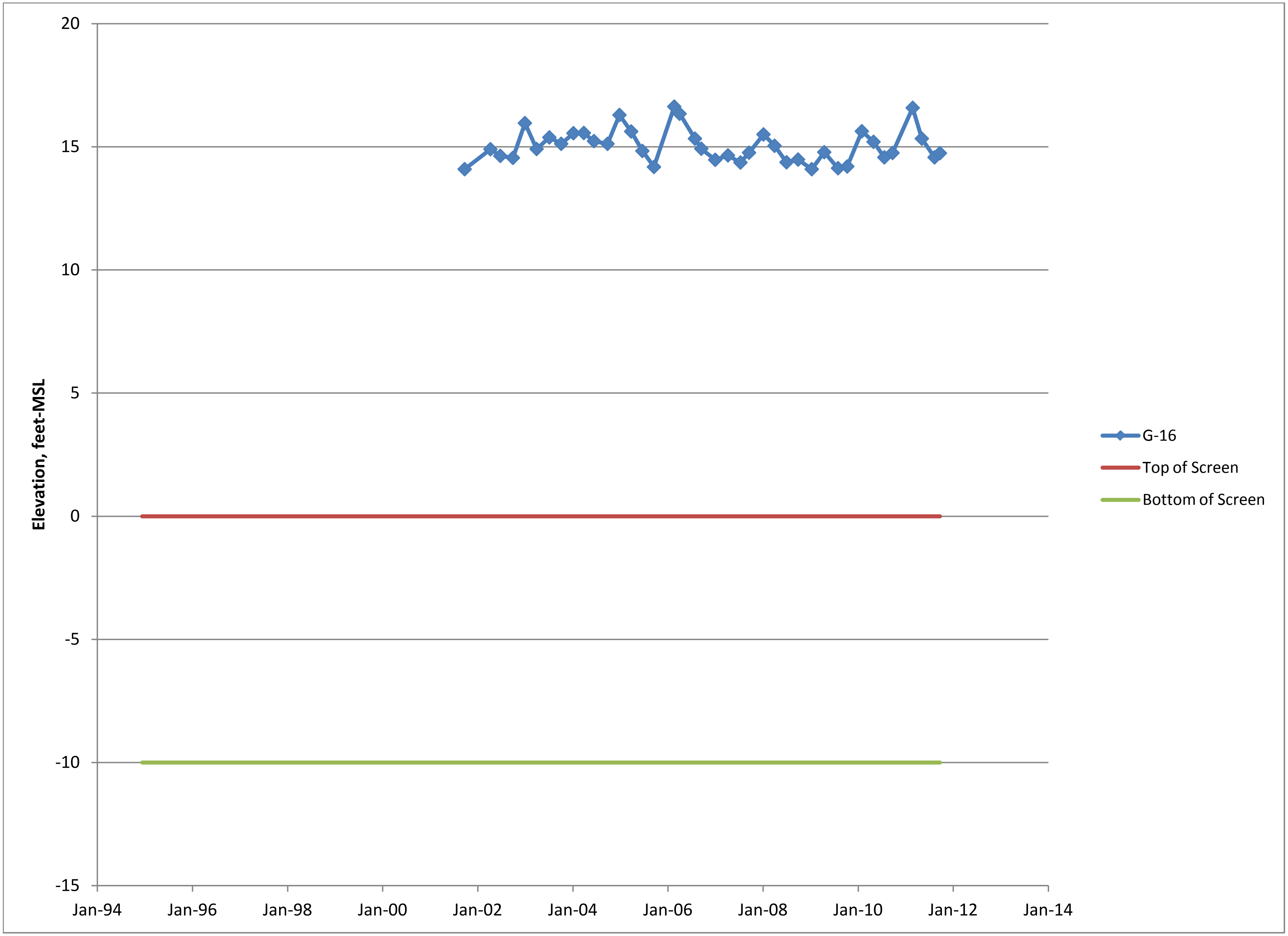
Jan-14
G-14
Top of Screen
Bottom of Screen



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Elevation, feet-MSL
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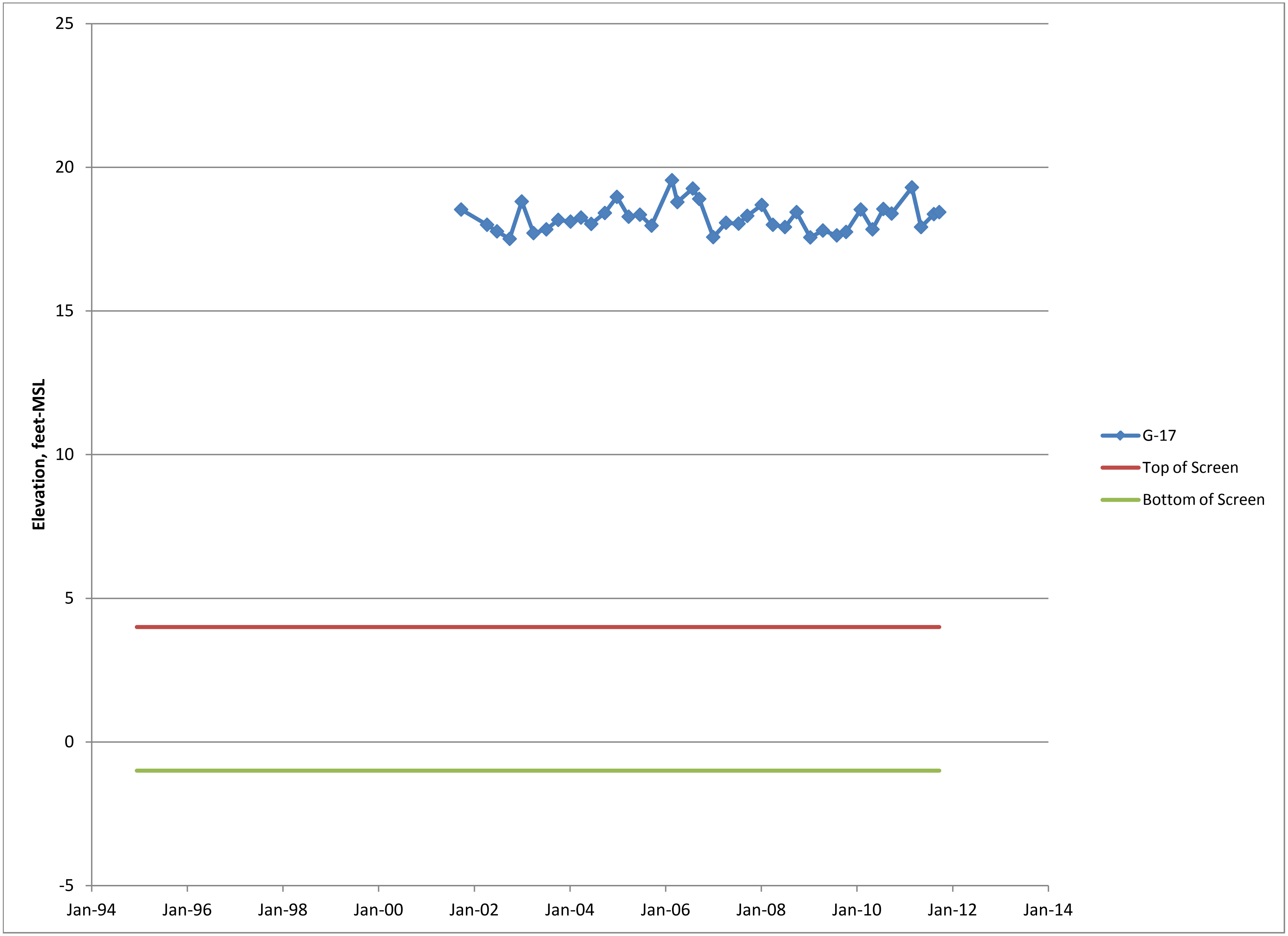
Bottom of Screen



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Elevation, feet-MSL
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Jan-96
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Jan-14
G-17
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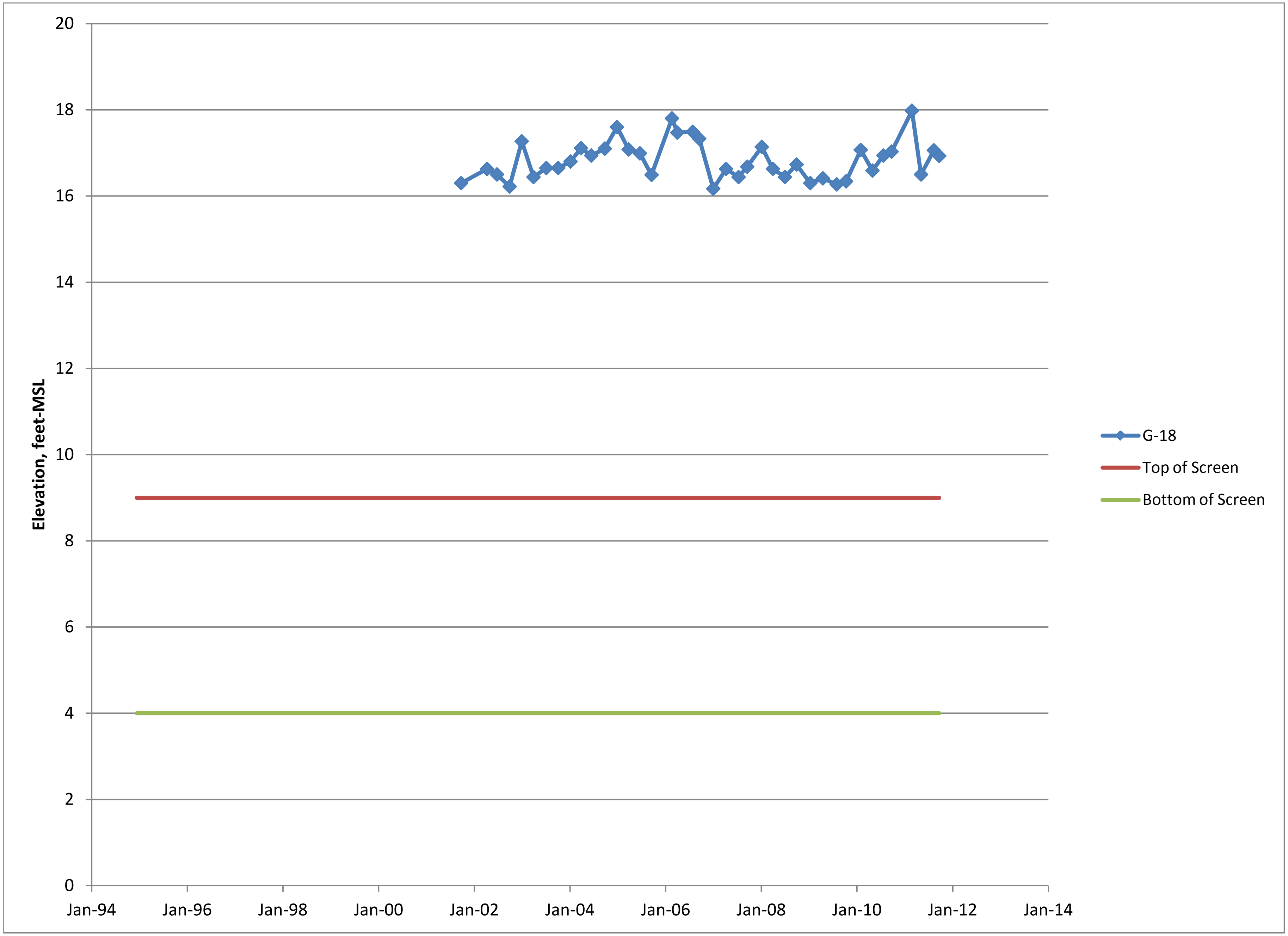
Bottom of Screen



Elevation, feet-MSL
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16
14
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Jan-96
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Jan-12
Jan-14
G-18
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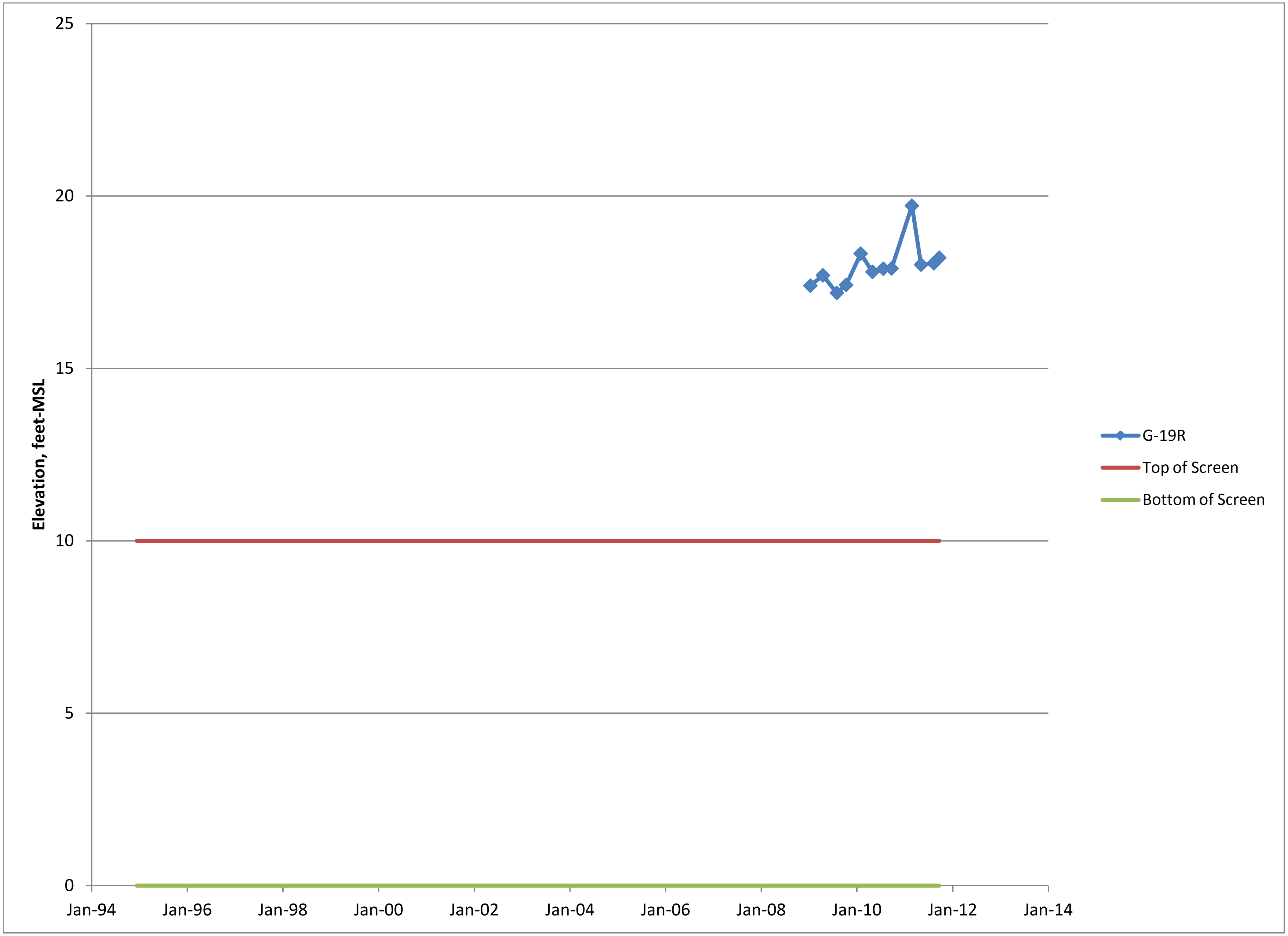
Bottom of Screen



Elevation, feet-MSL
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20
15
10
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Jan-94
Jan-96
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Jan-14
G-19R
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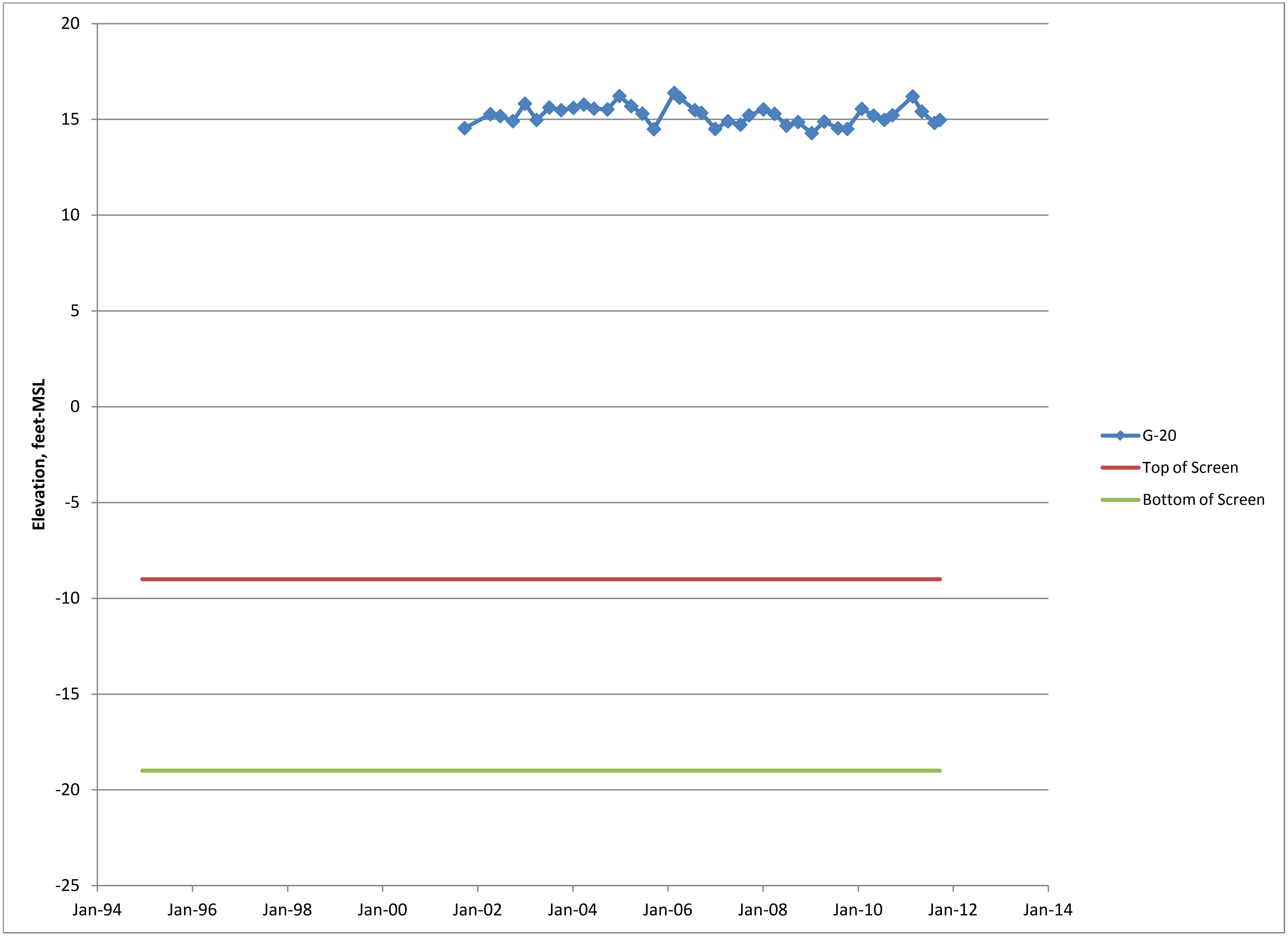
Bottom of Screen



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-5
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-15
-20
-25
Elevation, feet-MSL
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Jan-96
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G-20
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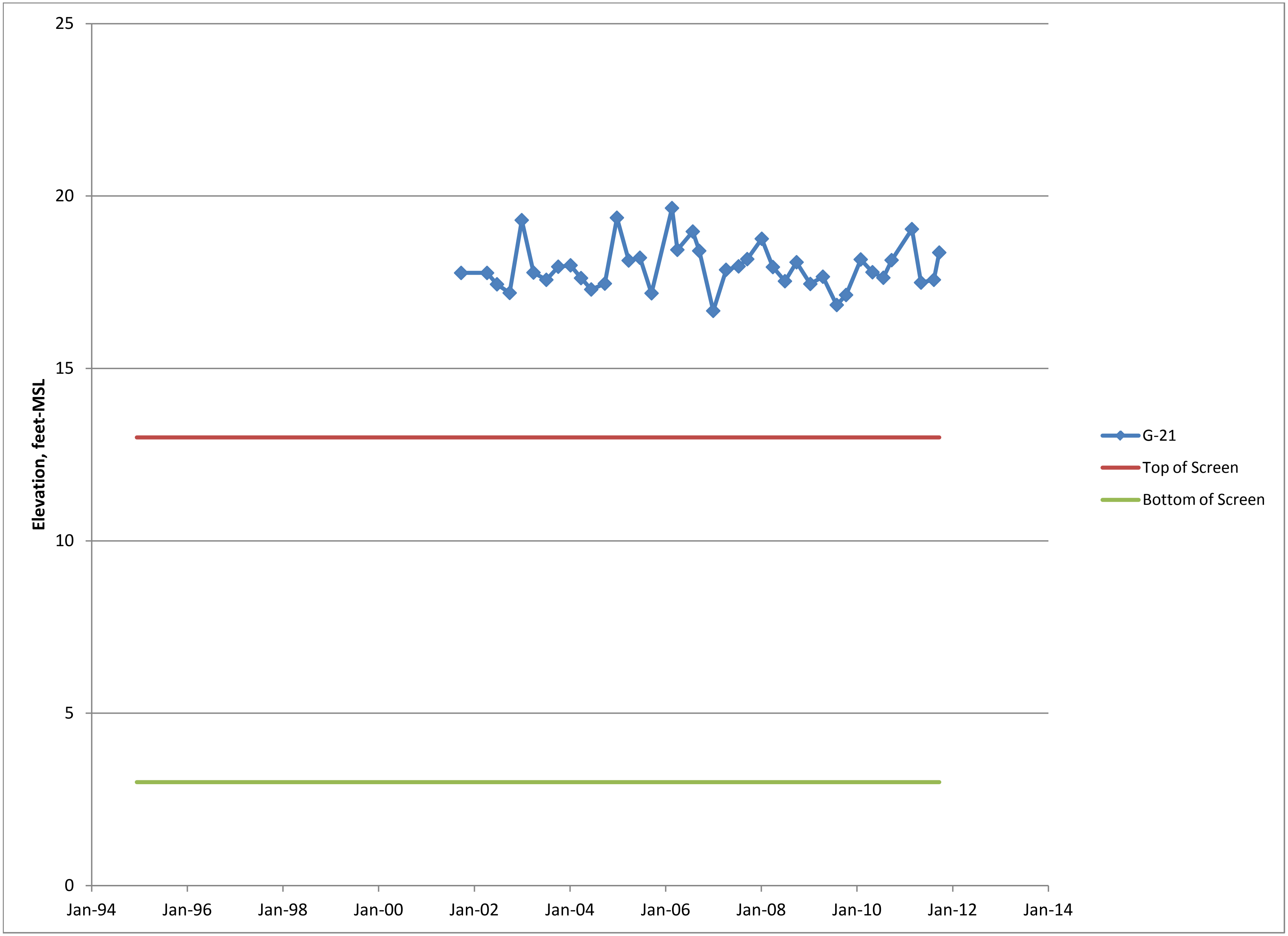
Bottom of Screen



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5
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Elevation, feet-MSL
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G-21
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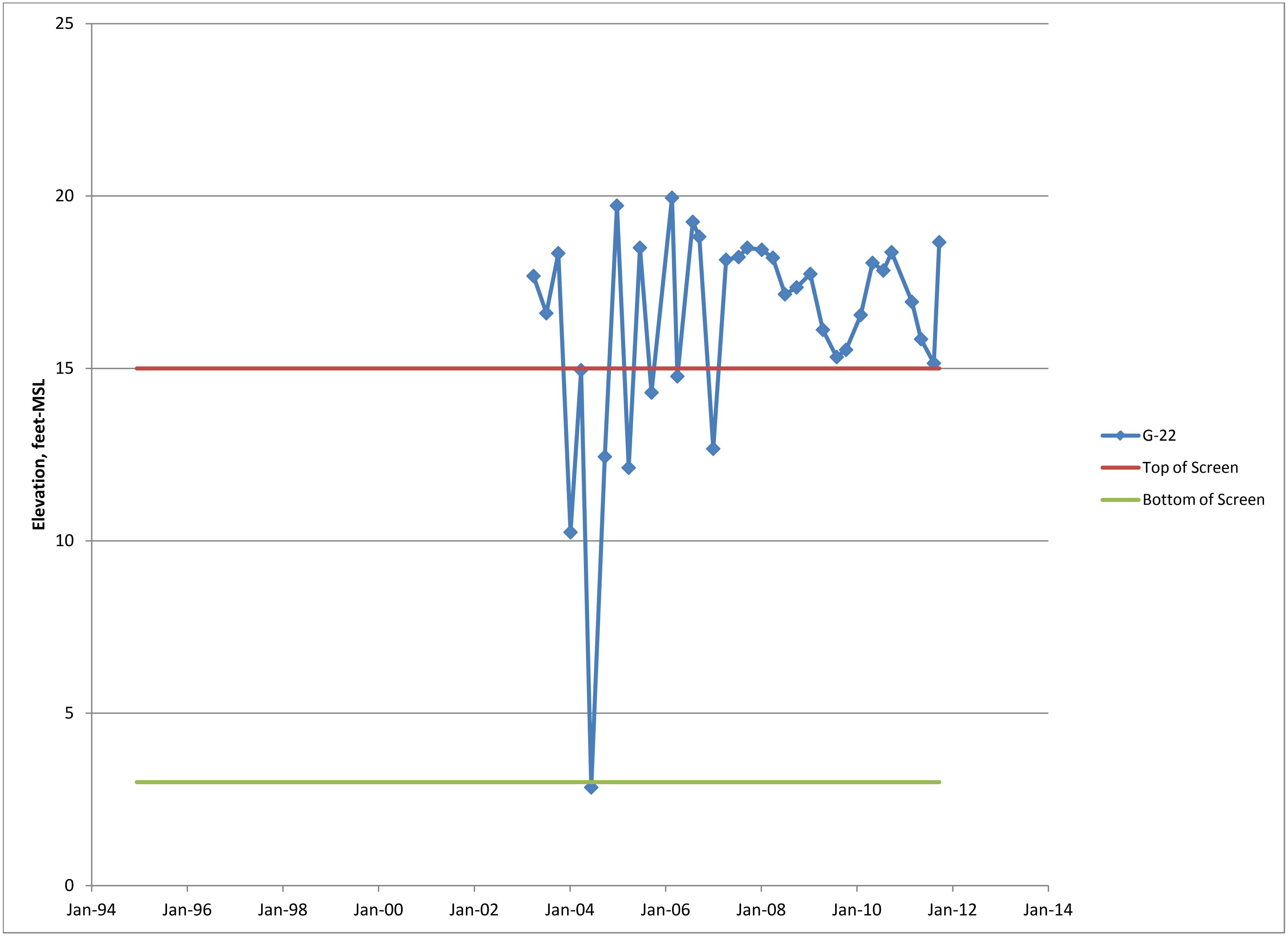
Bottom of Screen



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Elevation, feet-MSL
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Jan-14
G-22
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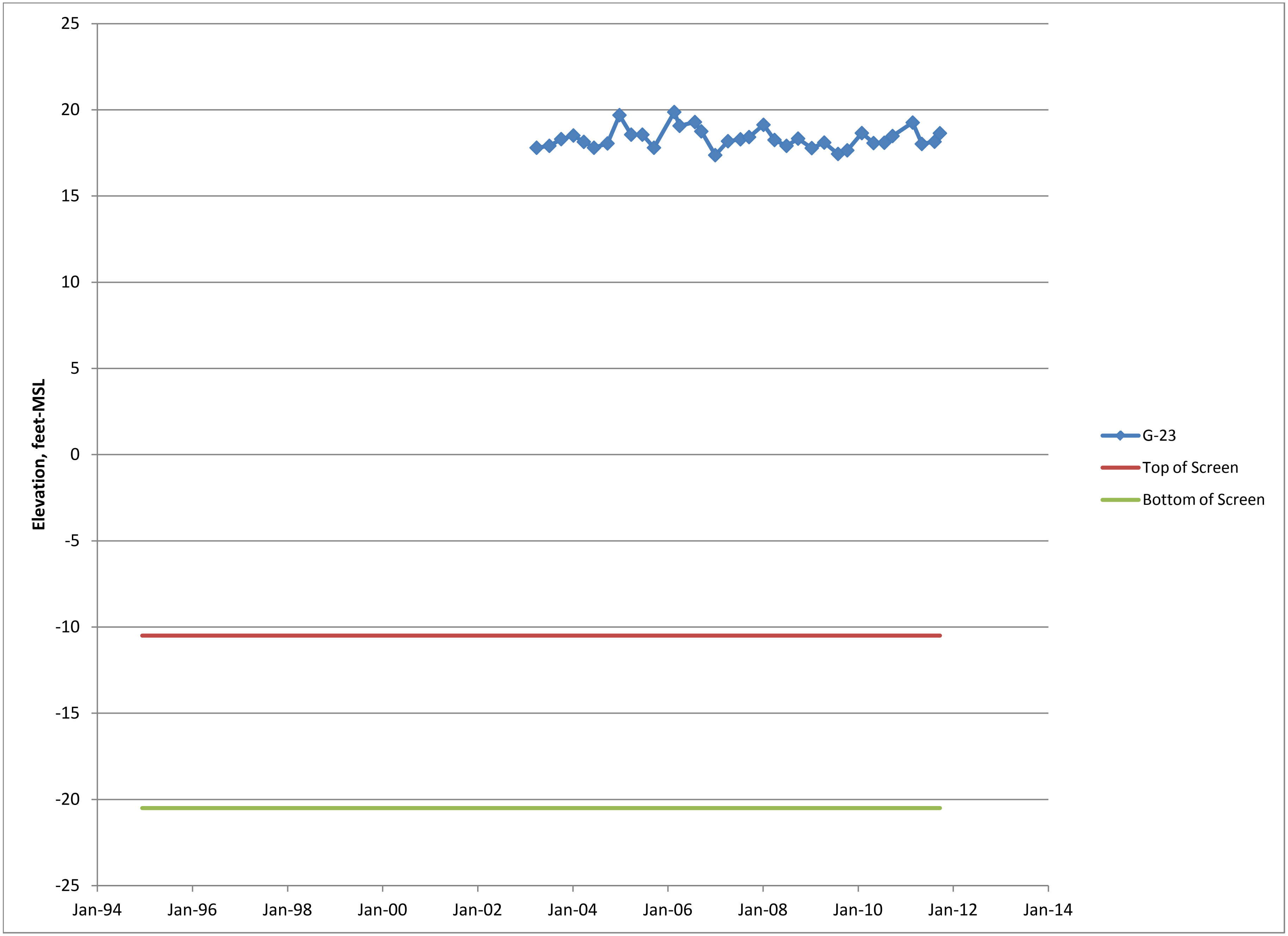
Bottom of Screen



Elevation, feet-MSL
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G-23
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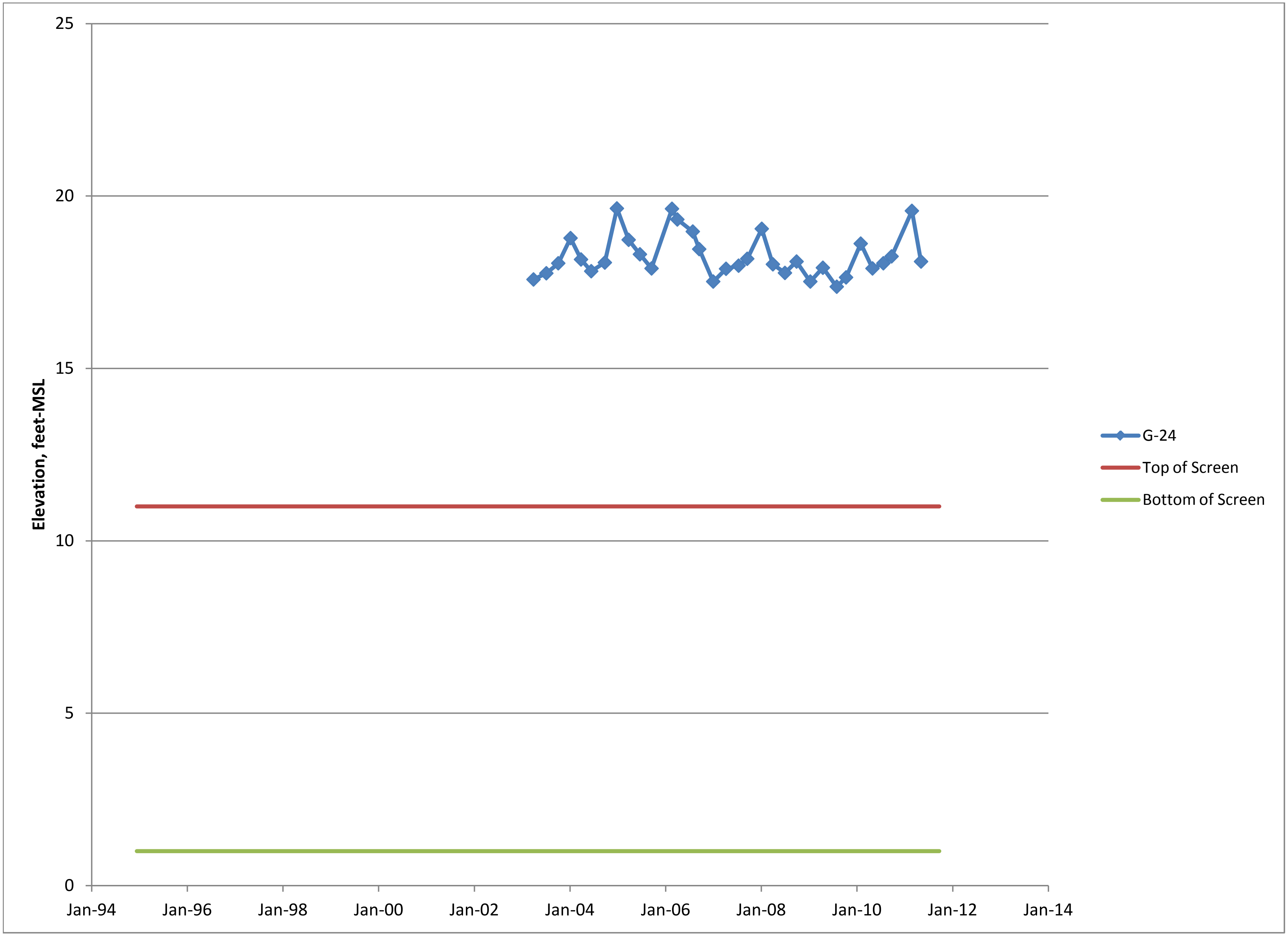
Bottom of Screen



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Elevation, feet-MSL
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Jan-96
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G-24
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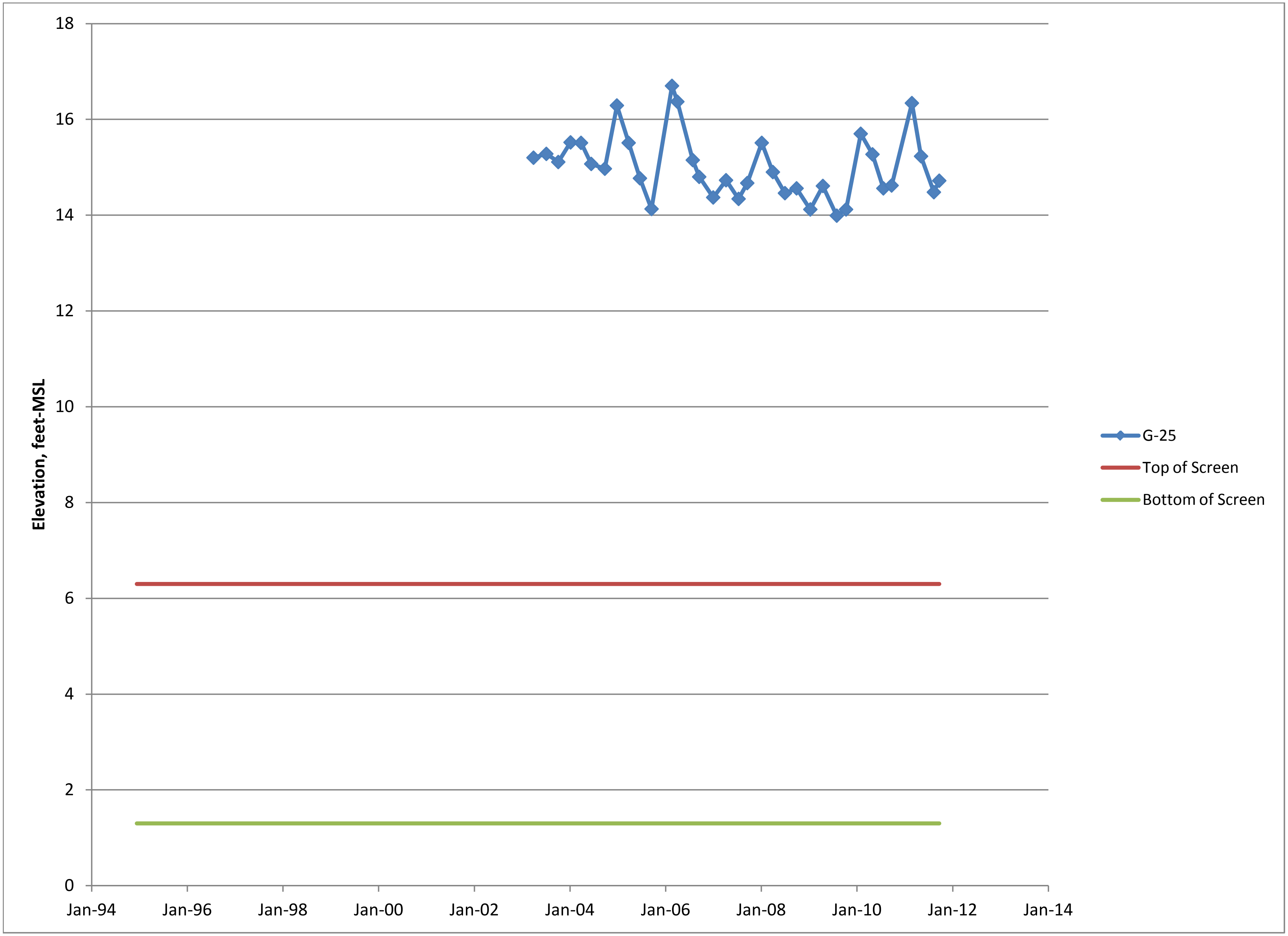
Bottom of Screen



Elevation, feet-MSL
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14
12
10
8
6
4
2
0
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Jan-96
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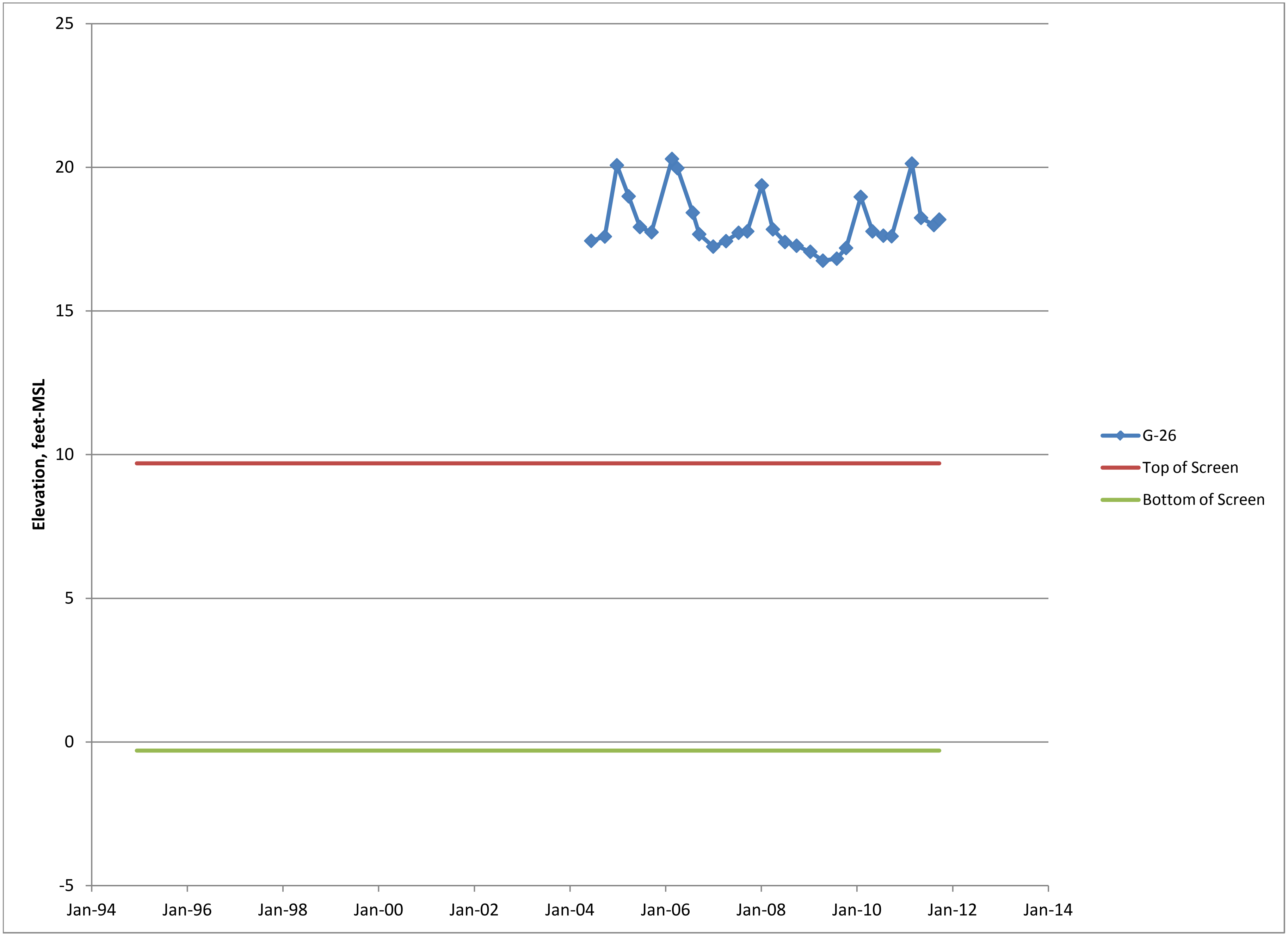
Jan-10
Jan-12
Jan-14
G-25
Top of Screen
Bottom of Screen



Elevation, feet-MSL
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Jan-94
Jan-96
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G-26
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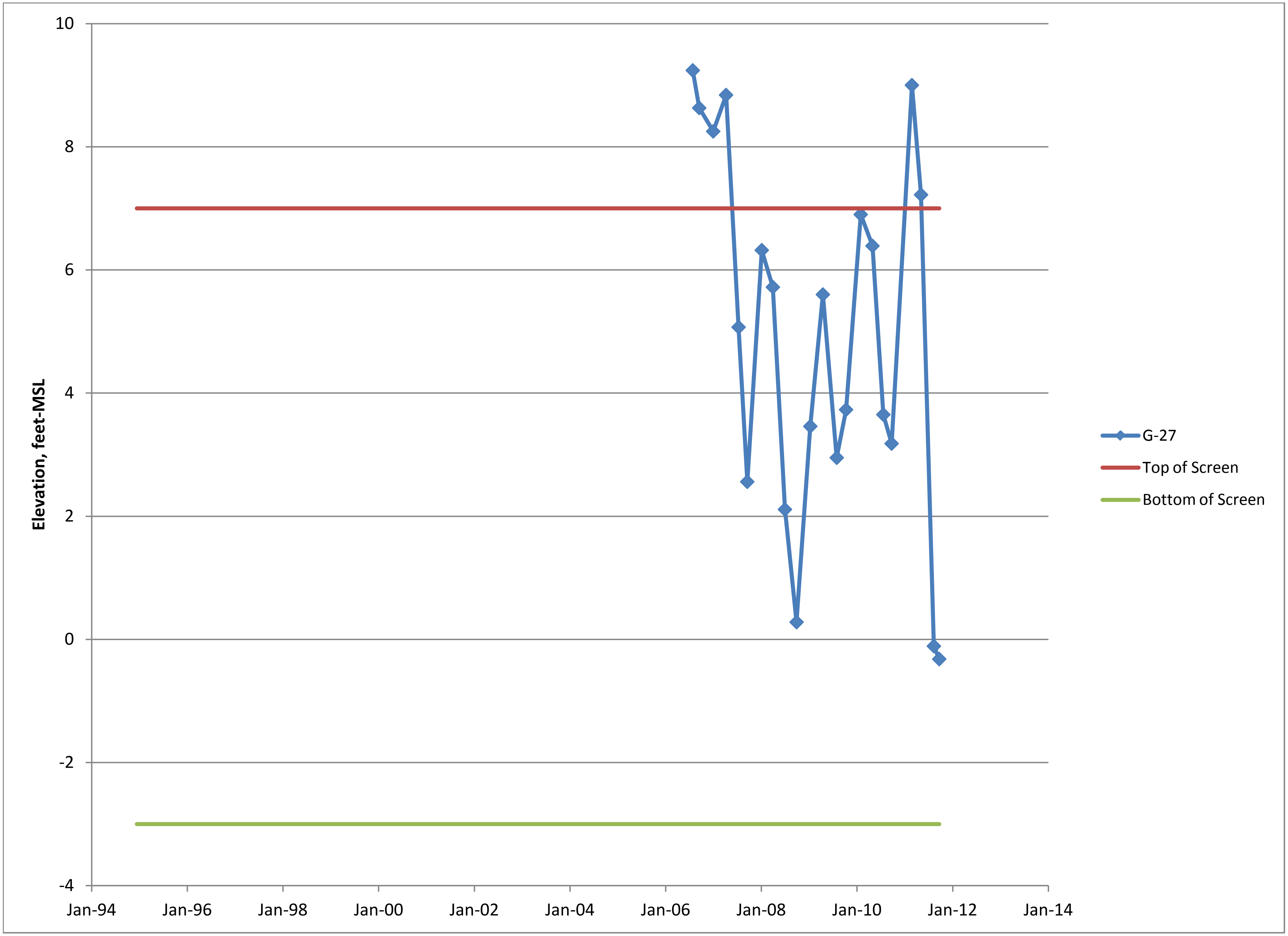
Bottom of Screen



Elevation, feet-MSL
10
8
6
4
2
0
-2
-4
Jan-94
Jan-96
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Jan-12
Jan-14
G-27
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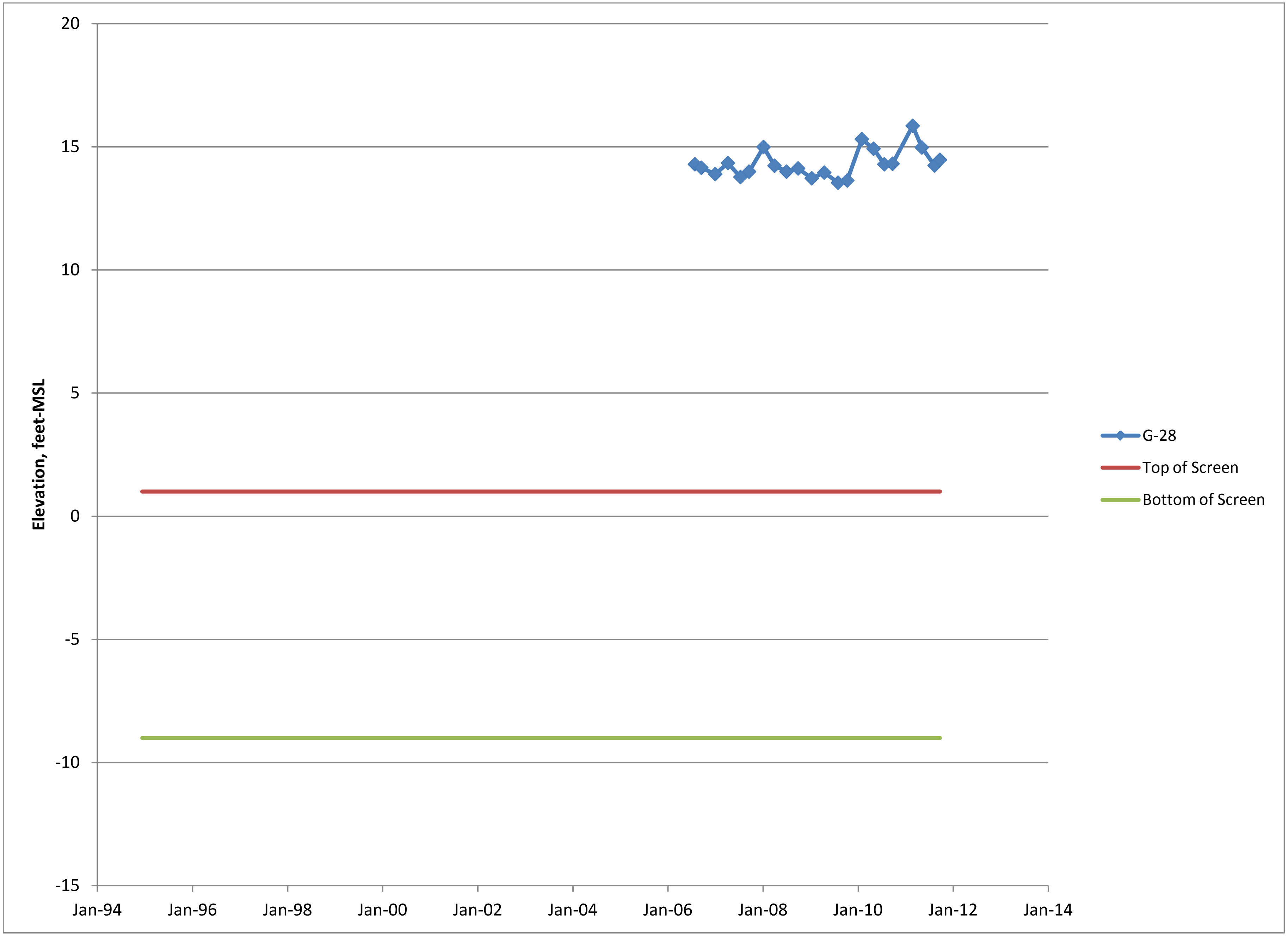
Bottom of Screen



Elevation, feet-MSL
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-10
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Jan-14
G-28
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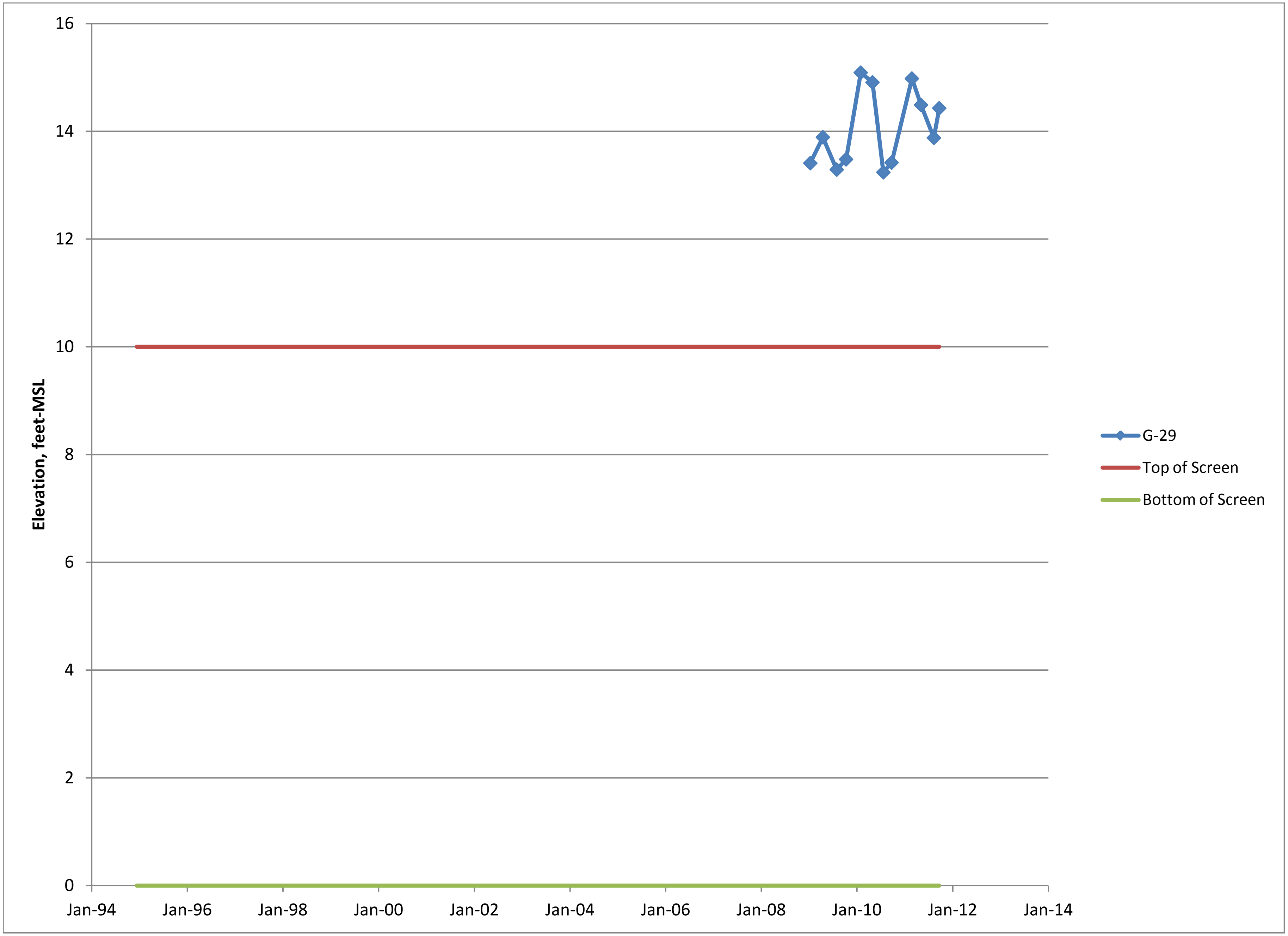
Bottom of Screen



16
14
12
10
8
6
4
2
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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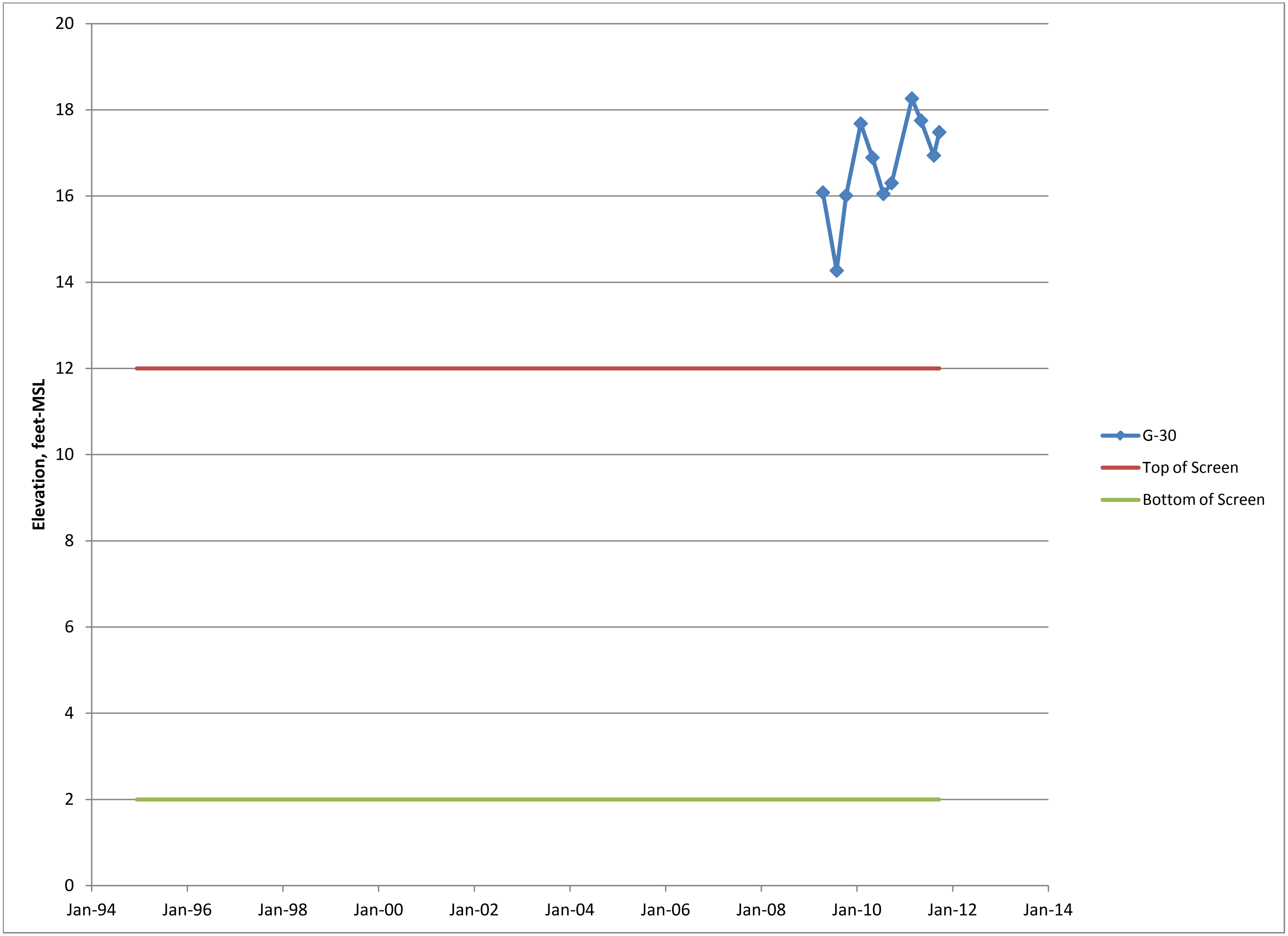
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-29
Top of Screen
Bottom of Screen



20
18
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14
12
10
8
6
4
2
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
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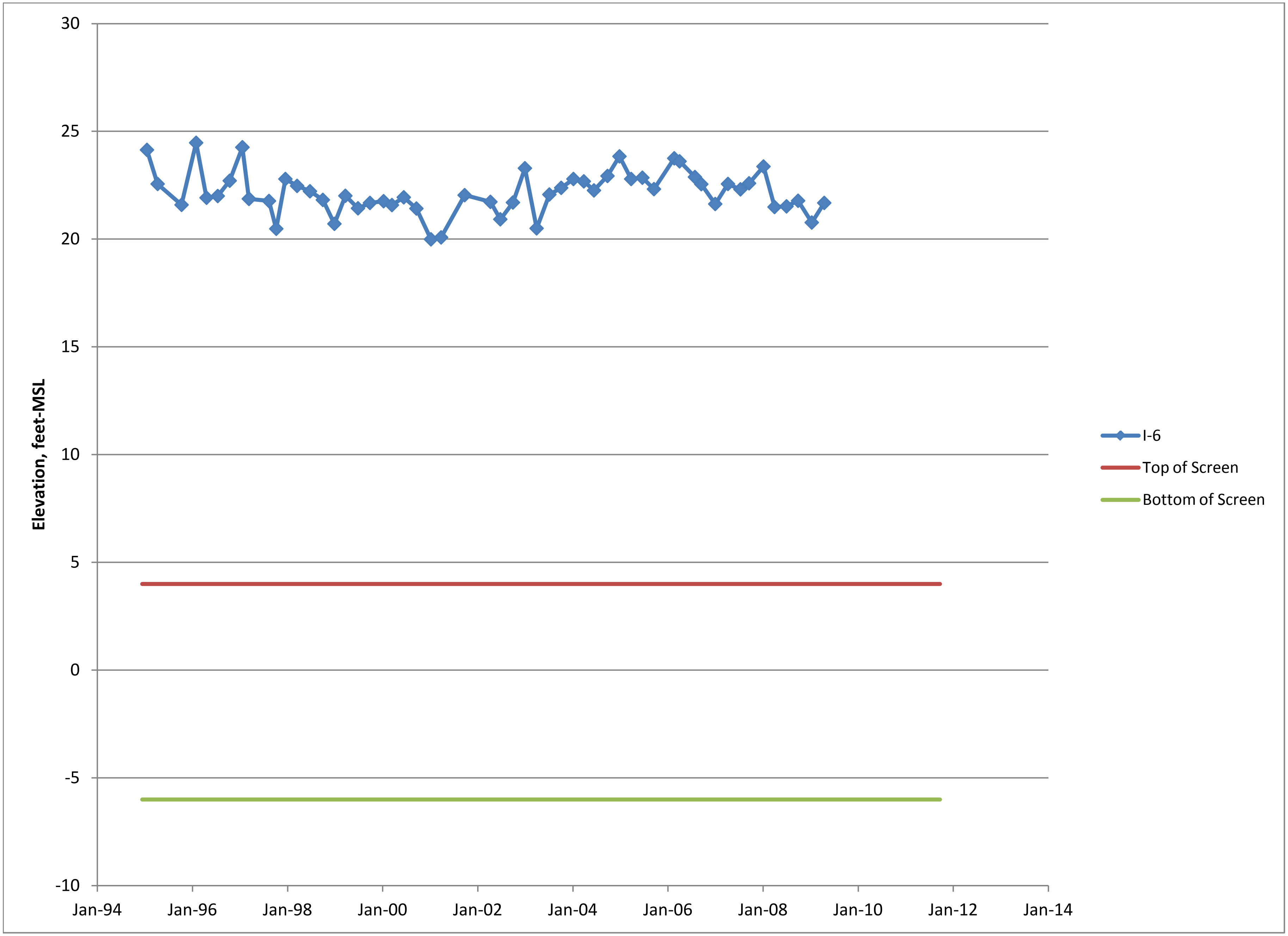
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
G-30
Top of Screen
Bottom of Screen



Elevation, feet-MSL
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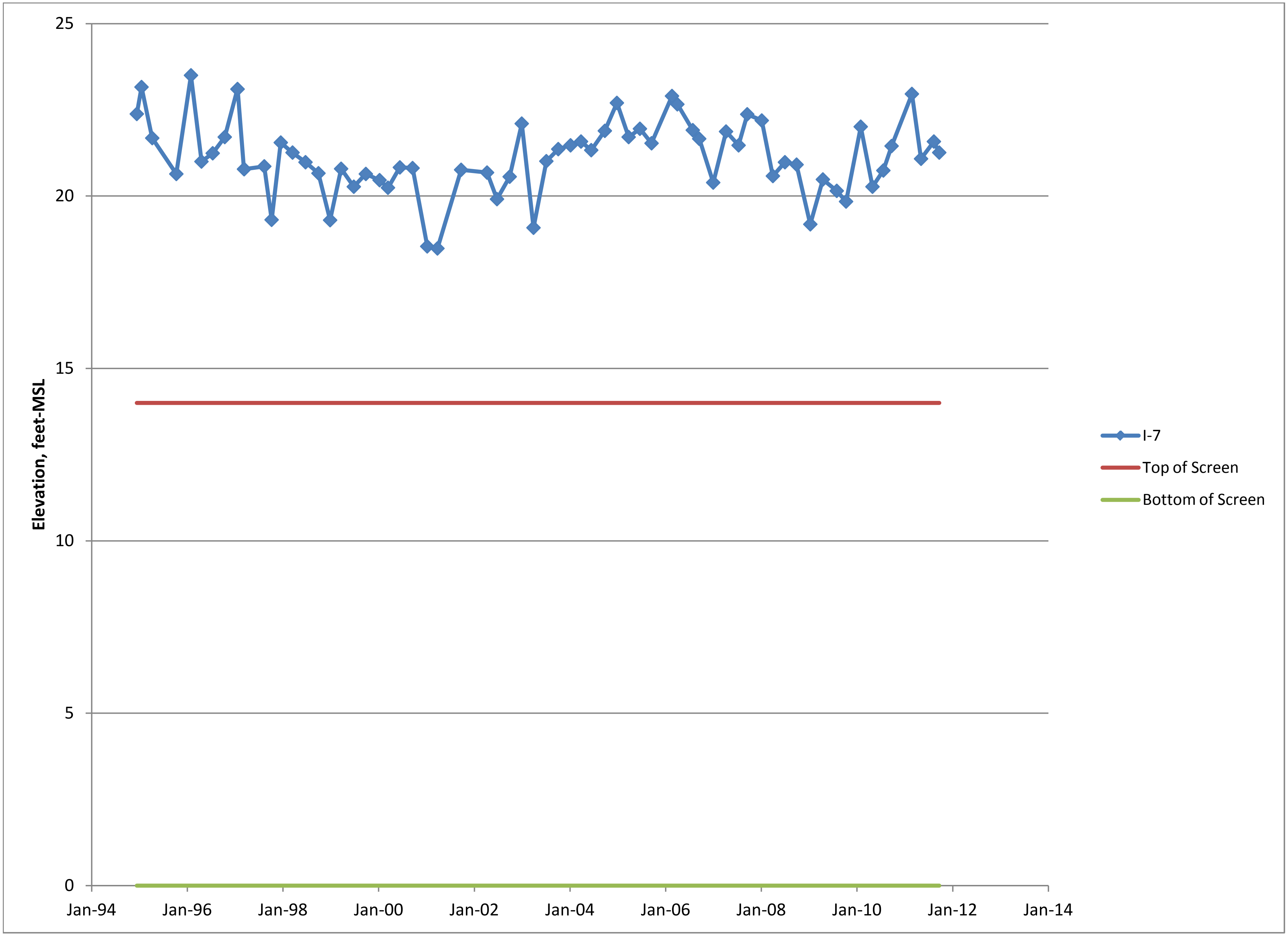
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
I-6
Top of Screen
Bottom of Screen



Elevation, feet-MSL
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15
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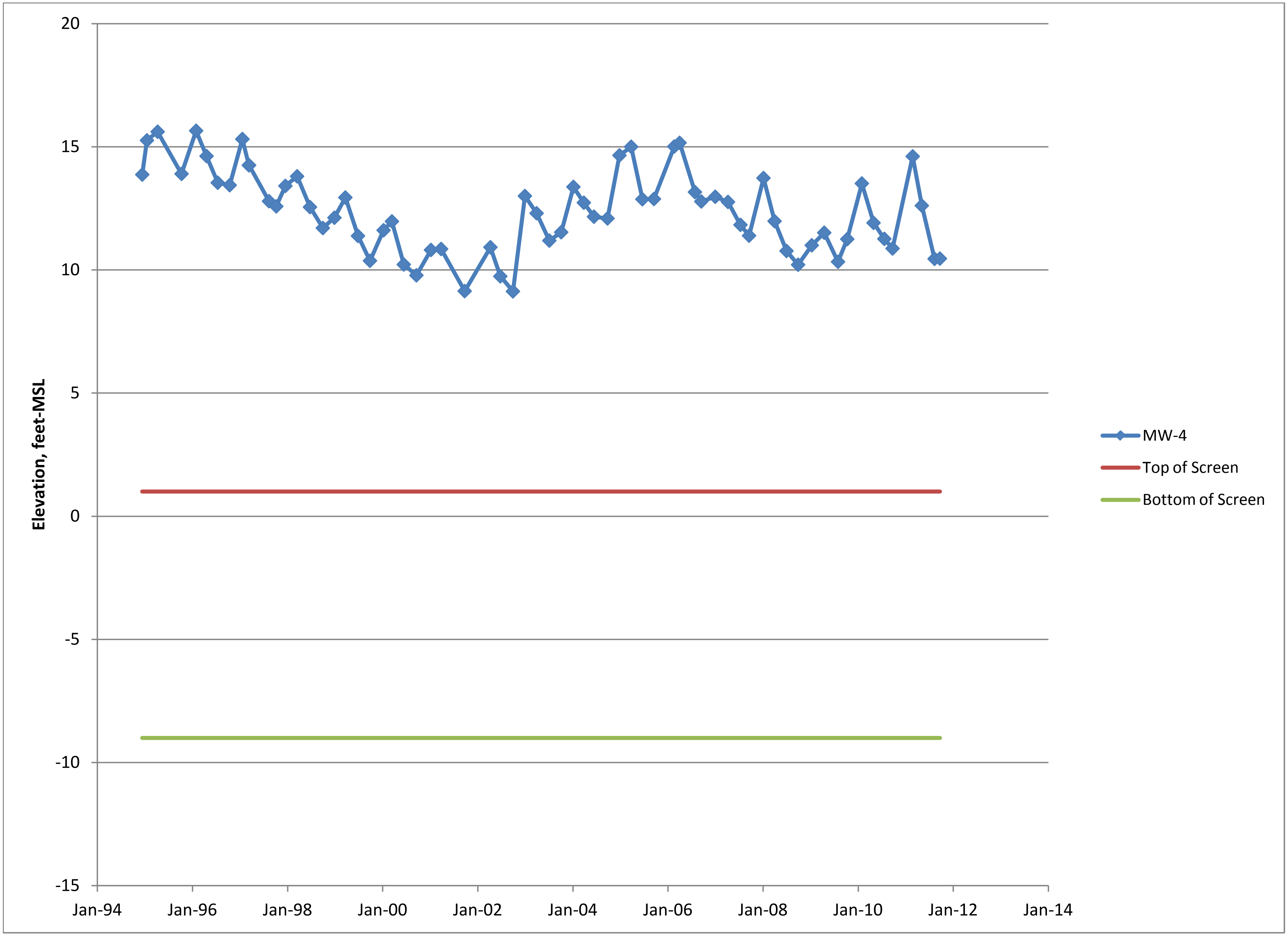
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
I-7
Top of Screen
Bottom of Screen


Elevation, feet-MSL
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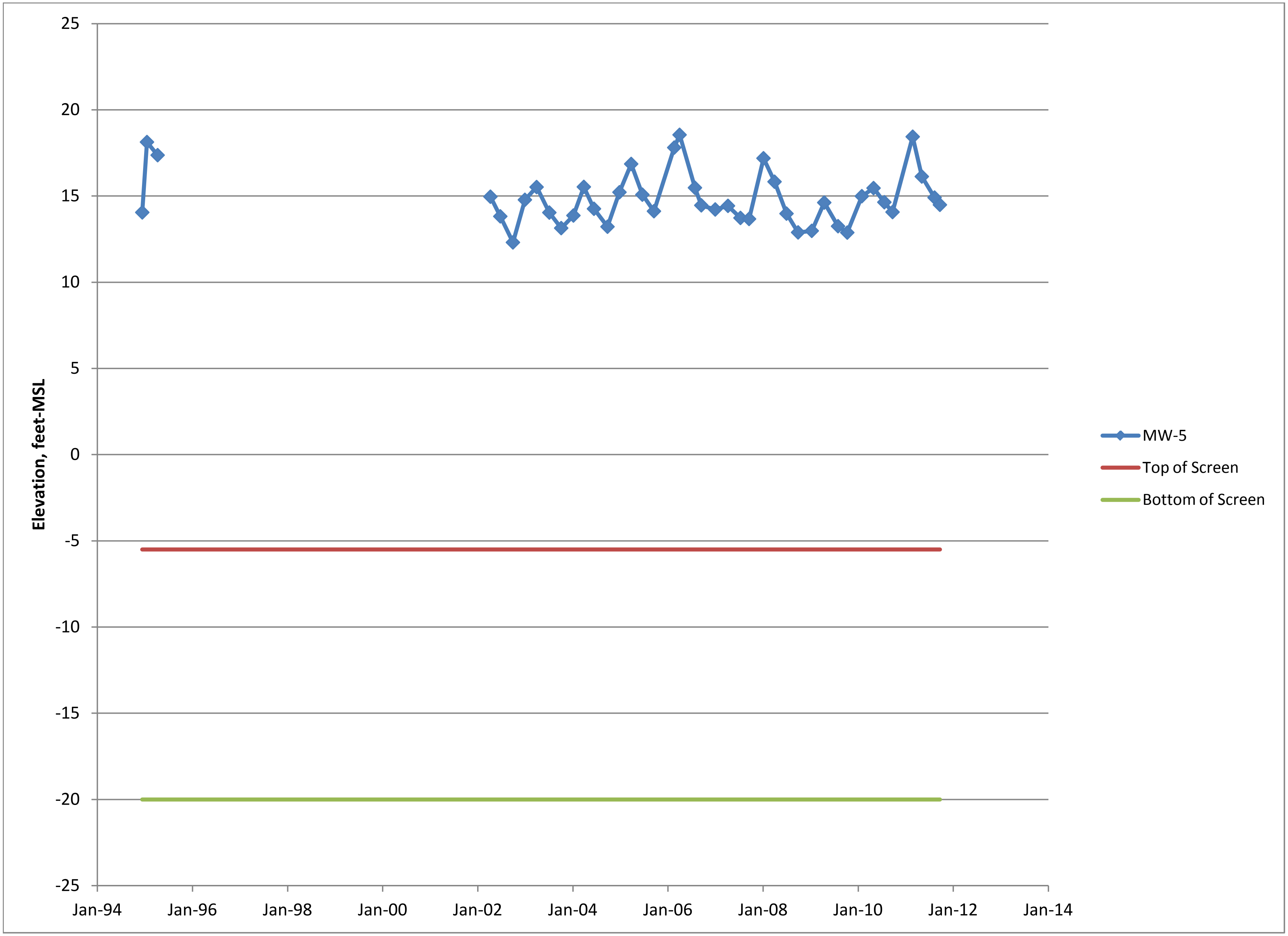
-5
-10
-15
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
MW-4
Top of Screen
Bottom of Screen



25
20
15
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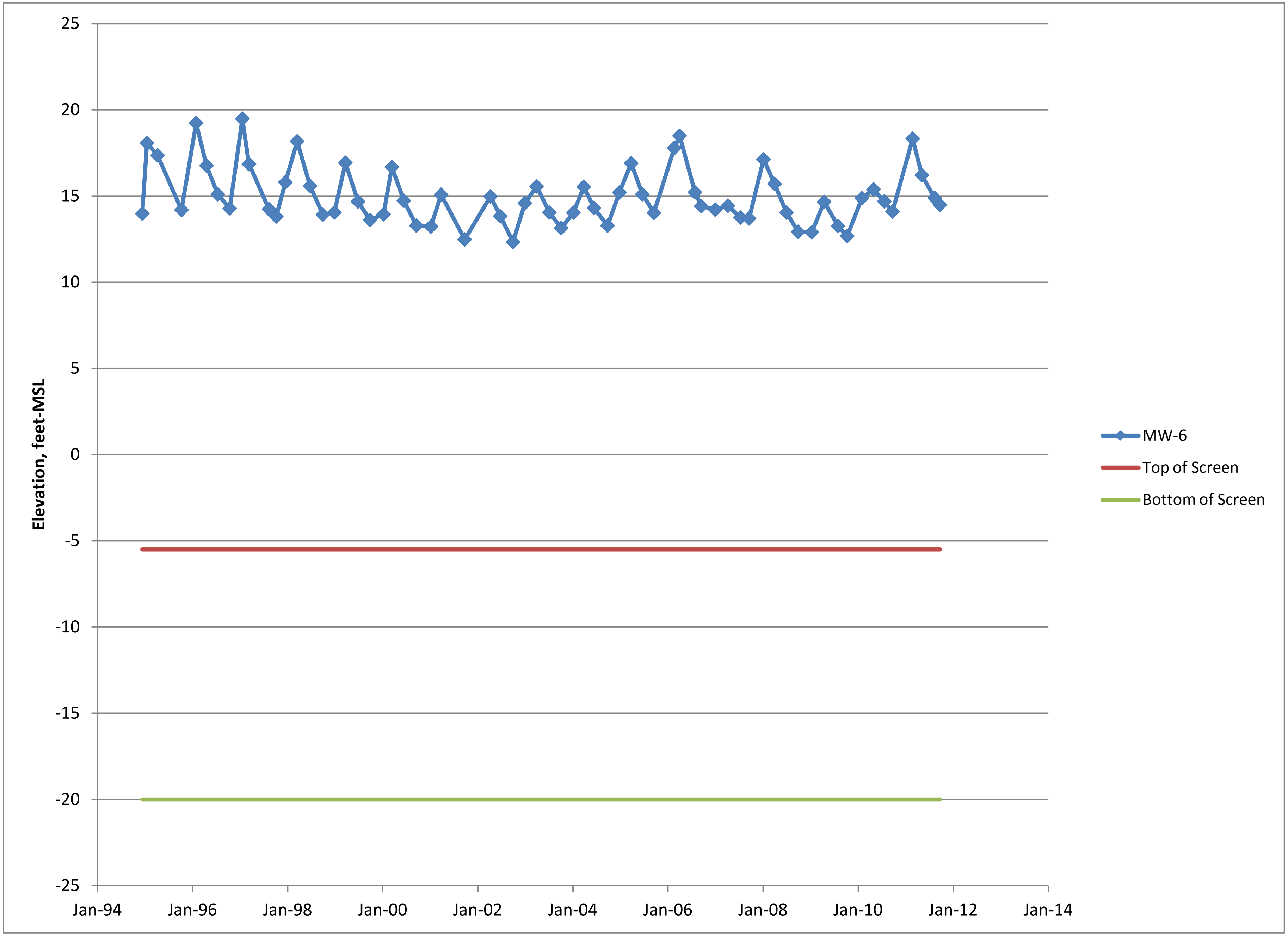
-5
-10
-15
-20
-25
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
MW-5
Top of Screen
Bottom of Screen



25
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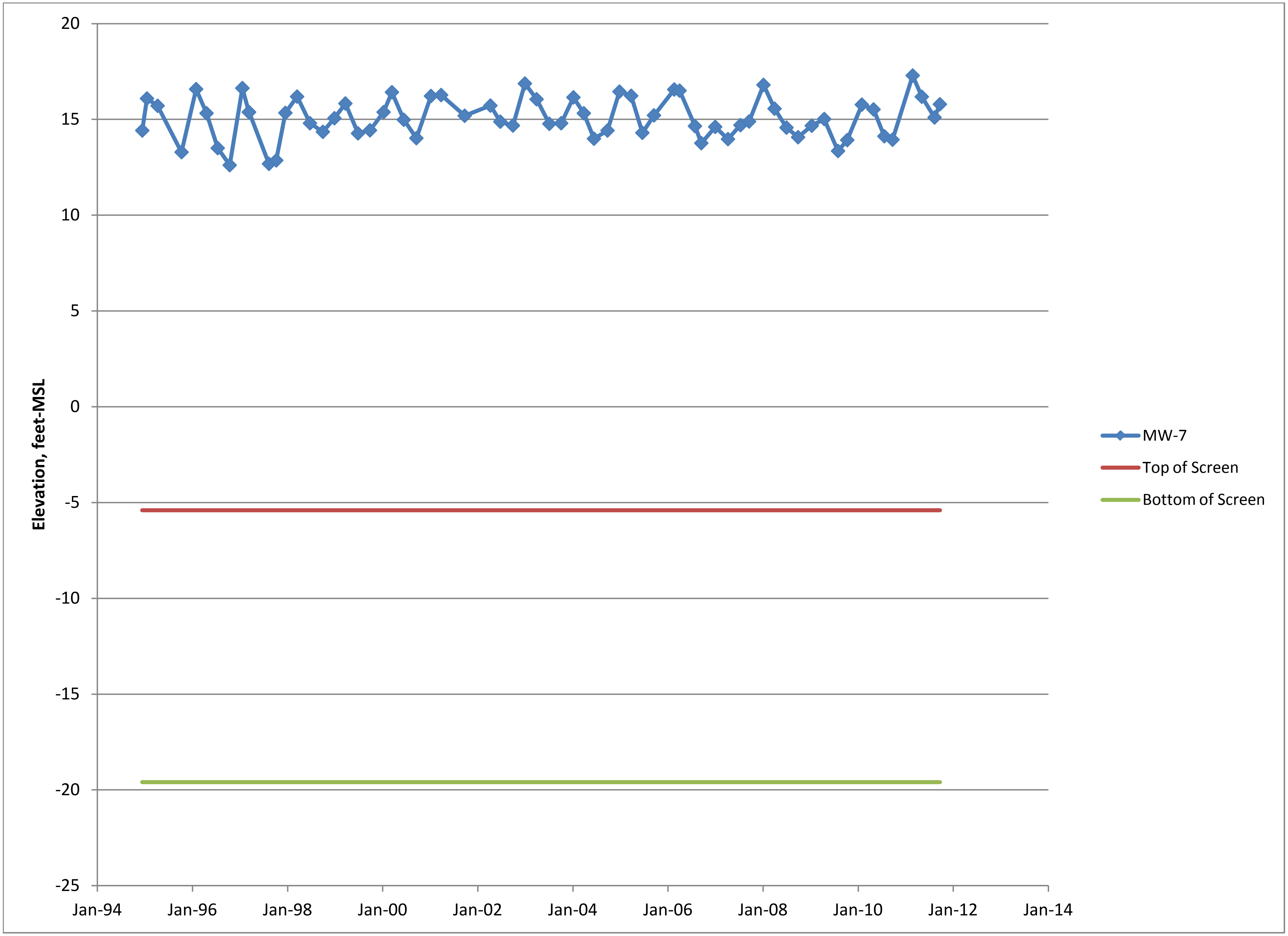
-5
-10
-15
-20
-25
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
MW-6
Top of Screen
Bottom of Screen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-5
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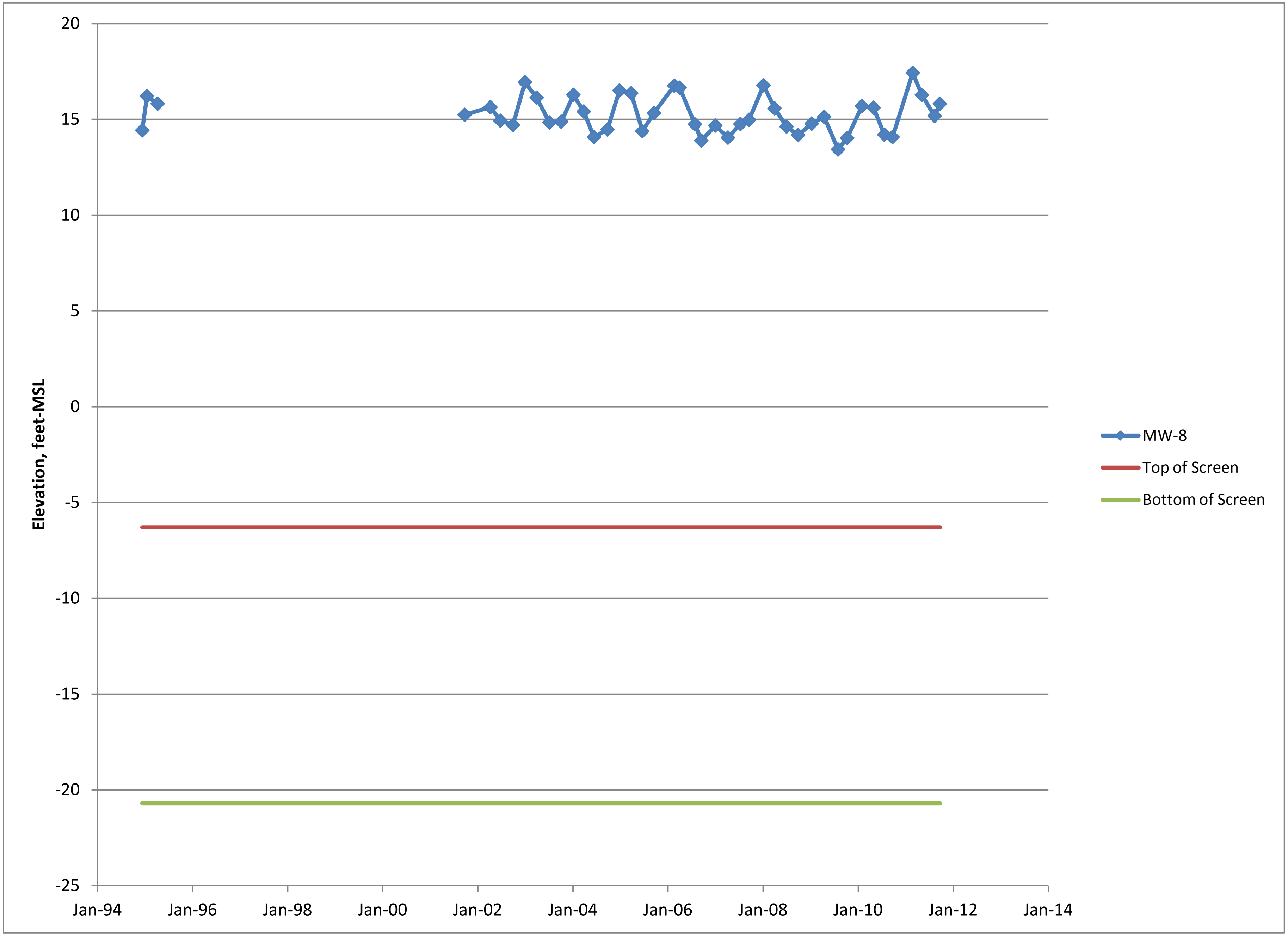
-15
-20
-25
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
MW-7
Top of Screen
Bottom of Screen



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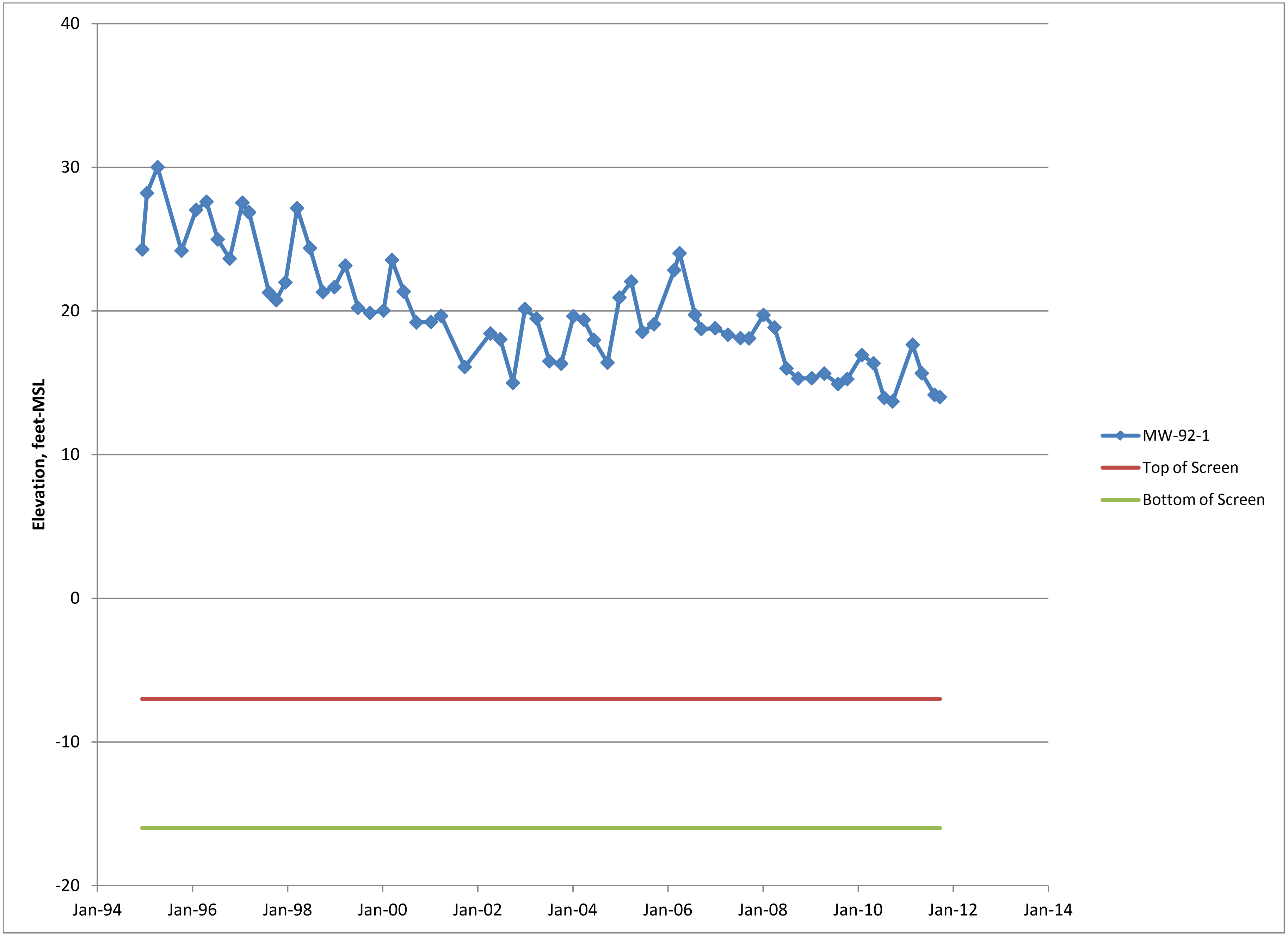
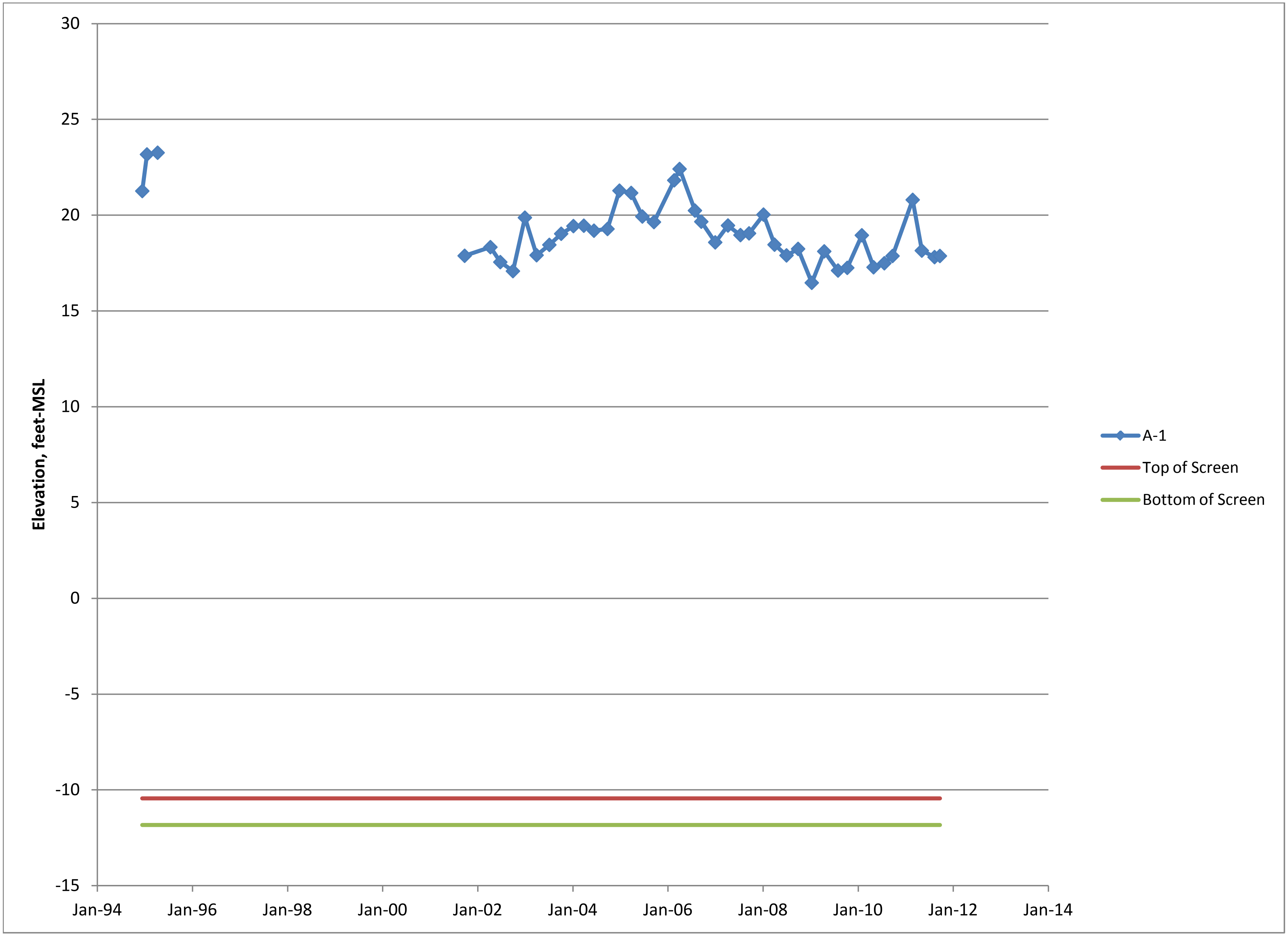
-5
-10
-15
-20
-25
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
MW-8
Top of Screen
Bottom of Screen



40
30
20
10
0
-10
-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
MW-92-1
Top of Screen
Bottom of Screen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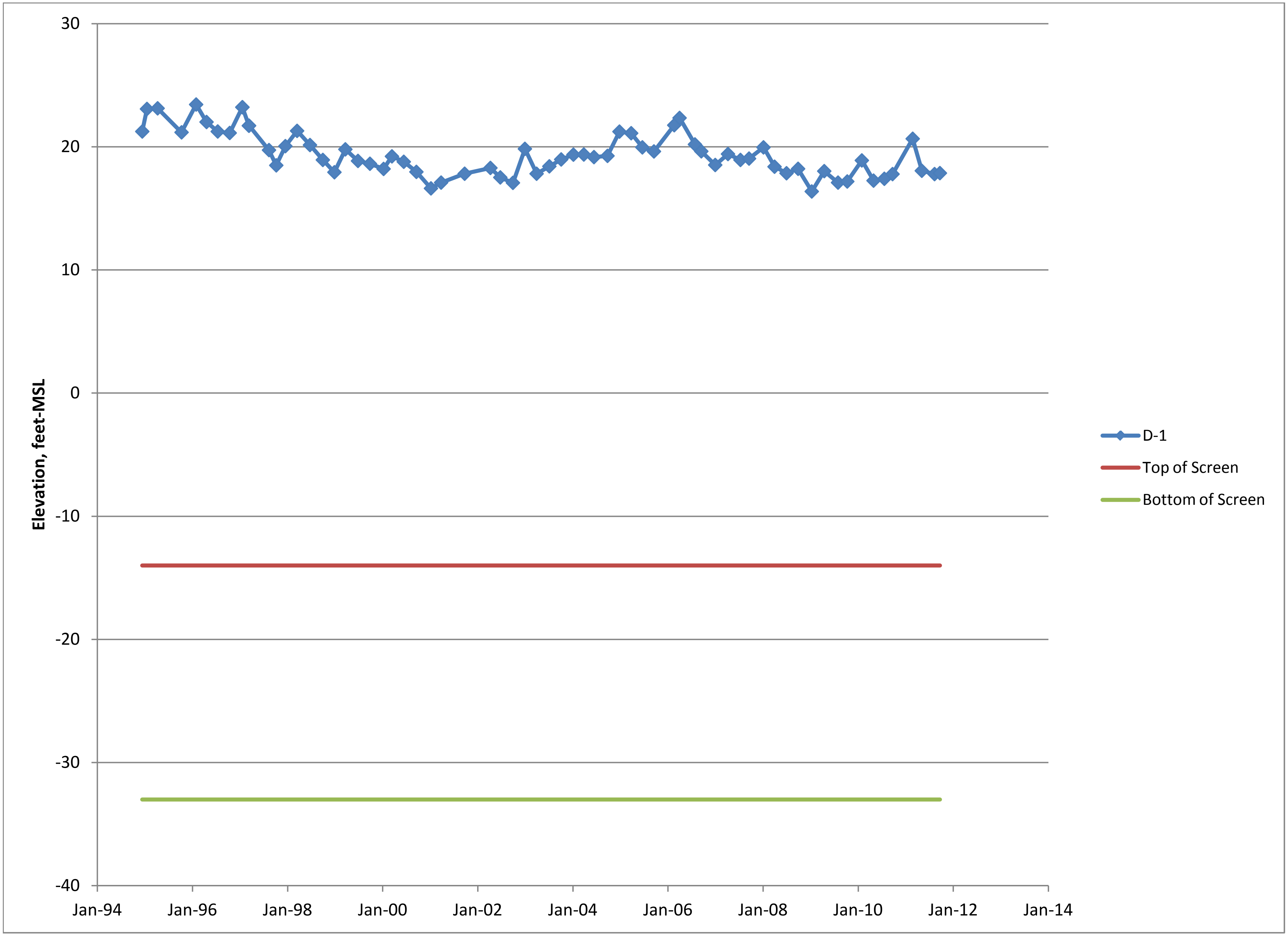
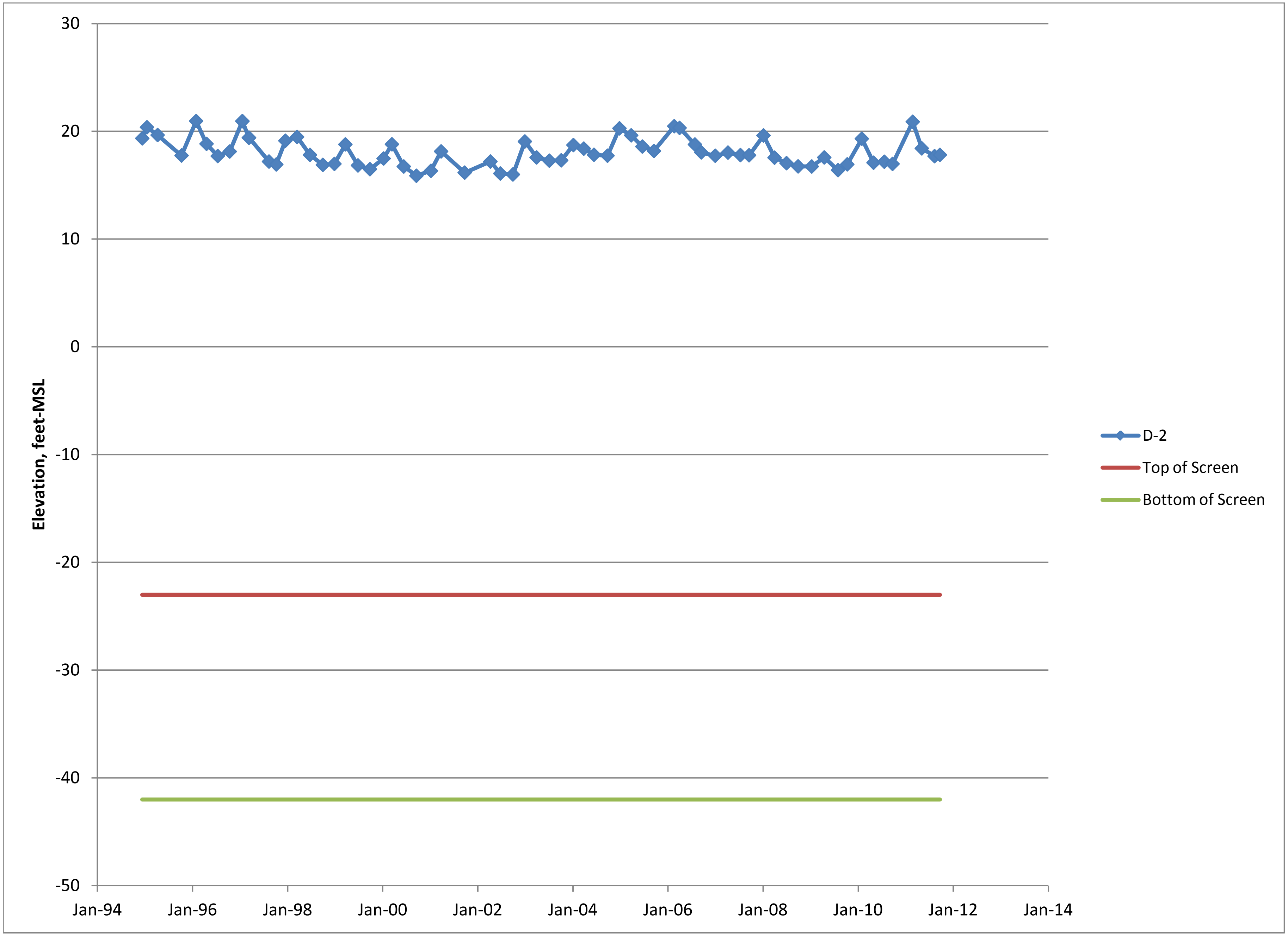
25
20
15
10
5
0
-5
-10
-15
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
A-1
Top of Screen
Bottom of Screen

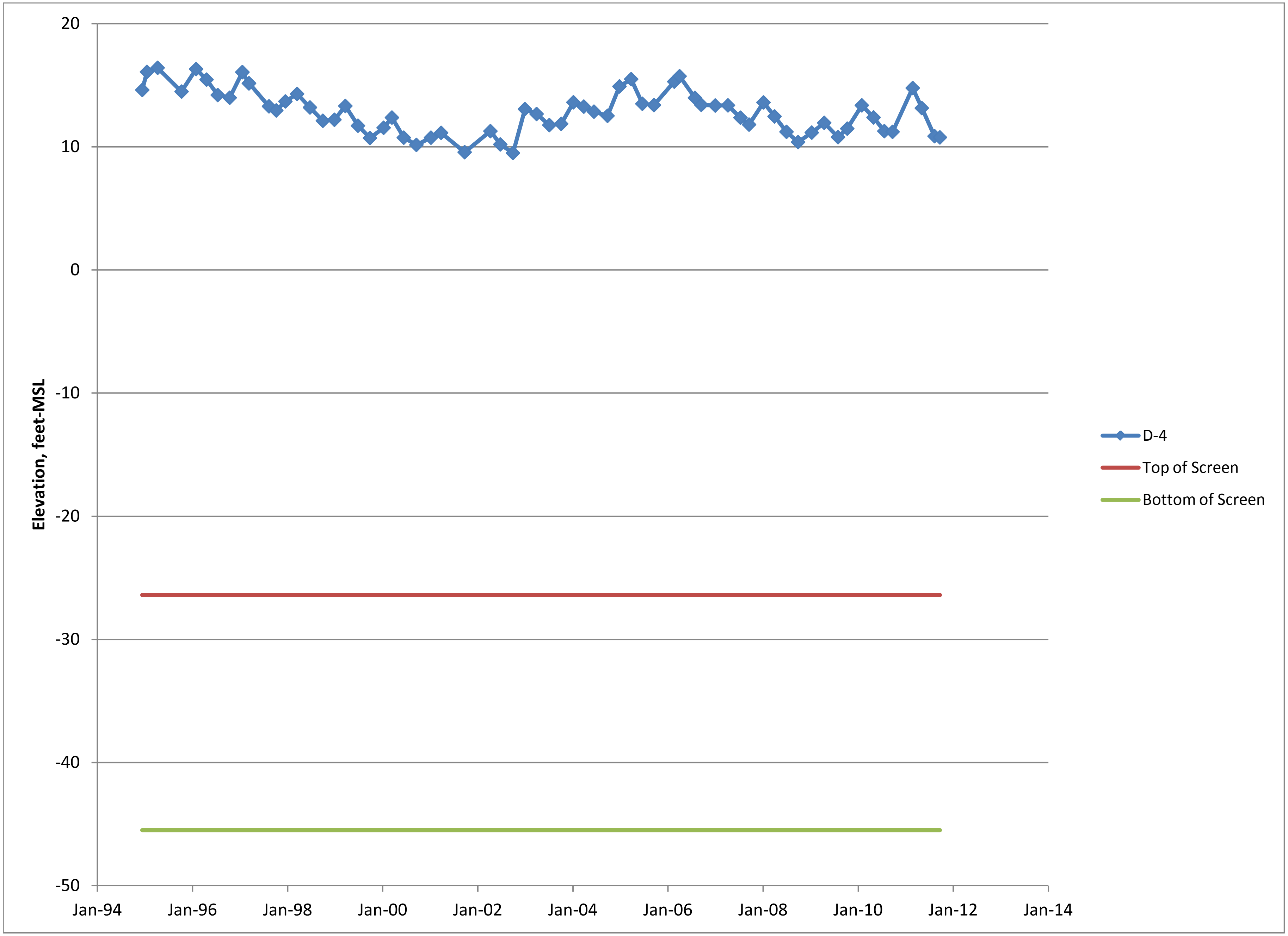


30
20
10
0
-10
-20
-30
-40
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-1
Top of Screen
Bottom of Screen

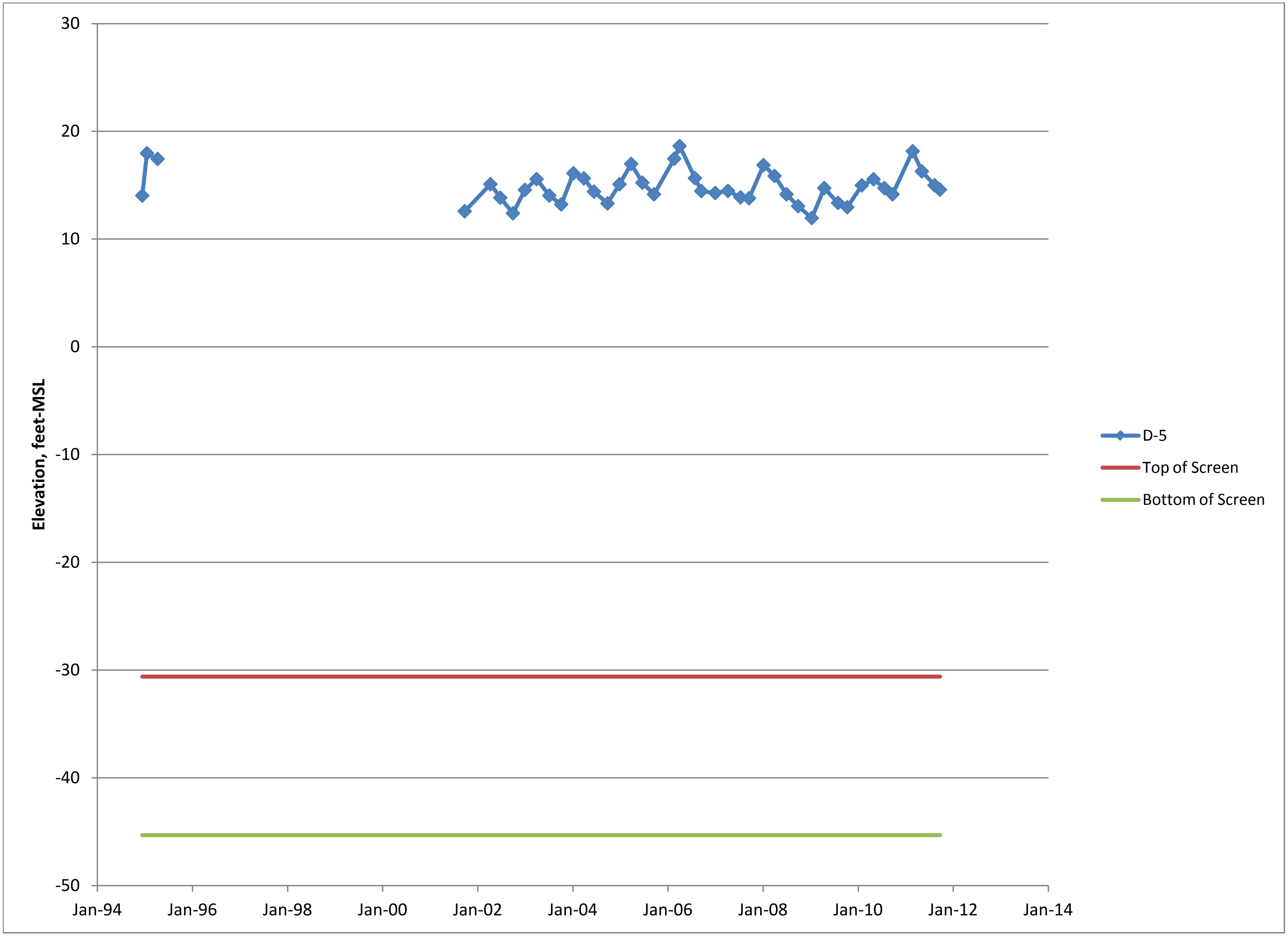


30
20
10
0
-10
-20
-30
-40
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-2
Top of Screen
Bottom of Screen

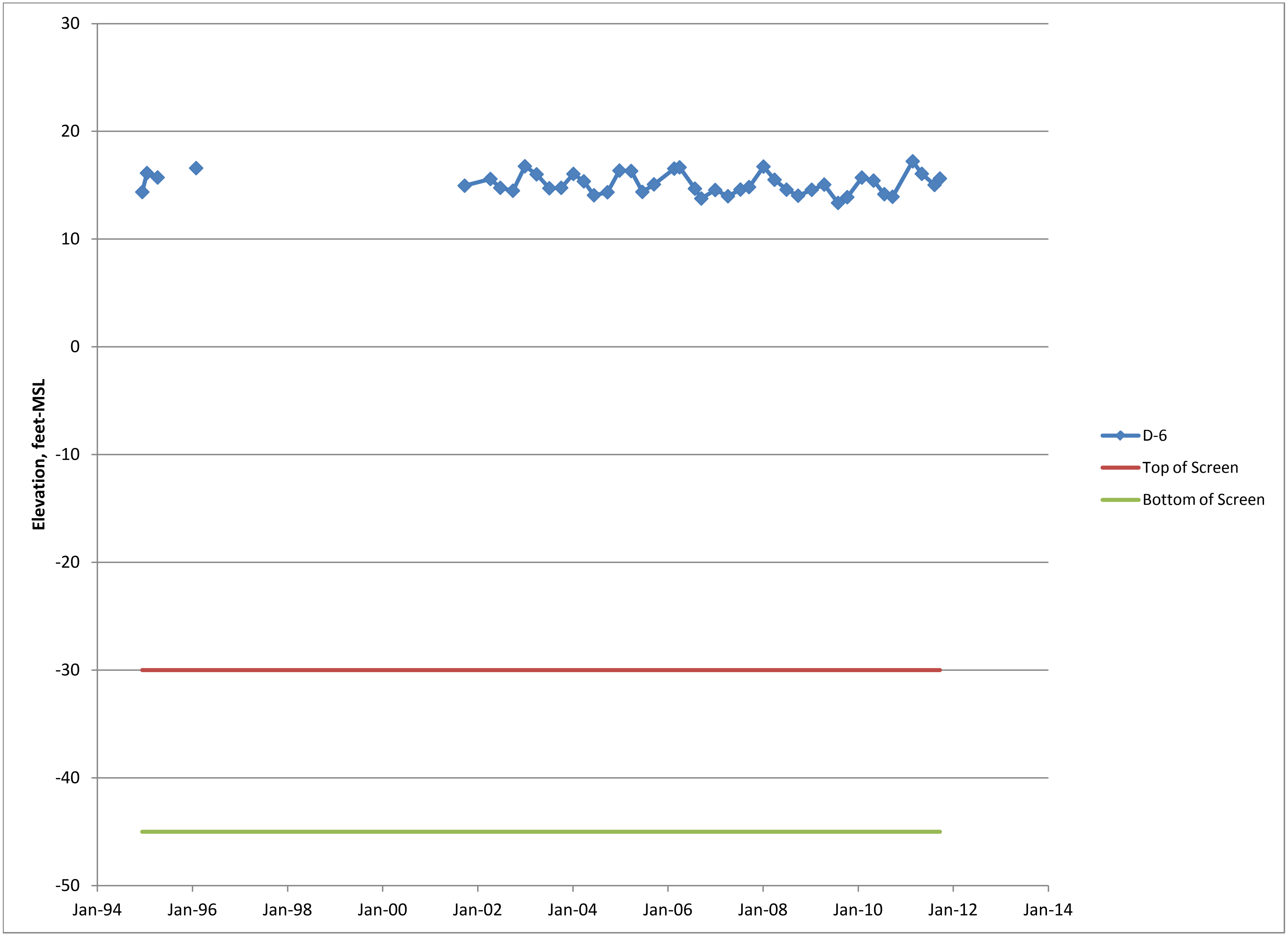
30
20
10
0
-10
-20
-30
-40
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-3
Top of Screen
Bottom of Screen



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
D-4
Top of Screen
Bottom of Screen

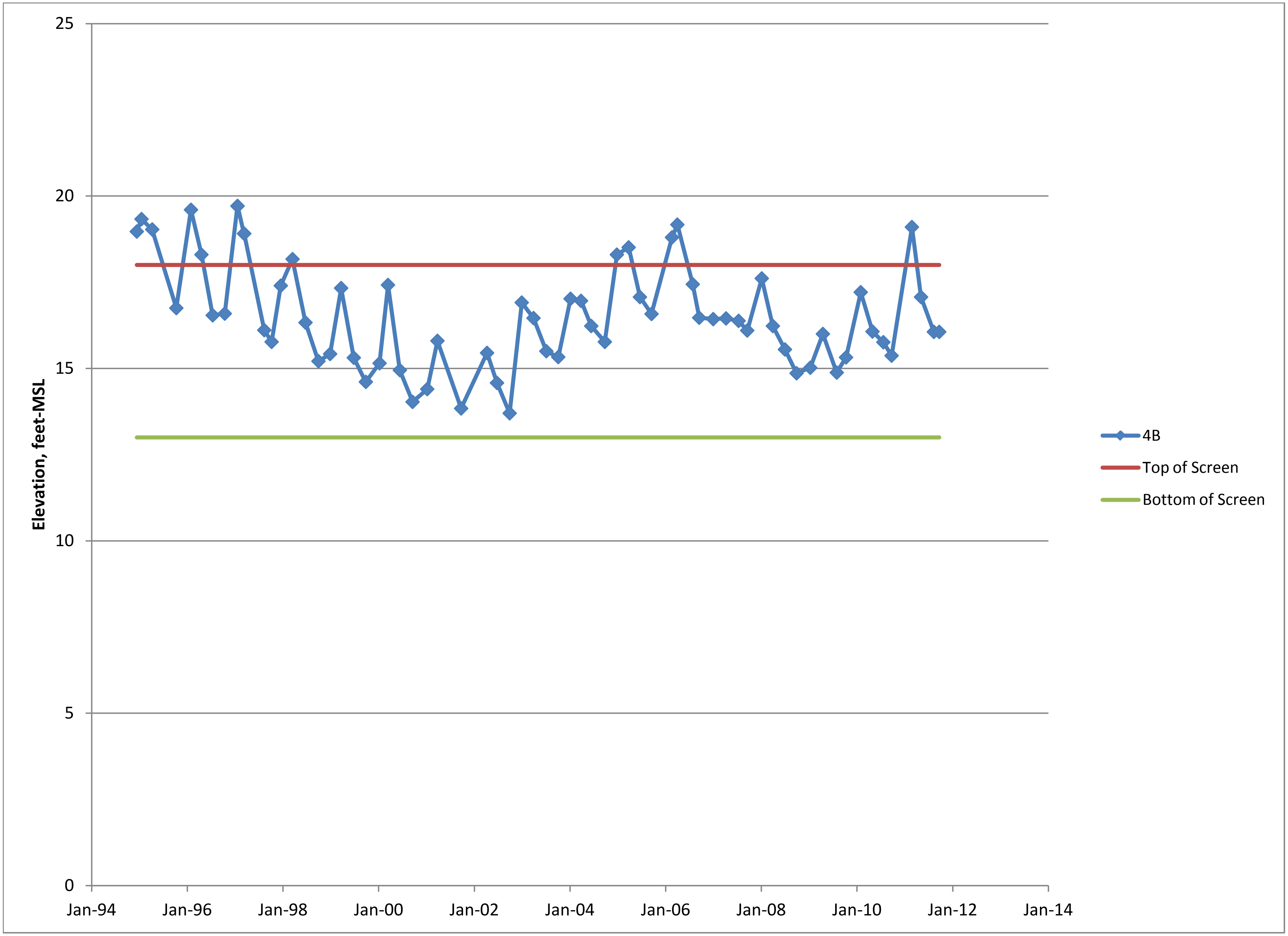


30
20
10
0
-10
-20
-30
-40
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-5
Top of Screen
Bottom of Screen

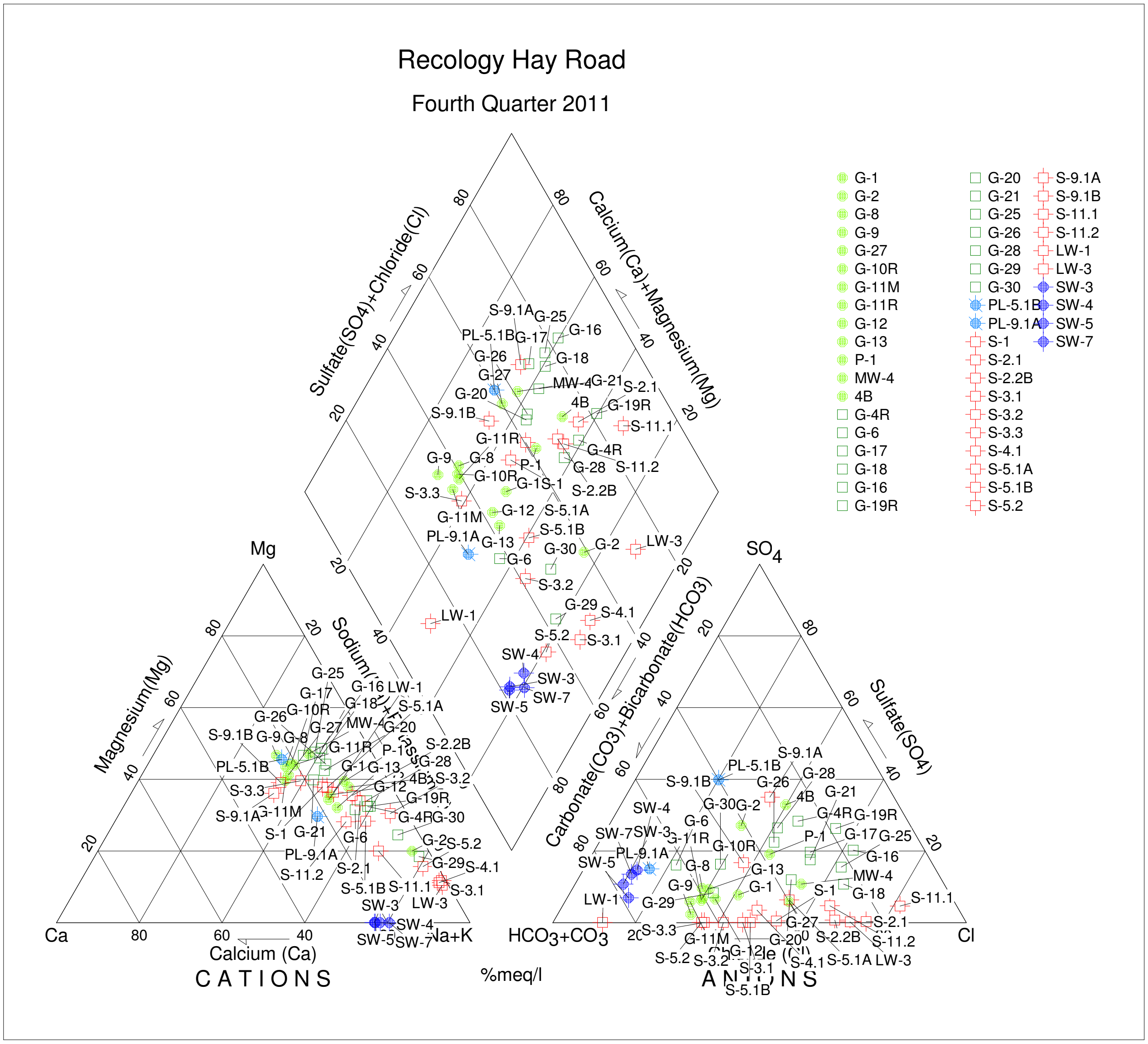


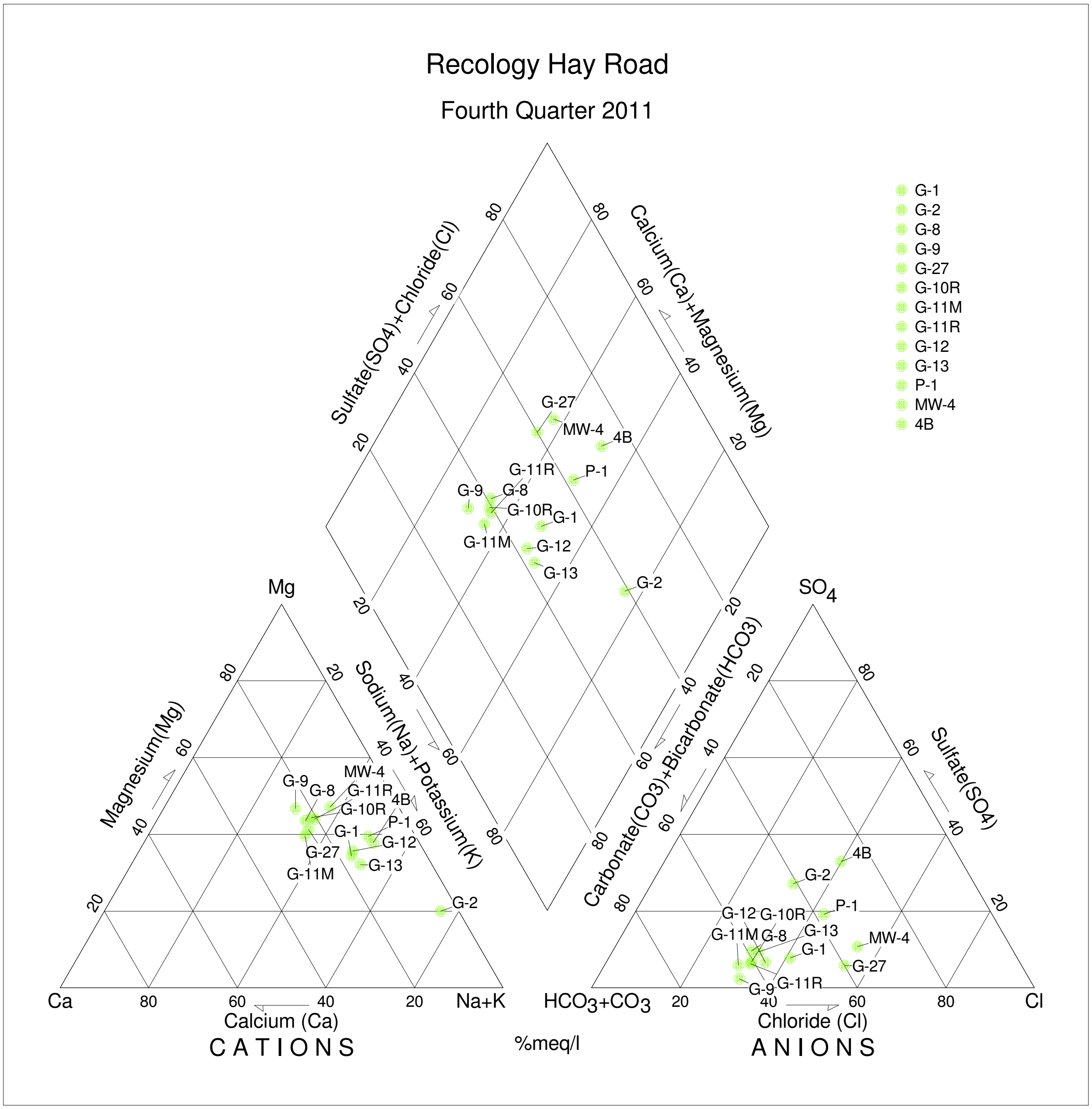
30
20
10
0
-10
-20
-30
-40
-50
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-6
Top of Screen
Bottom of Screen

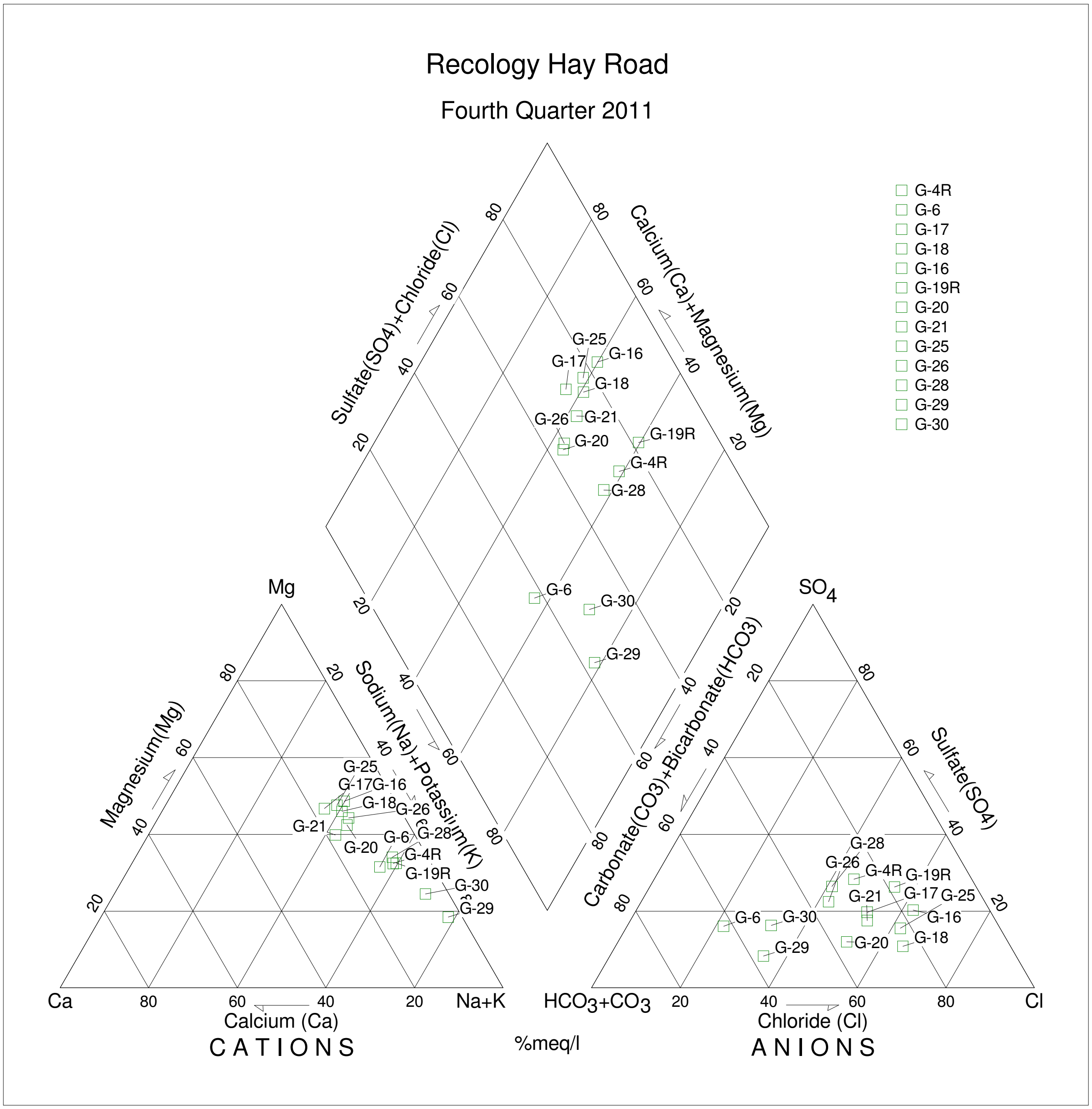
Elevation, feet-MSL
30
20
10
0
-10
-20
-30
-40
-50
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
D-7
Top of Screen
Bottom of Screen



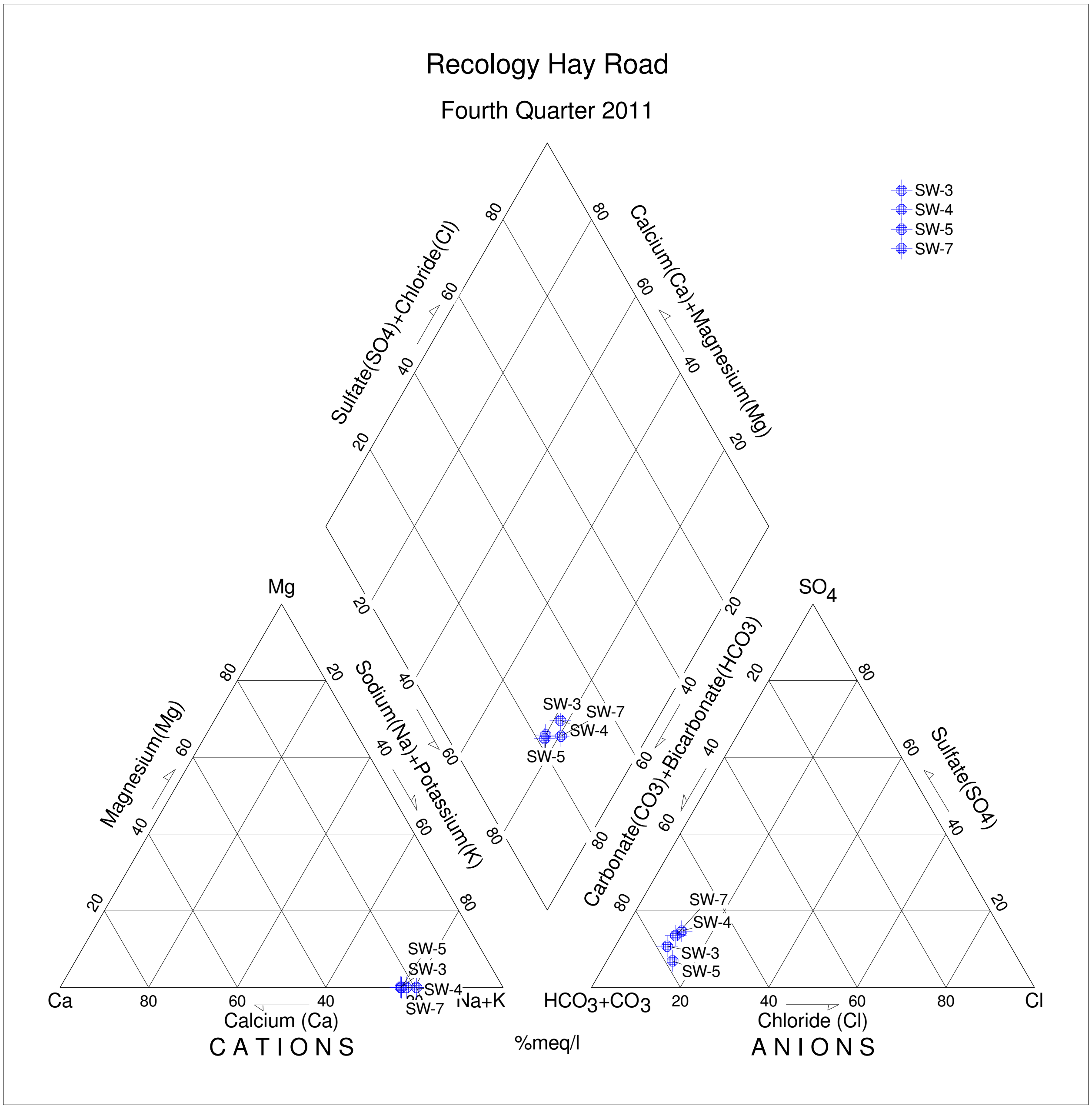
25
20
15
10
5
0
Elevation, feet-MSL
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
4B
Top of Screen
Bottom of Screen


Recology Hay Road
Fourth Quarter 2011
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Calcium (Ca)
Chloride (Cl)
Mg
Ca
Na+K
SO_4
HCO_3+CO_3
Cl
CATIONS
ANIONS
%meq/l
G-1
G-2
G-8
G-9
G-27
G-10R
G-11M
G-11R
G-12
G-13
P-1
MW-4
4B
G-4R
G-6
G-17
G-18
G-16
G-19R
G-20
G-21
G-25
G-26
G-28
G-29
G-30
PL-5.1B
PL-9.1A
S-1
S-2.1
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
S-11.2
LW-1
LW-3
SW-3
SW-4
SW-5
SW-7


Recology Hay Road
Fourth Quarter 2011
G-1
G-2
G-8
G-9
G-27
G-10R
G-11M
G-11R
G-12
G-13
P-1
MW-4
4B
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS



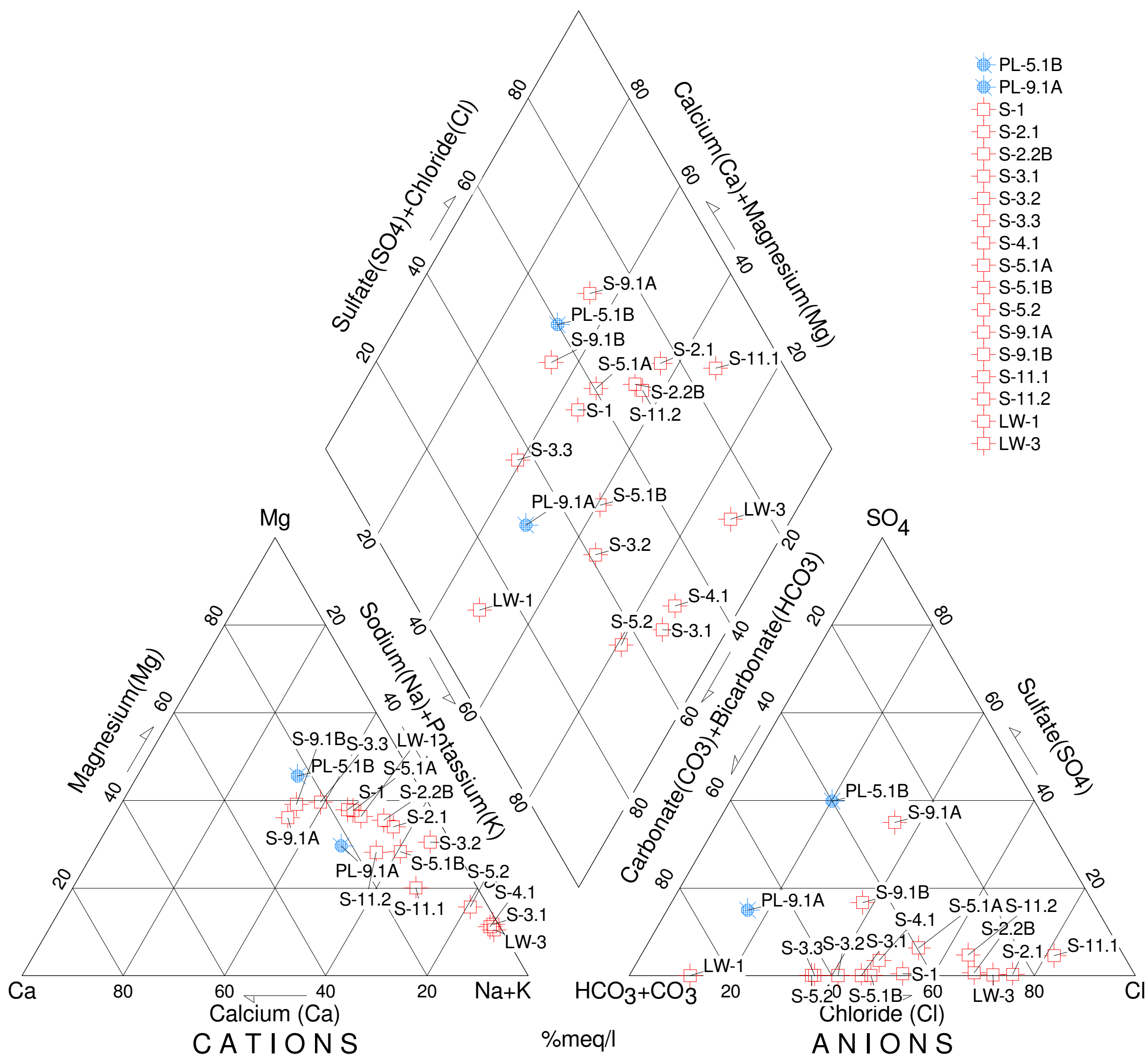
Recology Hay Road
Fourth Quarter 2011
G-4R
G-6
G-17
G-18
G-16
G-19R
G-20
G-21
G-25
G-26
G-28
G-29
G-30
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Mg
Magnesium(Mg)
Ca
Na+K
Calcium (Ca)
CATIONS
%meq/l
SO4
Sulfate(SO4)
HCO3+CO3
Cl
Chloride (Cl)
ANIONS

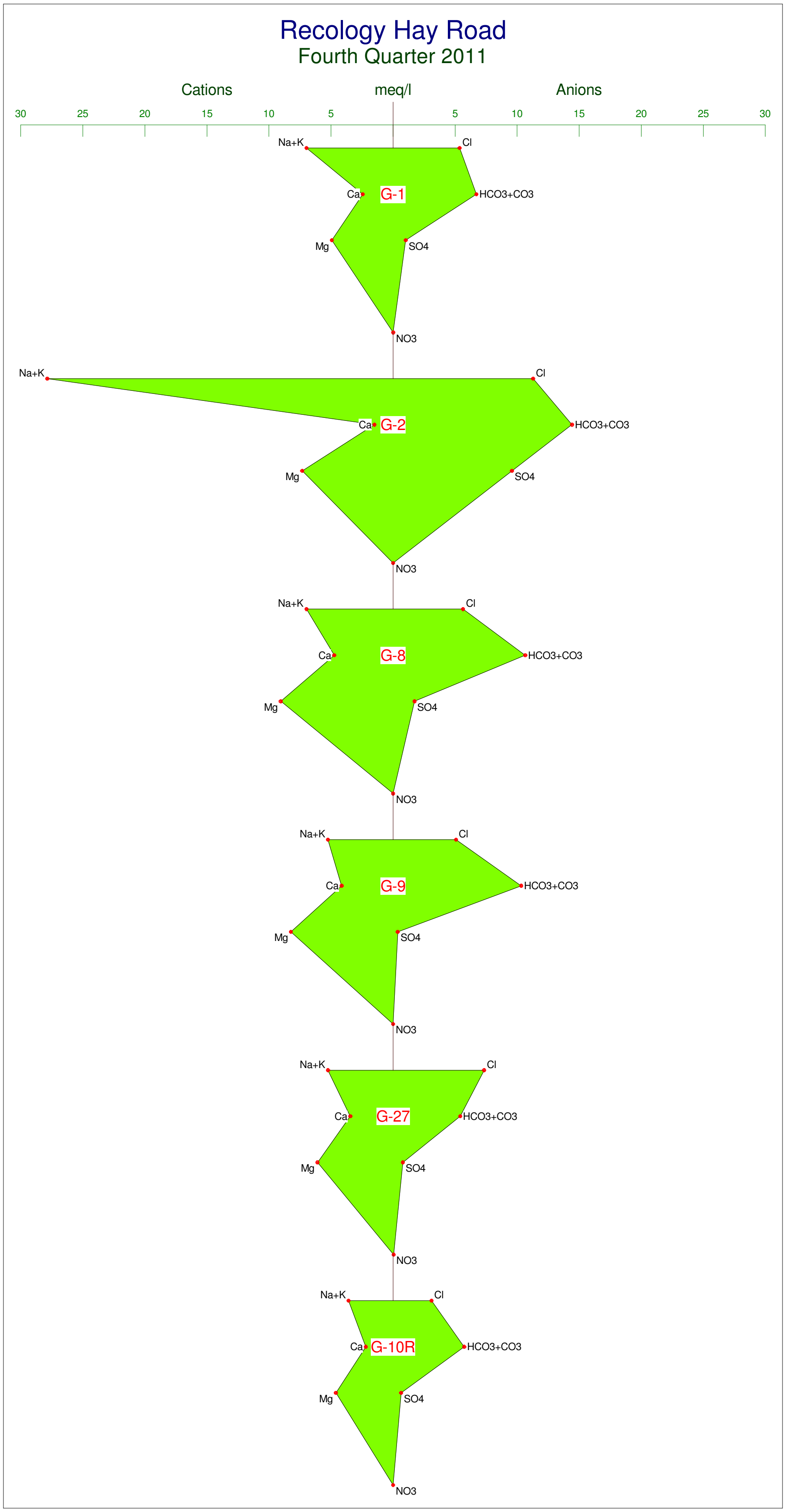


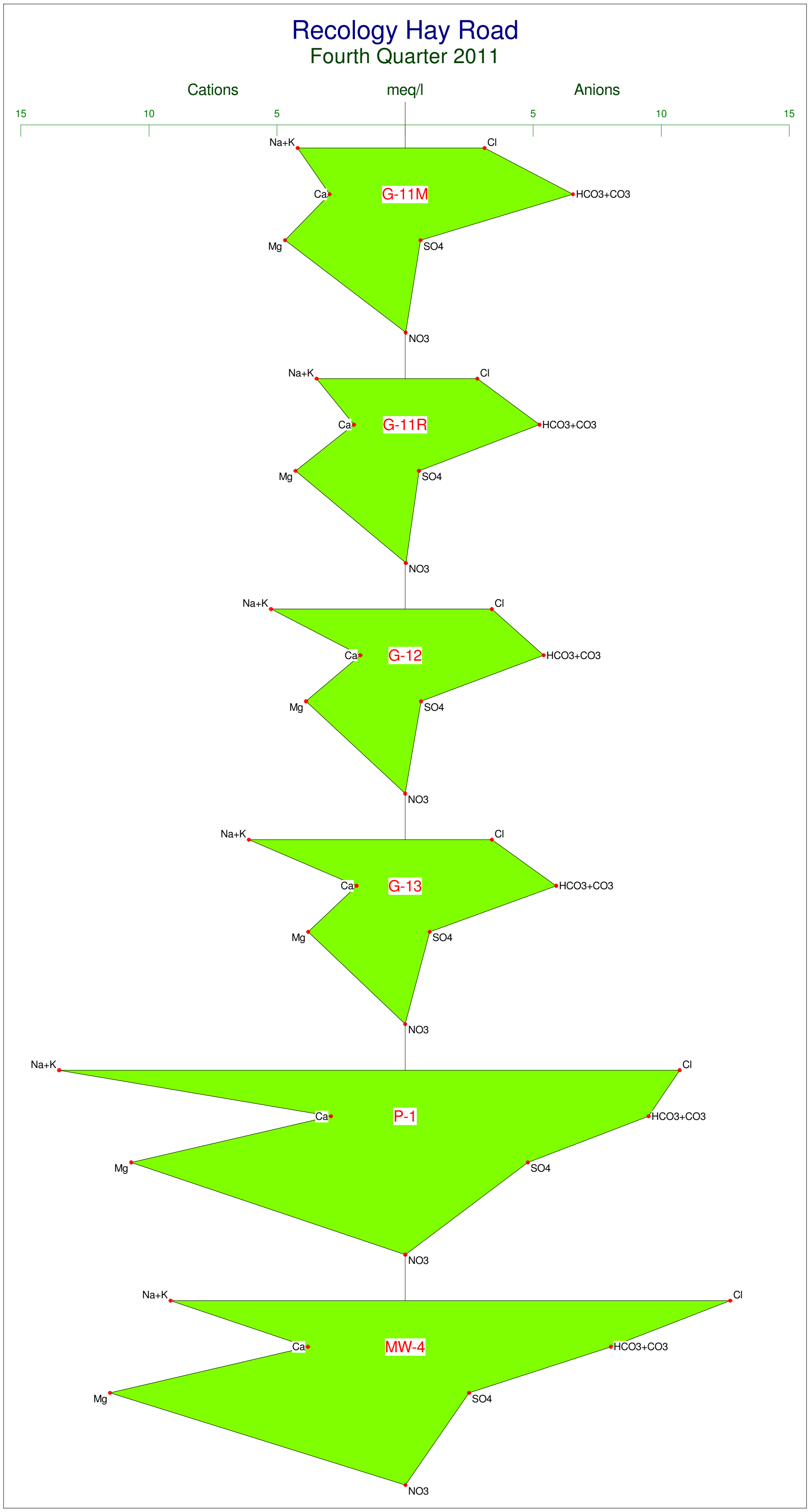
Recology Hay Road
Fourth Quarter 2011
SW-3
SW-4
SW-5
SW-7
Sulfate(SO4)+Chloride(Cl)
Calcium(Ca)+Magnesium(Mg)
Sodium(Na)+Potassium(K)
Carbonate(CO3)+Bicarbonate(HCO3)
Magnesium(Mg)
Sulfate(SO4)
Mg
SO4
Ca
Na+K
HCO3+CO3
Cl
Calcium (Ca)
Chloride (Cl)
CATIONS
%meq/l
ANIONS

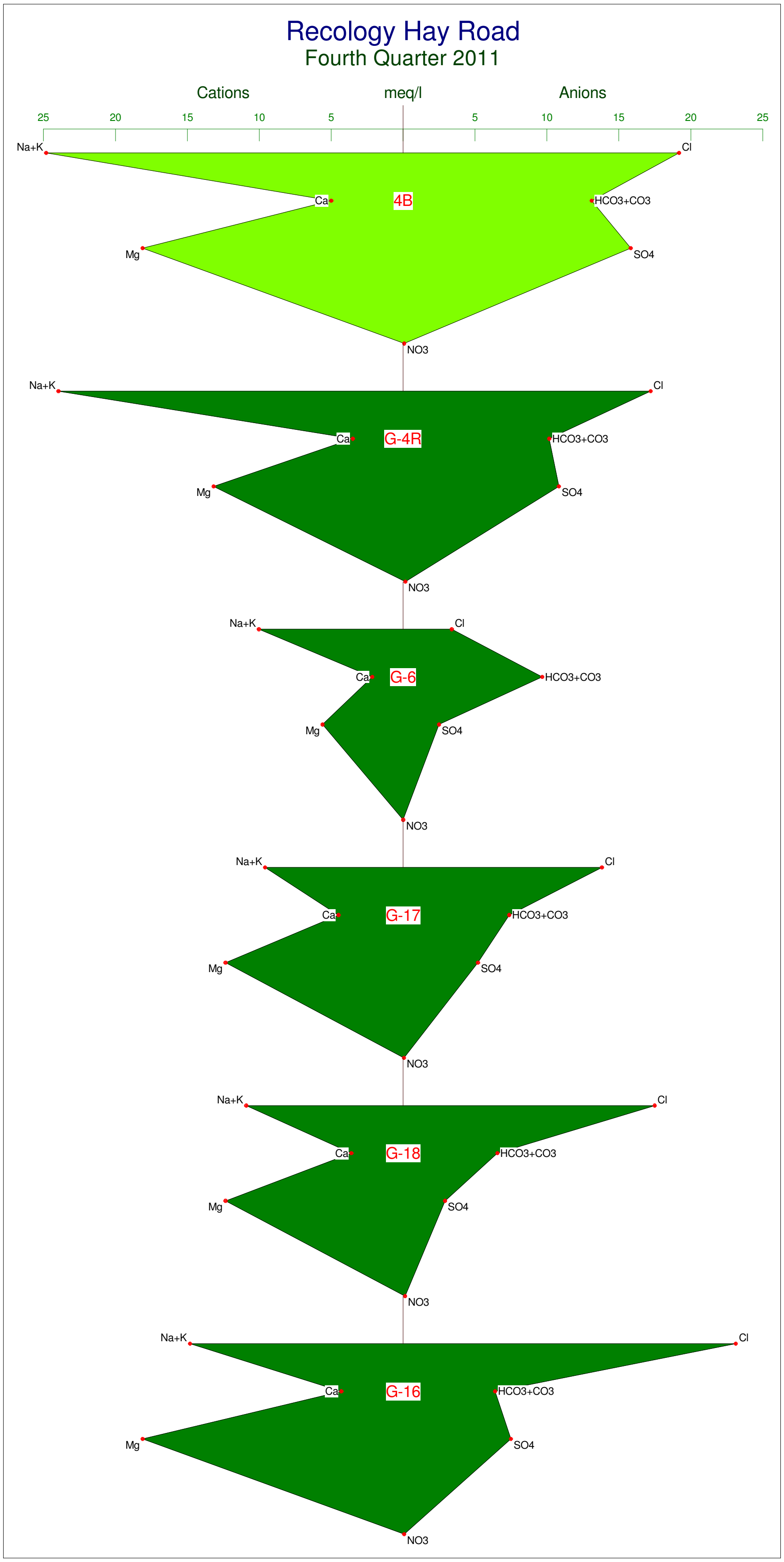
Recology Hay Road

Fourth Quarter 2011

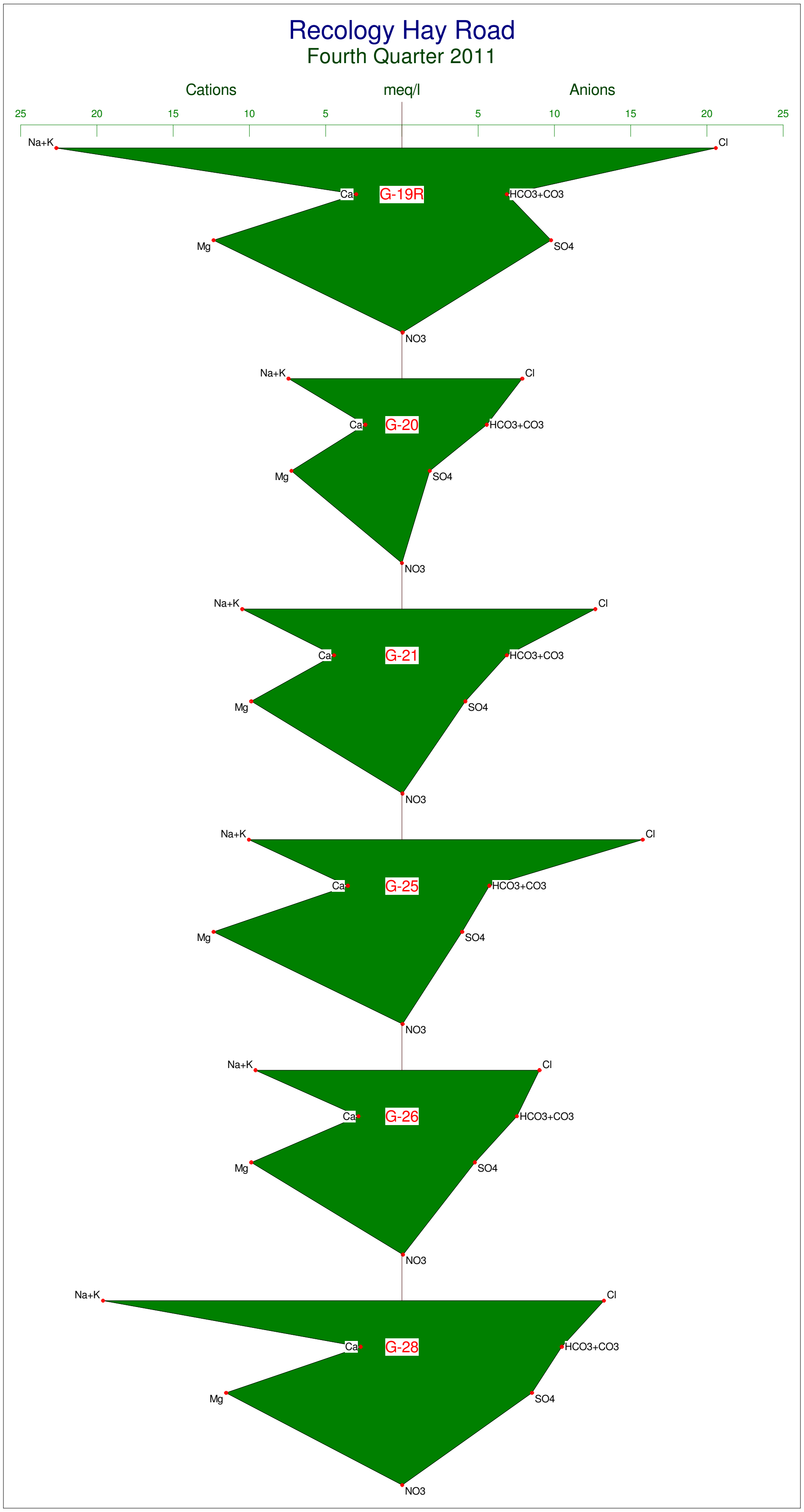



Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
30
25
20
15
10
5
5
10
15
20
25
30
Na+K
Ca
Mg
Cl
HCO3+CO3
SO4
NO3
G-1
G-2
G-8
G-9
G-27
G-10R


Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
15
10
5
5
10
15
Na+K
Cl
Ca
G-11M
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
G-11R
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
G-12
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
G-13
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
P-1
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
MW-4
HCO3+CO3
Mg
SO4
NO3



Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
25
20
15
10
5
5
10
15
20
25
Na+K
Ca
Mg
Cl
HCO3+CO3
SO4
NO3
4B
G-4R
G-6
G-17
G-18
G-16



Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
25
20
15
10
5
5
10
15
20
25
Na+K
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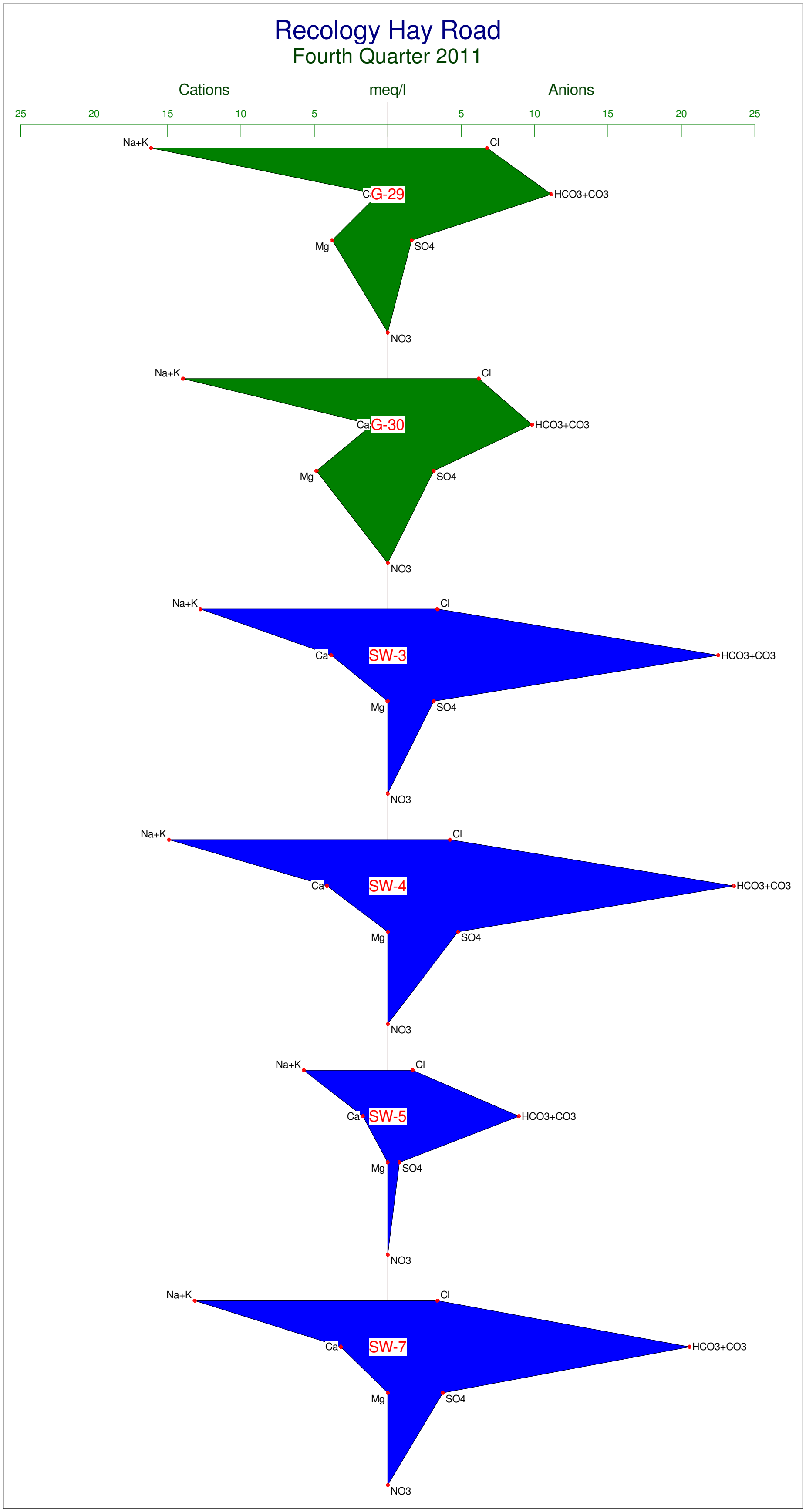
Cl
HCO3+CO3
SO4
G-19R
G-20
G-21
G-25
G-26
G-28



Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
25
20
15
10
5
5
10
15
20
25
Na+K
Cl
Ca
G-29
HCO3+CO3
Mg
SO4
NO3
Na+K
Cl
Ca
G-30
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SO4
NO3
Na+K
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Na+K
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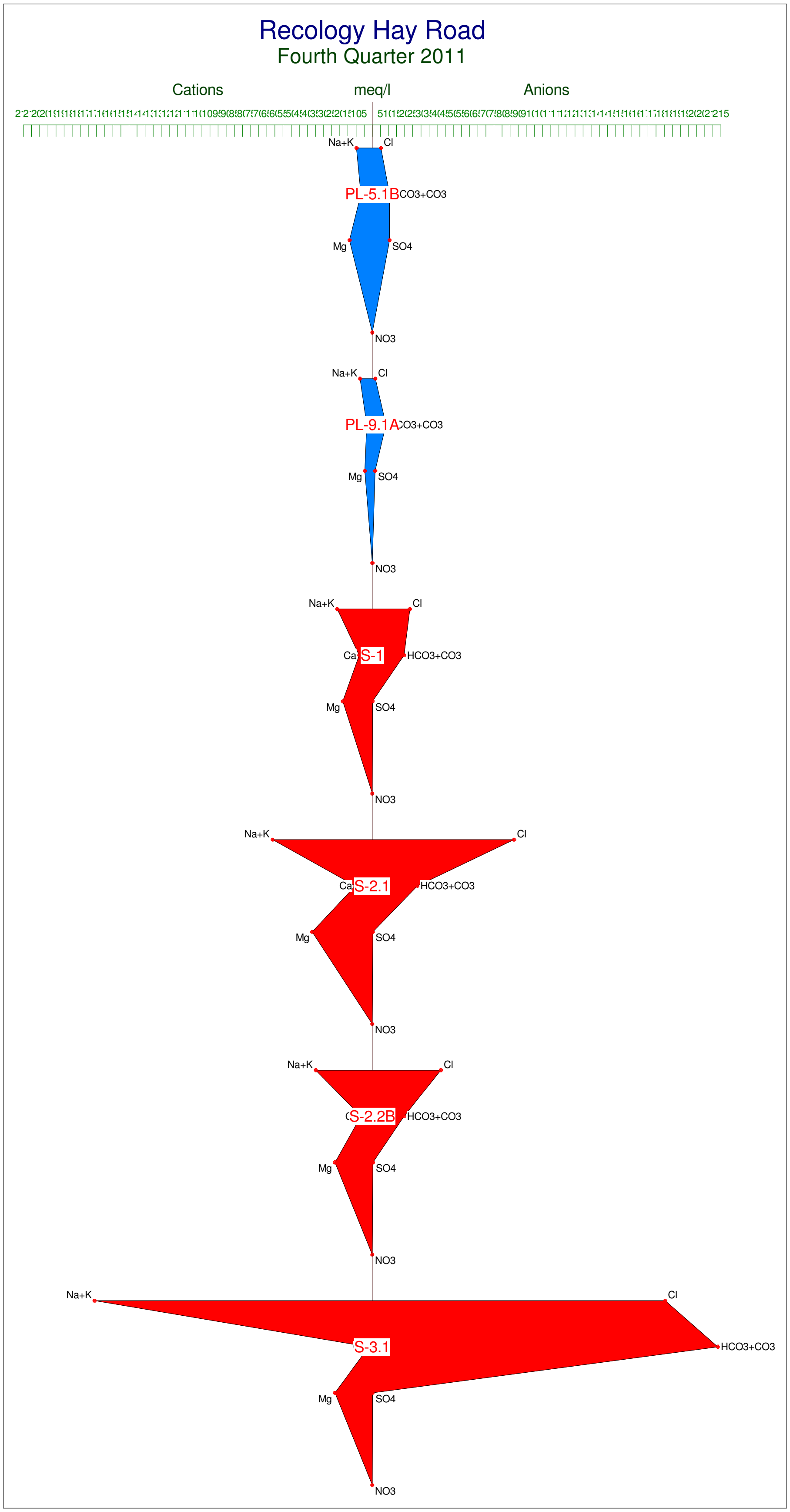
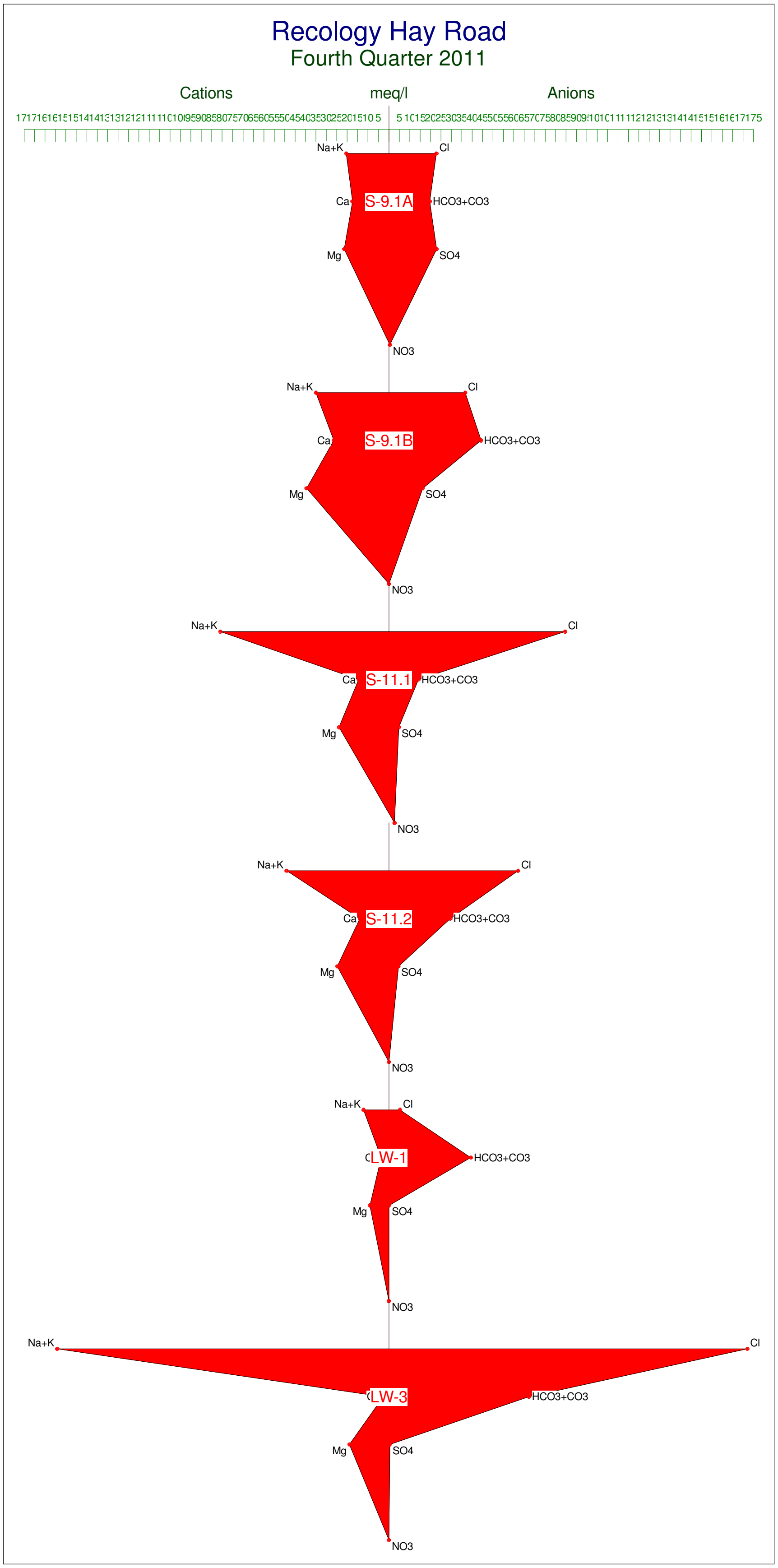
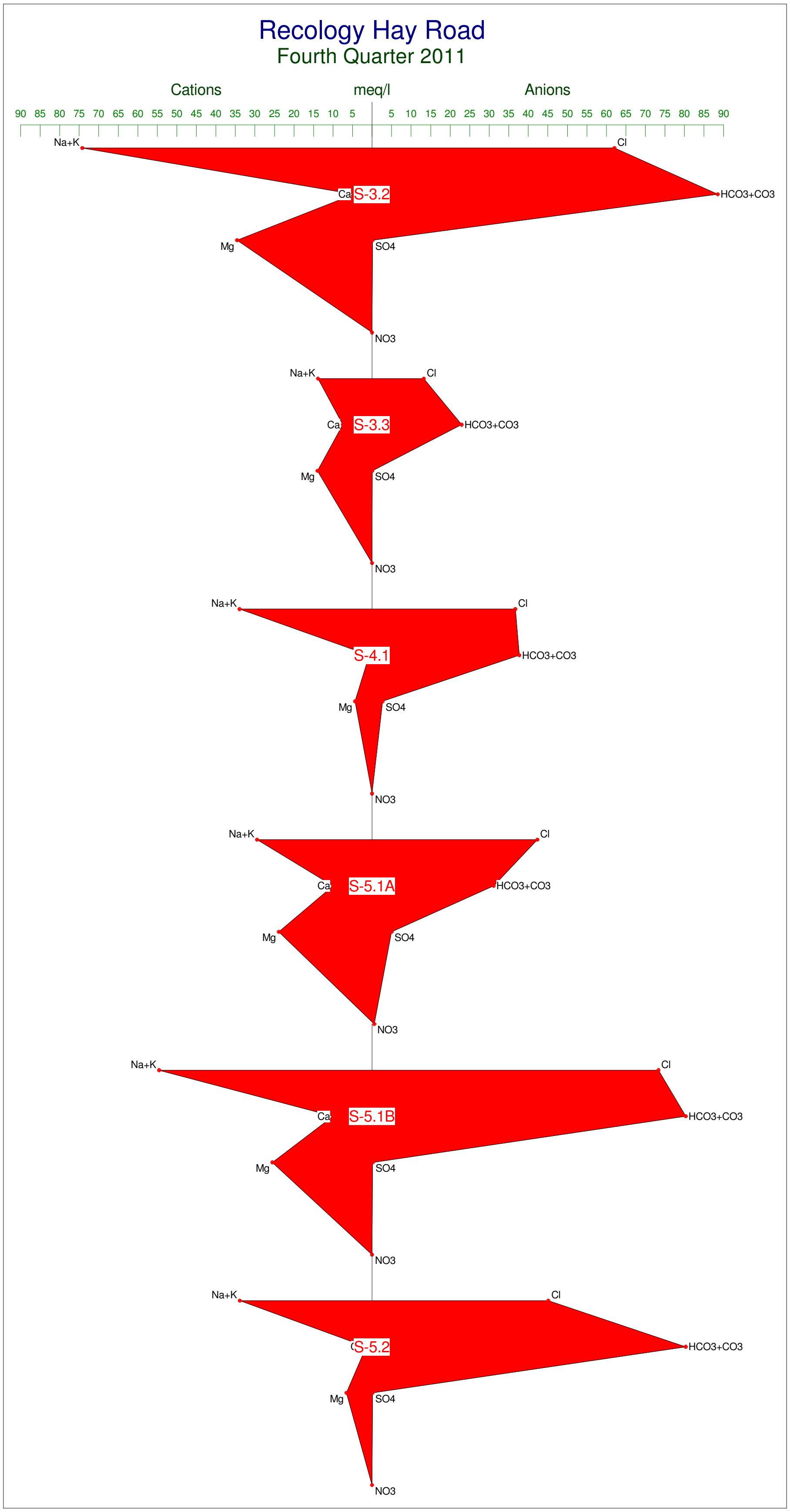
Mg
SO4
NO3


Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
Na+K
Cl
PL-5.1B
HCO3+CO3
Mg
SO4
NO3
PL-9.1A
Ca
S-1
S-2.1
S-2.2B
S-3.1


Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
Na+K
Ca
Mg
Cl
HCO3+CO3
SO4
NO3
S-9.1A
S-9.1B
S-11.1
S-11.2
LW-1
LW-3


Recology Hay Road
Fourth Quarter 2011
Cations
meq/l
Anions
90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90
Na+K
Ca
Mg
Cl
HCO3+CO3
SO4
NO3
S-3.2
S-3.3
S-4.1
S-5.1A
S-5.1B
S-5.2

Descriptive Statistics Report

Company:	Hay Road Landfill	**Data Group:**	None
Site:	Hay Road Landfill	**Date Range:**	01-01-1980 to 06-30-2011
Program:	BJD Groundwater	**Non-detects:**	1/2 detection limit

Parameter	Unit	Size	% NDs	Mean	Standard Deviation	Min	Max	K(95%)	Conc. Limit calculated	Conc. Limit actual
4B										
Nitrate/Nitrite as N	mg/L	61	4.90%	1.638	1.365	0	7.8	2.019	4.4	
Arsenic, Dissolved	mg/L	22	81.80%	0.013	0.018	0	0.05	2.350	0.055	
Chromium, Dissolved	mg/L	25	84.00%	0.003	0.002	0	0.008	2.292	0.008	NE
G-1										
Nitrate/Nitrite as N	mg/L	49	0.00%	9.556	7.102	0.75	38	2.071	24.264	
Arsenic, Dissolved	mg/L	25	92.00%	0.011	0.018	0	0.05	2.292	0.052	NE
Chromium, Dissolved	mg/L	28	75.00%	0.005	0.006	0	0.035	2.249	0.018	
G-10M										
Nitrate/Nitrite as N	mg/L	12	8.30%	0.649	0.481	0	1.7	2.736	1.965	
Arsenic, Dissolved	mg/L	11	63.60%	0.026	0.021	0	0.05	2.815	0.085	
Chromium, Dissolved	mg/L	12	83.30%	0.002	0.002	0	0.005	2.736	0.0	NE
G-11M										
Nitrate/Nitrite as N	mg/L	12	0.00%	3.702	8.923	0.18	32	2.736	28.115	
Arsenic, Dissolved	mg/L	11	81.80%	0.022	0.022	0	0.05	2.815	0.1	NE
Chromium, Dissolved	mg/L	12	91.70%	0.002	0.002	0	0.005	2.736	0.007	NE
G-11R										
Nitrate/Nitrite as N	mg/L	17	0.00%	1.428	0.332	0.93	2.3	2.486	2.3	
Arsenic, Dissolved	mg/L	14	92.90%	0.007	0.013	0	0.05	2.614	0.041	NE
Chromium, Dissolved	mg/L	16	100.00%	0.003	0.002	0	ND	2.523	0.008	NE
G-12										
Nitrate/Nitrite as N	mg/L	64	0.00%	2.202	1.383	0.095	4.6	2.010	4.982	
Arsenic, Dissolved	mg/L	24	79.20%	0.017	0.033	0	0.15	2.309	0.093	
Chromium, Dissolved	mg/L	26	84.60%	0.004	0.006	0	0.03	2.278	0.018	
G-13										
Nitrate/Nitrite as N	mg/L	64	0.00%	2.207	1.115	0.063	5.6	2.010	4.449	
Arsenic, Dissolved	mg/L	24	95.80%	0.011	0.018	0	0.05	2.309	0.053	NE
Chromium, Dissolved	mg/L	26	69.20%	0.006	0.007	0	0.035	2.278	0.02	
G-2										
Nitrate/Nitrite as N	mg/L	54	48.10%	0.206	0.251	0	1.4	2.048	0.720	
Arsenic, Dissolved	mg/L	24	95.80%	0.011	0.018	0	0.05	2.309	0.1	NE
Chromium, Dissolved	mg/L	27	100.00%	0.003	0.002	0	ND	2.263	0.008	NE
G-27										
Nitrate/Nitrite as N	mg/L	12	0.00%	2.342	0.64	1.1	3.3	2.736	4.1	
Arsenic, Dissolved	mg/L	11	72.70%	0.025	0.022	0	0.05	2.815	0.087	NE

Descriptive Statistics Report

Company:	Hay Road Landfill	**Data Group:**	None
Site:	Hay Road Landfill	**Date Range:**	01-01-1980 to 06-30-2011
Program:	BJD Groundwater	**Non-detects:**	1/2 detection limit

Parameter	Unit	Size	% NDs	Mean	Standard Deviation	Min	Max	K(95%)	Conc. Limit calculated	Conc. Limit actual
Chromium, Dissolved	mg/L	12	66.70%	0.003	0.002	0	0.005	2.736	0.008	NE
G-6										
Nitrate/Nitrite as N	mg/L	65	3.10%	0.799	1.212	0	8	2.008	3.232	
Arsenic, Dissolved	mg/L	23	87.00%	0.013	0.019	0	0.05	2.329	0.057	NE
Chromium, Dissolved	mg/L	28	89.30%	0.004	0.004	0	0.02	2.249	0.013	NE
G-8										
Nitrate/Nitrite as N	mg/L	65	0.00%	2.541	1.761	0.057	5.6	2.008	6.076	
Arsenic, Dissolved	mg/L	26	84.60%	0.013	0.023	0	0.1	2.278	0.065	
Chromium, Dissolved	mg/L	29	89.70%	0.003	0.002	0	0.01	2.234	0.0	NE
G-9										
Nitrate/Nitrite as N	mg/L	64	37.50%	1.199	1.349	0	5.2	2.010	3.911	
Arsenic, Dissolved	mg/L	24	87.50%	0.012	0.018	0	0.05	2.309	0.1	NE
Chromium, Dissolved	mg/L	27	100.00%	0.003	0.002	0	ND	2.263	0.008	NE
MW-4										
Nitrate/Nitrite as N	mg/L	64	0.00%	2.963	2.649	0.3	10.1	2.010	8.3	
Arsenic, Dissolved	mg/L	23	78.30%	0.013	0.019	0	0.05	2.329	0.057	
Chromium, Dissolved	mg/L	27	88.90%	0.003	0.002	0	0.011	2.263	0.008	NE
P-1										
Nitrate/Nitrite as N	mg/L	18	0.00%	0.669	0.321	0.44	1.6	2.453	1.456	
Arsenic, Dissolved	mg/L	14	85.70%	0.02	0.022	0	0.05	2.614	0.078	NE
Chromium, Dissolved	mg/L	17	94.10%	0.003	0.002	0	0.005	2.486	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

Company:	Hay Road Landfill	**Data Group:**	None
Site:	Hay Road Landfill	**Date Range:**	01-01-2001 to 12-31-2011
Program:	BJD Groundwater	**Non-detects:**	1/2 detection limit

Parameter	**Unit**	**Size**	**% NDs**	**Mean**	**Median**	**Standard Deviation**	**Min**	**Max**	**K(95%)**	**Conc. Limit calculated**	**Conc. Limit actual**
Background(G4,6,17,18)											
Ammonia as N	mg/L	92	80.40%	0.128	0.025	0.412	0	3.9	1.9422	0.9	
Arsenic, Dissolved	mg/L	80	91.30%	0.014	0.004	0.018	0	0.05	1.9650	0.05	
Chromium, Dissolved	mg/L	89	88.80%	0.004	0.005	0.005	0	0.035	1.9479	0.014	
Lead, Dissolved	mg/L	87	92.00%	0.012	0.003	0.018	0	0.05	1.9517	0.047	
Nitrate/Nitrite as N	mg/L	78	1.10%	2.06431		1.340855	0	4.3	1.9706	4.7	
Total Kjeldahl Nitrogen	mg/L	92	46.70%	0.833	0.25	2.402	0	18	1.9422	5.5	

End of report.

Note:The statistics are replaced by the corresponding minimum variance unbiased estimates for the log normal distribution.

Descriptive Statistics Report

Company: Hay Road Landfill | **Data Group:** None
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	Min	Max	Conc. Limit calculated	
SW-4										
pH	s.u.	22	0.00%	7.989	7.98	0.496	6.79	8.93	6.7	9.3
Specific Conductance	µmhos/cm	22	0.00%	1462.682	1125	817.882	427	2810	3385	
Ammonia as N	mg/L	21	23.80%	0.276	0.25	0.205	0	0.68	0.76	
Arsenic	mg/L	21	61.90%	0.025	0.013	0.021	0	0.05	0.075	
Chloride	mg/L	21	0.00%	257.524	140	207.004	43	610	748	
Chromium	mg/L	21	66.70%	0.005	0.005	0.004	0	0.015	0.014	
Lead	mg/L	23	82.60%	0.018	0.006	0.02	0	0.05	0.065	
Nitrate/Nitrite as N	mg/L	21	9.50%	2.296	0.64	4.187	0	17	12	
Nitrite as N	mg/L	21	47.60%	0.334	0.11	0.728	0	2.5	2.1	
Sulfate as SO4	mg/L	21	0.00%	120.762	94	64.337	19	240	273	
Total Dissolved Solids	mg/L	21	0.00%	912.381	680	486.301	210	1700	2065.40	
Total Kjeldahl Nitrogen	mg/L	21	0.00%	2.011	1.7	1.063	0.57	4.2	4.53	
Total Suspended Solids	mg/L	19	10.50%	75.105	46	87.636	0	350	287.45	

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	**Date Range:**	01-01-2007 to 12-31-2011
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
4B							
pH	s.u.	12	0.00%	-9	0.5	No	-
Specific Conductance	µmhos/cm	11	0.00%	25	0.03	Yes	Upward
Arsenic, Dissolved	mg/L	9	66.70%	-25	0.0025	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	38	0.0002	Yes	Upward
Calcium, Dissolved	mg/L	7	0.00%	11	0.068	No	-
Chloride	mg/L	10	0.00%	18	0.0705	No	-
Chromium, Dissolved	mg/L	10	60.00%	-2	0.4662	No	-
Magnesium, Dissolved	mg/L	7	0.00%	11	0.068	No	-
Nitrate/Nitrite as N	mg/L	12	0.00%	30	0.022	Yes	Upward
Potassium, Dissolved	mg/L	7	14.30%	7	0.191	No	-
Sodium, Dissolved	mg/L	7	0.00%	14	0.0155	Yes	Upward
Sulfate as SO4	mg/L	10	0.00%	29	0.005	Yes	Upward
Total Dissolved Solids	mg/L	10	0.00%	27	0.008	Yes	Upward
G-1							
pH	s.u.	9	0.00%	4	0.381	No	-
Specific Conductance	µmhos/cm	9	0.00%	-10	0.179	No	-
Arsenic, Dissolved	mg/L	9	88.90%	-12	0.13	No	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	17	0.078	No	-
Calcium, Dissolved	mg/L	7	0.00%	-11	0.068	No	-
Chloride	mg/L	10	0.00%	-23	0.023	Yes	Downward
Chromium, Dissolved	mg/L	10	30.00%	-10	0.2208	No	-
Magnesium, Dissolved	mg/L	7	0.00%	-11	0.068	No	-
Nitrate/Nitrite as N	mg/L	10	0.00%	-28	0.008	Yes	Downward
Potassium, Dissolved	mg/L	7	14.30%	3	0.386	No	-
Sodium, Dissolved	mg/L	7	0.00%	5	0.281	No	-
Sulfate as SO4	mg/L	10	0.00%	-3	0.431	No	-
Total Dissolved Solids	mg/L	10	0.00%	-7	0.3	No	-
G-10R							
pH	s.u.	1	0.00%	0	0	Yes	NA
Specific Conductance	µmhos/cm	1	0.00%	0	0	Yes	NA
Arsenic, Dissolved	mg/L	1	100.00%	0	0	Yes	ND
Bicarbonate Alkalinity	mg/L	1	0.00%	0	0	Yes	NA
Calcium, Dissolved	mg/L	1	0.00%	0	0	Yes	NA
Chloride	mg/L	1	0.00%	0	0	Yes	NA
Chromium, Dissolved	mg/L	1	100.00%	0	0	Yes	ND
Magnesium, Dissolved	mg/L	1	0.00%	0	0	Yes	NA
Nitrate/Nitrite as N	mg/L	1	0.00%	0	0	Yes	NA
Potassium, Dissolved	mg/L	1	0.00%	0	0	Yes	NA
Sodium, Dissolved	mg/L	1	0.00%	0	0	Yes	NA
Sulfate as SO4	mg/L	1	0.00%	0	0	Yes	NA
Total Dissolved Solids	mg/L	1	0.00%	0	0	Yes	NA
G-11M							
pH	s.u.	9	0.00%	-14	0.09	No	-
Specific Conductance	µmhos/cm	9	0.00%	-8	0.238	No	-
Arsenic, Dissolved	mg/L	9	77.80%	-17	0.0363	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-13	0.146	No	-
Calcium, Dissolved	mg/L	7	0.00%	-1	0.5	No	-
Chloride	mg/L	10	0.00%	-14	0.1321	No	-
Chromium, Dissolved	mg/L	10	90.00%	-1	0.5	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	-5	0.281	No	-

Parameter	Unit	Size	%NDs		Tabular	Statistically Significant	Direction
Nitrate/Nitrite as N	mg/L	10	0.00%	18	0.0705	No	-
Potassium, Dissolved	mg/L	7	14.30%	3	0.386	No	-
Sodium, Dissolved	mg/L	7	0.00%	-15	0.015	Yes	Downward
Sulfate as SO4	mg/L	10	0.00%	-23	0.023	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	4	0.3995	No	-
G-11R							
pH	s.u.	8	0.00%	-2	0.452	No	-
Specific Conductance	µmhos/cm	8	0.00%	10	0.138	No	-
Arsenic, Dissolved	mg/L	7	85.70%	-1	0.5	No	NA
Bicarbonate Alkalinity	mg/L	8	0.00%	-15	0.0425	Yes	Downward
Calcium, Dissolved	mg/L	6	0.00%	5	0.235	No	-
Chloride	mg/L	8	0.00%	22	0.002	Yes	Upward
Chromium, Dissolved	mg/L	8	100.00%	2	0.452	No	ND
Magnesium, Dissolved	mg/L	6	0.00%	4	0.2975	No	-
Nitrate/Nitrite as N	mg/L	8	0.00%	24	0.001	Yes	Upward
Potassium, Dissolved	mg/L	6	0.00%	10	0.048	Yes	Upward
Sodium, Dissolved	mg/L	6	0.00%	-8	0.102	No	-
Sulfate as SO4	mg/L	8	0.00%	-20	0.007	Yes	Downward
Total Dissolved Solids	mg/L	8	0.00%	13	0.0715	No	-
G-12							
pH	s.u.	9	0.00%	15	0.0588	No	-
Specific Conductance	µmhos/cm	9	0.00%	-6	0.306	No	-
Arsenic, Dissolved	mg/L	9	77.80%	-21	0.0108	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-6	0.3352	No	-
Calcium, Dissolved	mg/L	7	0.00%	-8	0.1305	No	-
Chloride	mg/L	10	0.00%	-20	0.049	Yes	Downward
Chromium, Dissolved	mg/L	10	70.00%	-11	0.19	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	-6	0.2127	No	-
Nitrate/Nitrite as N	mg/L	10	0.00%	-3	0.431	No	-
Potassium, Dissolved	mg/L	7	14.30%	6	0.2127	No	-
Sodium, Dissolved	mg/L	7	0.00%	-4	0.3169	No	-
Sulfate as SO4	mg/L	10	0.00%	-24	0.0213	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	-11	0.19	No	-
G-13							
pH	s.u.	9	0.00%	14	0.09	No	-
Specific Conductance	µmhos/cm	9	0.00%	-16	0.06	No	-
Arsenic, Dissolved	mg/L	9	100.00%	-6	0.306	No	-
Bicarbonate Alkalinity	mg/L	10	0.00%	-1	0.5	No	-
Calcium, Dissolved	mg/L	7	0.00%	-9	0.119	No	-
Chloride	mg/L	10	0.00%	-17	0.078	No	-
Chromium, Dissolved	mg/L	10	80.00%	-10	0.2208	No	-
Magnesium, Dissolved	mg/L	7	0.00%	-9	0.119	No	-
Nitrate/Nitrite as N	mg/L	12	0.00%	-6	0.369	No	-
Potassium, Dissolved	mg/L	7	14.30%	4	0.3169	No	-
Sodium, Dissolved	mg/L	7	0.00%	-7	0.191	No	-
Sulfate as SO4	mg/L	10	0.00%	-25	0.014	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	-3	0.431	No	-
G-2							
pH	s.u.	9	0.00%	15	0.0588	No	-
Specific Conductance	µmhos/cm	9	0.00%	-26	0.003	Yes	Downward
Arsenic, Dissolved	mg/L	9	100.00%	-6	0.306	No	ND
Bicarbonate Alkalinity	mg/L	10	0.00%	29	0.005	Yes	Upward
Calcium, Dissolved	mg/L	7	0.00%	-19	0.001	Yes	Downward
Chloride	mg/L	10	0.00%	-17	0.078	No	-
Chromium, Dissolved	mg/L	10	100.00%	-4	0.3995	No	ND
Magnesium, Dissolved	mg/L	7	0.00%	-19	0.001	Yes	Downward
Nitrate/Nitrite as N	mg/L	10	100.00%	-29	0.005	Yes	ND

Parameter	Unit	Size	%NDs		Tabular	Statistically Significant	Direction
Potassium, Dissolved	mg/L	6	16.70%	-11	0.028	Yes	Downward
Sodium, Dissolved	mg/L	7	0.00%	-13	0.035	Yes	Downward
Sulfate as SO4	mg/L	10	0.00%	-30	0.0046	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	-28	0.008	Yes	Downward
G-27							
pH	s.u.	10	0.00%	-8	0.2751	No	-
Specific Conductance	µmhos/cm	9	0.00%	0	0.54	No	-
Arsenic, Dissolved	mg/L	9	66.70%	-19	0.0208	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-22	0.0329	Yes	Downward
Calcium, Dissolved	mg/L	7	0.00%	6	0.2127	No	-
Chloride	mg/L	10	0.00%	-7	0.3	No	-
Chromium, Dissolved	mg/L	10	50.00%	-4	0.3995	No	-
Magnesium, Dissolved	mg/L	7	0.00%	5	0.281	No	-
Nitrate/Nitrite as N	mg/L	10	0.00%	11	0.19	No	-
Potassium, Dissolved	mg/L	7	14.30%	-3	0.386	No	-
Sodium, Dissolved	mg/L	7	0.00%	-15	0.015	Yes	Downward
Sulfate as SO4	mg/L	10	0.00%	-31	0.002	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	7	0.3	No	-
G-6							
pH	s.u.	9	0.00%	-8	0.238	No	-
Specific Conductance	µmhos/cm	8	0.00%	2	0.452	No	-
Arsenic, Dissolved	mg/L	8	62.50%	-13	0.0715	No	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-13	0.146	No	-
Calcium, Dissolved	mg/L	7	0.00%	-3	0.386	No	-
Chloride	mg/L	10	0.00%	-22	0.0329	Yes	Downward
Chromium, Dissolved	mg/L	10	80.00%	-5	0.364	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	-4	0.3169	No	-
Nitrate/Nitrite as N	mg/L	10	0.00%	5	0.364	No	-
Potassium, Dissolved	mg/L	7	14.30%	4	0.3169	No	-
Sodium, Dissolved	mg/L	7	0.00%	0	0.57	No	-
Sulfate as SO4	mg/L	10	0.00%	-3	0.431	No	-
Total Dissolved Solids	mg/L	10	0.00%	-2	0.4662	No	-
G-8							
pH	s.u.	10	0.00%	4	0.3995	No	-
Specific Conductance	µmhos/cm	9	0.00%	19	0.0208	Yes	Upward
Arsenic, Dissolved	mg/L	9	77.80%	-18	0.038	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	38	0.0002	Yes	Upward
Calcium, Dissolved	mg/L	7	0.00%	14	0.0155	Yes	Upward
Chloride	mg/L	10	0.00%	1	0.5	No	-
Chromium, Dissolved	mg/L	10	70.00%	-1	0.5	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	13	0.035	Yes	Upward
Nitrate/Nitrite as N	mg/L	10	0.00%	4	0.3995	No	-
Potassium, Dissolved	mg/L	7	14.30%	7	0.191	No	-
Sodium, Dissolved	mg/L	7	0.00%	12	0.036	Yes	Upward
Sulfate as SO4	mg/L	10	0.00%	19	0.054	No	-
Total Dissolved Solids	mg/L	10	0.00%	33	0.001	Yes	Upward
G-9							
pH	s.u.	10	0.00%	-19	0.054	No	-
Specific Conductance	µmhos/cm	9	0.00%	10	0.179	No	-
Arsenic, Dissolved	mg/L	9	77.80%	-21	0.0108	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	13	0.146	No	-
Calcium, Dissolved	mg/L	7	0.00%	8	0.1305	No	-
Chloride	mg/L	10	0.00%	4	0.3995	No	-
Chromium, Dissolved	mg/L	10	100.00%	-4	0.3995	No	ND
Magnesium, Dissolved	mg/L	7	0.00%	9	0.119	No	-
Nitrate/Nitrite as N	mg/L	10	90.00%	-27	0.008	Yes	NA
Potassium, Dissolved	mg/L	7	14.30%	8	0.1305	No	-

Parameter	Unit	Size	%NDs		Tabular	Statistically Significant	Direction
Sodium, Dissolved	mg/L	7	0.00%	-17	0.005	Yes	Downward
Sulfate as SO4	mg/L	10	0.00%	-29	0.005	Yes	Downward
Total Dissolved Solids	mg/L	10	0.00%	24	0.0213	Yes	Upward
MW-4							
pH	s.u.	10	0.00%	-12	0.1731	No	-
Specific Conductance	µmhos/cm	9	0.00%	-12	0.13	No	-
Arsenic, Dissolved	mg/L	9	66.70%	-19	0.0208	Yes	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-16	0.0979	No	-
Calcium, Dissolved	mg/L	7	0.00%	-9	0.119	No	-
Chloride	mg/L	10	0.00%	-24	0.0213	Yes	Downward
Chromium, Dissolved	mg/L	10	80.00%	-5	0.364	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	-12	0.036	Yes	Downward
Nitrate/Nitrite as N	mg/L	10	0.00%	-25	0.014	Yes	Downward
Potassium, Dissolved	mg/L	7	14.30%	4	0.3169	No	-
Sodium, Dissolved	mg/L	7	0.00%	-7	0.191	No	-
Sulfate as SO4	mg/L	10	0.00%	27	0.008	Yes	Upward
Total Dissolved Solids	mg/L	10	0.00%	-12	0.1731	No	-
P-1							
pH	s.u.	10	0.00%	-20	0.049	Yes	Downward
Specific Conductance	µmhos/cm	9	0.00%	4	0.381	No	-
Arsenic, Dissolved	mg/L	9	77.80%	-14	0.09	No	NA
Bicarbonate Alkalinity	mg/L	10	0.00%	-5	0.364	No	-
Calcium, Dissolved	mg/L	7	0.00%	0	0.57	No	-
Chloride	mg/L	10	0.00%	-31	0.002	Yes	Downward
Chromium, Dissolved	mg/L	10	80.00%	-1	0.5	No	NA
Magnesium, Dissolved	mg/L	7	0.00%	-7	0.191	No	-
Nitrate/Nitrite as N	mg/L	10	0.00%	5	0.364	No	-
Potassium, Dissolved	mg/L	7	14.30%	7	0.191	No	-
Sodium, Dissolved	mg/L	7	0.00%	-5	0.281	No	-
Sulfate as SO4	mg/L	10	0.00%	3	0.431	No	-
Total Dissolved Solids	mg/L	10	0.00%	9	0.242	No	-

End of report

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	45	0.00%	-3.71728	0.0001007	Yes	Downward
G-22							
Nitrate/Nitrite as N	mg/L	35	2.90%	155	0.014	Yes	Upward
G-23							
Nitrate/Nitrite as N	mg/L	35	0.00%	-99	0.083	No	-

End of report

Mann-Kendall Trend Test Report

Site: Hay Road Landfill
Program: BJD Vadose Zone
Permit:
Minimum S 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.	28	0.00%		0.0339	Yes	Upward
Specific Conductance	µmhos/cm	28	0.00%	-294	0	Yes	Downward
Ammonia as N	mg/L	27	22.20%	-33	0.254	No	-
Chloride	mg/L	29	0.00%	-280	0	Yes	Downward
Nitrate/Nitrite as N	mg/L	30	0.00%	-333	0	Yes	Downward
Sulfate as SO4	mg/L	29	0.00%	-312	0	Yes	Downward
Total Dissolved Solids	mg/L	29	0.00%	-328	0	Yes	Downward
Total Kjeldahl Nitrogen	mg/L	26	42.30%	65	0.08	No	-
Arsenic, Dissolved	mg/L	20	85.00%	61	0.025	Yes	Upward
Calcium, Dissolved	mg/L	17	0.00%	-60	0.007	Yes	Downward
Chromium, Dissolved	mg/L	21	66.70%	-54	0.055	No	-
Lead, Dissolved	mg/L	21	95.20%	45	0.093	No	-
Magnesium, Dissolved	mg/L	17	0.00%	-93	0	Yes	Downward
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	0.00%	77	0.099	No	-
Specific Conductance	µmhos/cm	31	0.00%	-134	0.0108	Yes	Downward
Ammonia as N	mg/L	30	30.00%	73	0.1	No	-
Chloride	mg/L	31	0.00%	-139	0.009	Yes	Downward
Nitrate/Nitrite as N	mg/L	32	3.10%	-143	0.0111	Yes	Downward
Sulfate as SO4	mg/L	31	0.00%	-138	0.0088	Yes	Downward
Total Dissolved Solids	mg/L	31	0.00%	-136	0.0098	Yes	Downward
Total Kjeldahl Nitrogen	mg/L	29	37.90%	157	0.0014	Yes	Upward
Arsenic, Dissolved	mg/L	23	82.60%	93	0.007	Yes	Upward
Calcium, Dissolved	mg/L	19	0.00%	38	0.099	No	-
Chromium, Dissolved	mg/L	23	91.30%	-75	0.025	Yes	Downward
Lead, Dissolved	mg/L	23	100.00%	59	0.063	No	-
Magnesium, Dissolved	mg/L	19	0.00%	29	0.166	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

Historical Time-Concentration Graphs not included (marked with x) and reason graph not included

Monitoring Point	*Field Parameters*	*Inorganic Monitoring Parameters*	*VOCs*	Reason not graphed
Western Area Wells				
G-1	graphed	graphed	x	No VOCs, see parameter lists below.
G-2	graphed	graphed	x	No VOCs, see parameter lists below.
G-6	graphed	graphed	x	No VOCs, see parameter lists below.
G-8	graphed	graphed	x	No VOCs, see parameter lists below.
G-9	graphed	graphed	x	No VOCs, see parameter lists below.
G-27	graphed	graphed	x	No VOCs, see parameter lists below.
G-10M	graphed	graphed	x	No VOCs, see parameter lists below.
G-10R	graphed	graphed	x	No VOCs, see parameter lists below.
G-11	graphed	graphed	x	No VOCs, see parameter lists below.
G-11M	graphed	graphed	x	No VOCs, see parameter lists below.
G-11R	graphed	graphed	x	No VOCs, see parameter lists below.
G-12	graphed	graphed	x	No VOCs, see parameter lists below.
G-13	graphed	graphed	x	No VOCs, see parameter lists below.
P-1	graphed	graphed	x	No VOCs, see parameter lists below.
MW-4	graphed	graphed	x	No VOCs, see parameter lists below.
4B	graphed	graphed	4	Only detected VOCs graphed (acetone, 2-butanone, toluene, vinyl chloride) see full parameter list below.
Eastern Area Wells				
G-4R	graphed	graphed	x	No VOCs, see parameter lists below.
G-17	graphed	graphed	x	No VOCs, see parameter lists below.
G-18	graphed	graphed	x	No VOCs, see parameter lists below.
G-14	graphed	graphed	x	No VOCs, see parameter lists below.
G-16	graphed	graphed	x	No VOCs, see parameter lists below.
G-19R	graphed	graphed	x	No VOCs, see parameter lists below.
G-20	graphed	graphed	x	No VOCs, see parameter lists below.
G-21	graphed	graphed	x	No VOCs, see parameter lists below.
G-25	graphed	graphed	x	No VOCs, see parameter lists below.
G-26	graphed	graphed	x	No VOCs, see parameter lists below.
G-28	graphed	graphed	x	No VOCs, see parameter lists below.
G-29	graphed	graphed	1	Only detected VOC graphed (TBA) see full parameter list below.
G-30	graphed	graphed	1	Only detected VOC graphed (TCE) see full parameter list below.
Corrective Action Wells				
G-22	graphed	graphed	x	Corrective action well, no VOCs analyzed
G-23	graphed	graphed	x	Corrective action well, no VOCs analyzed
G-24	graphed	graphed	x	Corrective action well, no VOCs analyzed
Vadose Zone				
VZ-2.1	x	x	x	Sample point dry, no sample obtained, no graphs
PL-2.2A	x	x	x	Sample point dry, no sample obtained, no graphs

Historical Time-Concentration Graphs not included (marked with x) and reason graph not included

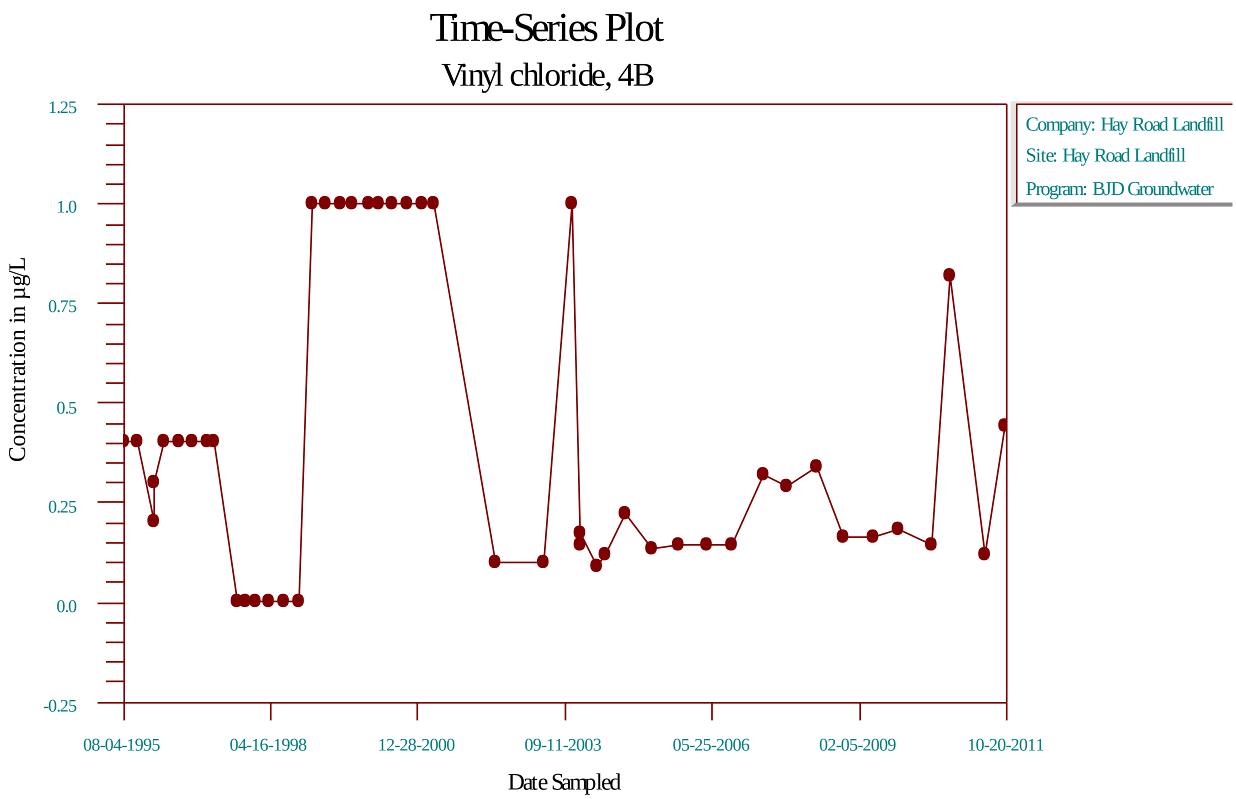
Monitoring Point	Field Parameters	Inorganic Monitoring Parameters	VOCs	Reason not graphed
PL-2.2B	x	x	x	Sample point dry, no sample obtained, no graphs
PL-3.1	x	x	x	Sample point dry, no sample obtained, no graphs
LD-3.1	x	x	x	Sample point dry, no sample obtained, no graphs
PL-3.2	x	x	x	Sample point dry, no sample obtained, no graphs
LD-3.2	graphed	graphed	x	No VOCs analyzed
PL-3.3	x	x	x	Sample point dry, no sample obtained, no graphs
LD-3.3	x	x	x	Sample point dry, no sample obtained, no graphs
PL-4.1	x	x	x	Sample point dry, no sample obtained, no graphs
LD-4.1	x	x	x	Sample point dry, no sample obtained, no graphs
PL-5.1A	x	x	x	Sample point dry, no sample obtained, no graphs
PL-5.1B	graphed	graphed	3	Only detected VOCs graphed (PCE, TCE, acetone) see full parameter list below.
PL-5.2	x	x	x	Sample point dry, no sample obtained, no graphs
LD-5.2	x	x	x	Sample point dry, no sample obtained, no graphs
PL-9.1A	graphed	graphed	x	No VOCs detected, see VOC parameter list below
PL-9.1B	x	x	x	Sample point dry, no sample obtained, no graphs
PL-11.1	x	x	6	Sample point dry, but VOCs graphed with PL-11.2, see VOC parameter list below
PL-11.2	graphed	graphed	6	Only detected VOCs graphed (benzene, 11DCA, cis12DCE, MtBE, PCE, vinyl chloride) see full parameter list below.
*Land Treatment Unit				
UZ-1	x	graphed	x	No VOCs analyzed
UZ-2	x	graphed	x	
UZ-3	x	graphed	x	
UZ-4	x	graphed	x	
UZ-5	x	graphed	x	
UZ-6	x	graphed	x	
UZ-7	x	graphed	x	
UZ-8	x	graphed	x	
UZ-9	x	graphed	x	
UZ-10	x	graphed	x	
Surface Water				
SW-3	graphed	graphed	x	No VOCs detected, see VOC parameter list below
SW-4	graphed	graphed	x	No VOCs detected, see VOC parameter list below
SW-5	graphed	graphed	x	No VOCs detected, see VOC parameter list below
SW-7	graphed	graphed	x	No VOCs detected, see VOC parameter list below

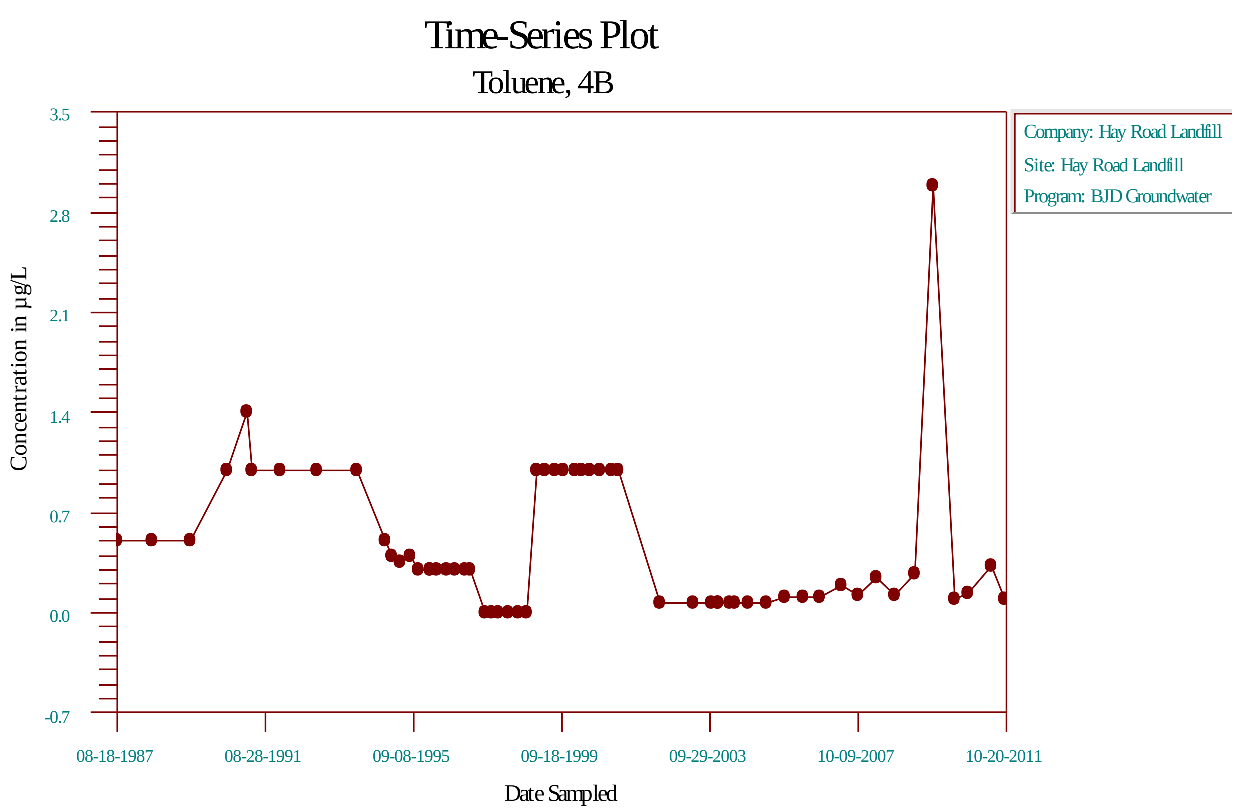
Historical Time-Concentration Graphs not included (marked with x) and reason graph not included

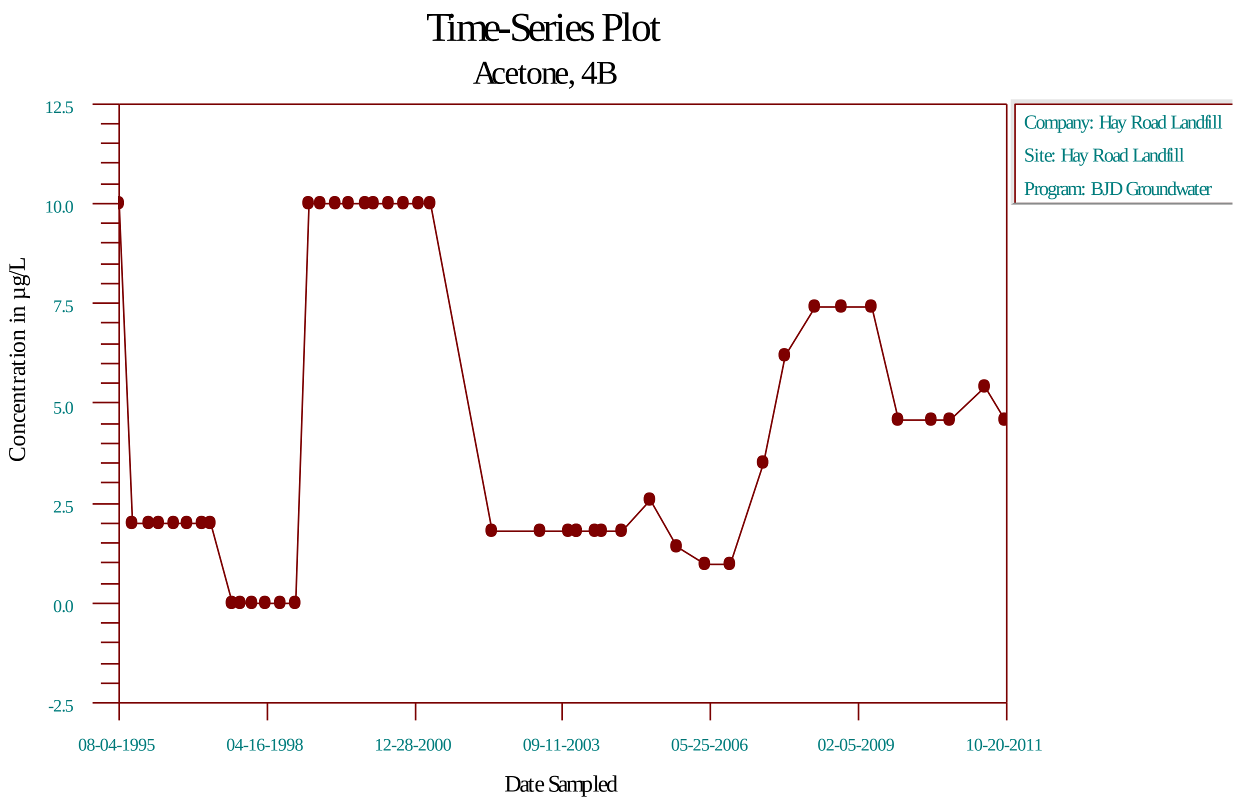
Monitoring Point	*Field Parameters*	*Inorganic Monitoring Parameters*	*VOCs*	Reason not graphed
Leachate				
S-1	graphed	graphed	36	Leachate graphs provided for the following detected VOCs, all other VOCs (see full VOC parameter list below) not detected and not graphed - 1,1-Dichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,4-Dichlorobenzene, 1,4-Dioxane, 2-Butanone (MEK), 2-Hexanone, 4-methyl-2-pentanone, Acetone, Benzene, Carbon disulfide, Chlorobenzene, Chloroethane, Chloroform, cis-1,2-Dichloroethene, Dichlorodifluoromethane, Di-isopropyl ether, Ethyl t-butyl ether, Ethanol, Ethylbenzene, Methyl tert-butyl ether, Naphthalene, n-Butylbenzene, n-Propylbenzene, Styrene, tert-Amyl methyl ether, tert-Butyl alcohol, Tetrachloroethene, Toluene, Trichloroethene, trans-1,2-Dichloroethene, Vinyl chloride, Xylenes (total) - note VOCs for sumps S-3.2 and 3.2 were not graphed due to only one or two monitoring events.
S-2.1	graphed	graphed	36	
S-2.2A	x	x	x	
S-2.2B	graphed	graphed	36	
S-3.1	graphed	graphed	36	
S-3.2	graphed	graphed	36	
S-3.3	graphed	graphed	36	
S-4.1	graphed	graphed	36	
S-5.1A	graphed	graphed	36	
S-5.1B	graphed	graphed	36	
S-5.2	graphed	graphed	36	
S-9.1A	graphed	graphed	36	
S-9.1B	graphed	graphed	36	
S-11.1	graphed	graphed	36	
S-11.2	graphed	graphed	36	
LW-1	graphed	graphed	36	
LW-2	x	x	x	
LW-3	graphed	graphed	36	

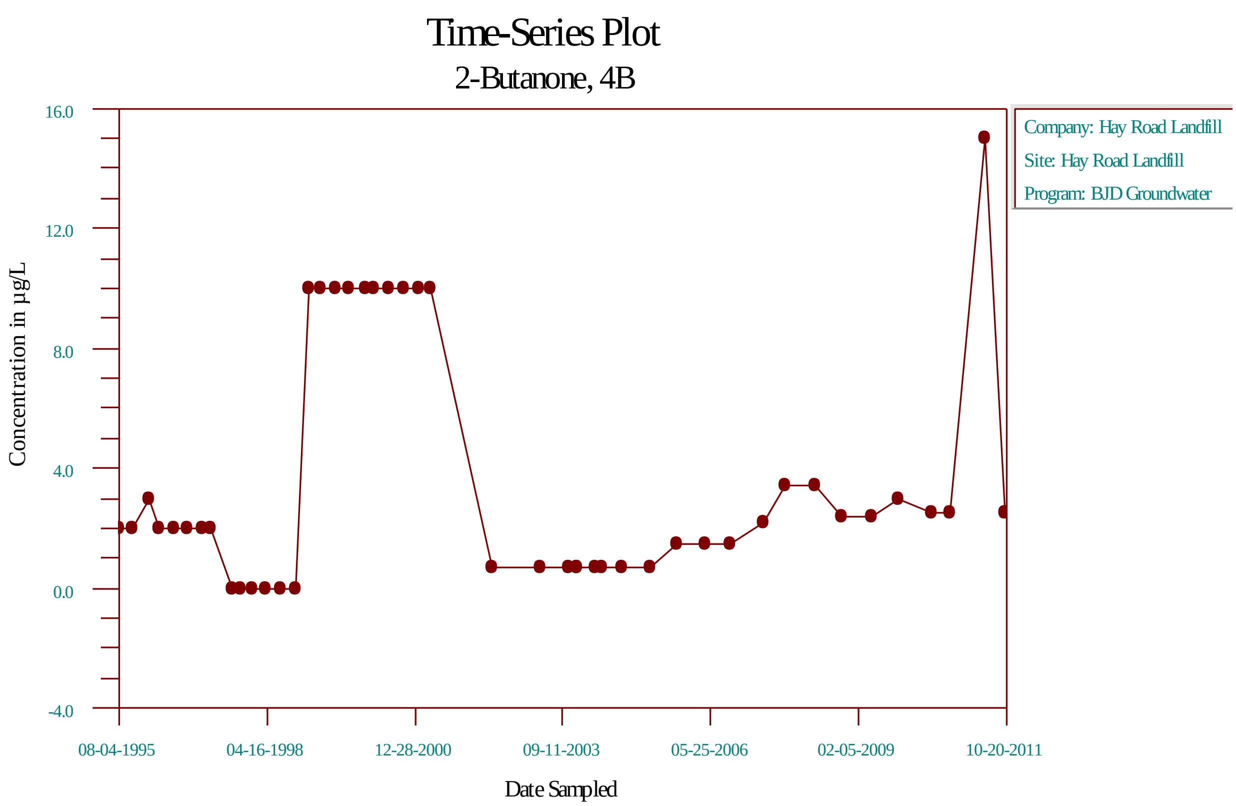
* No field parameters monitored in LTU samples

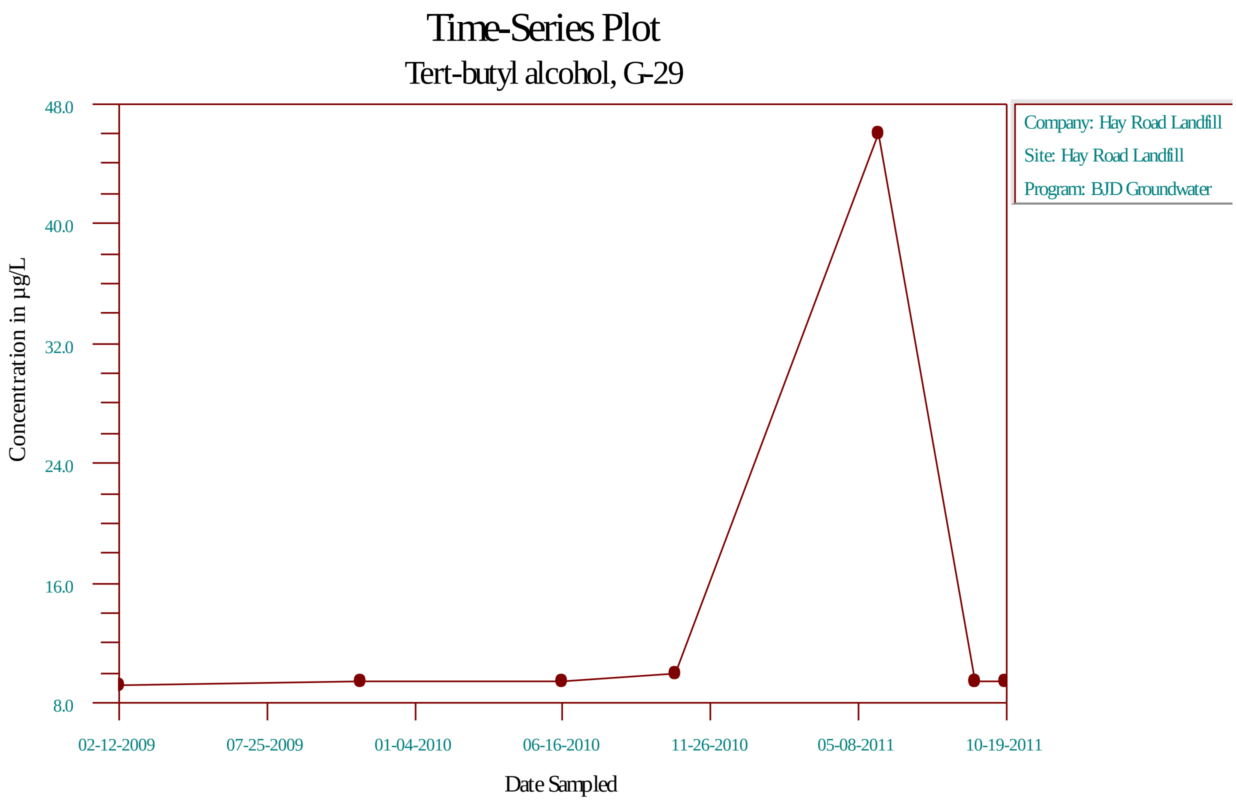
VOC parameter list -1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane (EDB), 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,4-Dioxane, 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, Acrylonitrile, Benzene, Bromobenzene, Bromochloromethane, Bromodichloromethane, Bromoform, Bromomethane, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Dibromochloromethane, Dibromomethane, Dichlorodifluoromethane, Diisopropyl ether, Ethanol, Ethyl Tert-Butyl Ether, Ethylbenzene, Hexachlorobutadiene, Iodomethane, Methyl Tert-Butyl Ether, Methylene chloride, Naphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, Styrene, tert-amyl methyl ether, tert-butyl alcohol, tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, trans-1,4-Dichloro-2-butene, Trichloroethene, Trichlorofluoromethane, Vinyl acetate, Vinyl chloride, Xylenes (Total),


Time-Series Plot
Vinyl chloride, 4B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in µg/L
1.25
1.0
0.75
0.5
0.25
0.0
-0.25
08-04-1995
04-16-1998
12-28-2000
09-11-2003
05-25-2006
02-05-2009
10-20-2011
Date Sampled

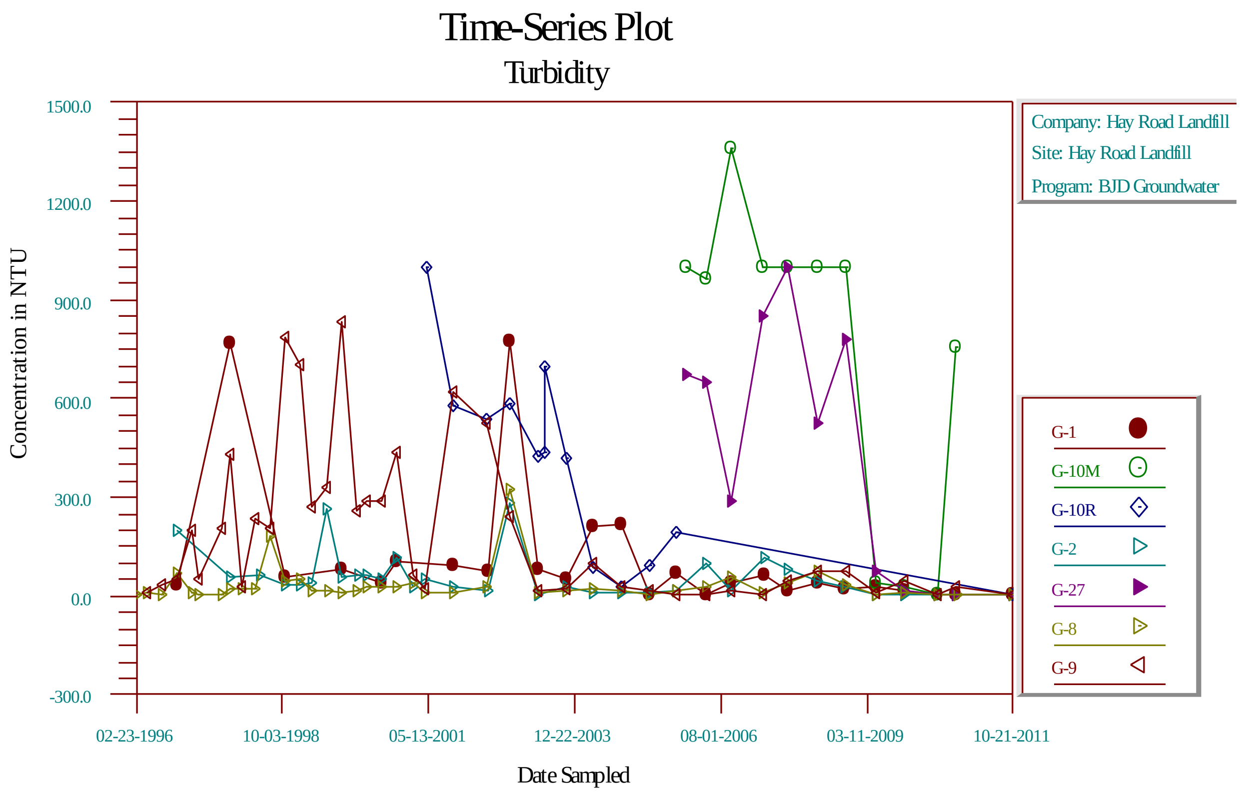

Time-Series Plot
Toluene, 4B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in µg/L
3.5
2.8
2.1
1.4
0.7
0.0
-0.7
08-18-1987
08-28-1991
09-08-1995
09-18-1999
09-29-2003
10-09-2007
10-20-2011
Date Sampled


Time-Series Plot
Acetone, 4B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in µg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
08-04-1995
04-16-1998
12-28-2000
09-11-2003
05-25-2006
02-05-2009
10-20-2011
Date Sampled

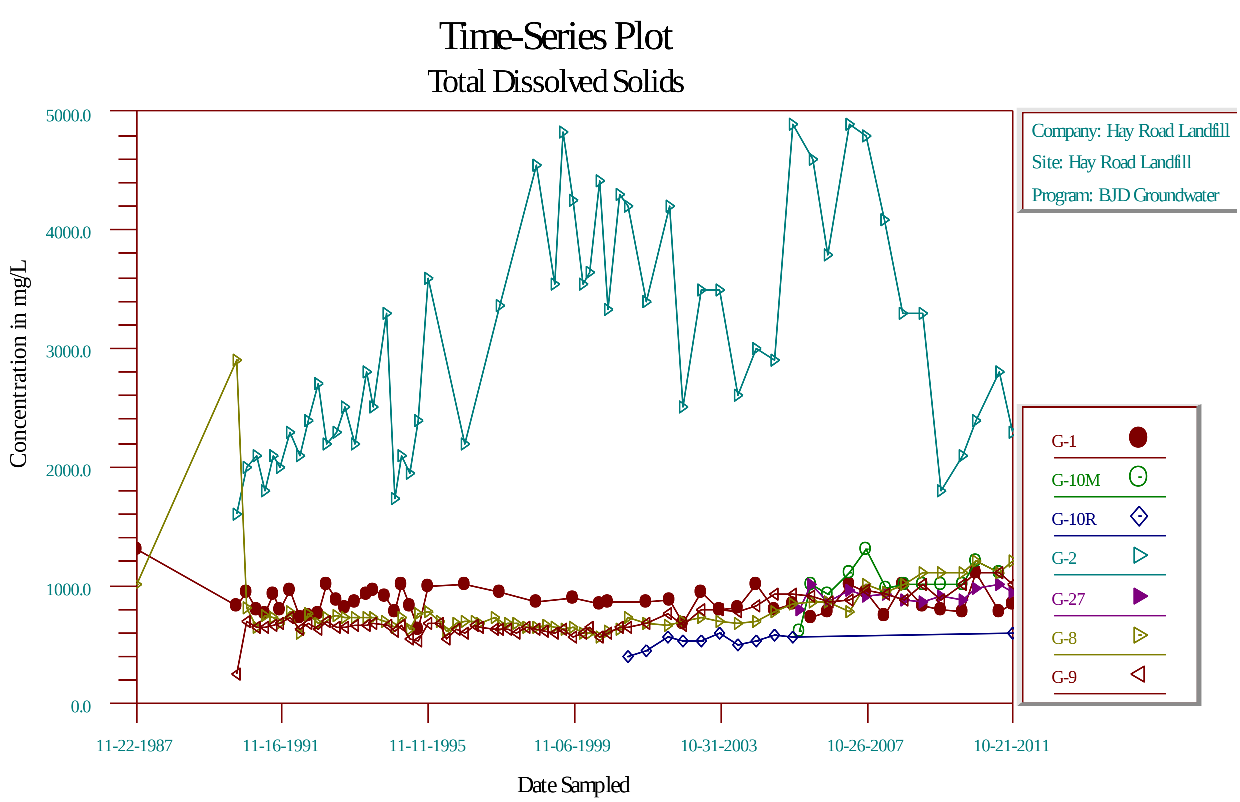

Time-Series Plot
2-Butanone, 4B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in µg/L
16.0
12.0
8.0
4.0
0.0
-4.0
08-04-1995
04-16-1998
12-28-2000
09-11-2003
05-25-2006
02-05-2009
10-20-2011
Date Sampled


Time-Series Plot
Tert-butyl alcohol, G-29
Concentration in µg/L
48.0
40.0
32.0
24.0
16.0
8.0
02-12-2009
07-25-2009
01-04-2010
06-16-2010
11-26-2010
05-08-2011
10-19-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater

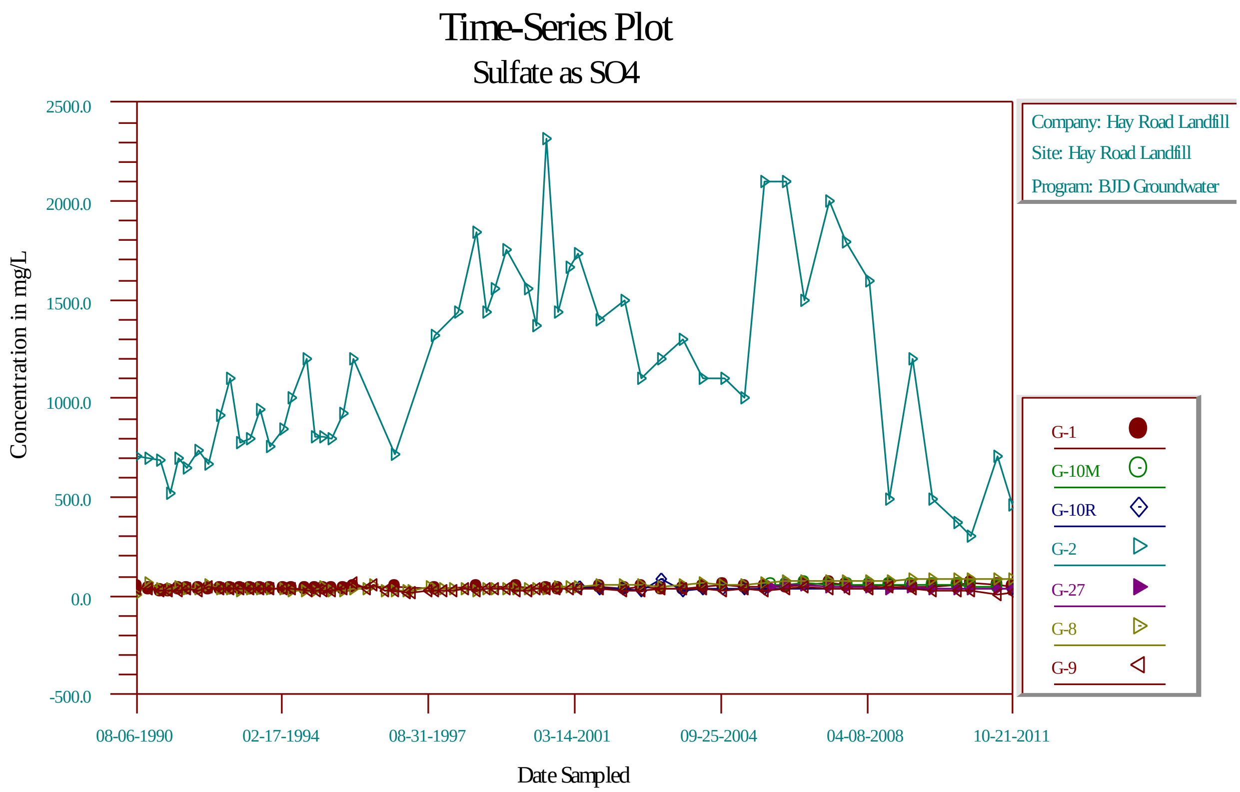

Time-Series Plot
Trichloroethene, G-30
Concentration in µg/L
0.24
0.2
0.16
0.12
0.08
05-12-2009
10-07-2009
03-04-2010
07-31-2010
12-26-2010
05-23-2011
10-19-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater

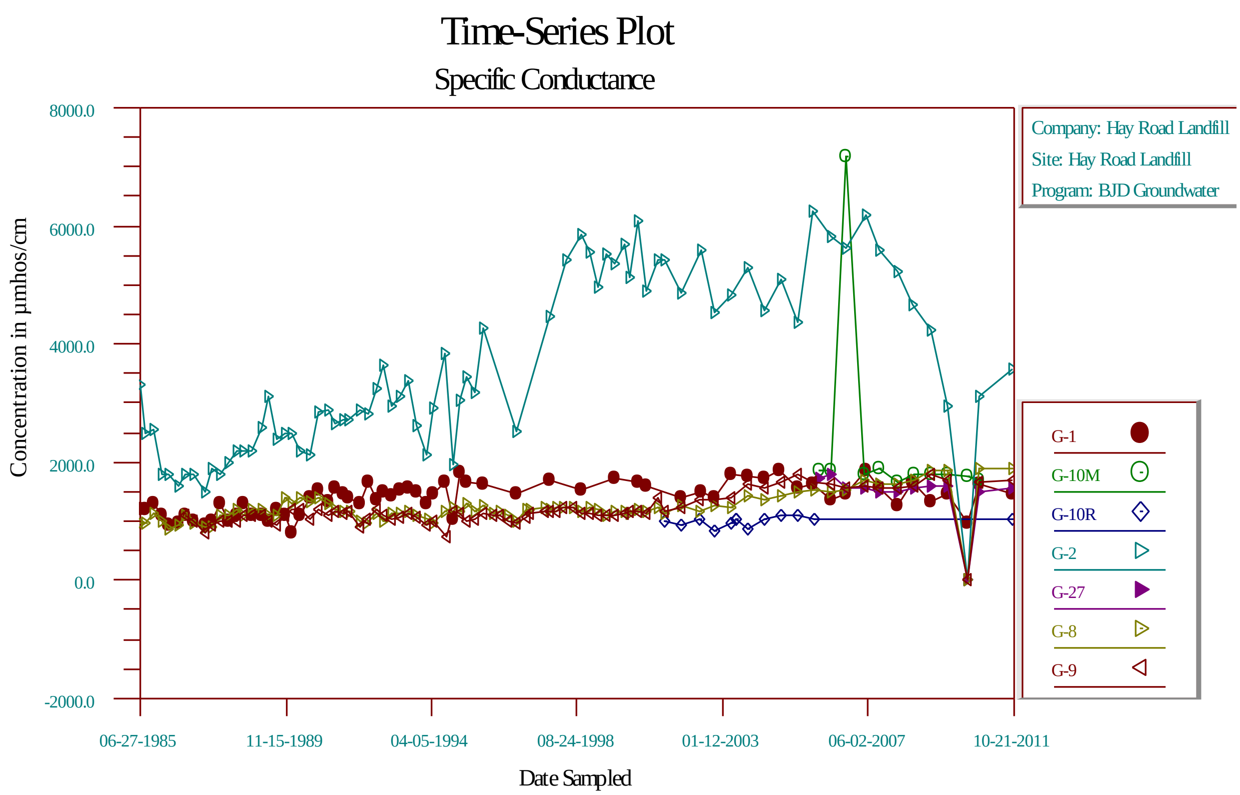


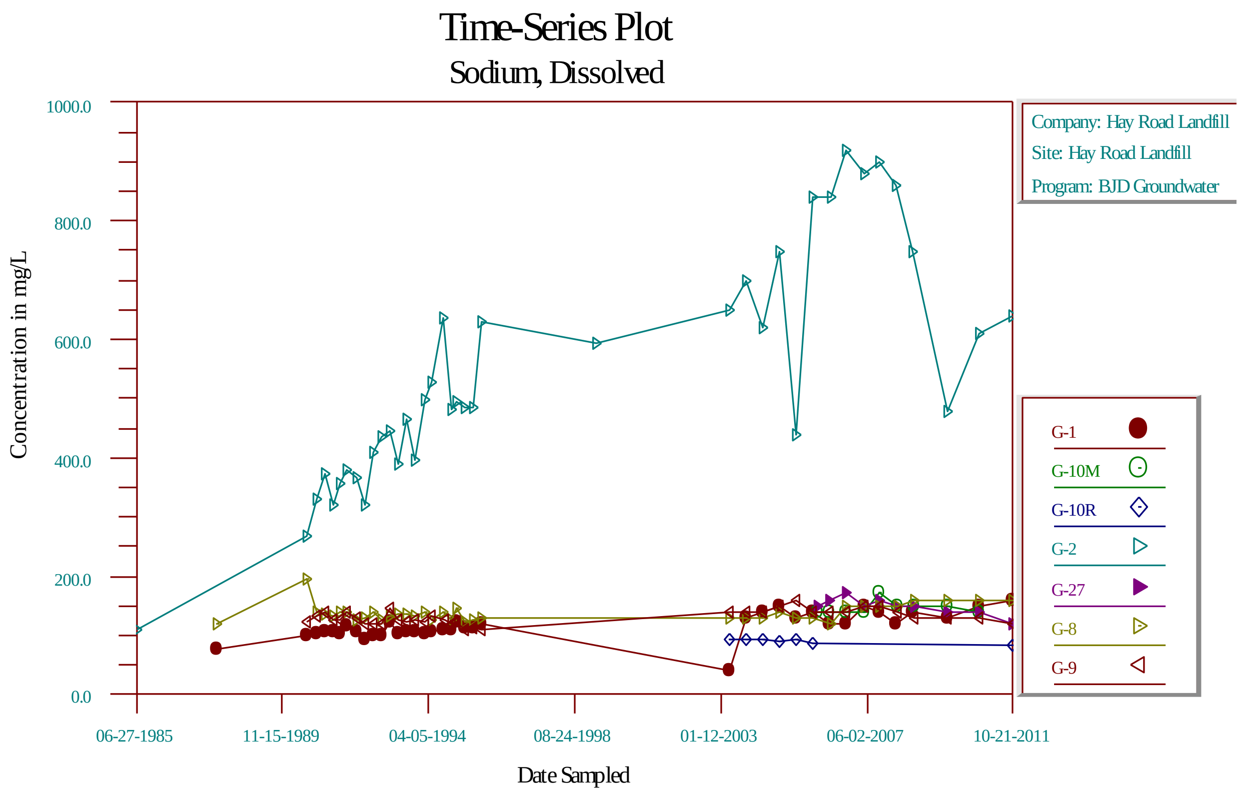
Time-Series Plot
Turbidity
Concentration in NTU
1500.0
1200.0
900.0
600.0
300.0
0.0
-300.0
02-23-1996
10-03-1998
05-13-2001
12-22-2003
08-01-2006
03-11-2009
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

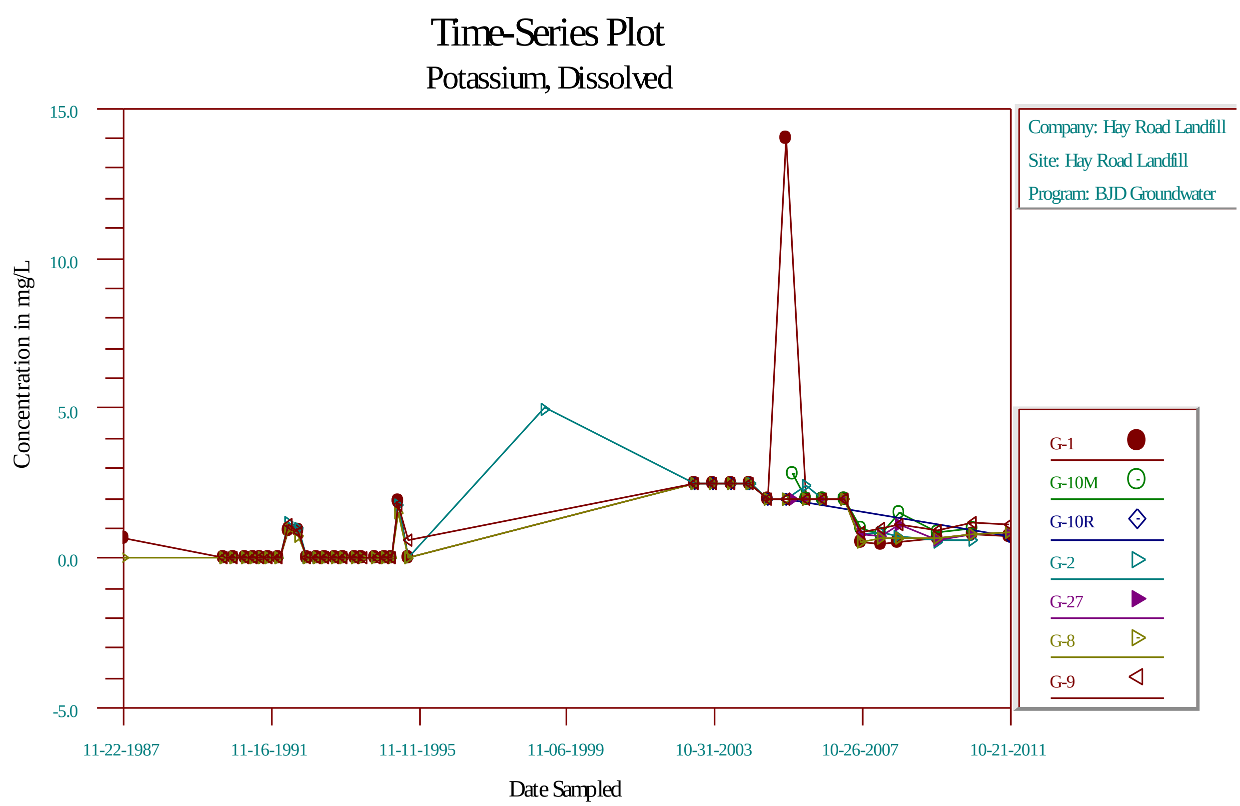


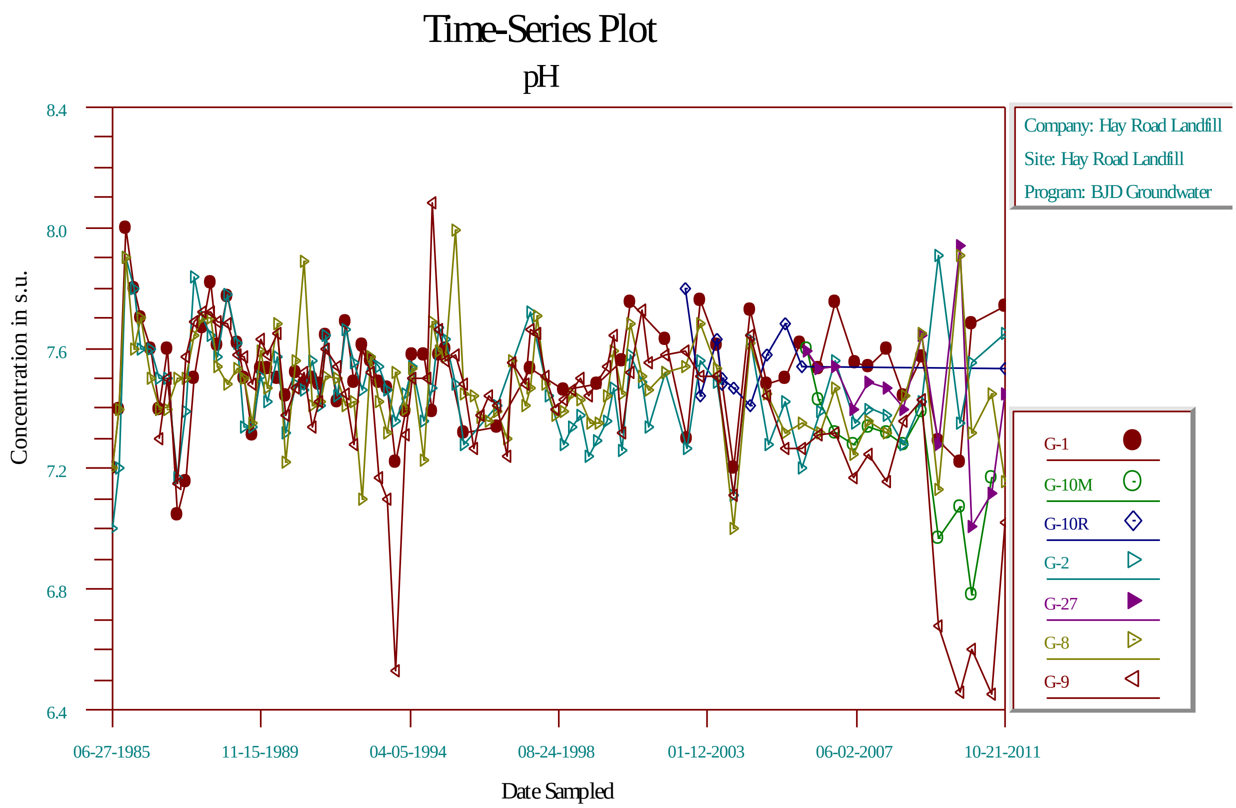
Time-Series Plot
Total Dissolved Solids
Concentration in mg/L
5000.0
4000.0
3000.0
2000.0
1000.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Sulfate as SO4
2500.0
2000.0
1500.0
1000.0
500.0
0.0
-500.0
Concentration in mg/L
08-06-1990
02-17-1994
08-31-1997
03-14-2001
09-25-2004
04-08-2008
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

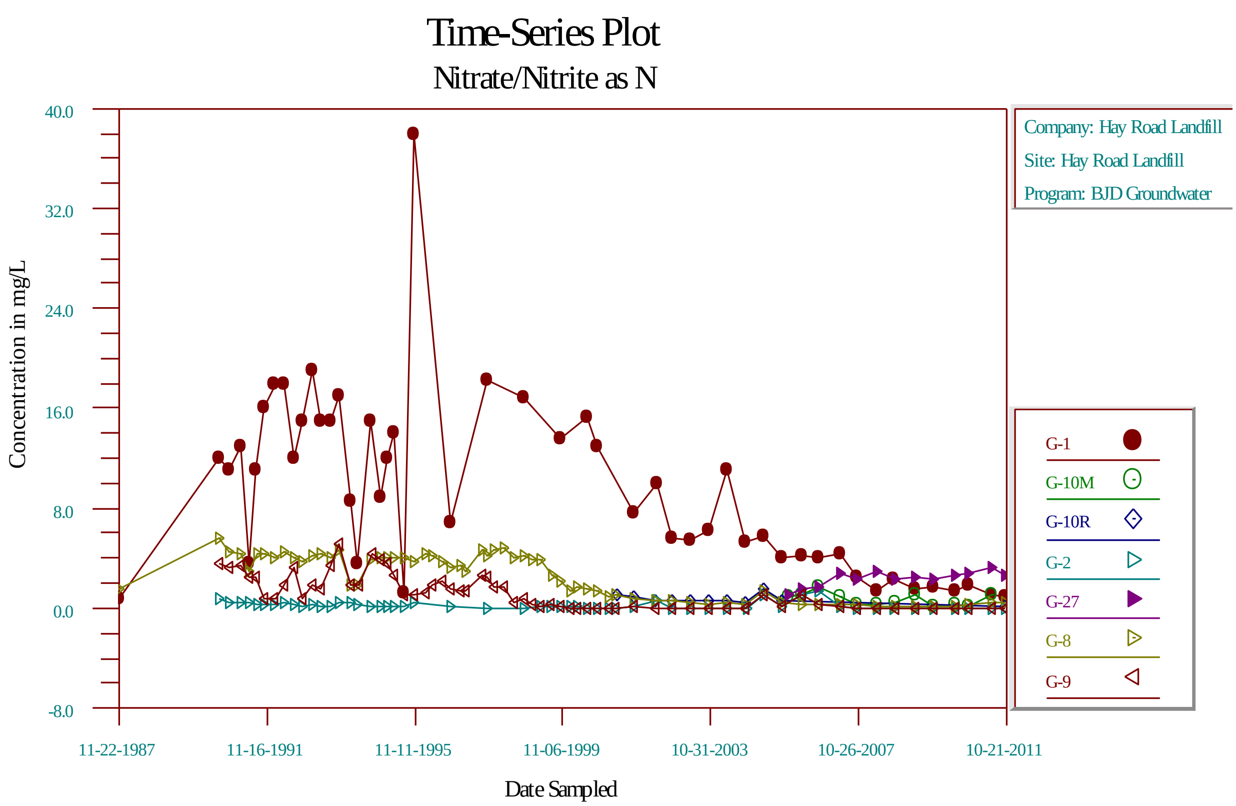

Time-Series Plot
Specific Conductance
8000.0
6000.0
4000.0
2000.0
0.0
-2000.0
Concentration in µmhos/cm
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
1000.0
800.0
600.0
400.0
200.0
0.0
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

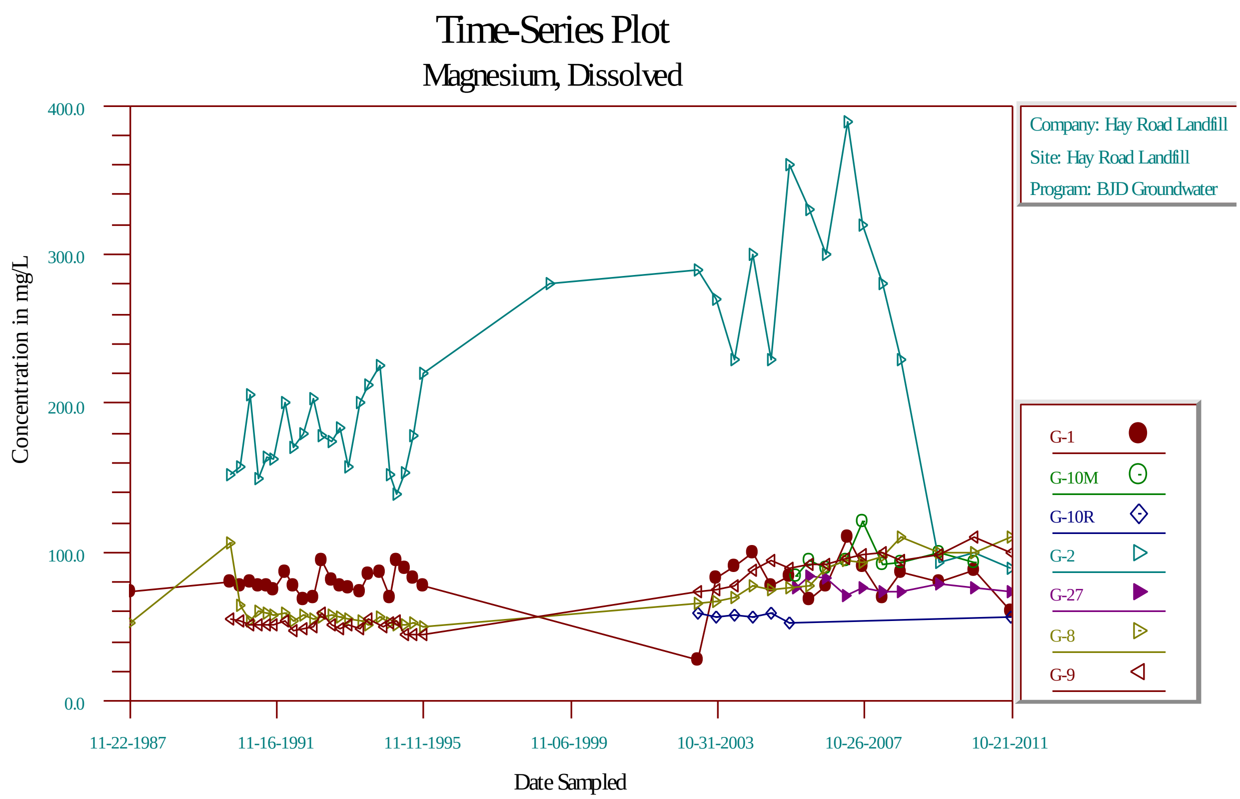

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
15.0
10.0
5.0
0.0
-5.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9



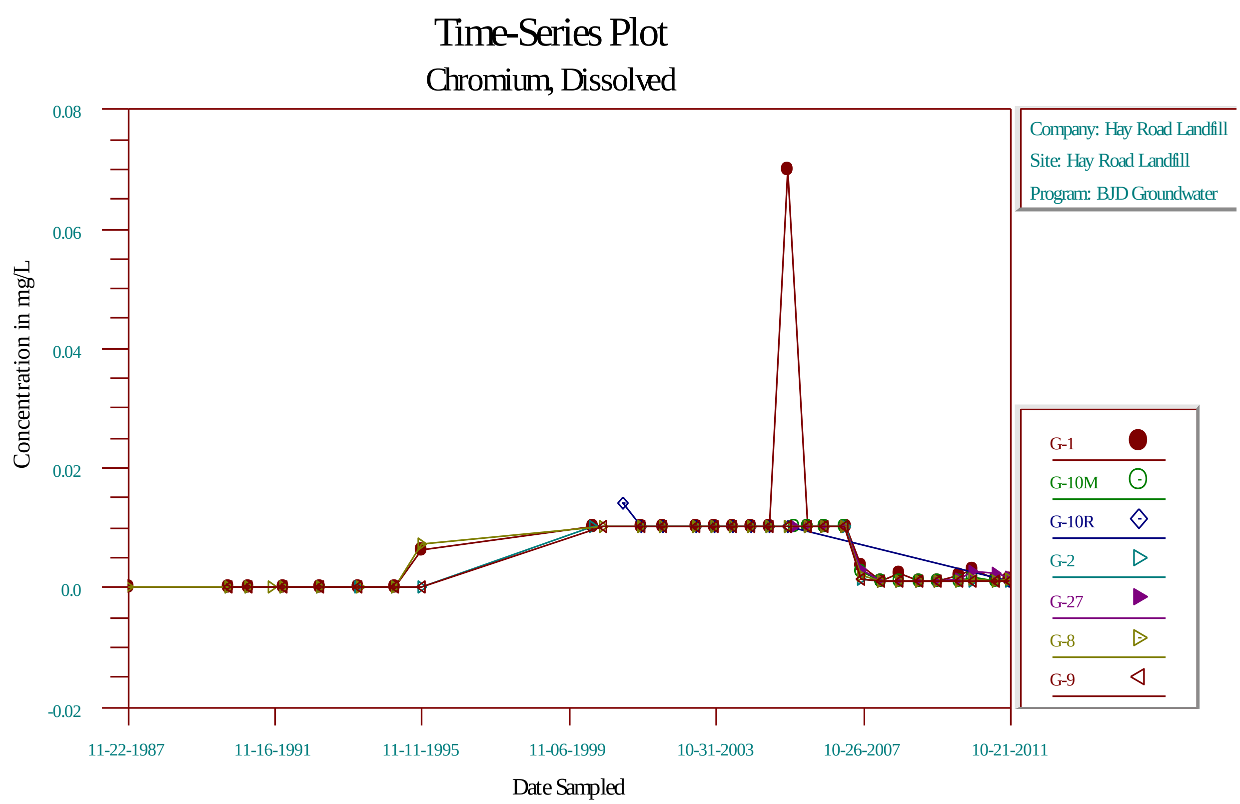
Time-Series Plot
pH
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in s.u.
8.4
8.0
7.6
7.2
6.8
6.4
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9



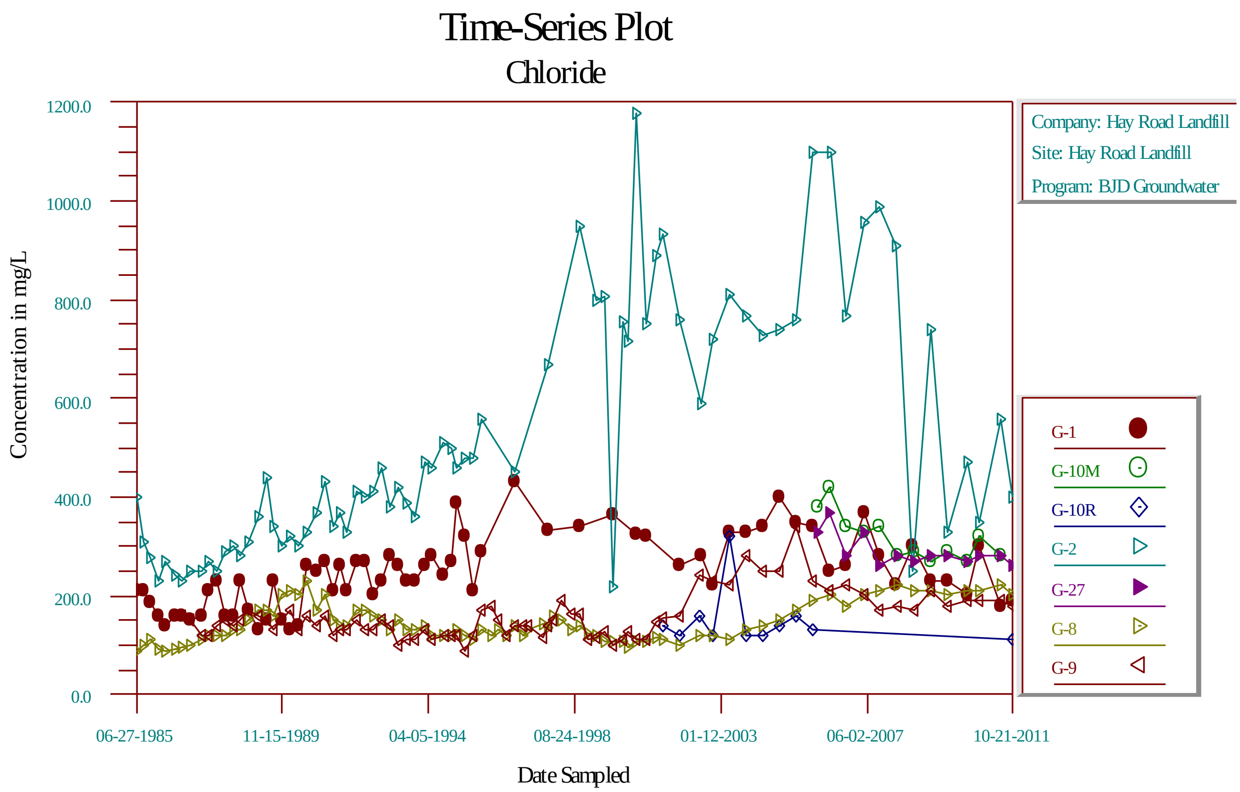
Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
40.0
32.0
24.0
16.0
8.0
0.0
-8.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

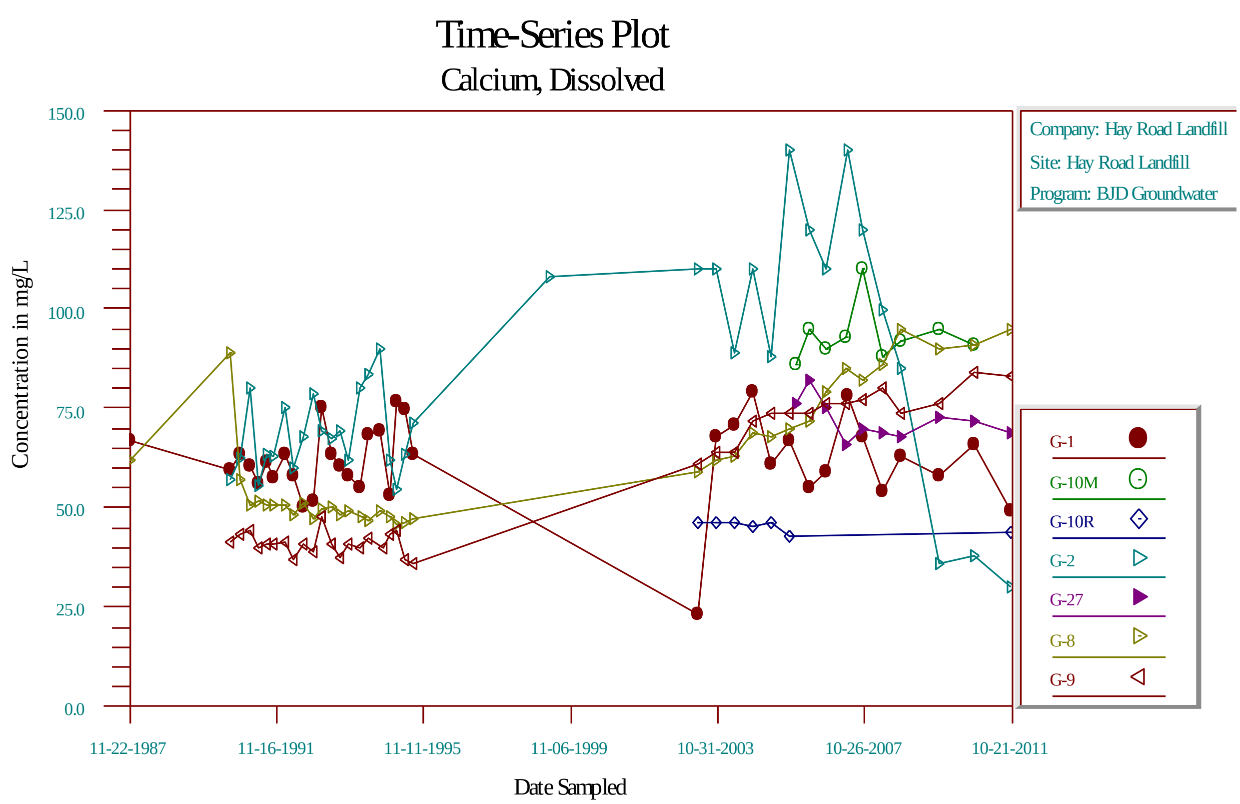


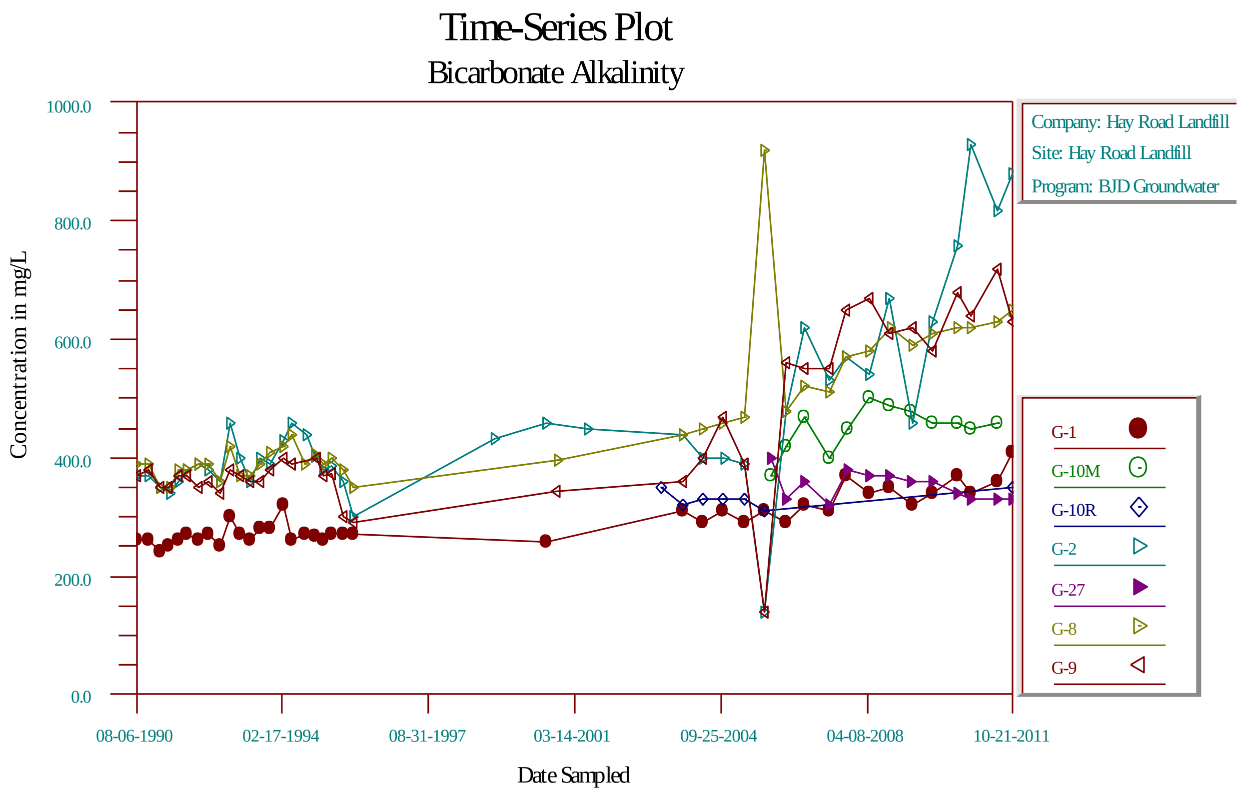
Time-Series Plot
Magnesium, Dissolved
Concentration in mg/L
400.0
300.0
200.0
100.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

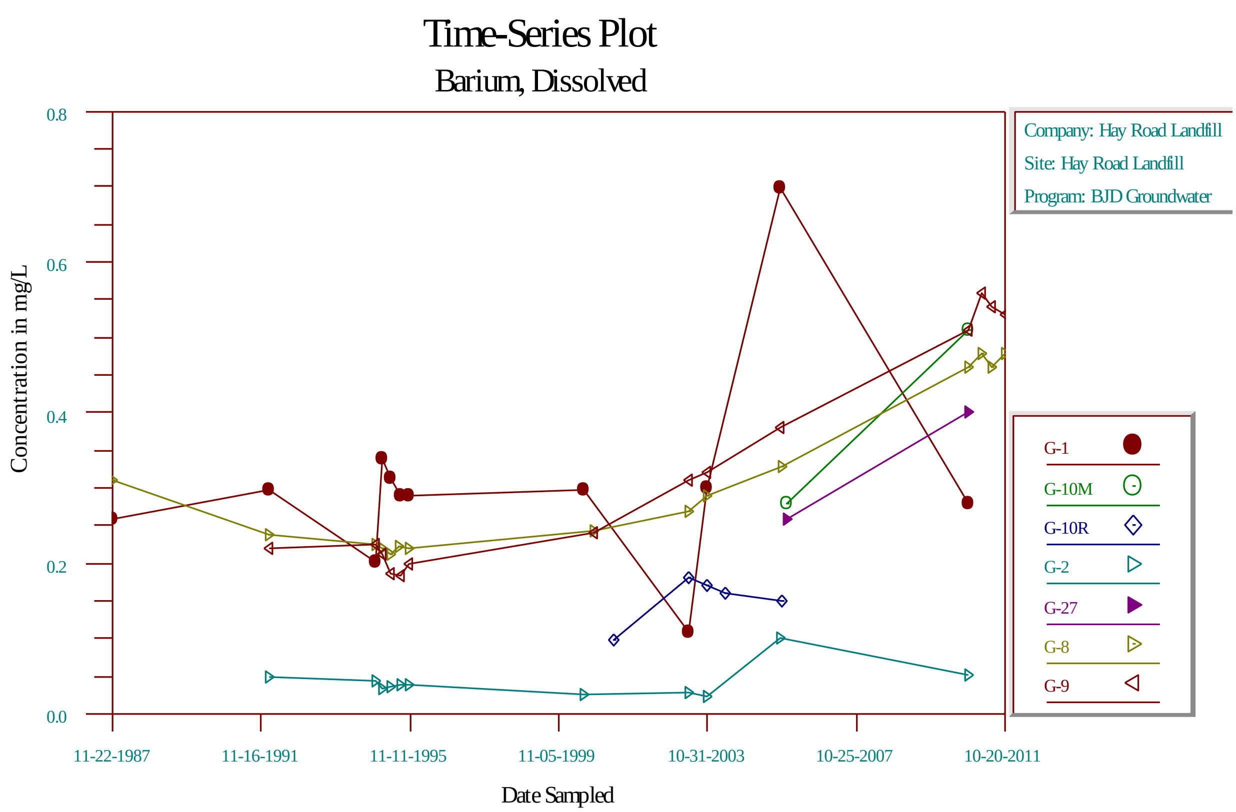


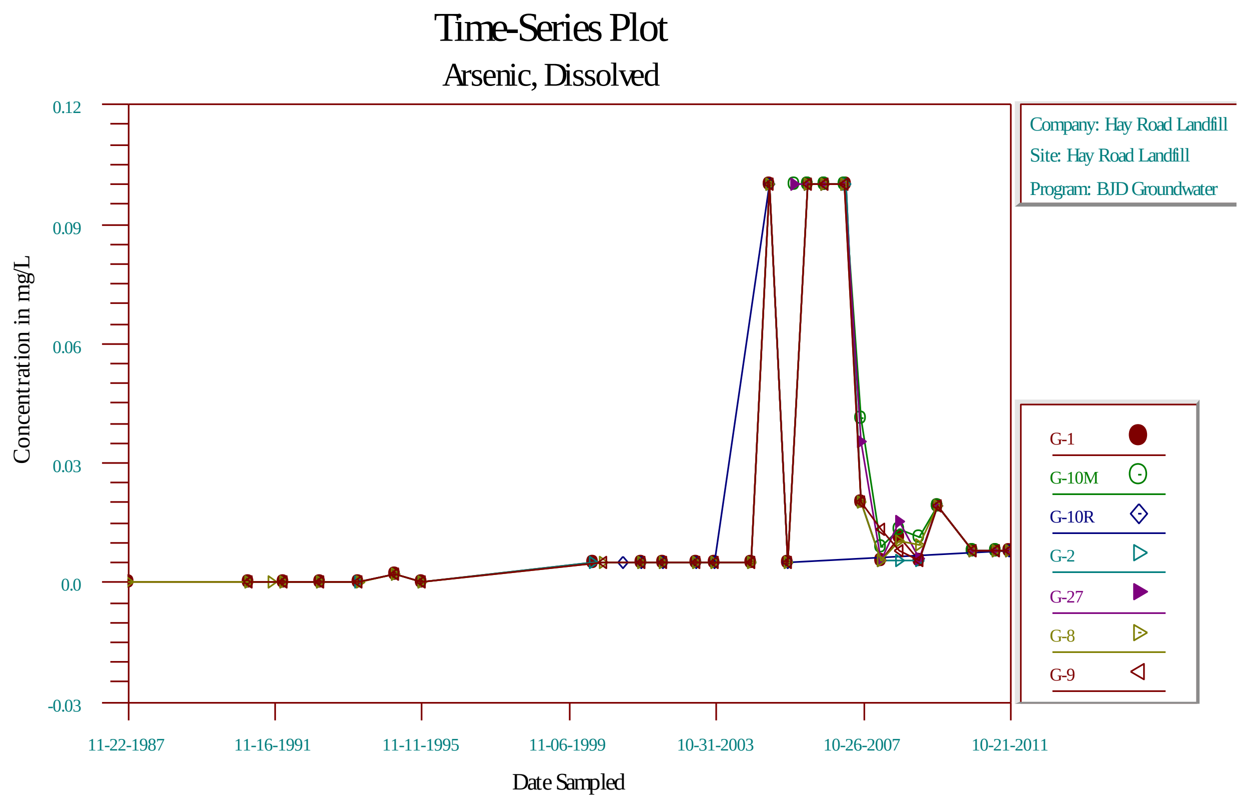
Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
0.08
0.06
0.04
0.02
0.0
-0.02
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

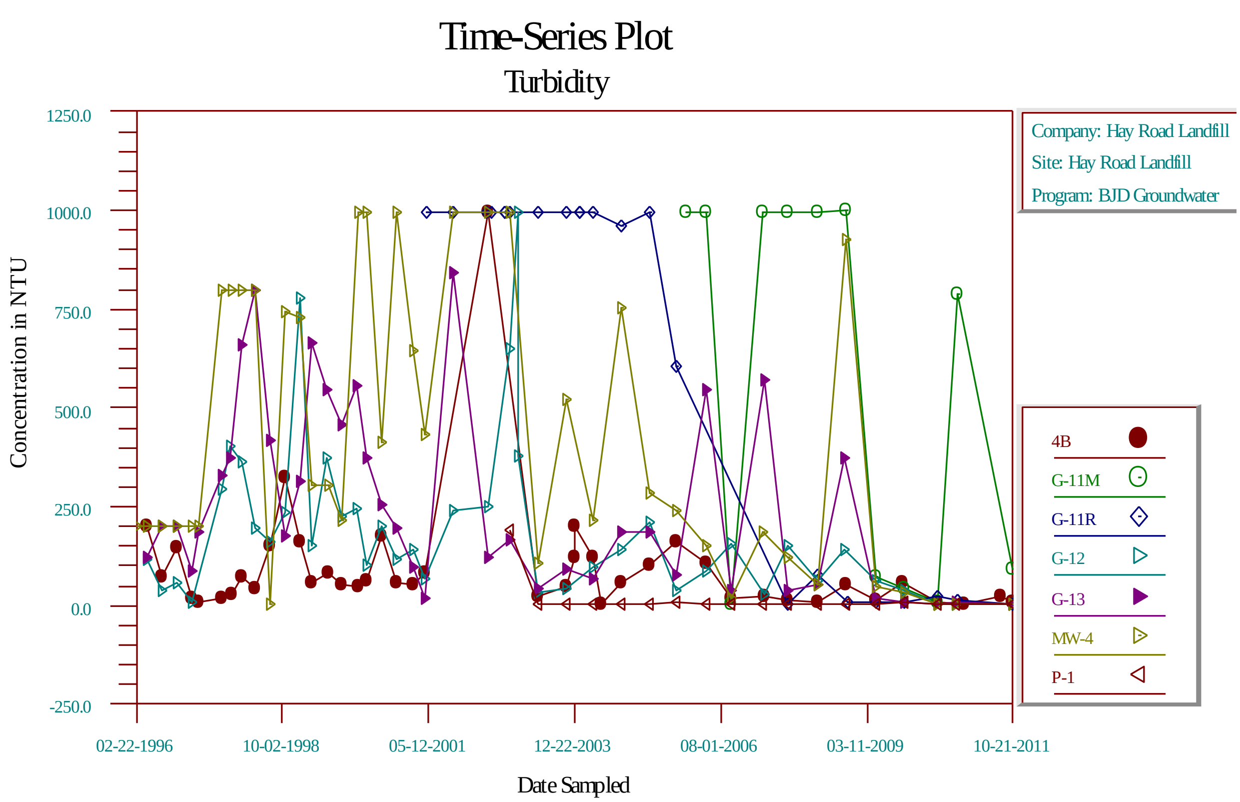

Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Calcium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
150.0
125.0
100.0
75.0
50.0
25.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Bicarbonate Alkalinity
Concentration in mg/L
1000.0
800.0
600.0
400.0
200.0
0.0
08-06-1990
02-17-1994
08-31-1997
03-14-2001
09-25-2004
04-08-2008
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9

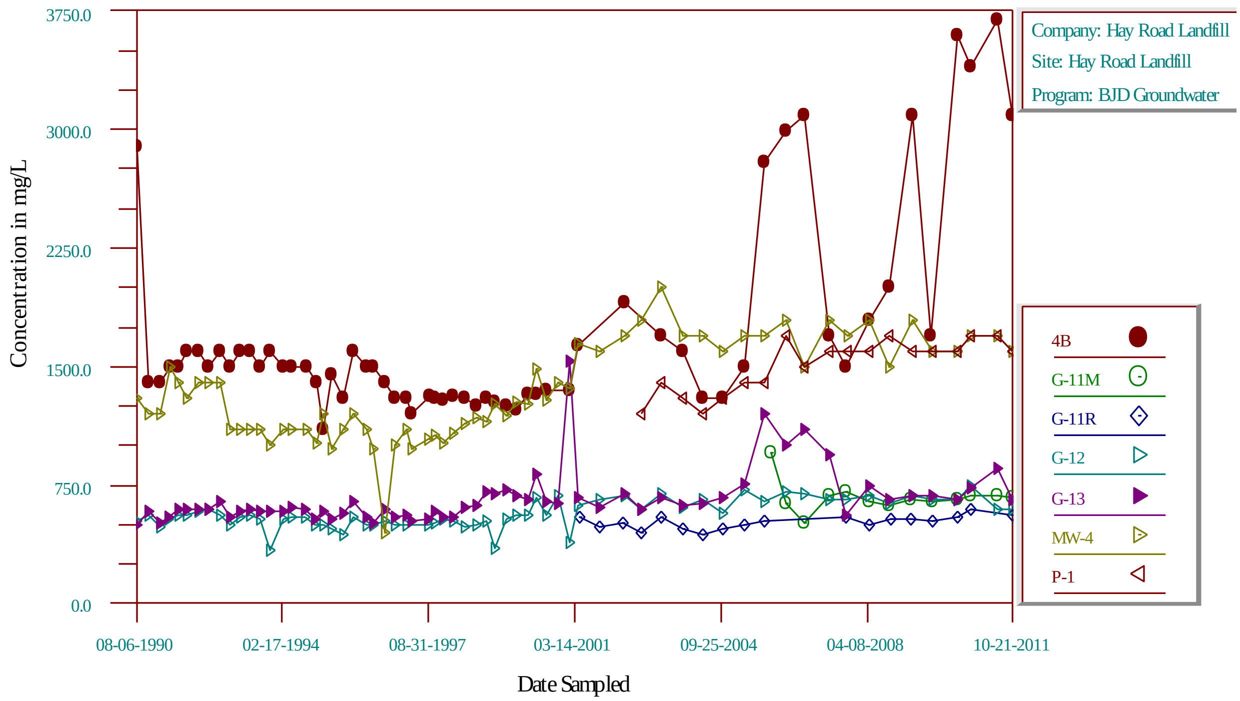

Time-Series Plot
Barium, Dissolved
Concentration in mg/L
0.8
0.6
0.4
0.2
0.0
11-22-1987
11-16-1991
11-11-1995
11-05-1999
10-31-2003
10-25-2007
10-20-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Arsenic, Dissolved
Concentration in mg/L
0.12
0.09
0.06
0.03
0.0
-0.03
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-1
G-10M
G-10R
G-2
G-27
G-8
G-9


Time-Series Plot
Turbidity
Concentration in NTU
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
02-22-1996
10-02-1998
05-12-2001
12-22-2003
08-01-2006
03-11-2009
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

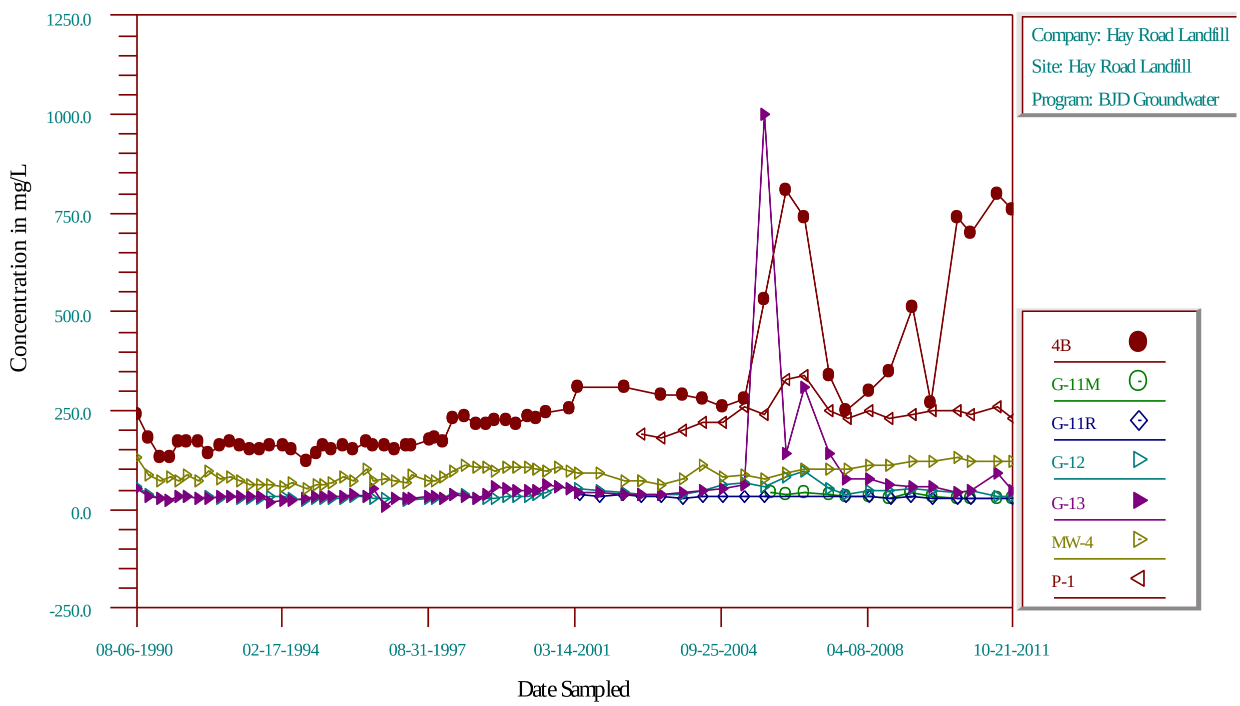
Time-Series Plot

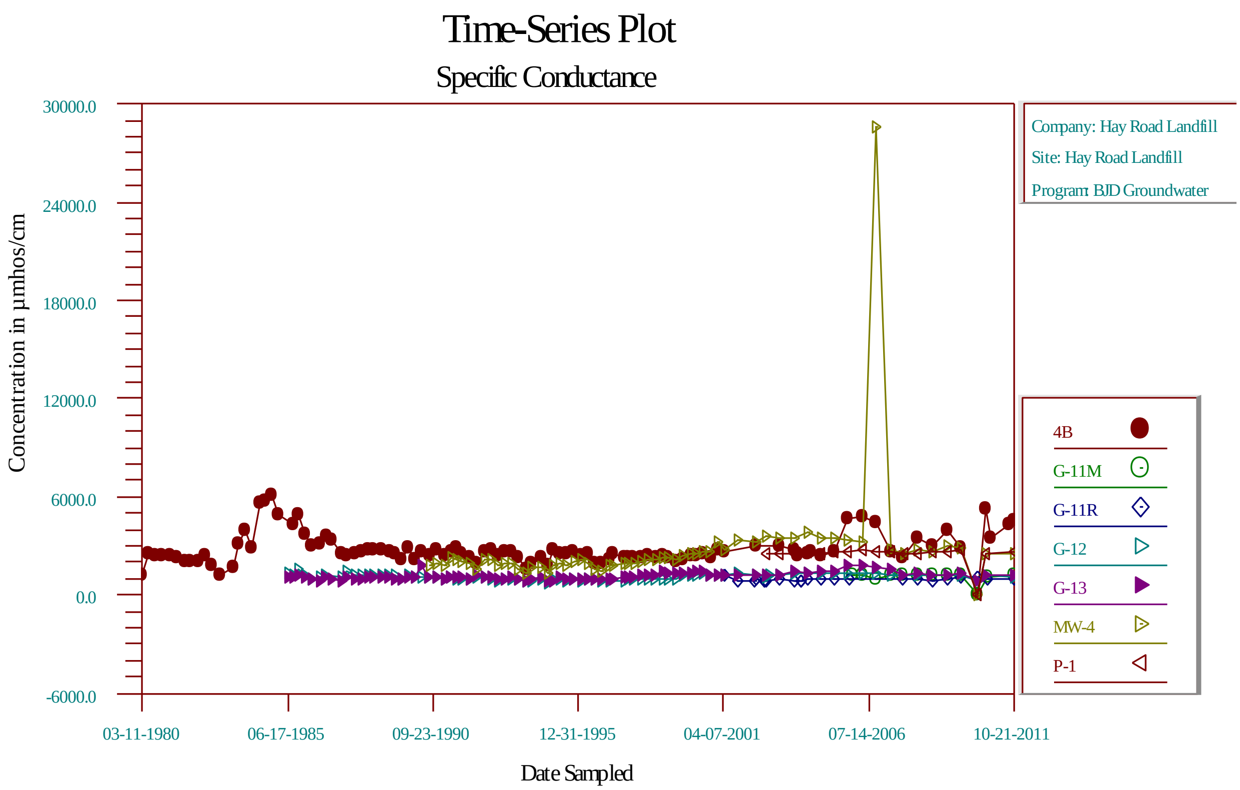
Total Dissolved Solids

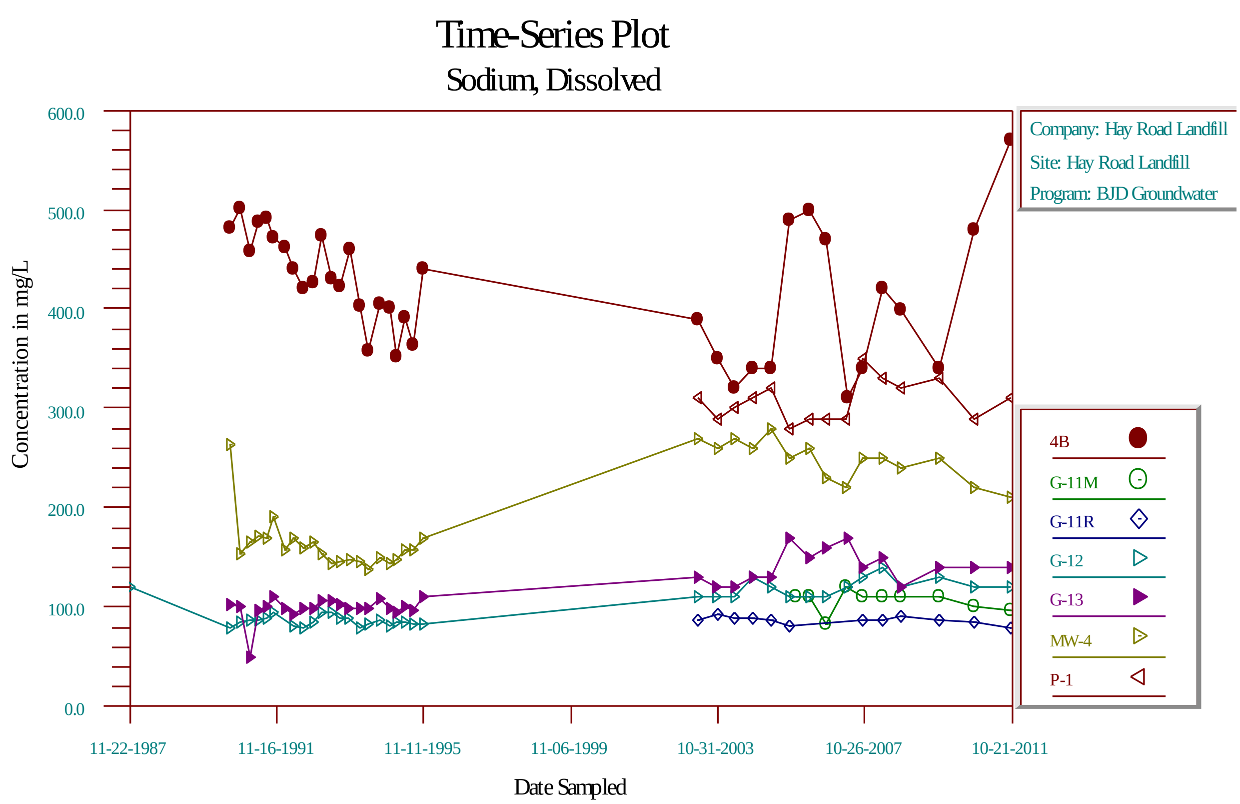


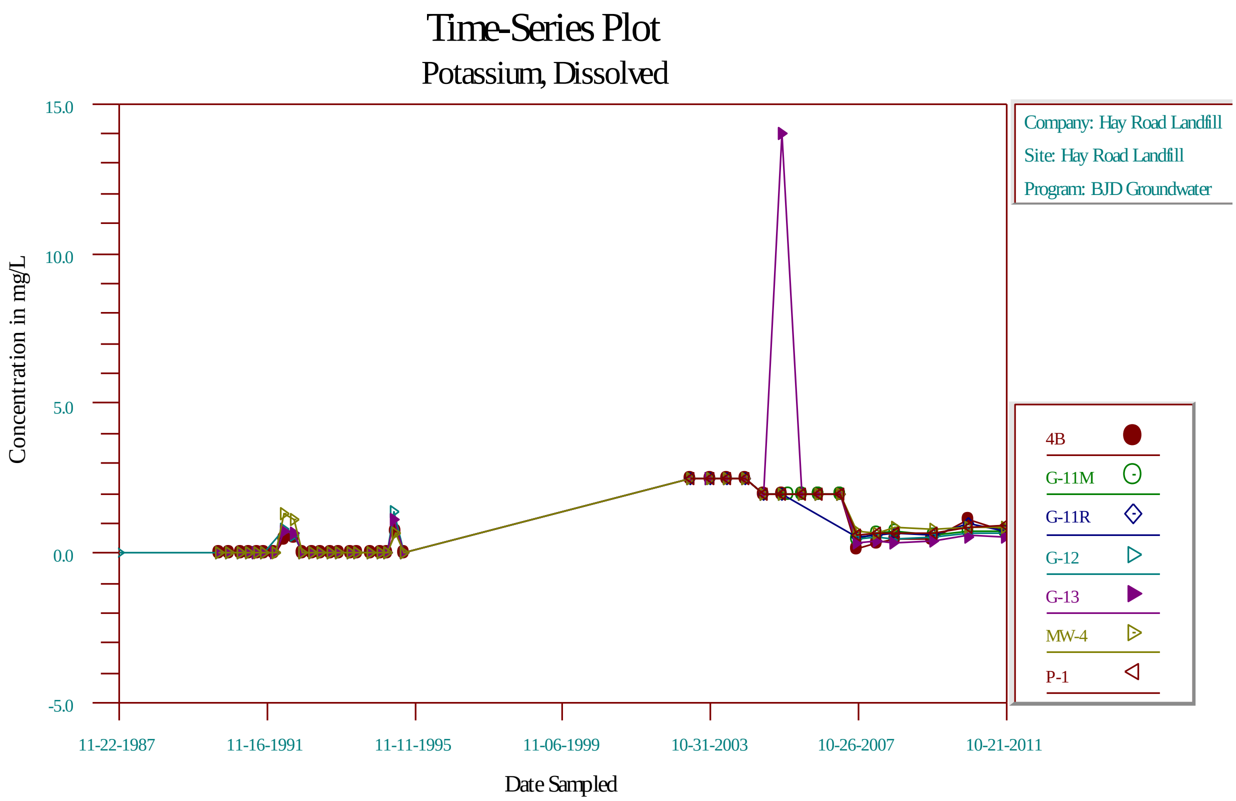
Time-Series Plot

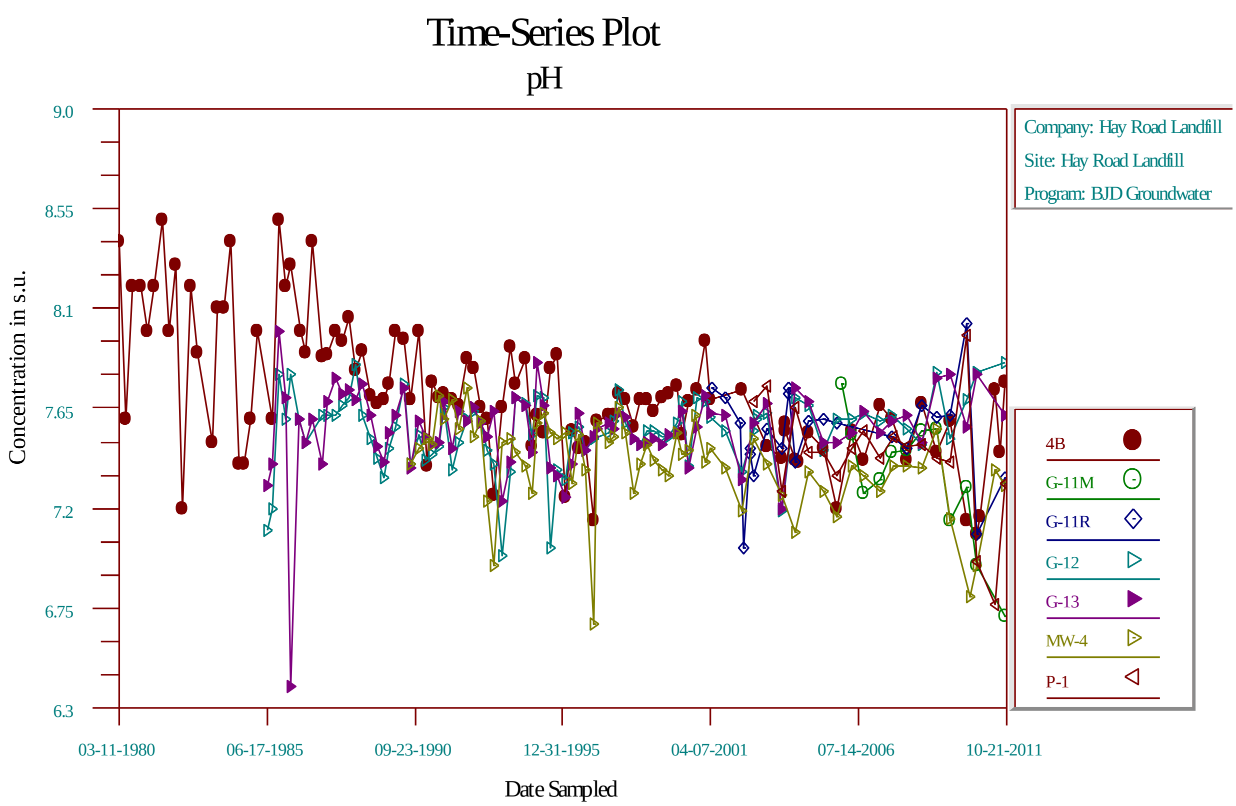
Sulfate as SO4

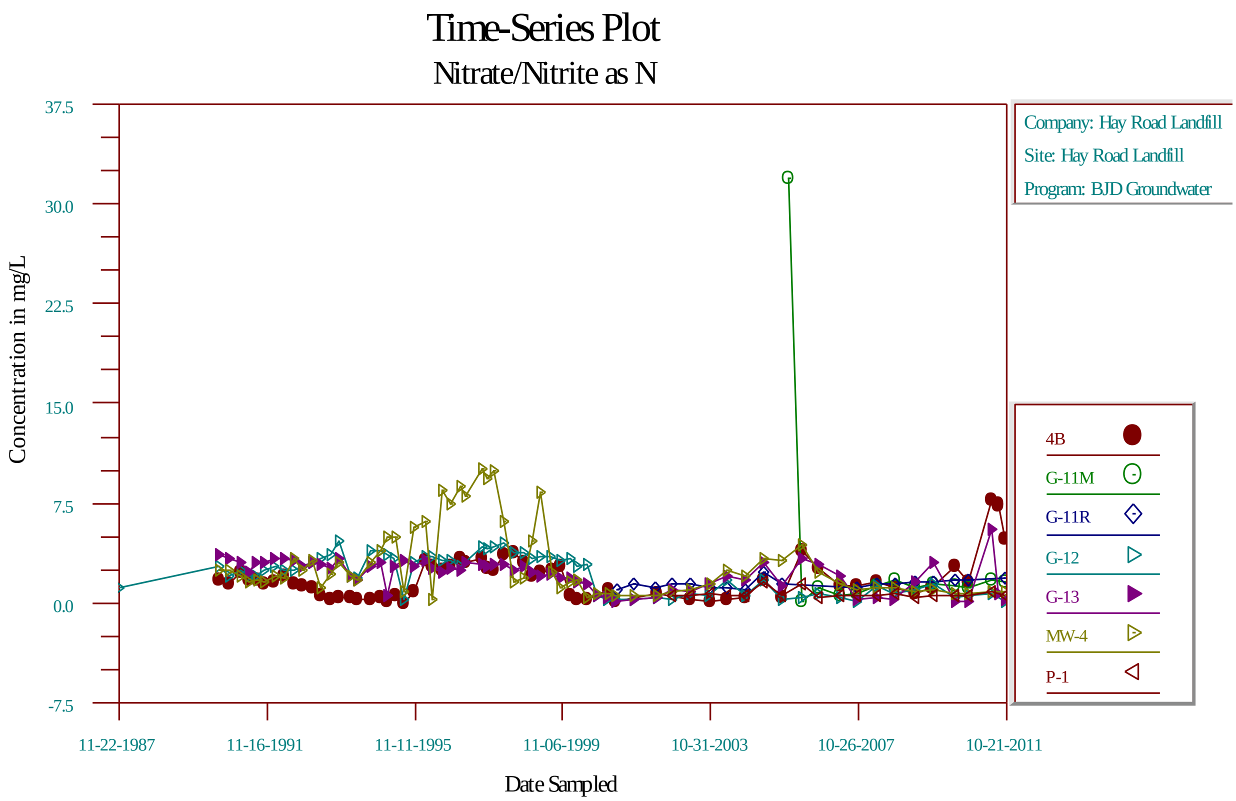



Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
30000.0
24000.0
18000.0
12000.0
6000.0
0.0
-6000.0
03-11-1980
06-17-1985
09-23-1990
12-31-1995
04-07-2001
07-14-2006
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

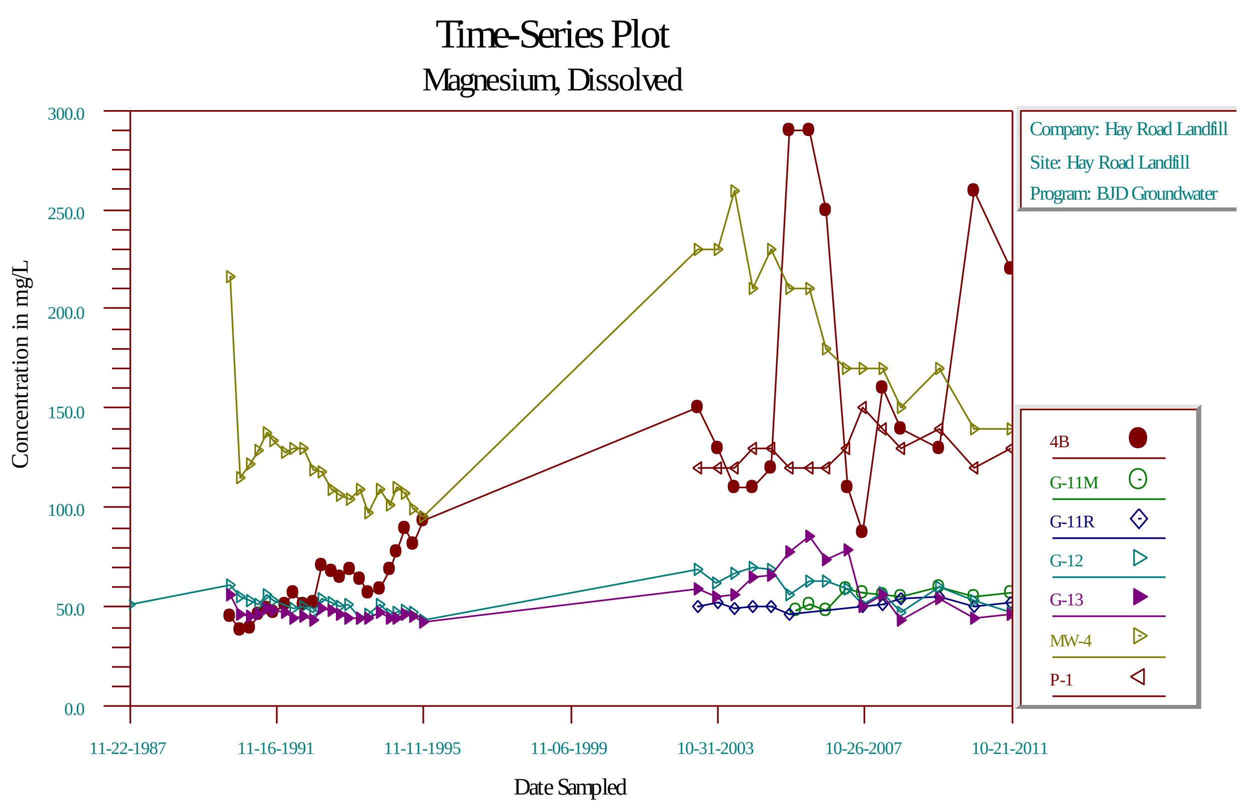

Time-Series Plot
Sodium, Dissolved
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1


Time-Series Plot
Potassium, Dissolved
15.0
10.0
5.0
0.0
-5.0
Concentration in mg/L
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

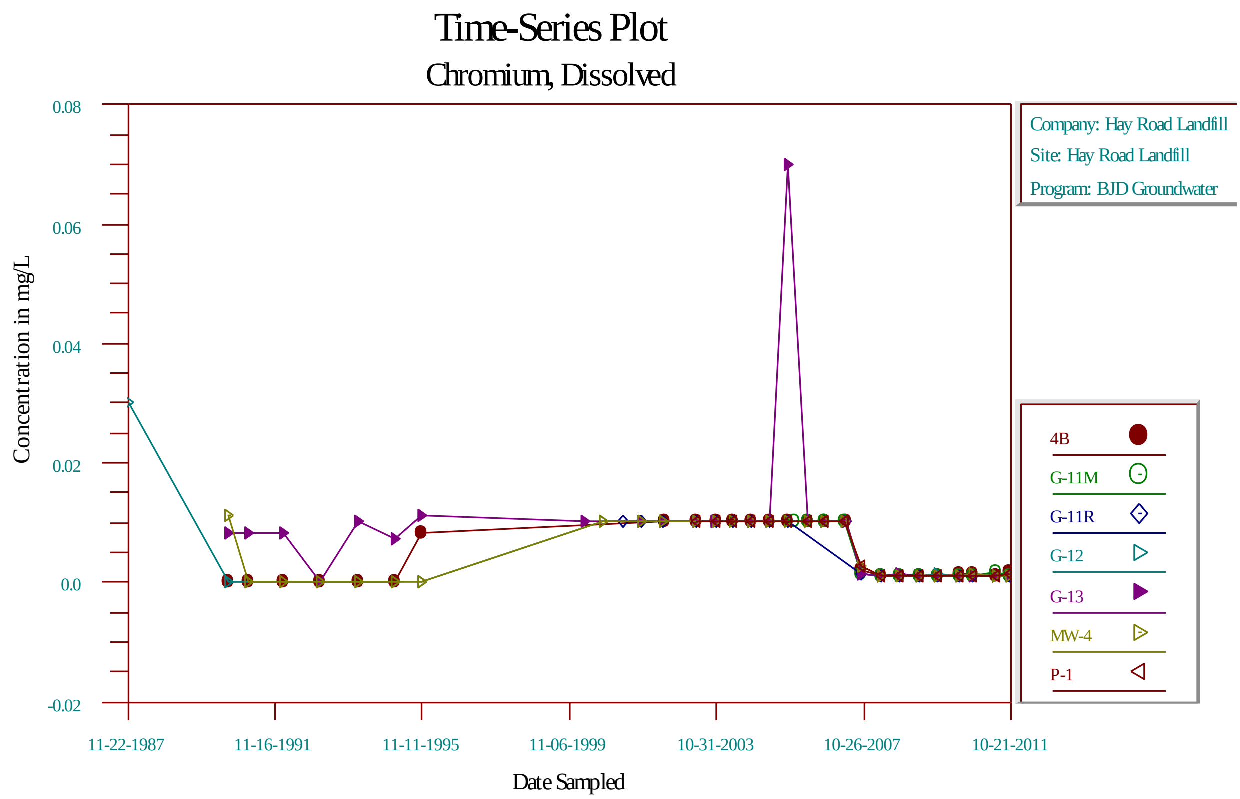

Time-Series Plot
pH
9.0
8.55
8.1
7.65
7.2
6.75
6.3
Concentration in s.u.
03-11-1980
06-17-1985
09-23-1990
12-31-1995
04-07-2001
07-14-2006
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1



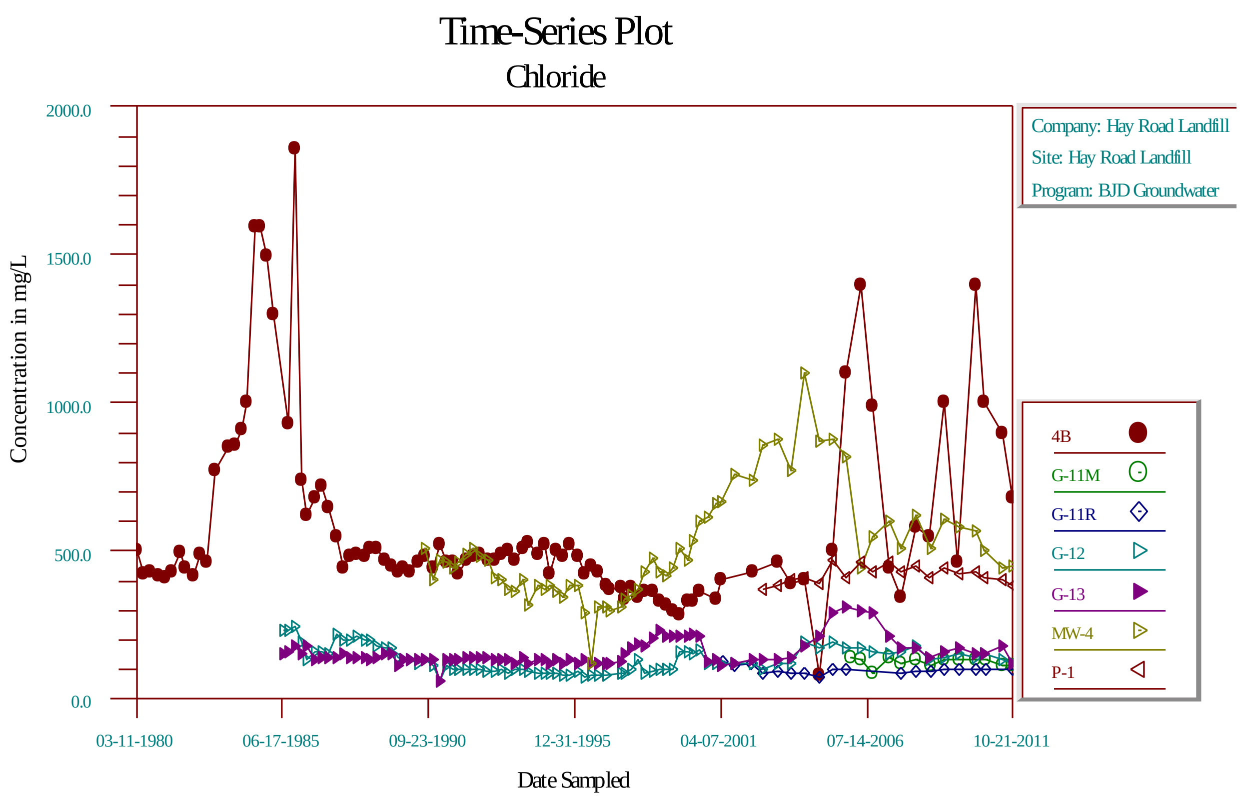
Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
37.5
30.0
22.5
15.0
7.5
0.0
-7.5
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1



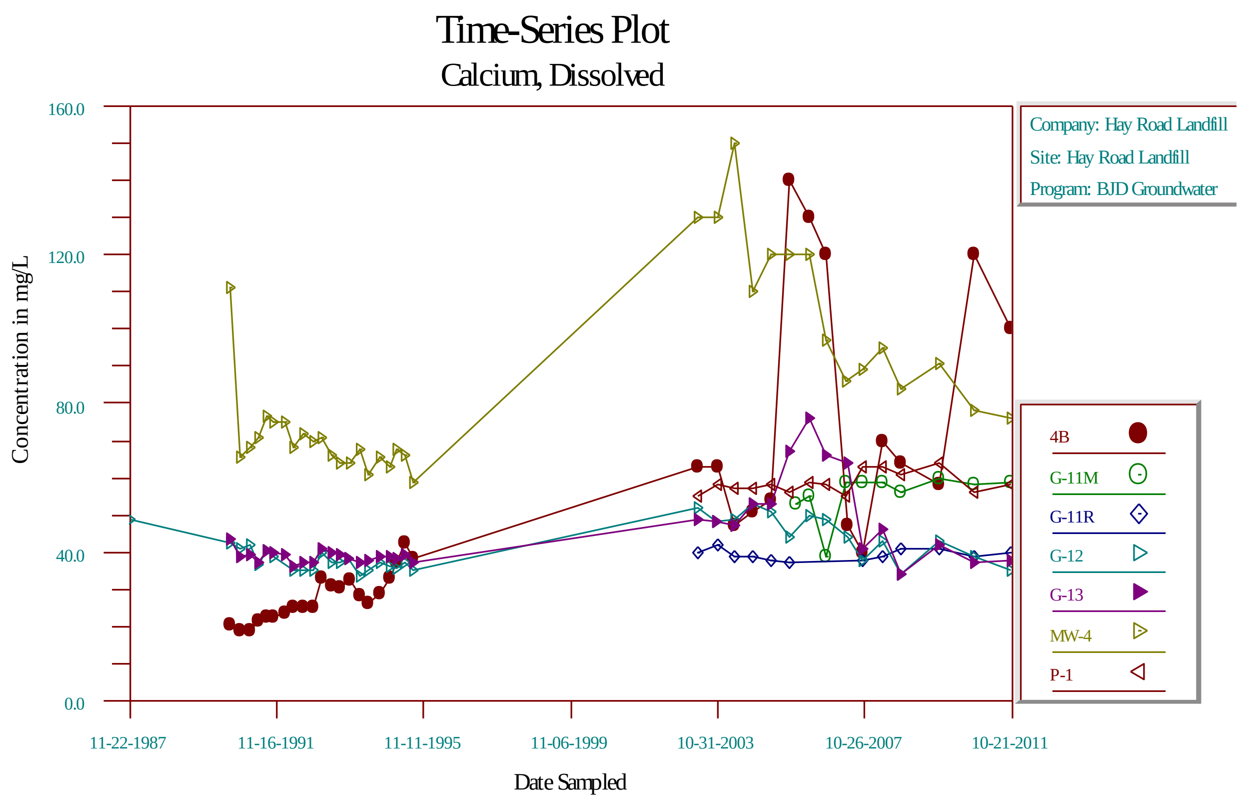
Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
300.0
250.0
200.0
150.0
100.0
50.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1



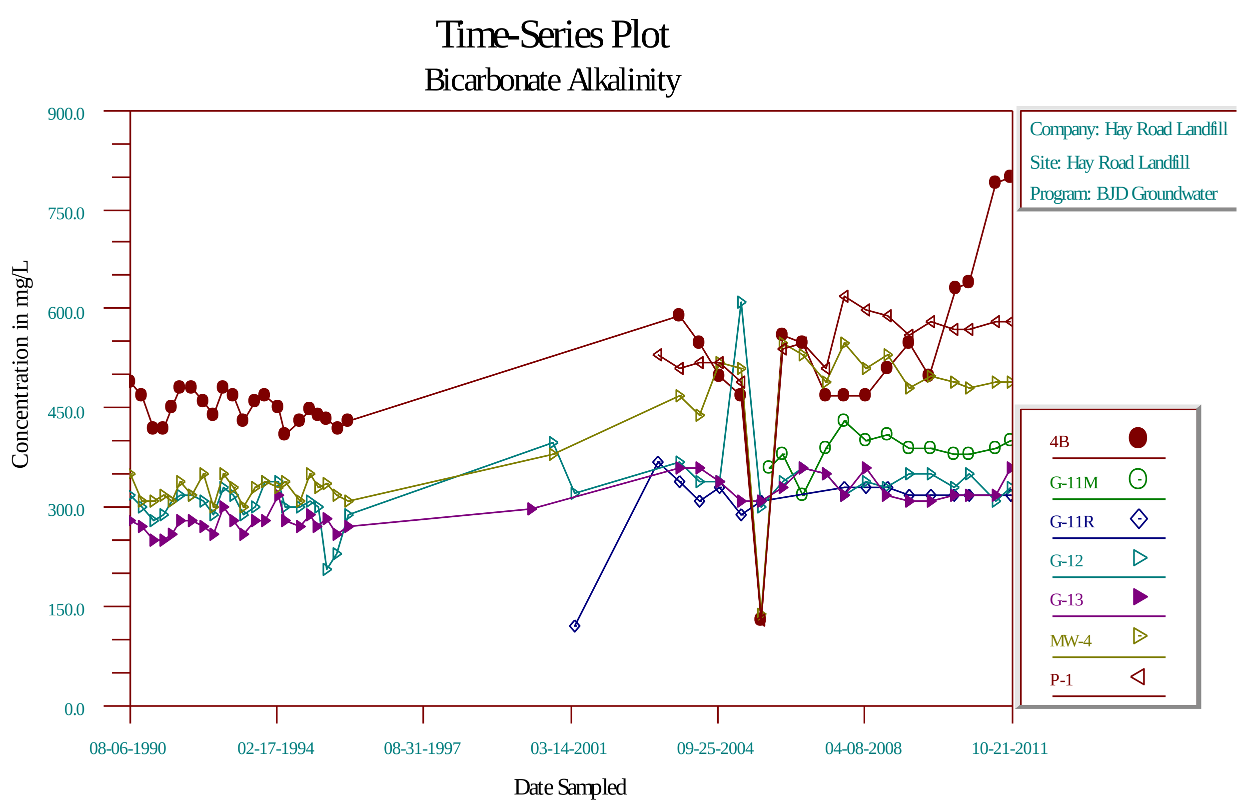
Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
0.08
0.06
0.04
0.02
0.0
-0.02
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1



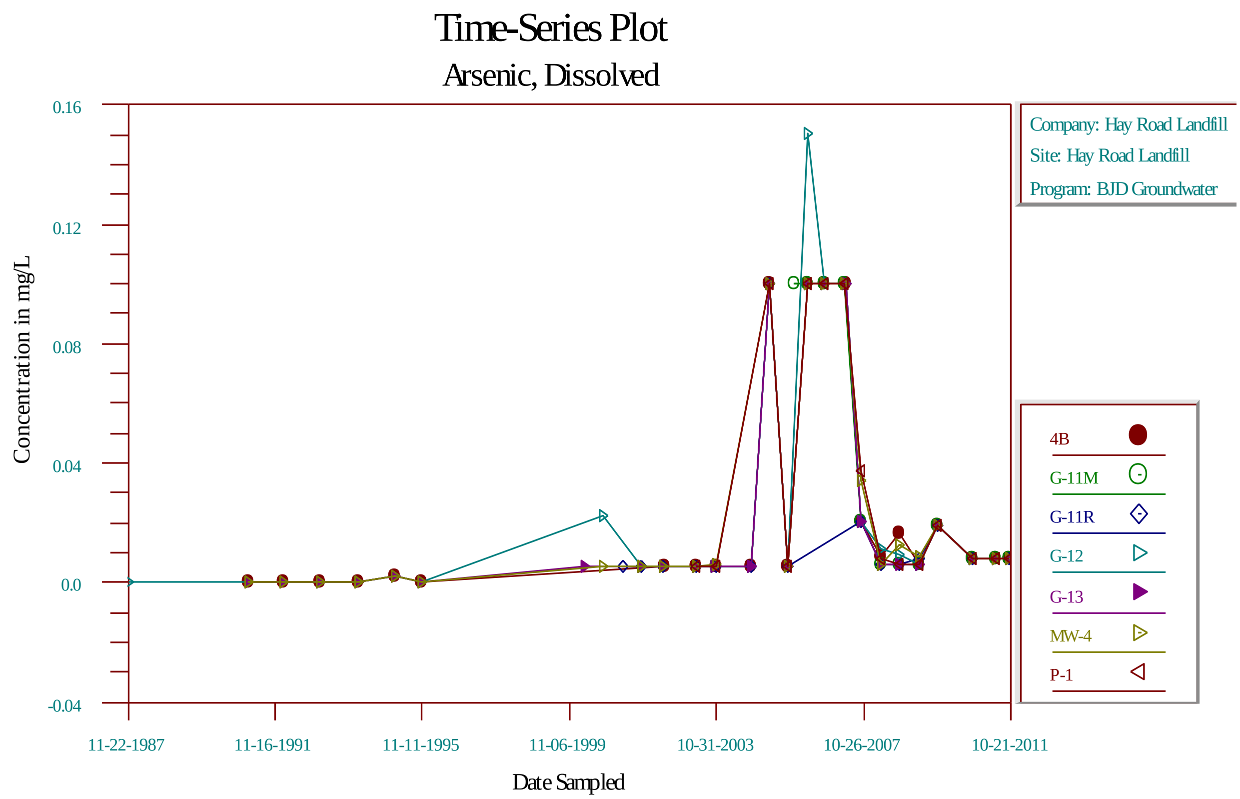
Time-Series Plot
Chloride
Concentration in mg/L
2000.0
1500.0
1000.0
500.0
0.0
03-11-1980
06-17-1985
09-23-1990
12-31-1995
04-07-2001
07-14-2006
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

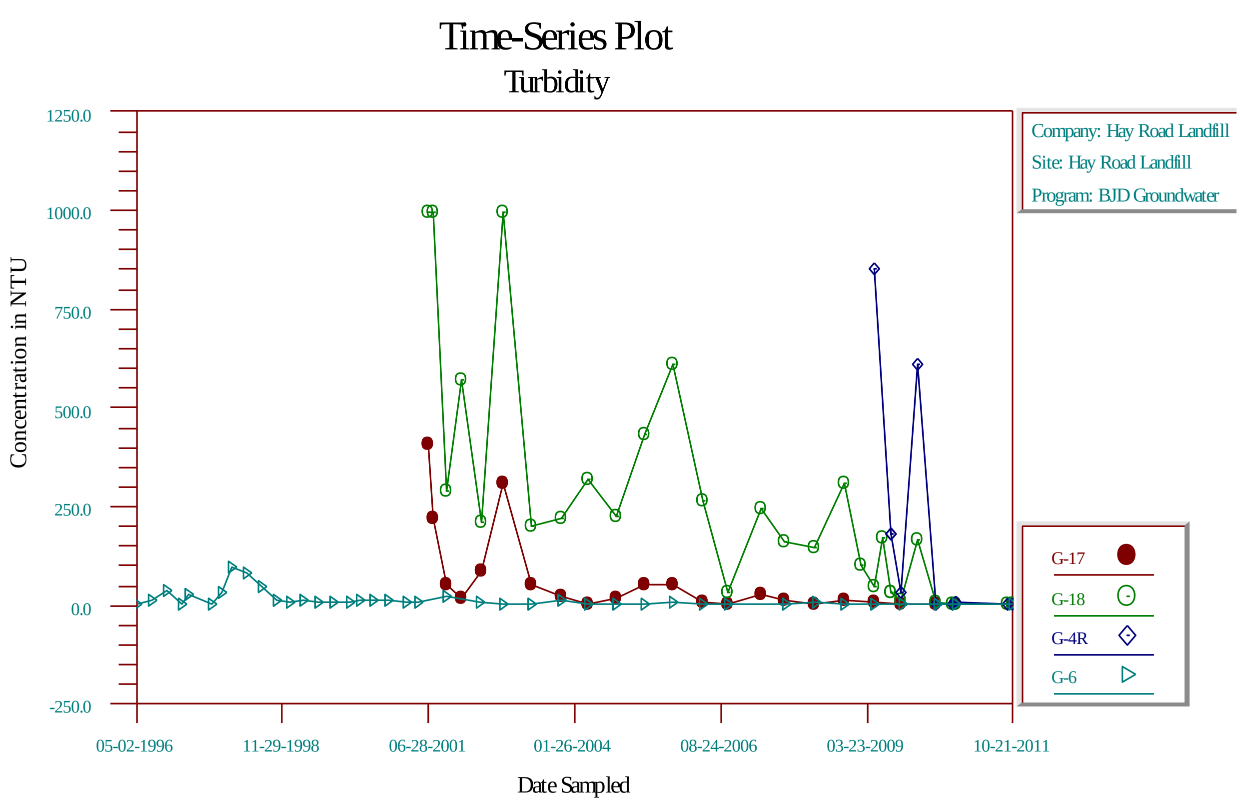


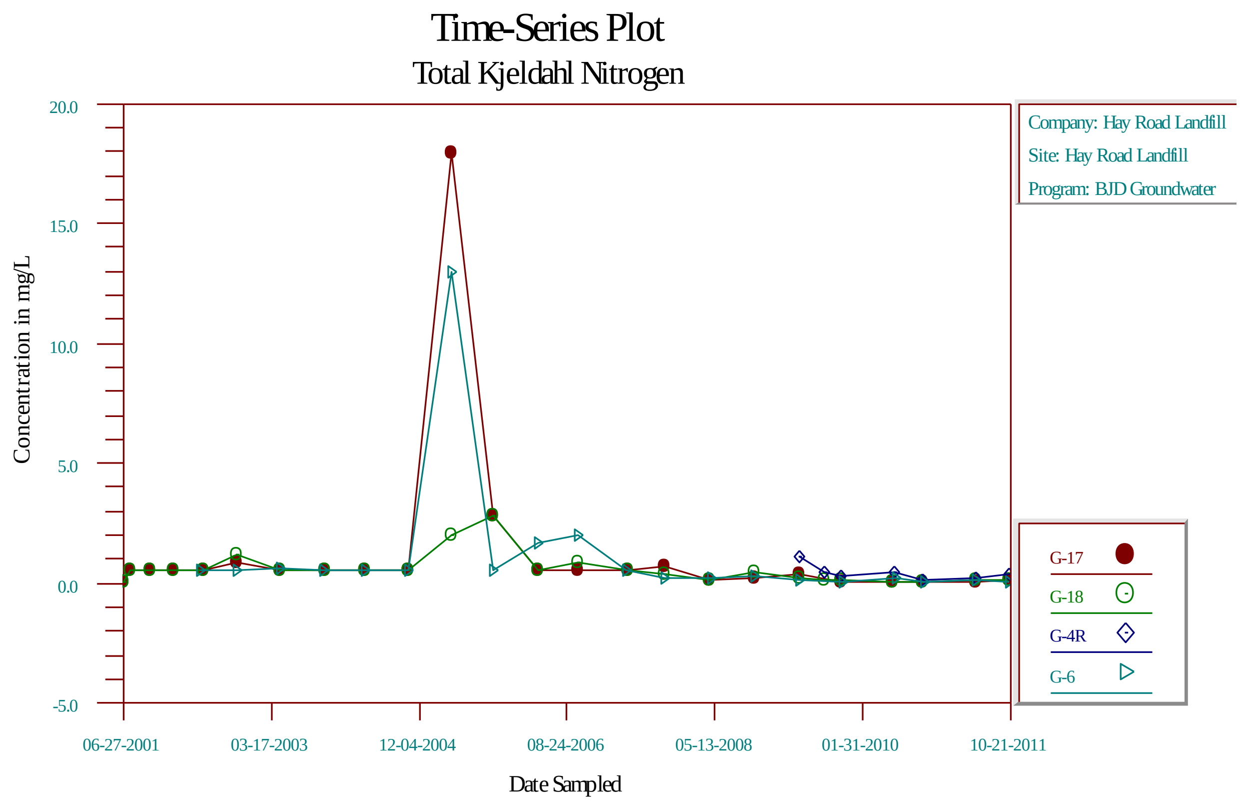
Time-Series Plot
Calcium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
160.0
120.0
80.0
40.0
0.0
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

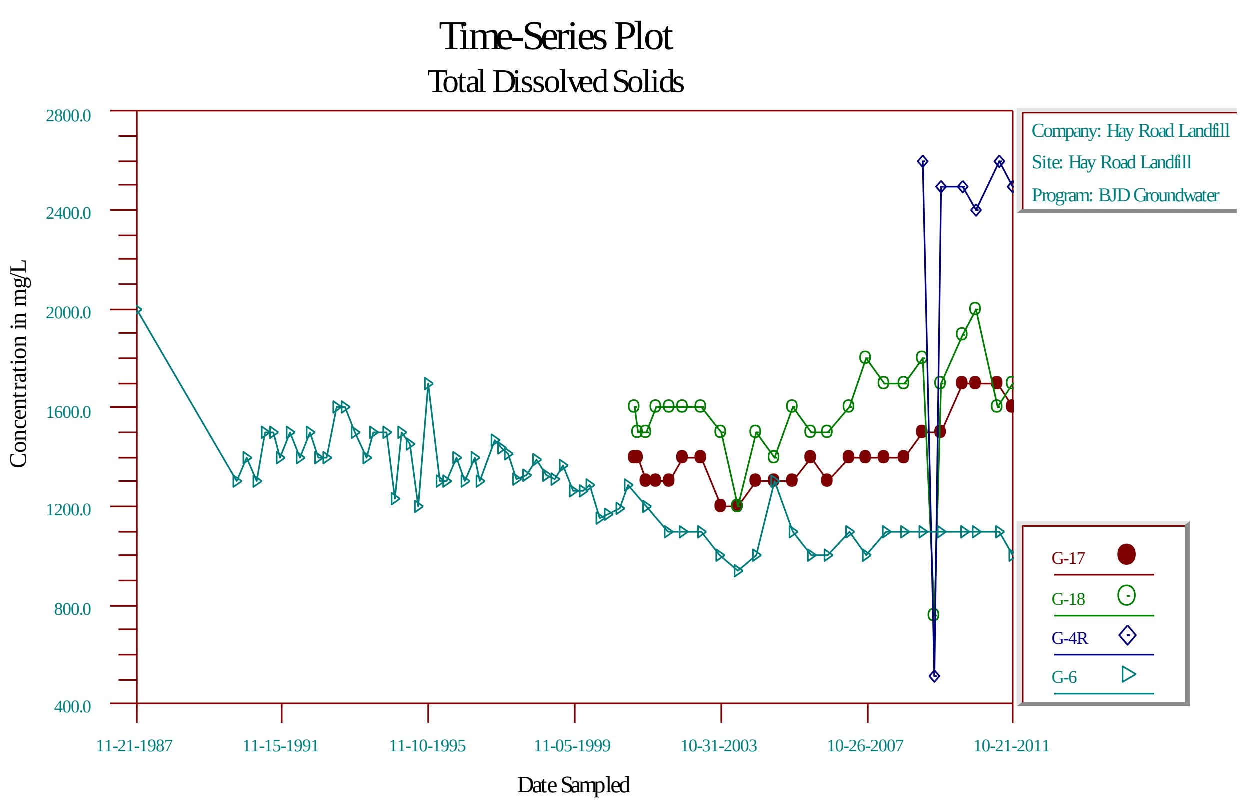


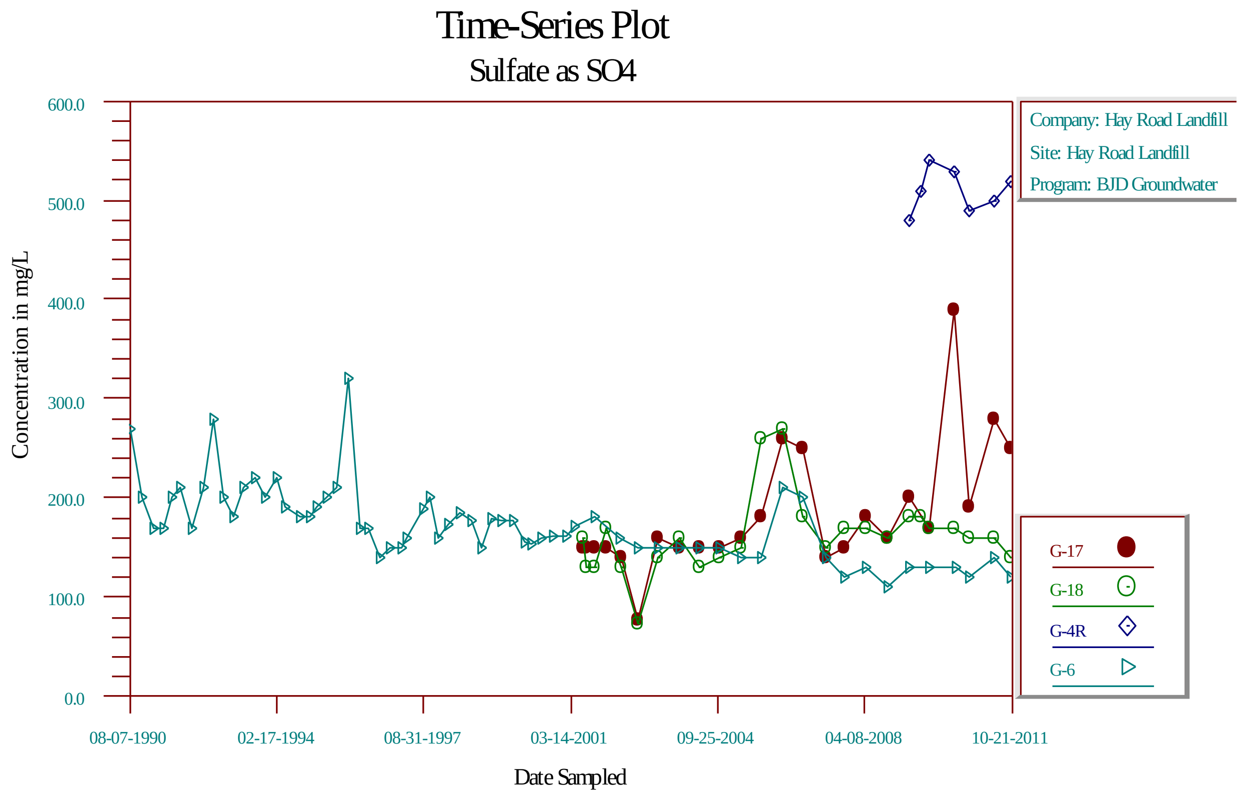
Time-Series Plot
Bicarbonate Alkalinity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
900.0
750.0
600.0
450.0
300.0
150.0
0.0
08-06-1990
02-17-1994
08-31-1997
03-14-2001
09-25-2004
04-08-2008
10-21-2011
Date Sampled
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

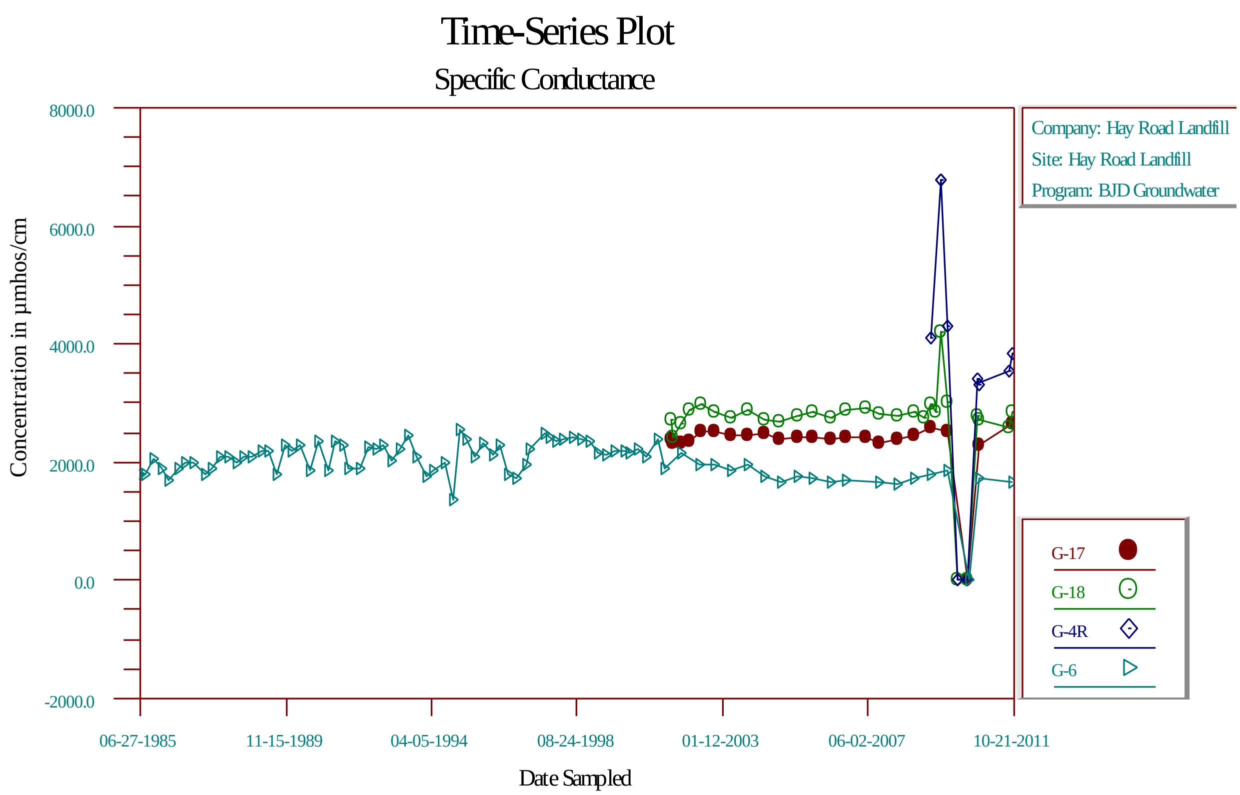

Time-Series Plot
Arsenic, Dissolved
Concentration in mg/L
0.16
0.12
0.08
0.04
0.0
-0.04
11-22-1987
11-16-1991
11-11-1995
11-06-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
4B
G-11M
G-11R
G-12
G-13
MW-4
P-1

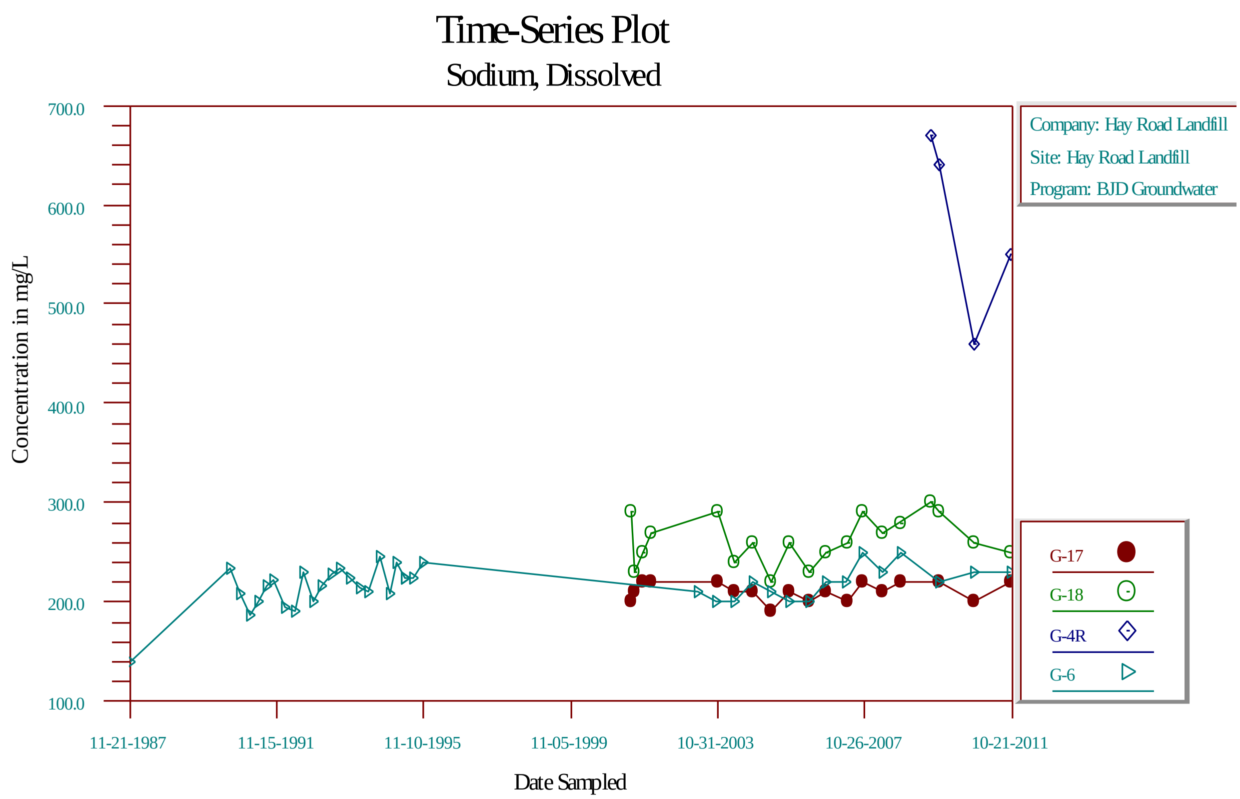

Time-Series Plot
Turbidity
Concentration in NTU
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
05-02-1996
11-29-1998
06-28-2001
01-26-2004
08-24-2006
03-23-2009
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

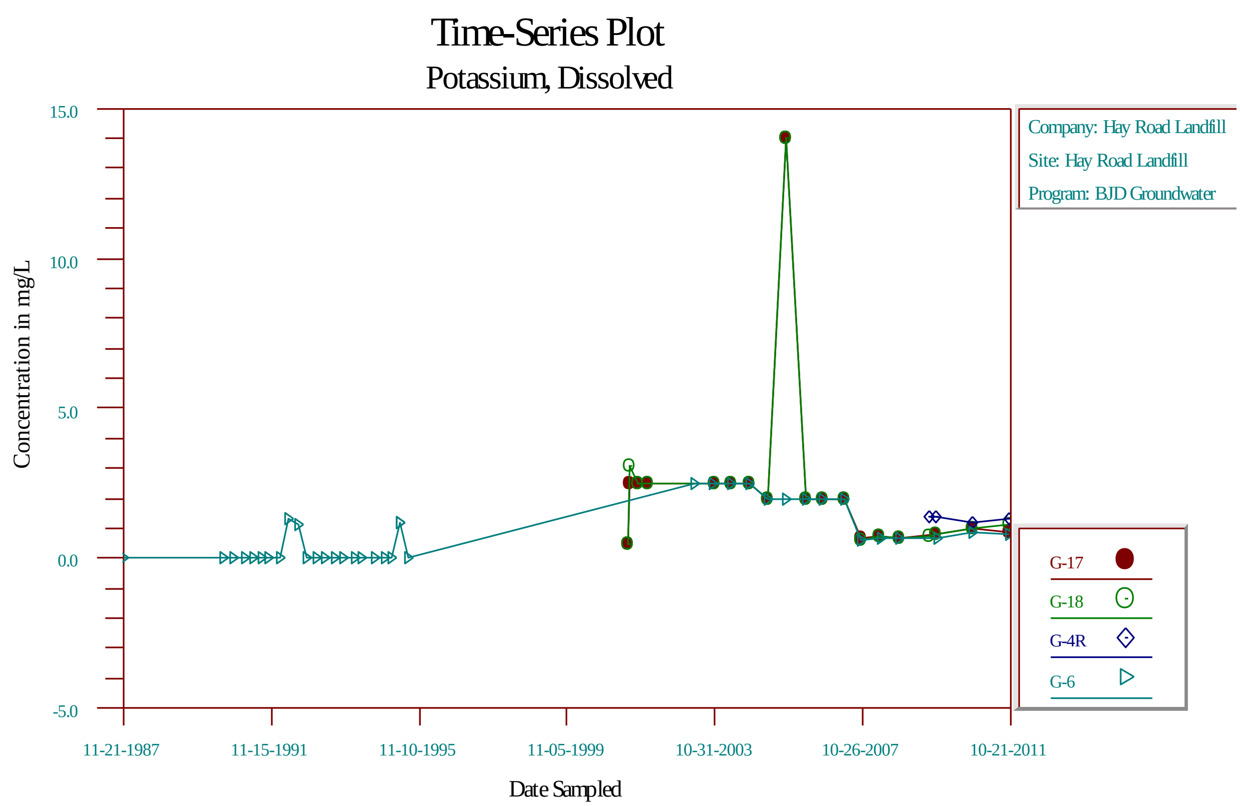

Time-Series Plot
Total Kjeldahl Nitrogen
Concentration in mg/L
20.0
15.0
10.0
5.0
0.0
-5.0
06-27-2001
03-17-2003
12-04-2004
08-24-2006
05-13-2008
01-31-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6


Time-Series Plot
Total Dissolved Solids
Concentration in mg/L
2800.0
2400.0
2000.0
1600.0
1200.0
800.0
400.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

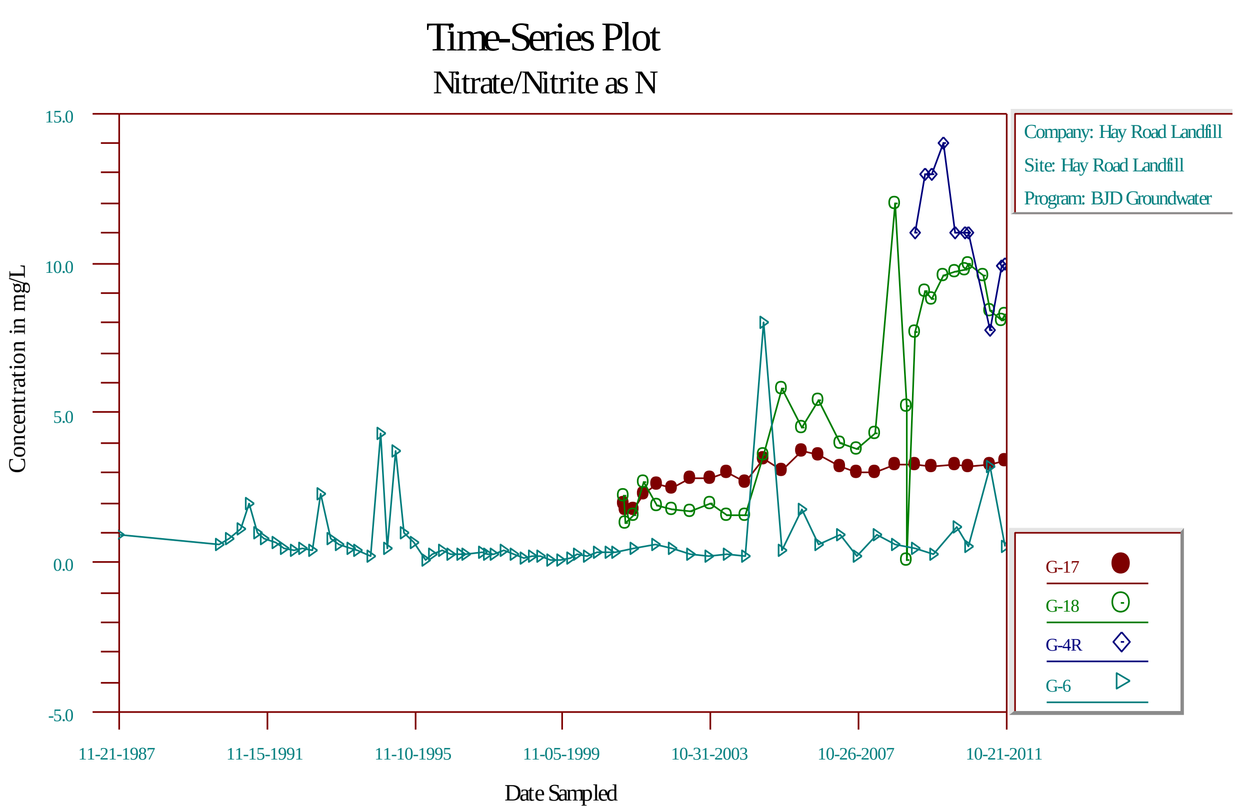

Time-Series Plot
Sulfate as SO4
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
0.0
08-07-1990
02-17-1994
08-31-1997
03-14-2001
09-25-2004
04-08-2008
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

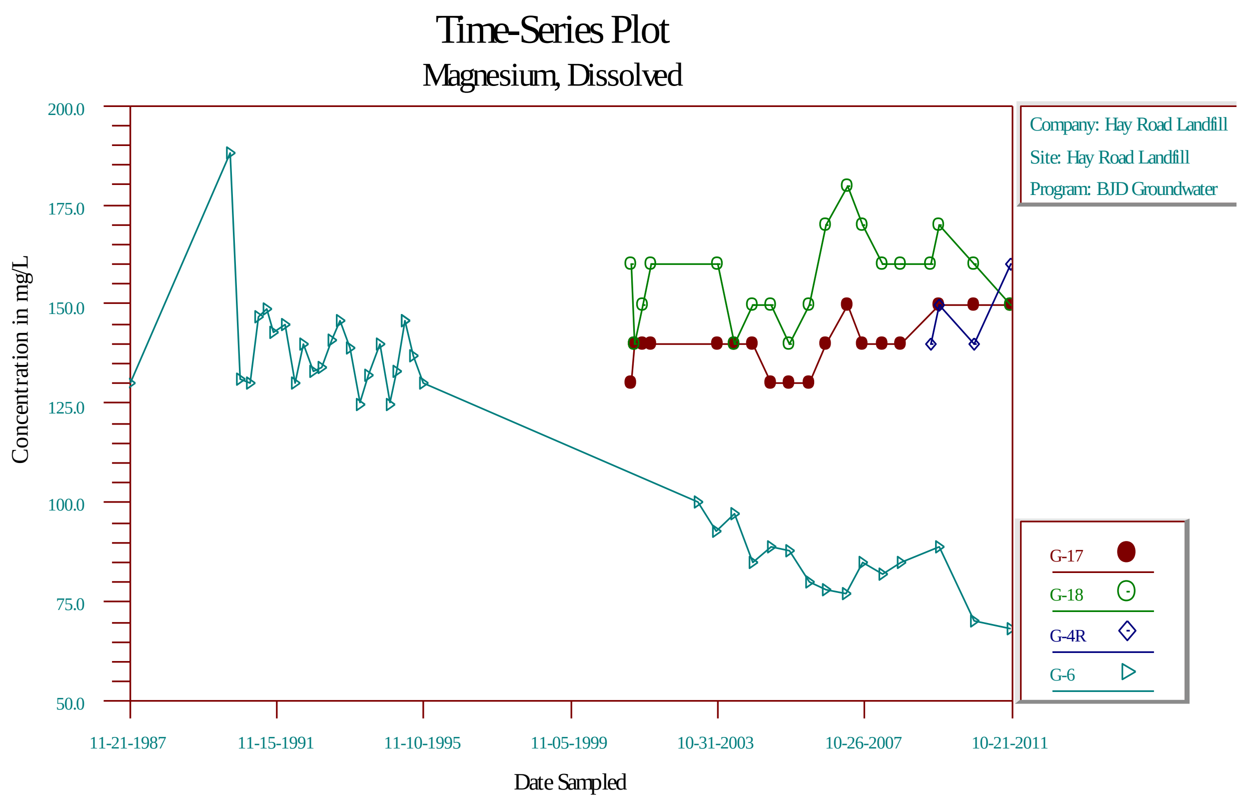

Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
8000.0
6000.0
4000.0
2000.0
0.0
-2000.0
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

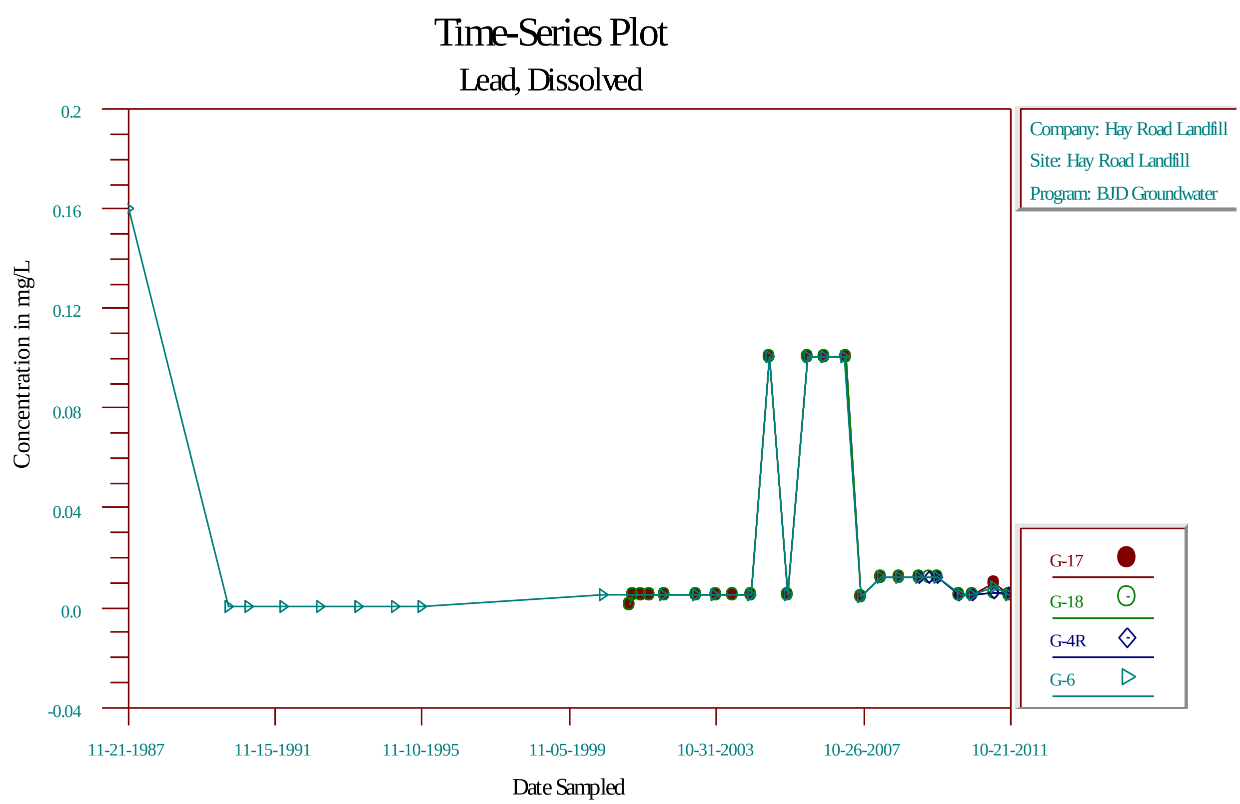

Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
700.0
600.0
500.0
400.0
300.0
200.0
100.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
G-17
G-18
G-4R
G-6

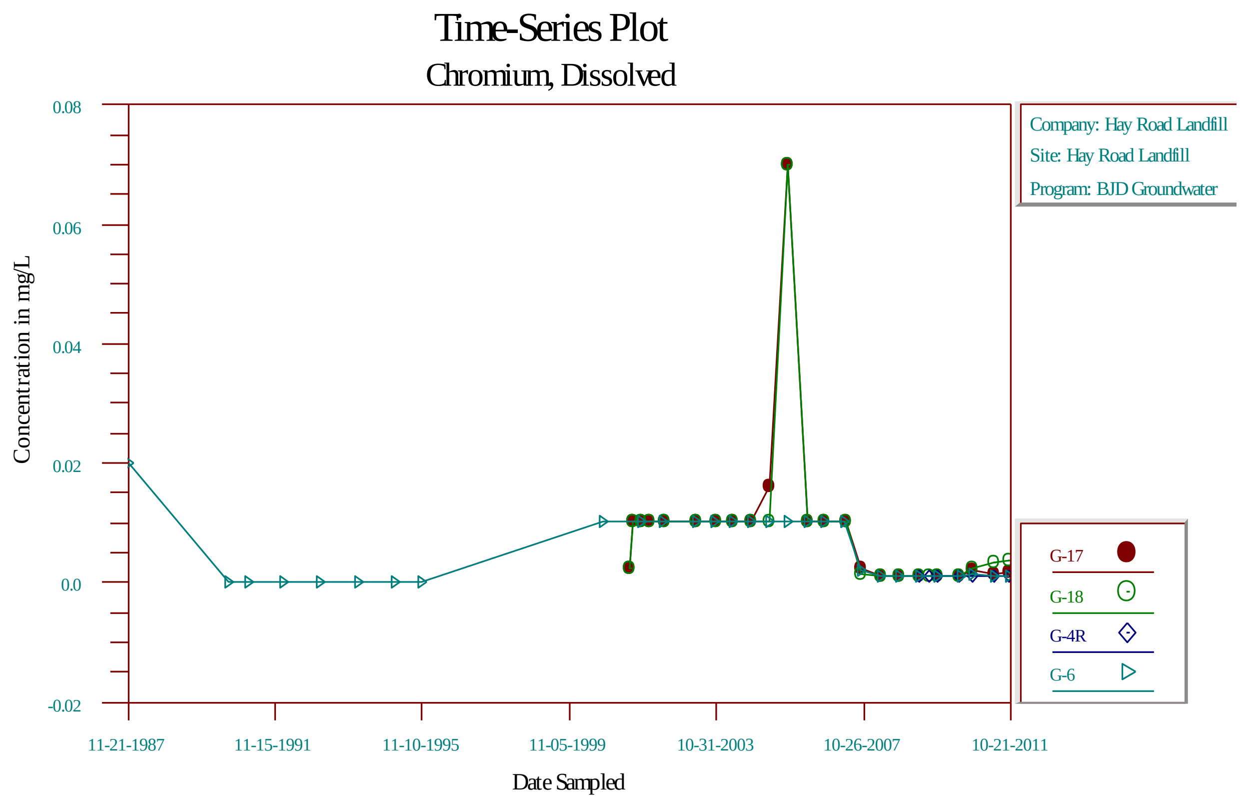

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
15.0
10.0
5.0
0.0
-5.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
G-17
G-18
G-4R
G-6


Time-Series Plot
pH
Concentration in s.u.
8.1
7.8
7.5
7.2
6.9
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

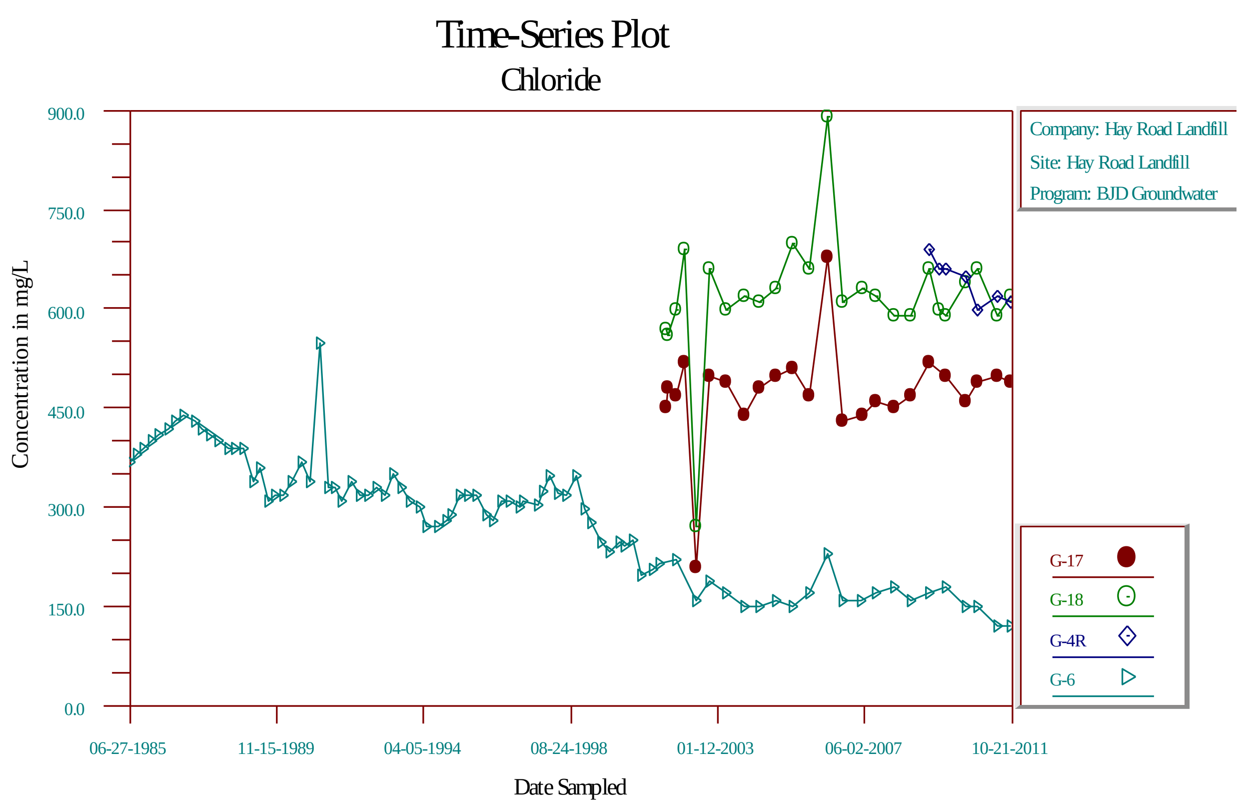

Time-Series Plot
Nitrate/Nitrite as N
Concentration in mg/L
15.0
10.0
5.0
0.0
-5.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6


Time-Series Plot
Magnesium, Dissolved
Concentration in mg/L
200.0
175.0
150.0
125.0
100.0
75.0
50.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

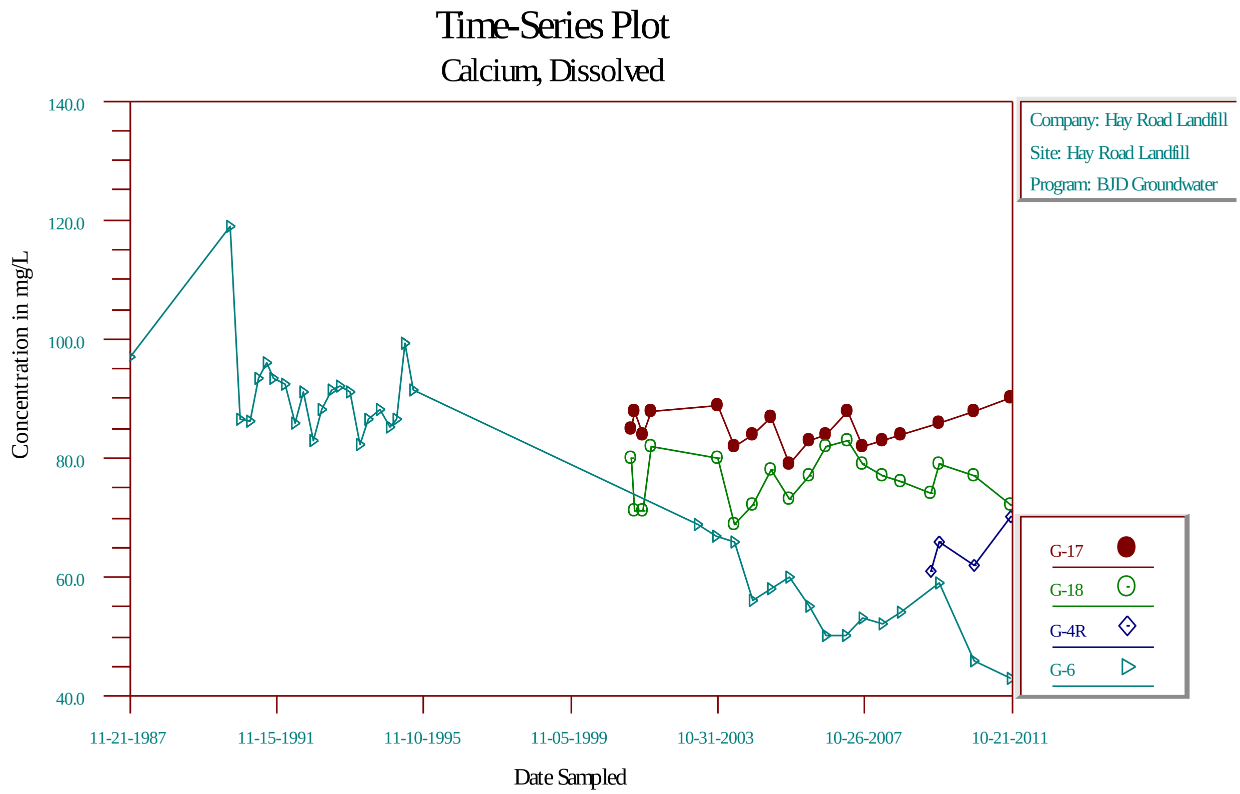

Time-Series Plot
Lead, Dissolved
Concentration in mg/L
0.2
0.16
0.12
0.08
0.04
0.0
-0.04
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6



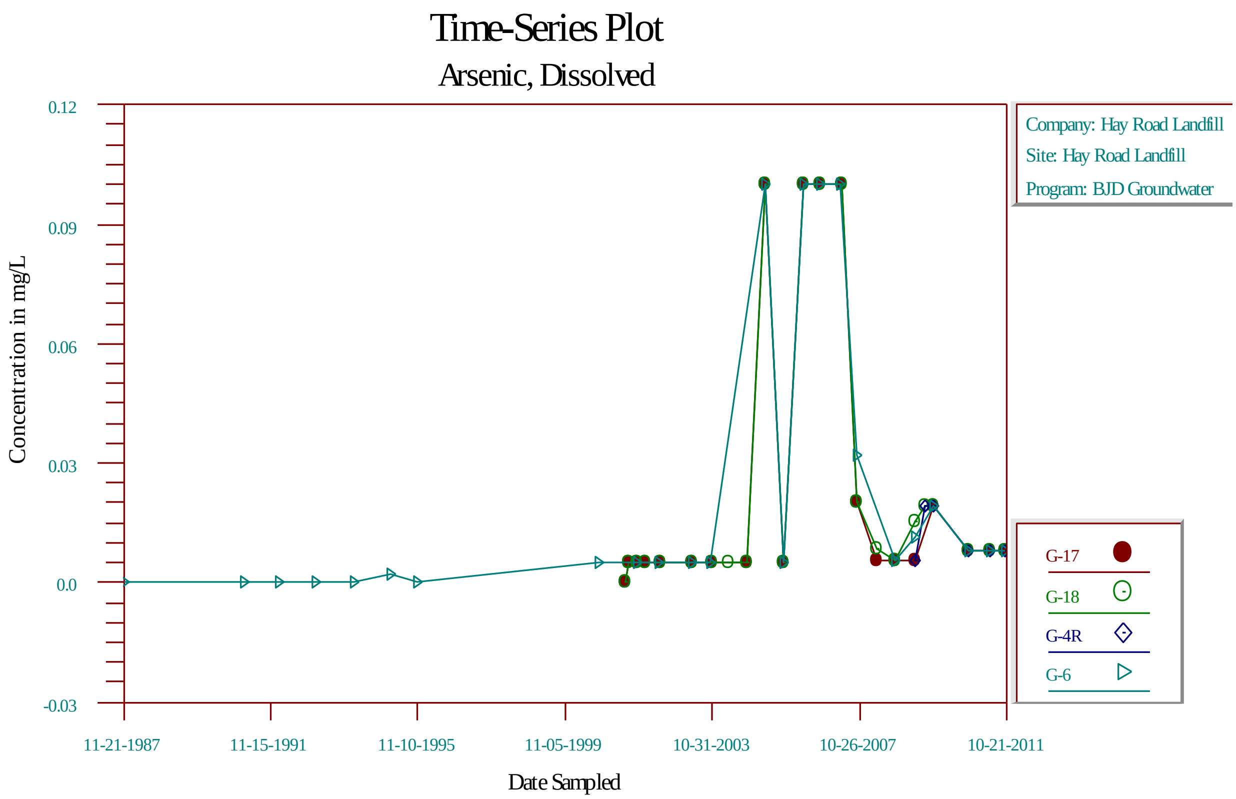
Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
0.08
0.06
0.04
0.02
0.0
-0.02
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

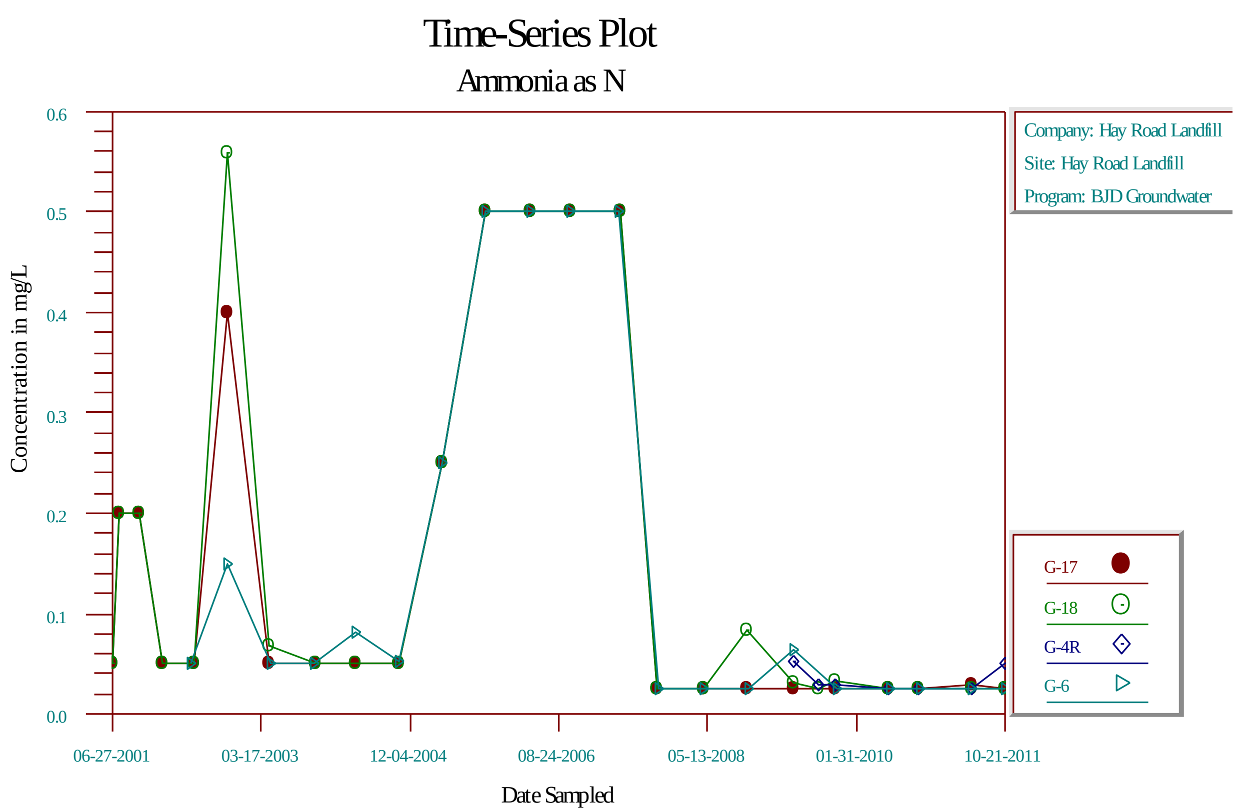


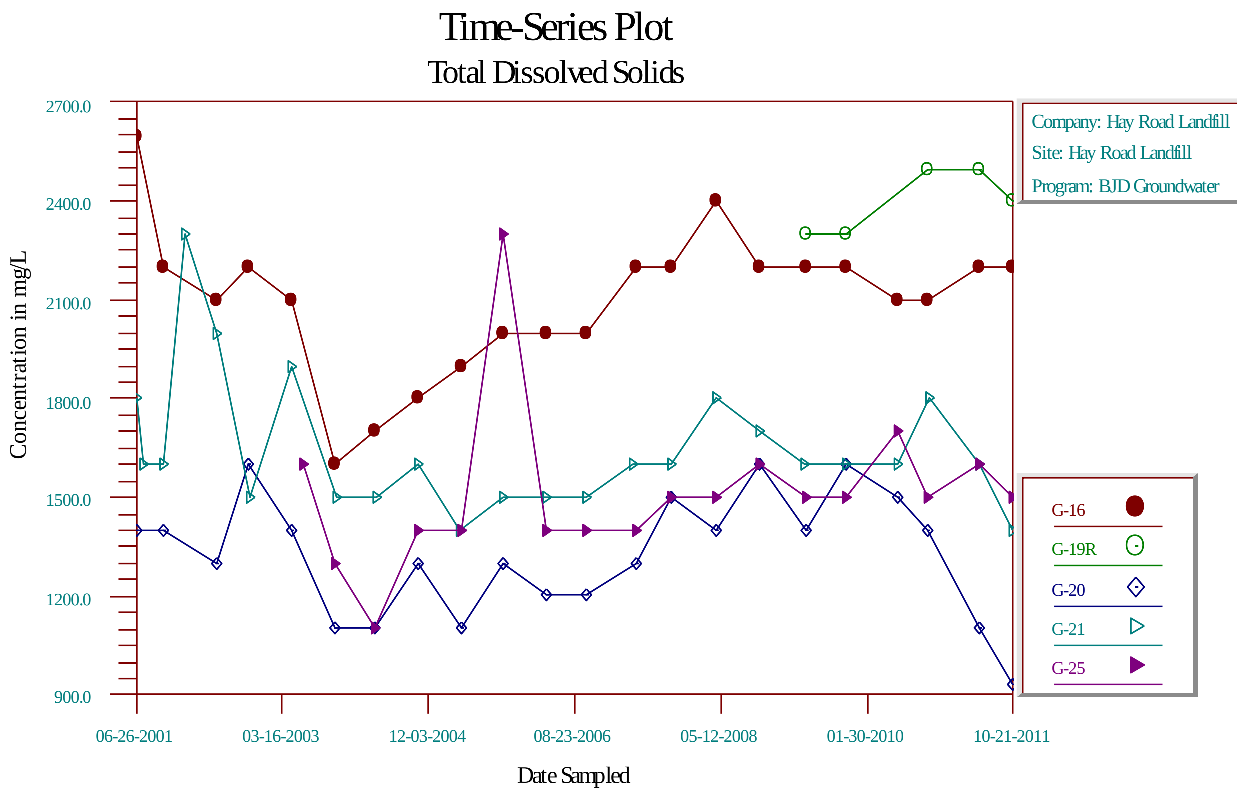
Time-Series Plot
Chloride
Concentration in mg/L
900.0
750.0
600.0
450.0
300.0
150.0
0.0
06-27-1985
11-15-1989
04-05-1994
08-24-1998
01-12-2003
06-02-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6


Time-Series Plot
Calcium, Dissolved
Concentration in mg/L
140.0
120.0
100.0
80.0
60.0
40.0
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

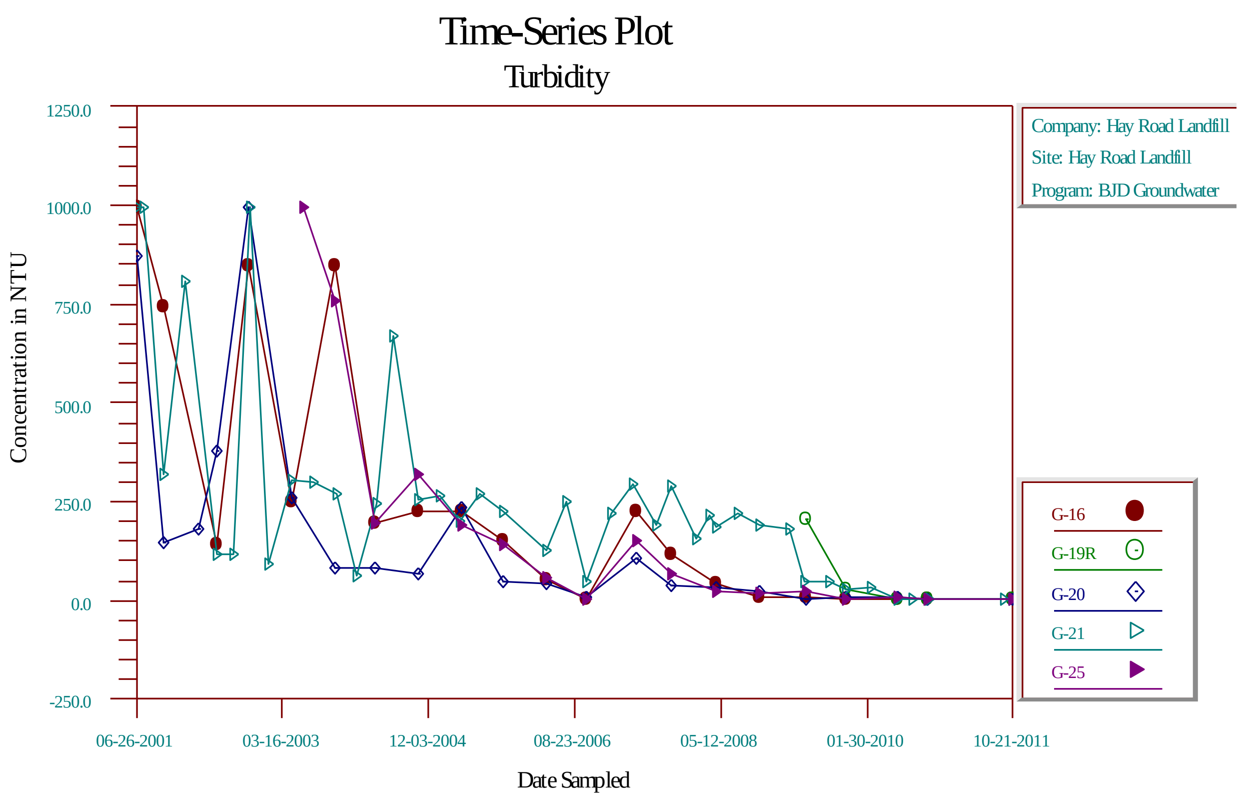

Time-Series Plot
Bicarbonate Alkalinity
Concentration in mg/L
700.0
600.0
500.0
400.0
300.0
200.0
100.0
08-07-1990
02-17-1994
08-31-1997
03-14-2001
09-25-2004
04-08-2008
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6


Time-Series Plot
Arsenic, Dissolved
Concentration in mg/L
0.12
0.09
0.06
0.03
0.0
-0.03
11-21-1987
11-15-1991
11-10-1995
11-05-1999
10-31-2003
10-26-2007
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

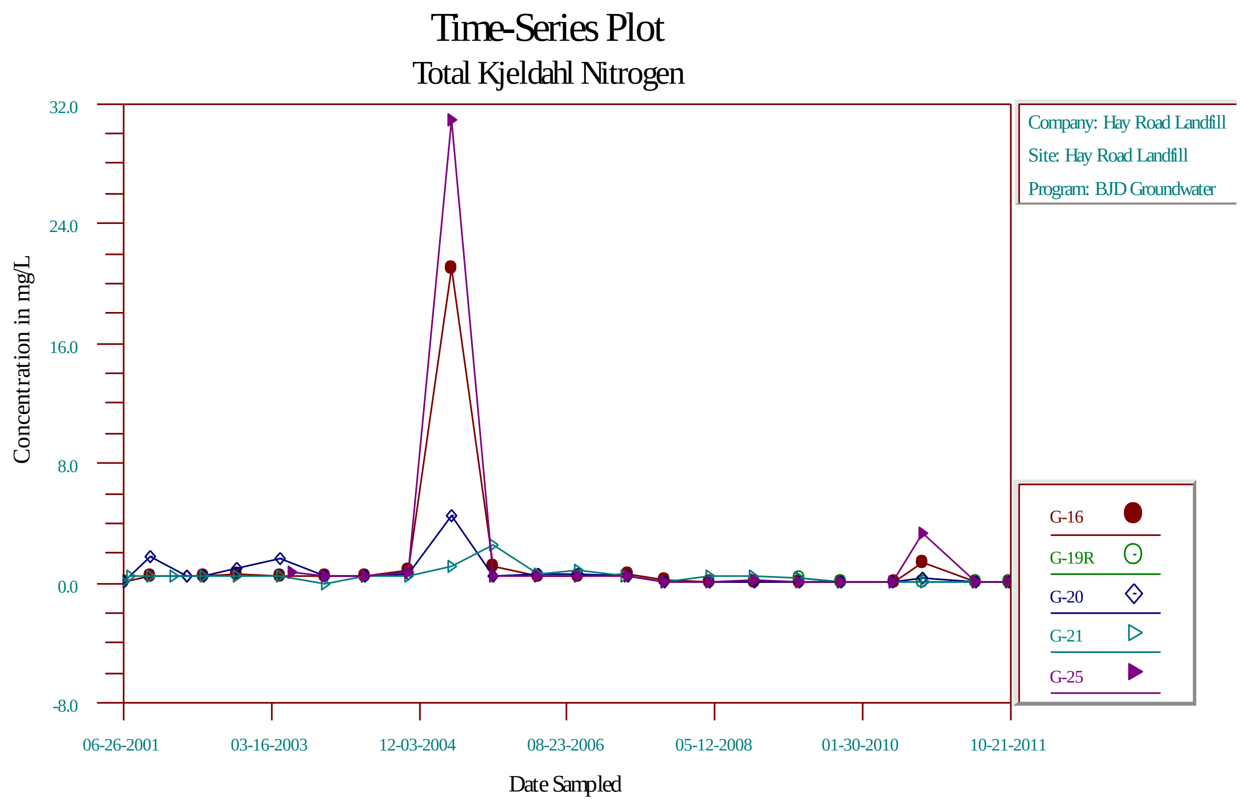

Time-Series Plot
Ammonia as N
Concentration in mg/L
0.6
0.5
0.4
0.3
0.2
0.1
0.0
06-27-2001
03-17-2003
12-04-2004
08-24-2006
05-13-2008
01-31-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-17
G-18
G-4R
G-6

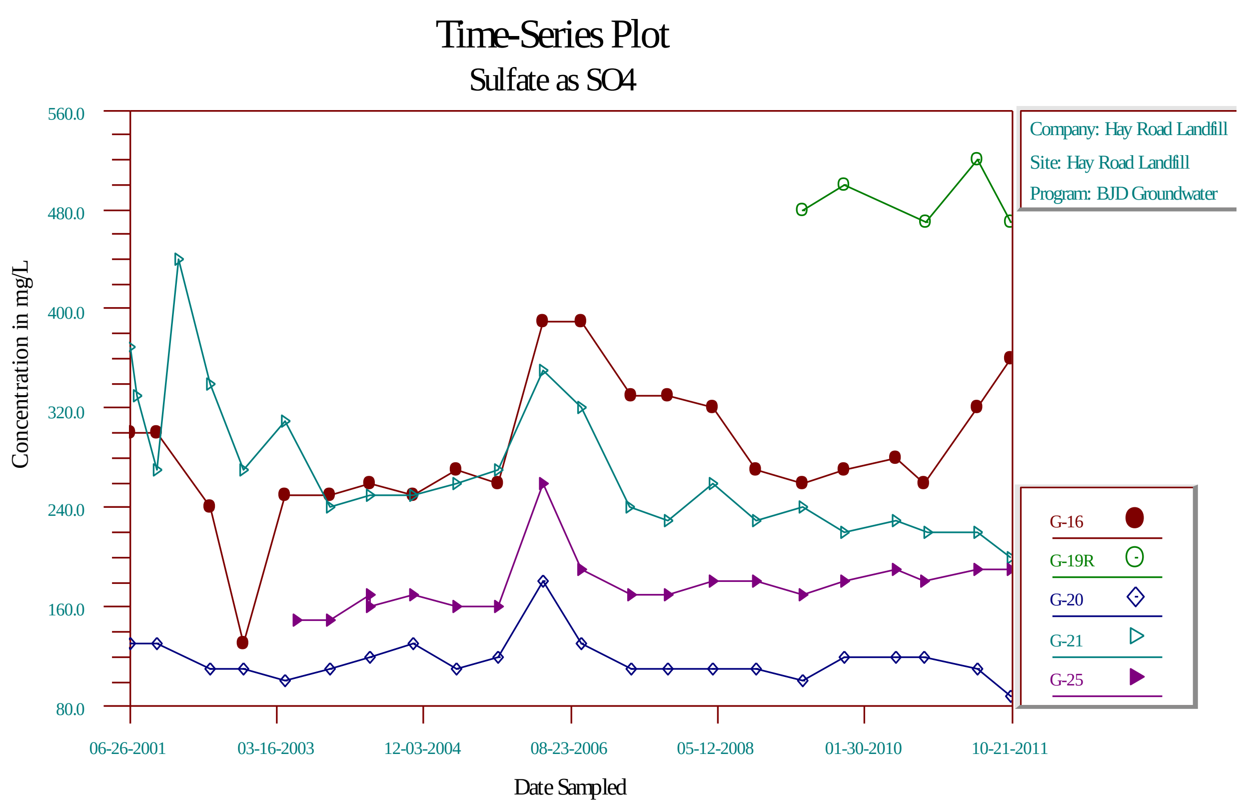


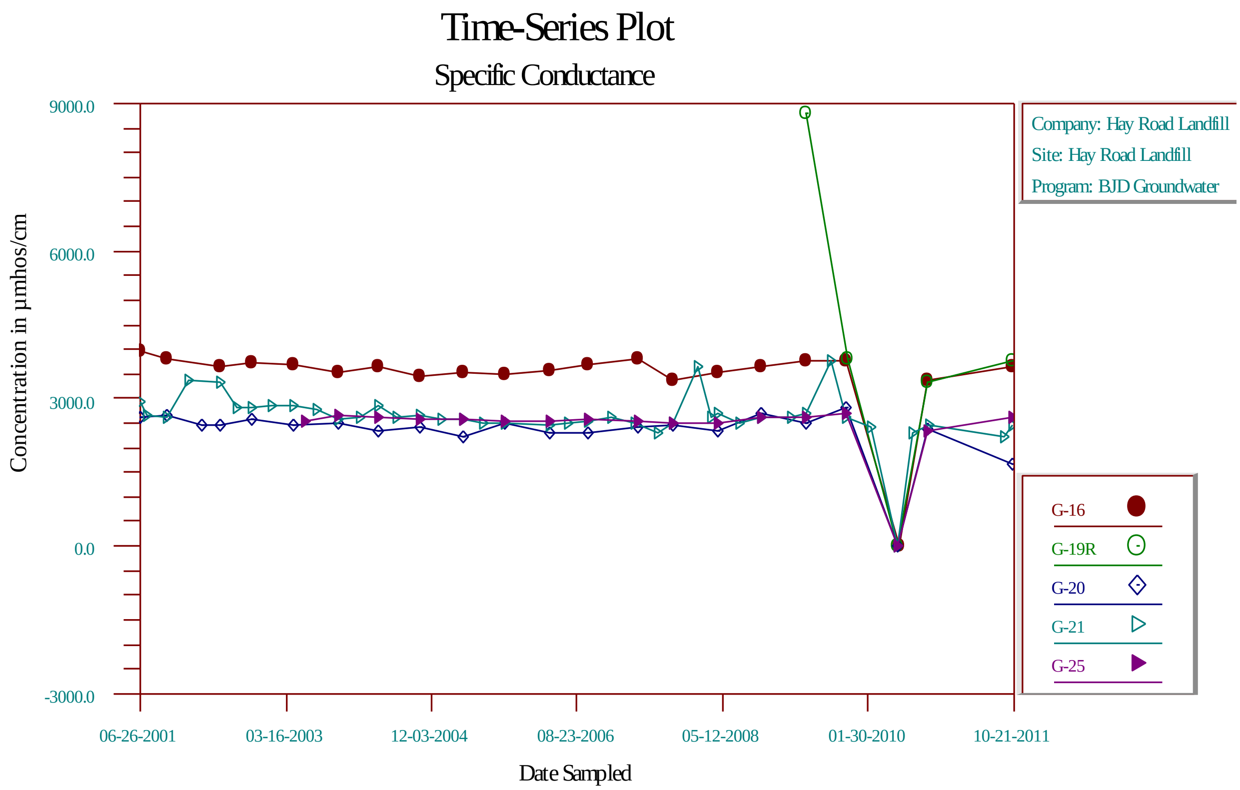
Time-Series Plot
Total Dissolved Solids
Concentration in mg/L
2700.0
2400.0
2100.0
1800.0
1500.0
1200.0
900.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

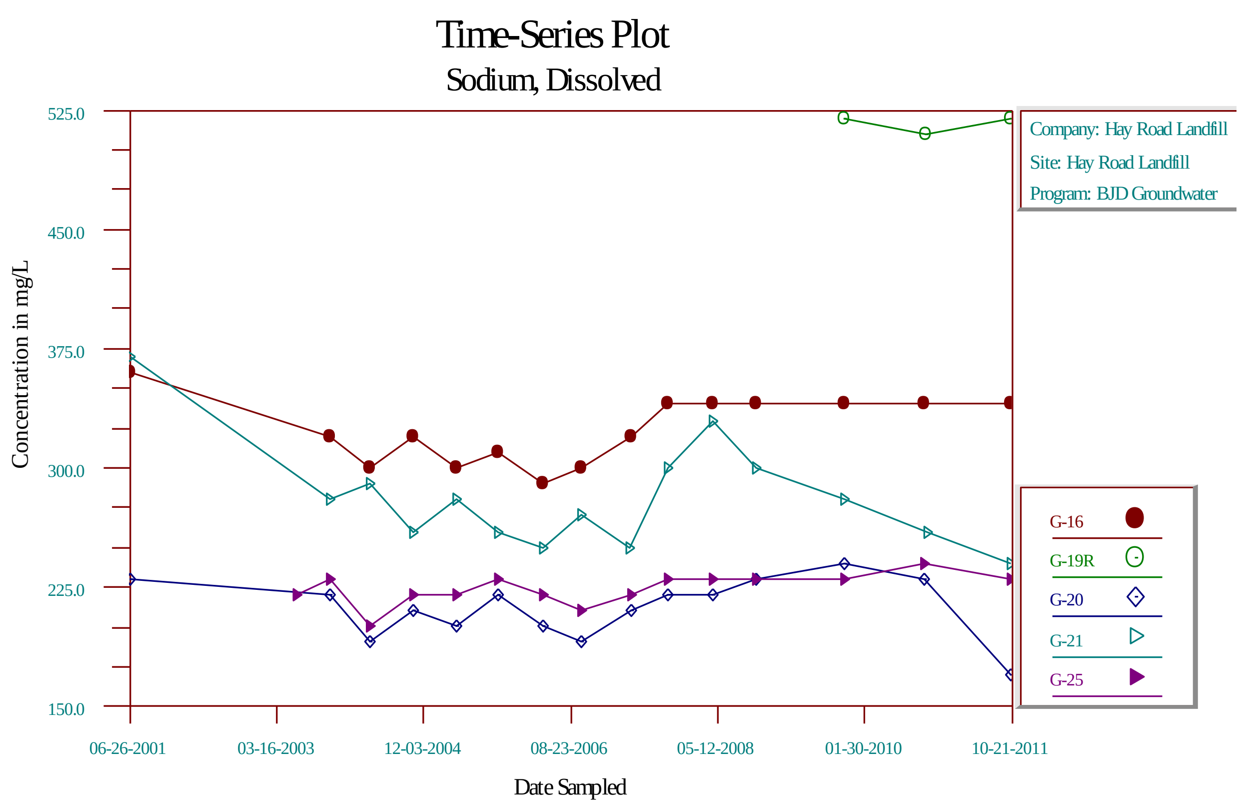


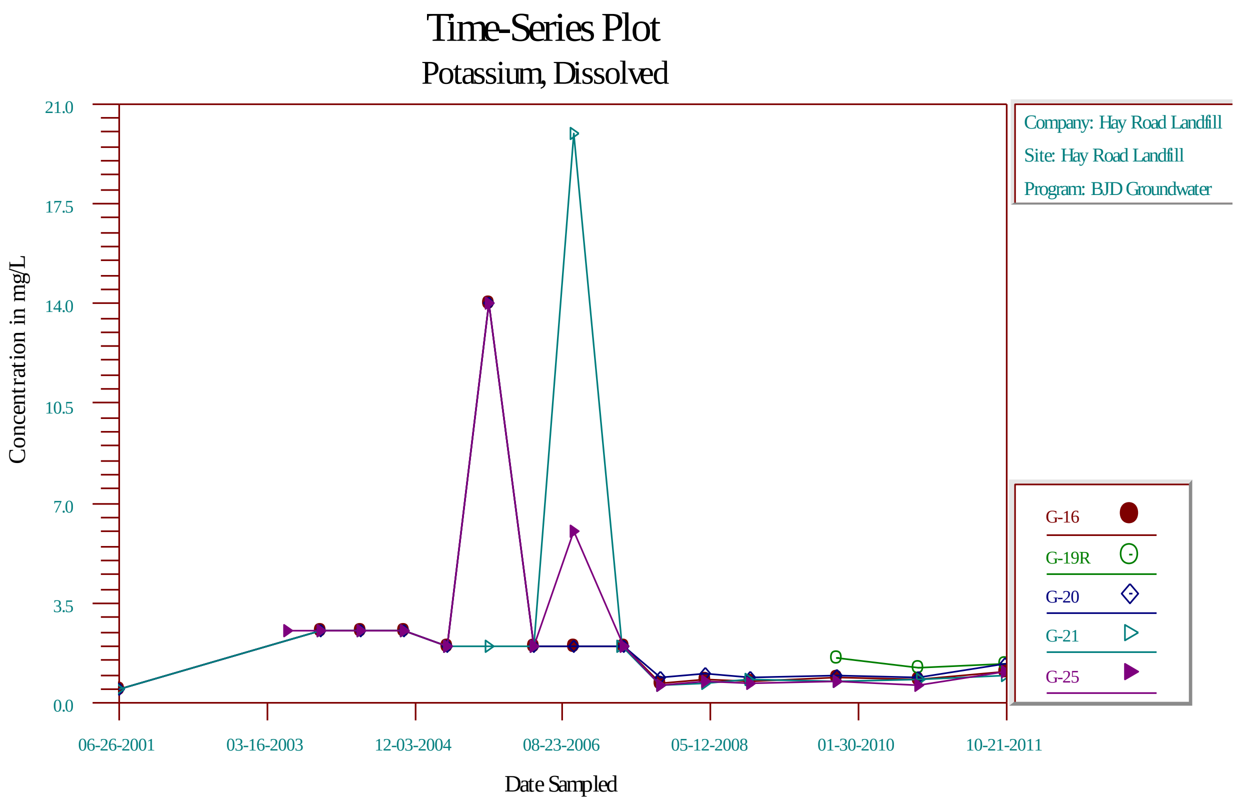
Time-Series Plot
Turbidity
Concentration in NTU
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

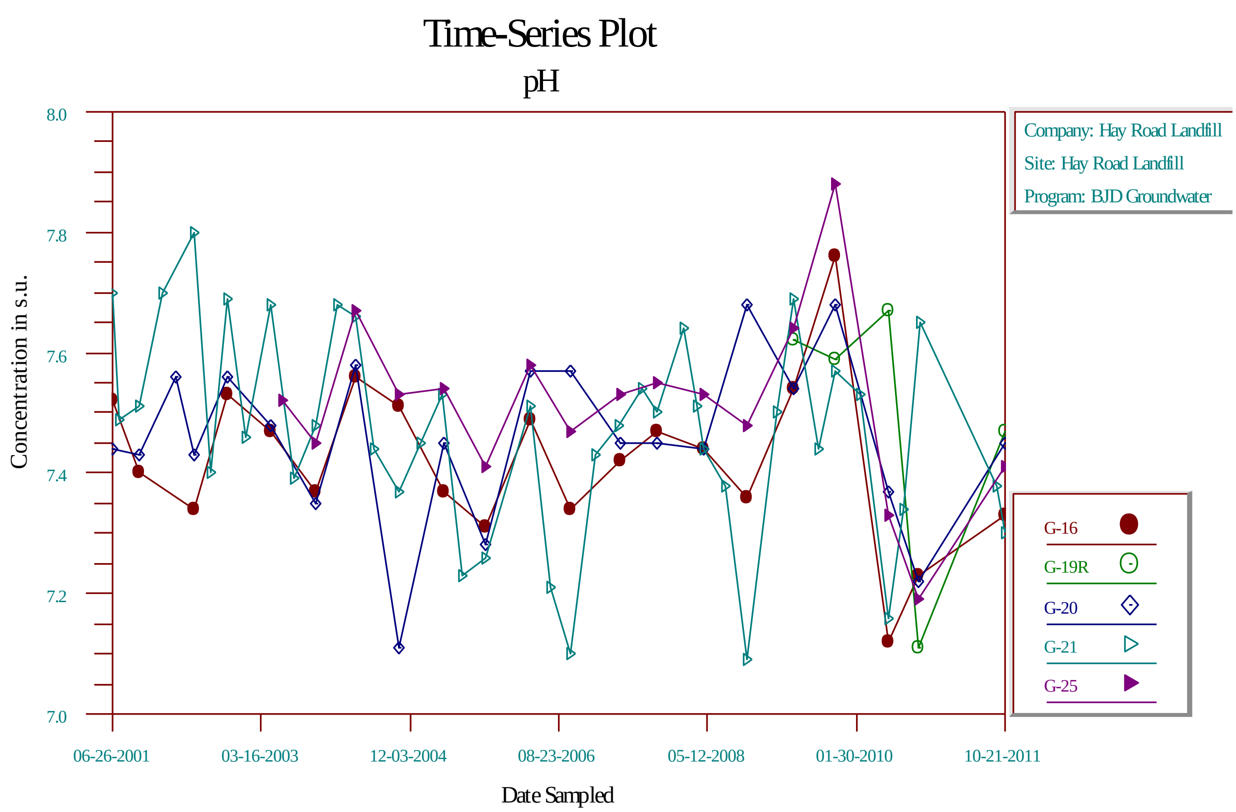

Time-Series Plot
Total Kjeldahl Nitrogen
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
32.0
24.0
16.0
8.0
0.0
-8.0
Concentration in mg/L
G-16
G-19R
G-20
G-21
G-25
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled

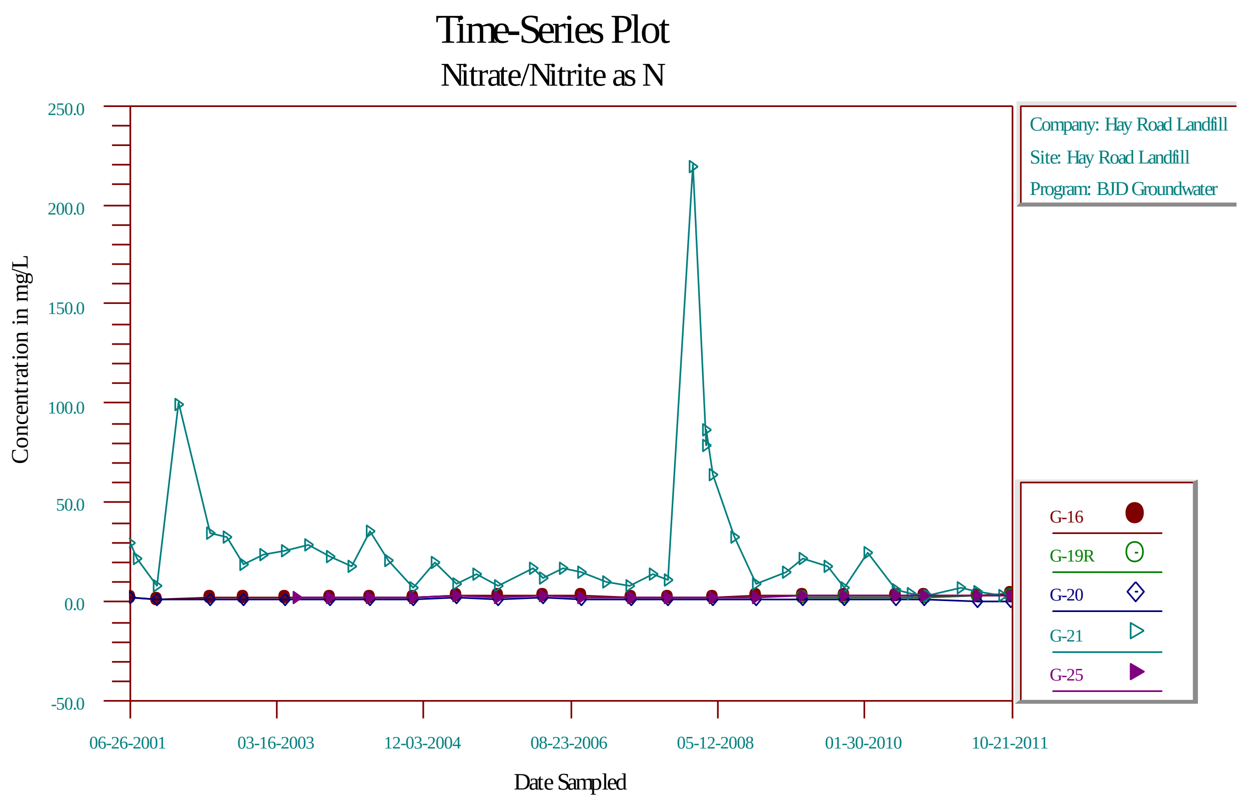

Time-Series Plot
Sulfate as SO4
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
560.0
480.0
400.0
320.0
240.0
160.0
80.0
Concentration in mg/L
G-16
G-19R
G-20
G-21
G-25
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled

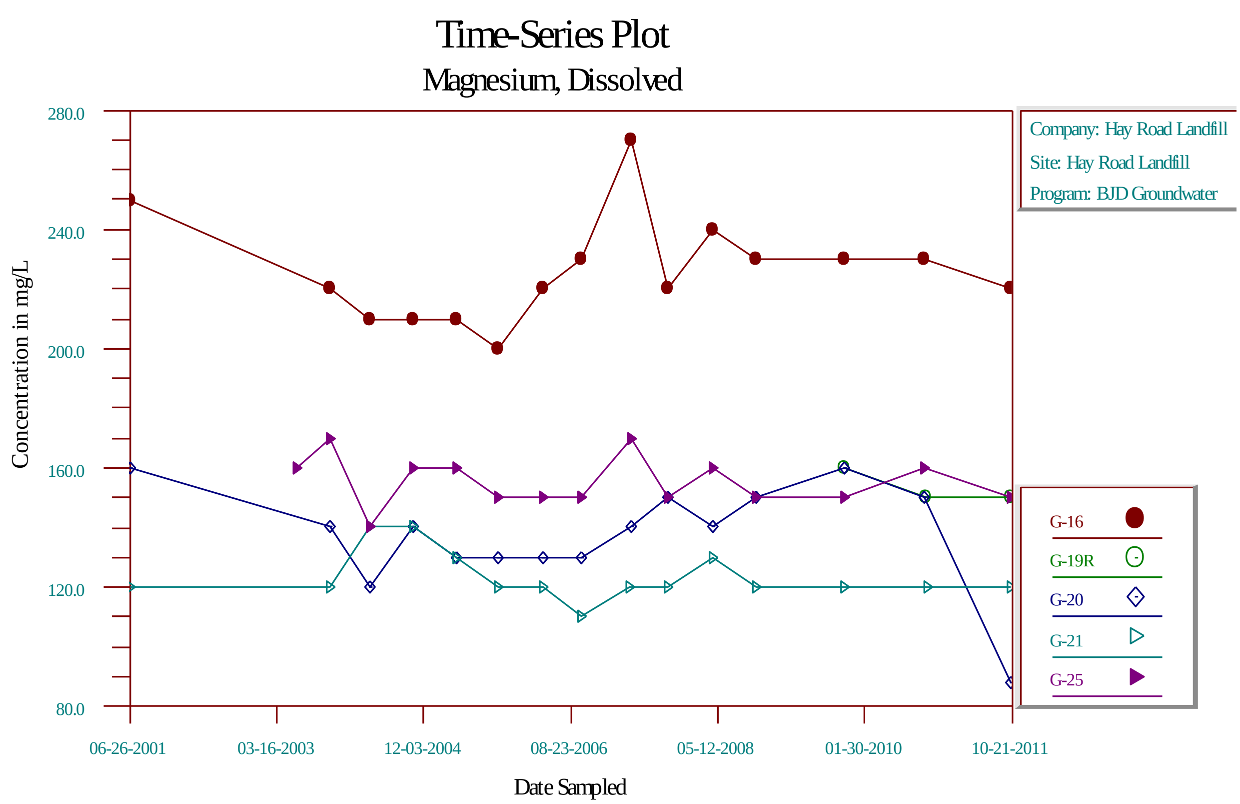

Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
9000.0
6000.0
3000.0
0.0
-3000.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

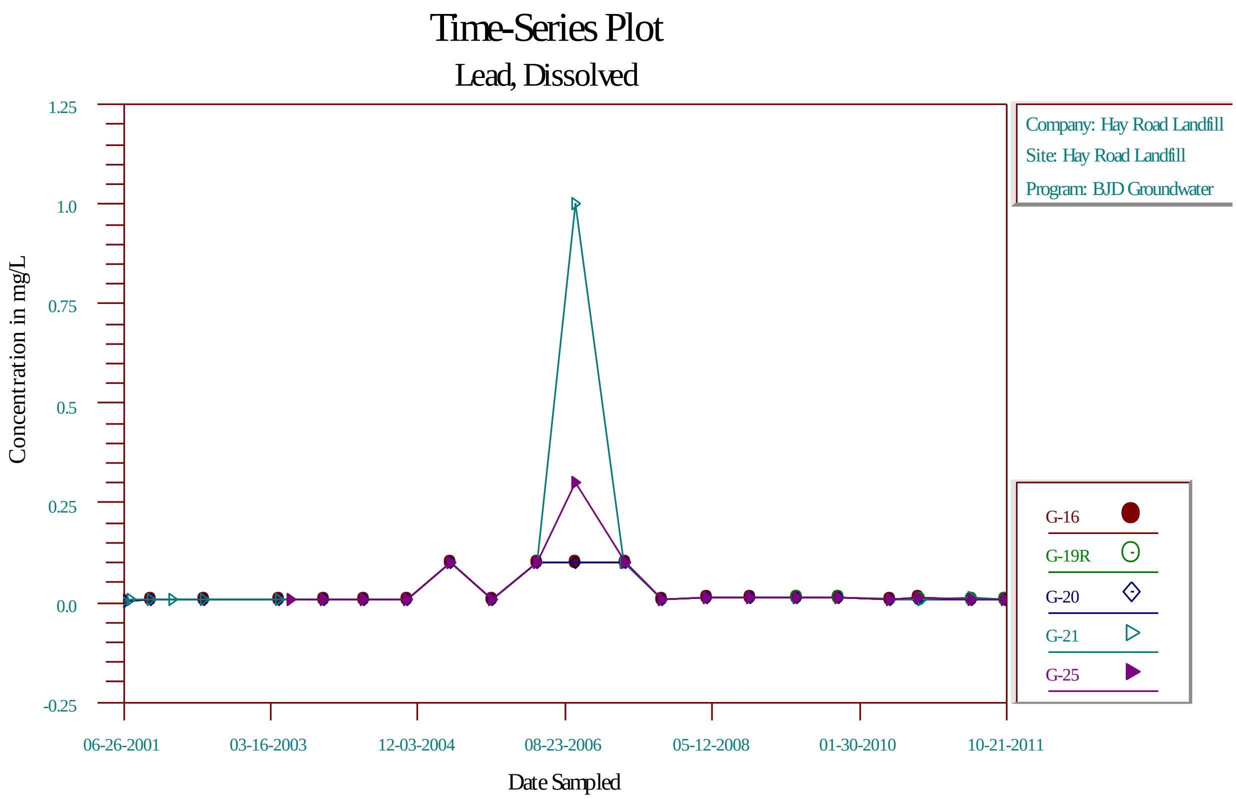

Time-Series Plot
Sodium, Dissolved
Concentration in mg/L
525.0
450.0
375.0
300.0
225.0
150.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

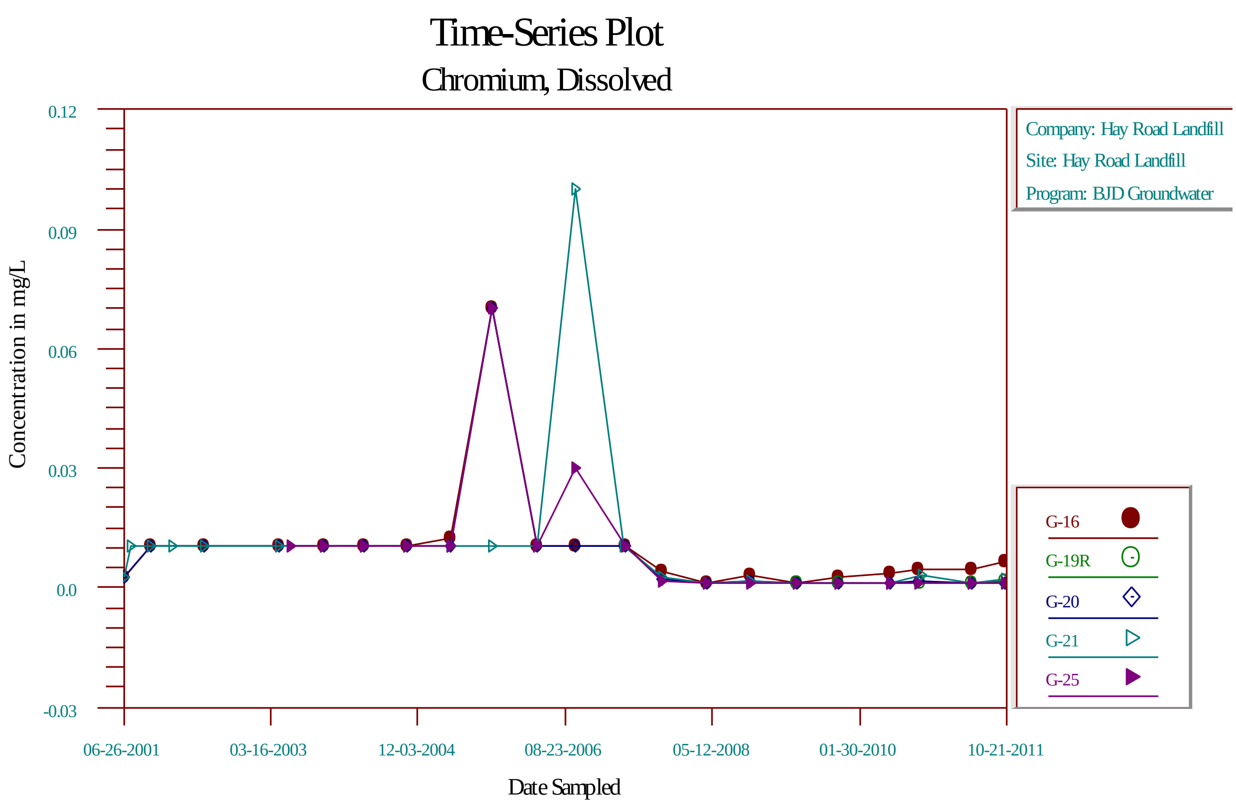

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
21.0
17.5
14.0
10.5
7.0
3.5
0.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-16
G-19R
G-20
G-21
G-25

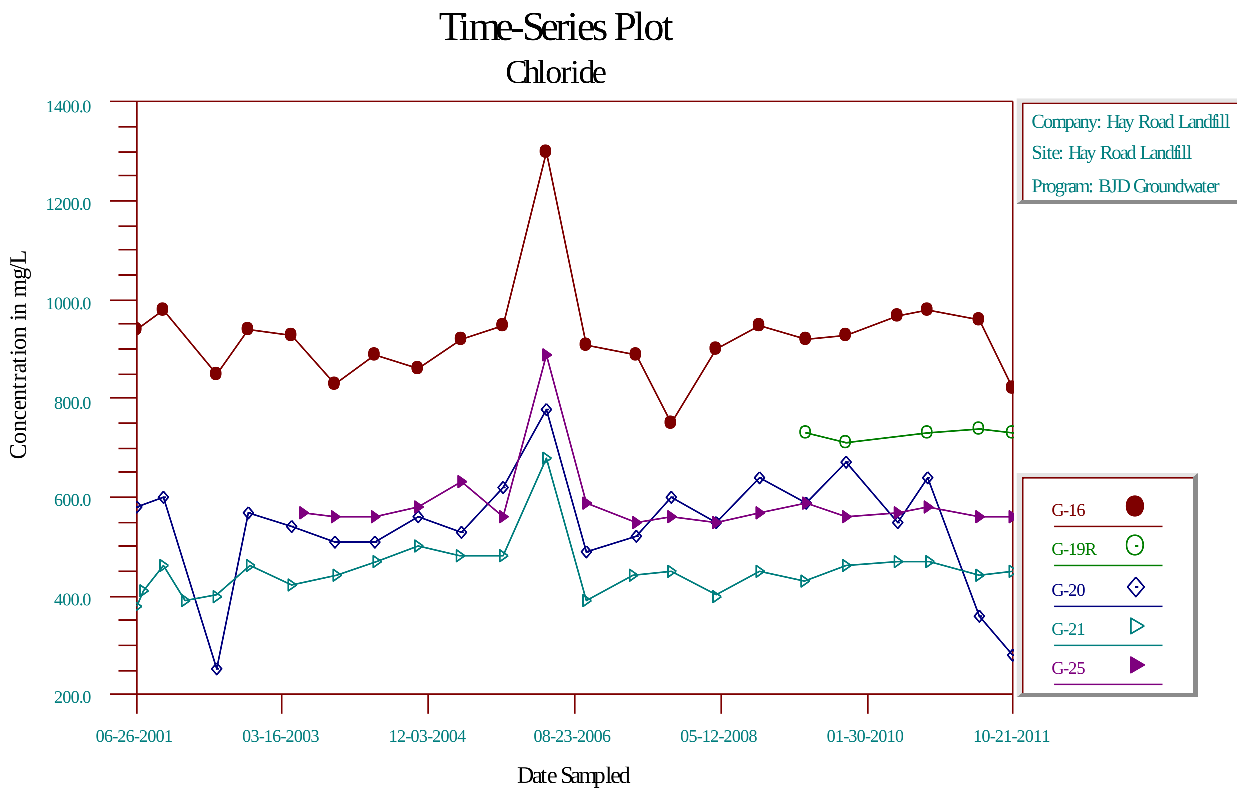

Time-Series Plot
pH
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in s.u.
8.0
7.8
7.6
7.4
7.2
7.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-16
G-19R
G-20
G-21
G-25

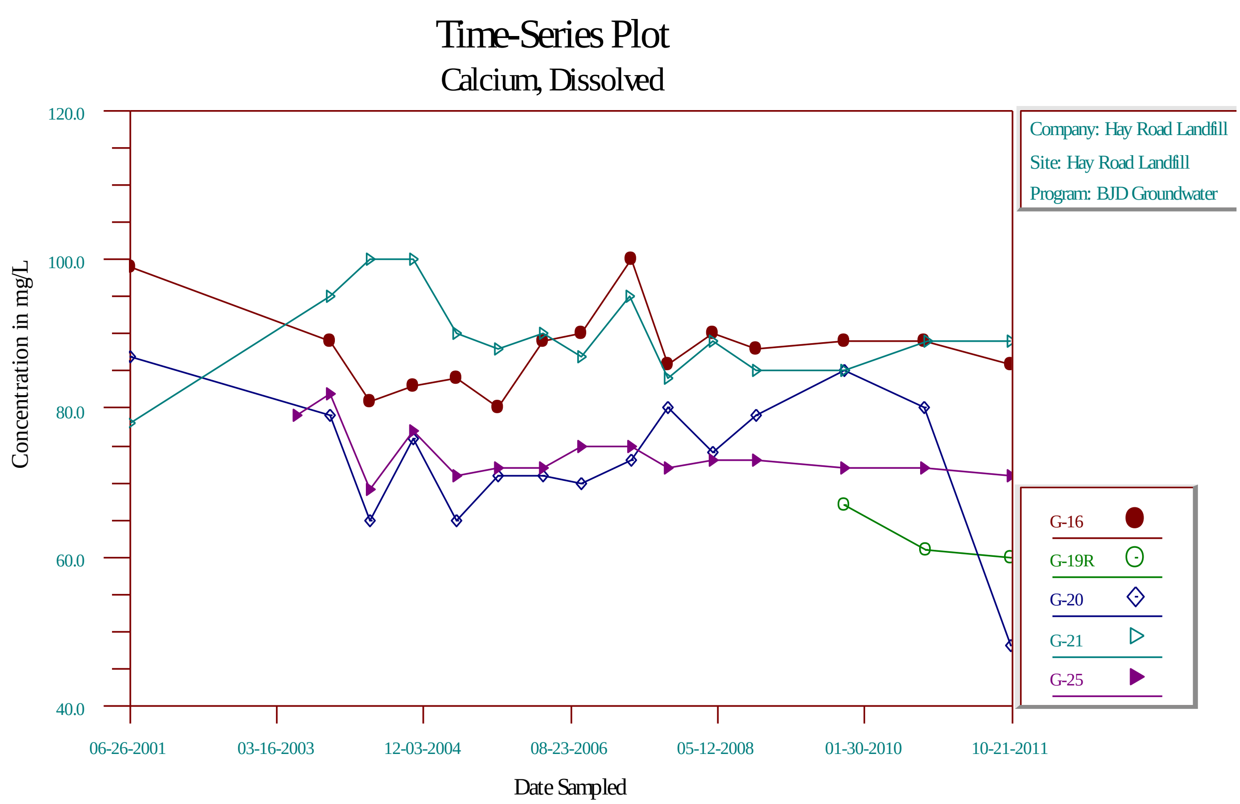

Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
250.0
200.0
150.0
100.0
50.0
0.0
-50.0
Concentration in mg/L
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-16
G-19R
G-20
G-21
G-25

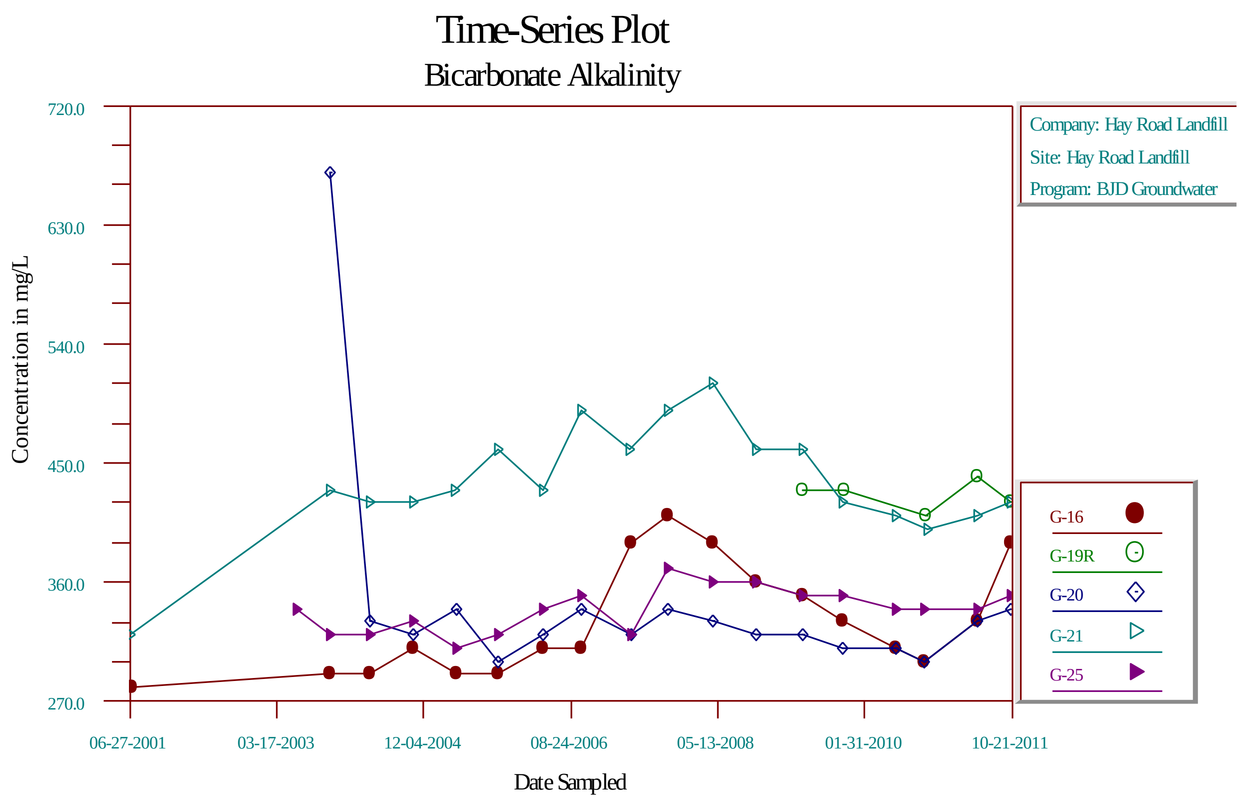

Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
280.0
240.0
200.0
160.0
120.0
80.0
Concentration in mg/L
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-16
G-19R
G-20
G-21
G-25

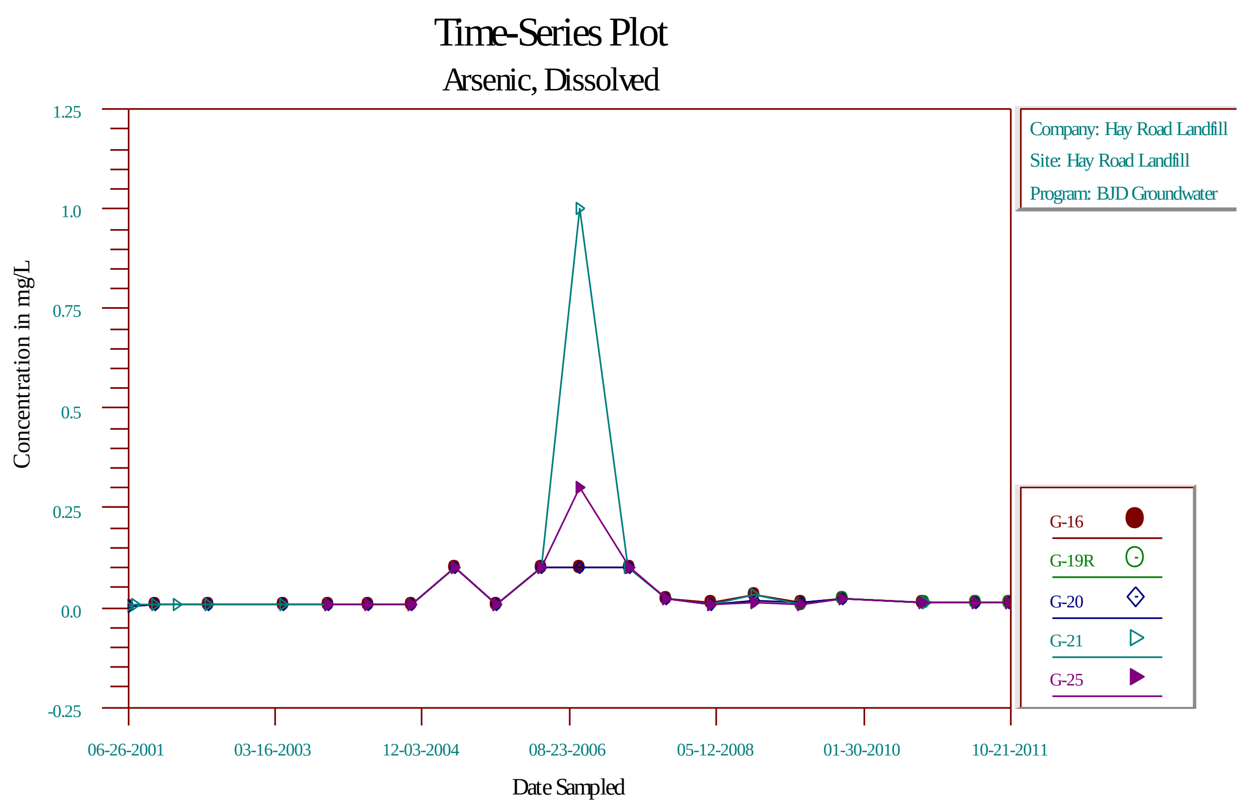

Time-Series Plot
Lead, Dissolved
Concentration in mg/L
1.25
1.0
0.75
0.5
0.25
0.0
-0.25
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

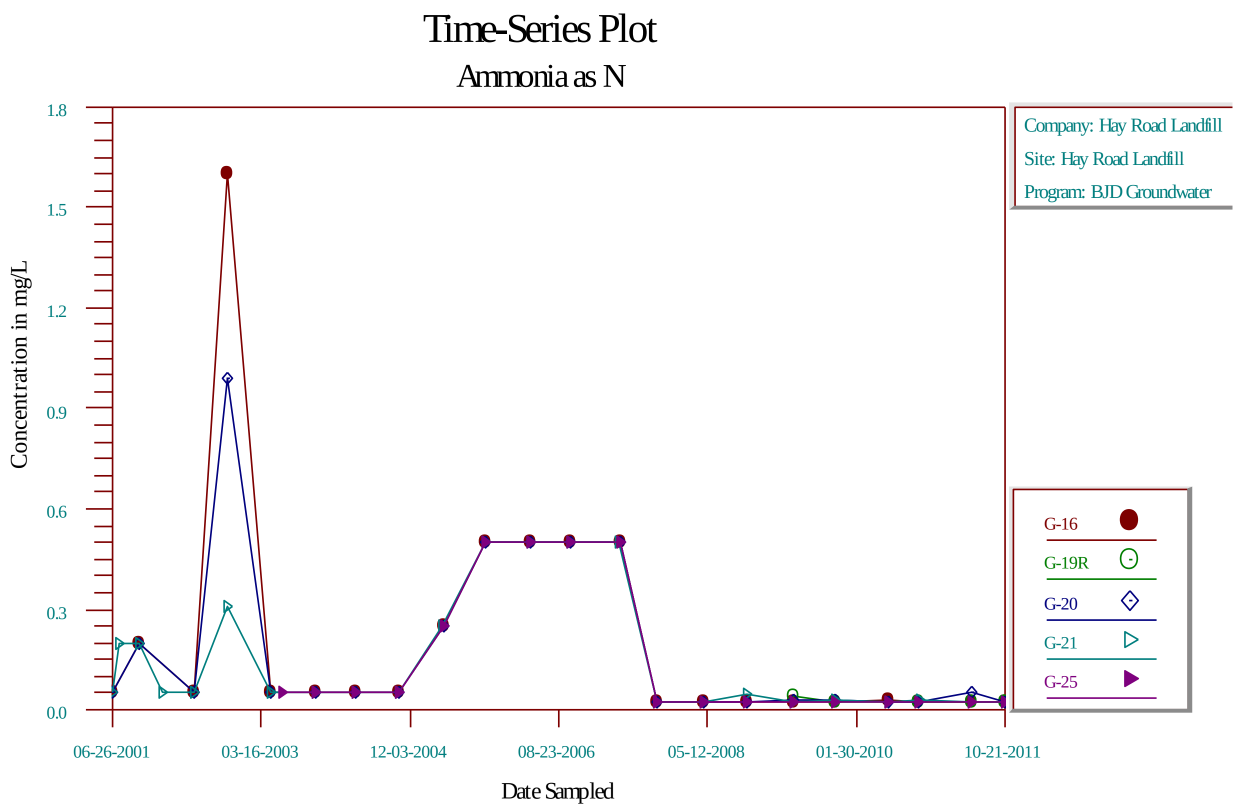

Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
0.12
0.09
0.06
0.03
0.0
-0.03
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25


Time-Series Plot
Chloride
Concentration in mg/L
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

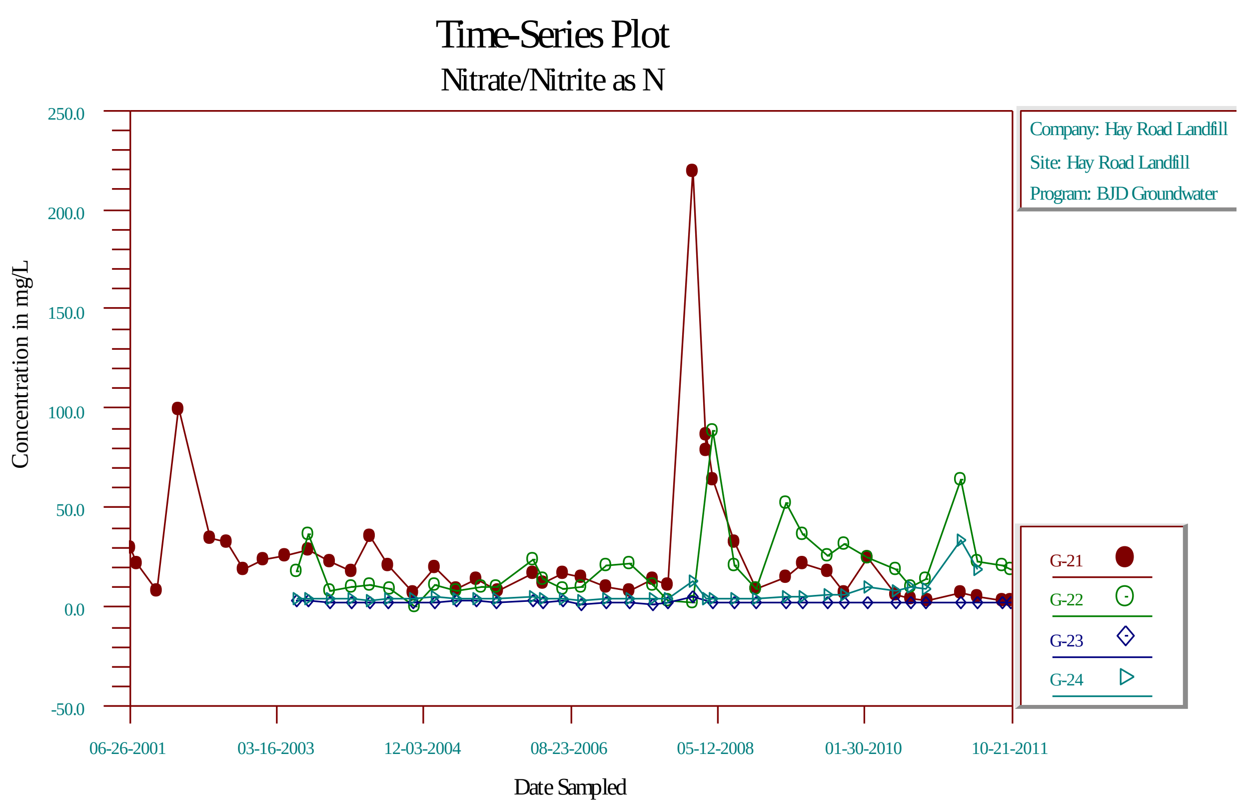

Time-Series Plot
Calcium, Dissolved
Concentration in mg/L
120.0
100.0
80.0
60.0
40.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25


Time-Series Plot
Bicarbonate Alkalinity
Concentration in mg/L
720.0
630.0
540.0
450.0
360.0
270.0
06-27-2001
03-17-2003
12-04-2004
08-24-2006
05-13-2008
01-31-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25

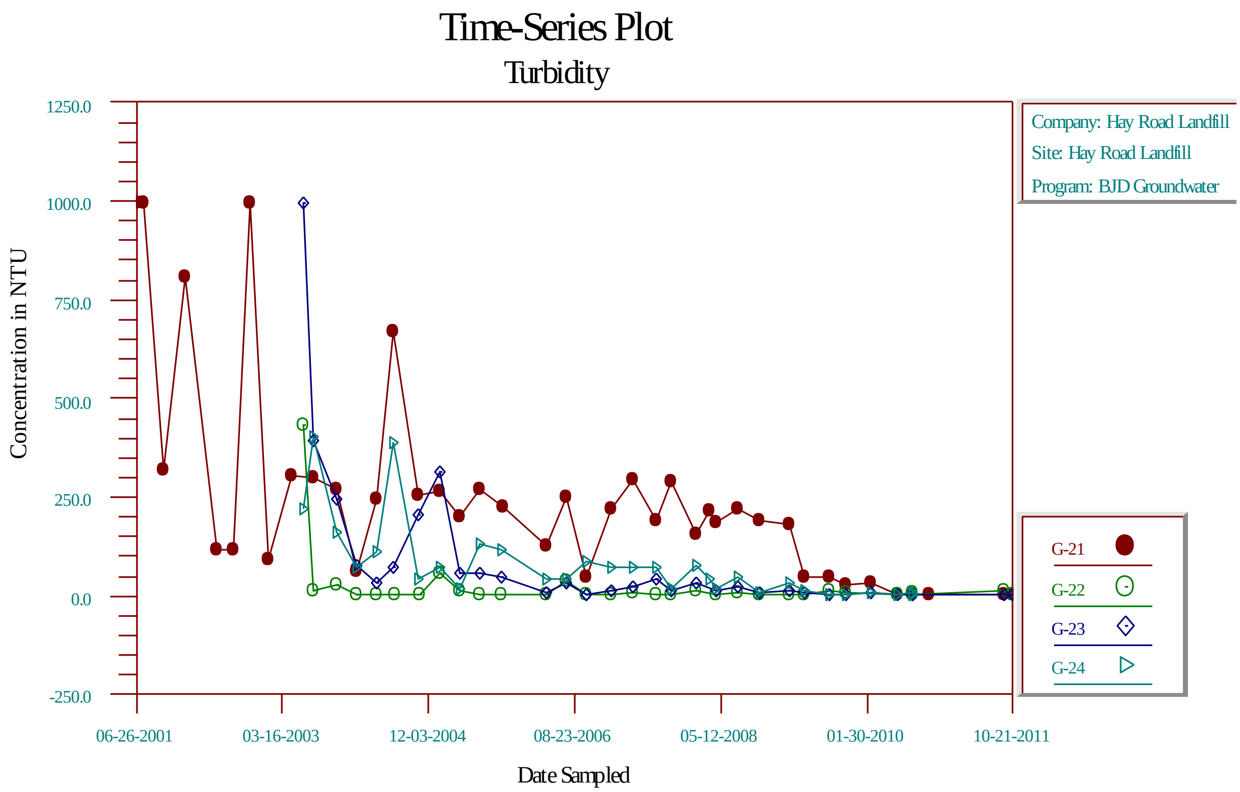

Time-Series Plot
Arsenic, Dissolved
Concentration in mg/L
1.25
1.0
0.75
0.5
0.25
0.0
-0.25
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-16
G-19R
G-20
G-21
G-25



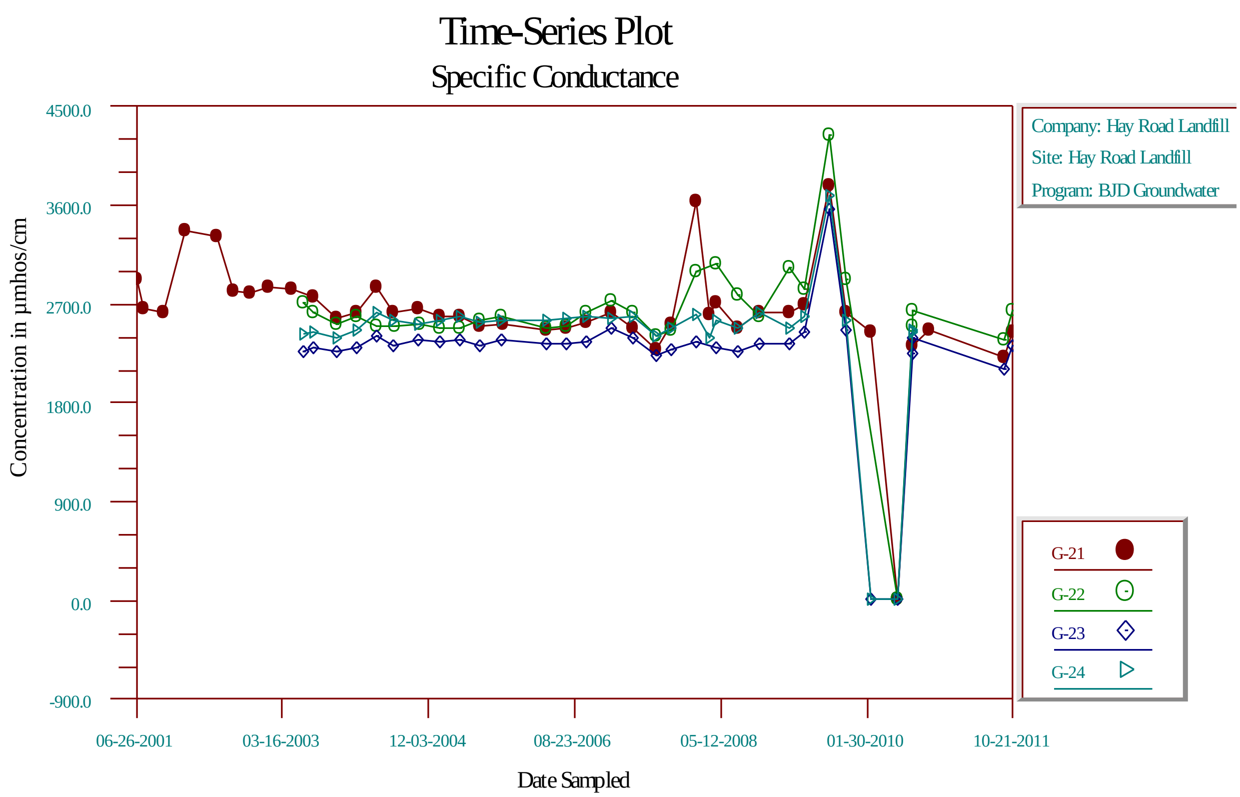
Time-Series Plot
Ammonia as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
1.8
1.5
1.2
0.9
0.6
0.3
0.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-16
G-19R
G-20
G-21
G-25



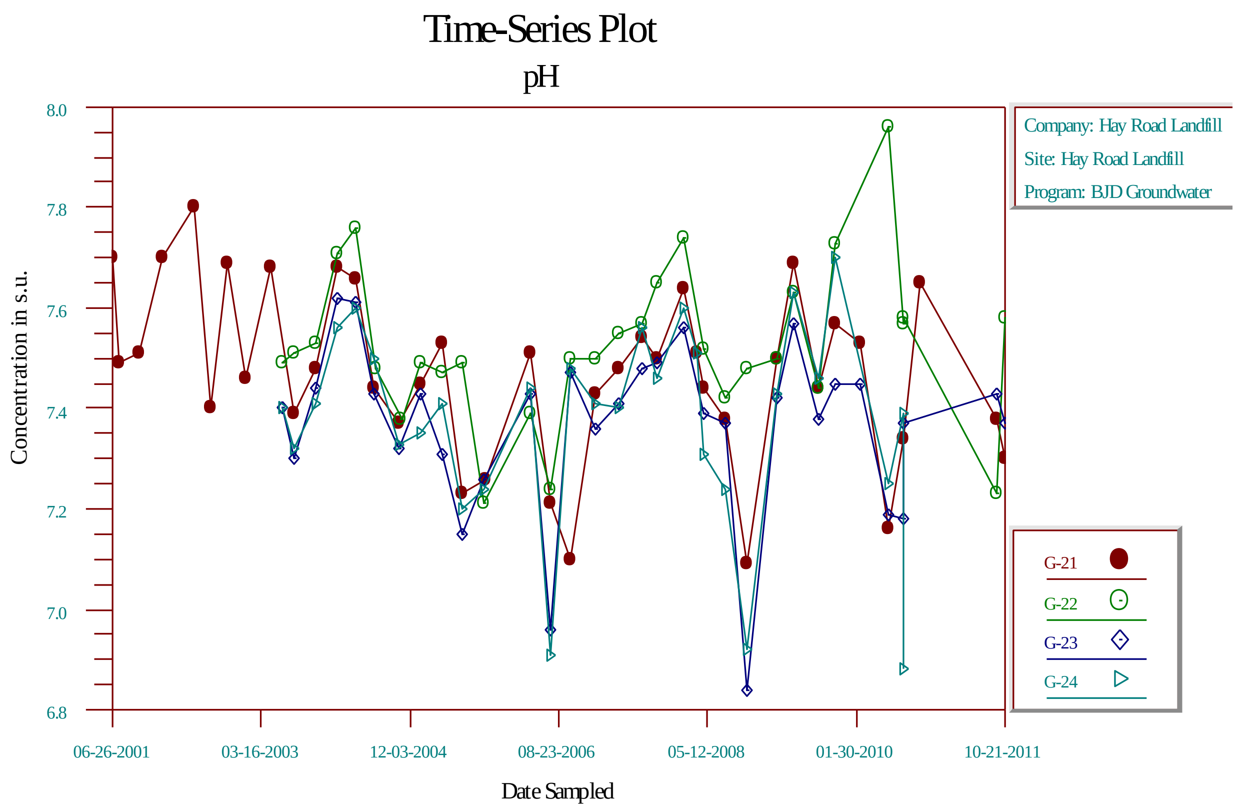
Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in mg/L
250.0
200.0
150.0
100.0
50.0
0.0
-50.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-21
G-22
G-23
G-24

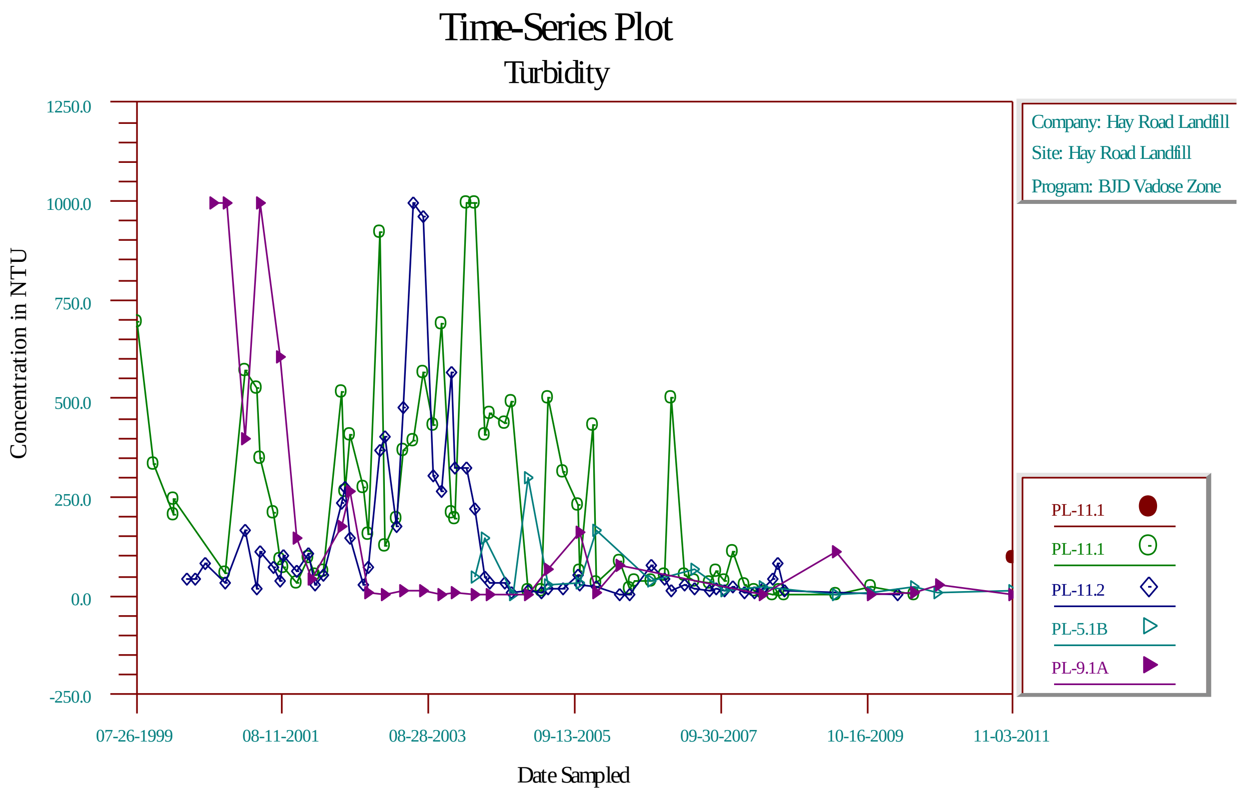


Time-Series Plot
Turbidity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in NTU
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-21
G-22
G-23
G-24

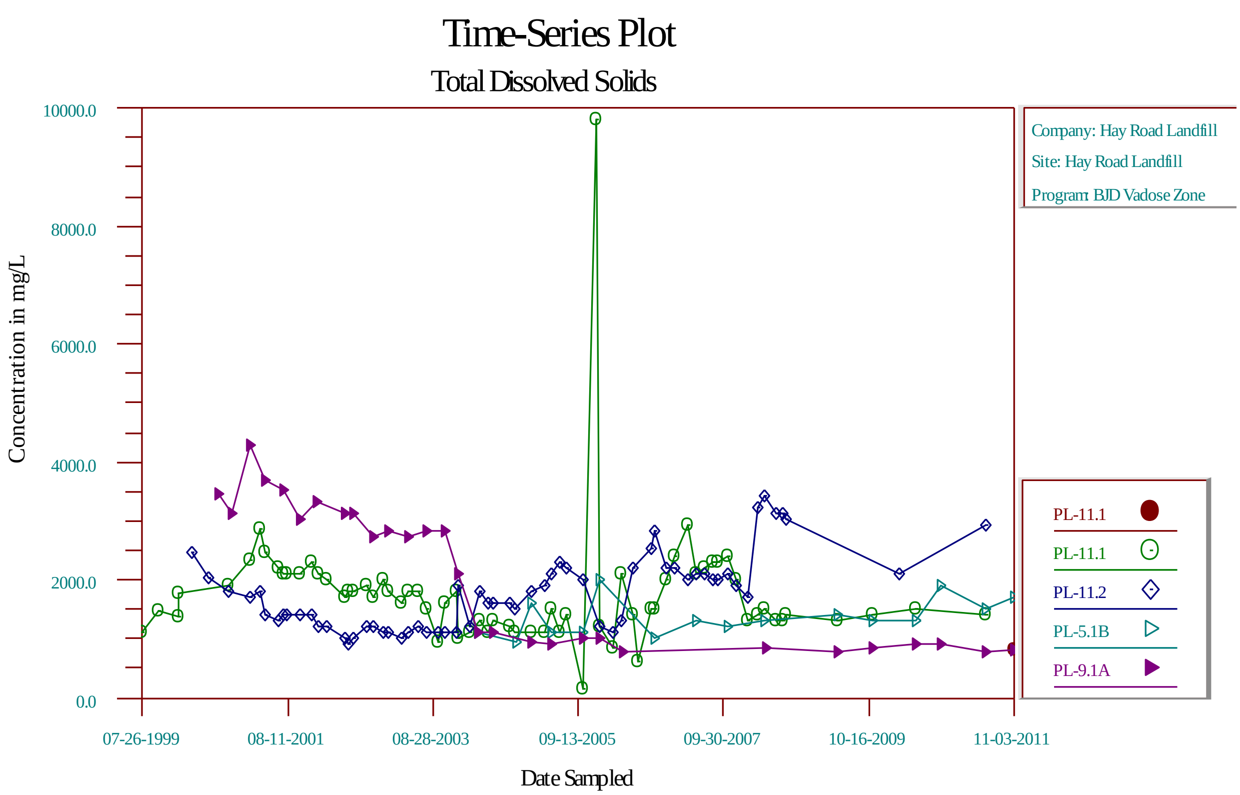


Time-Series Plot
Specific Conductance
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
Concentration in µmhos/cm
4500.0
3600.0
2700.0
1800.0
900.0
0.0
-900.0
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
G-21
G-22
G-23
G-24

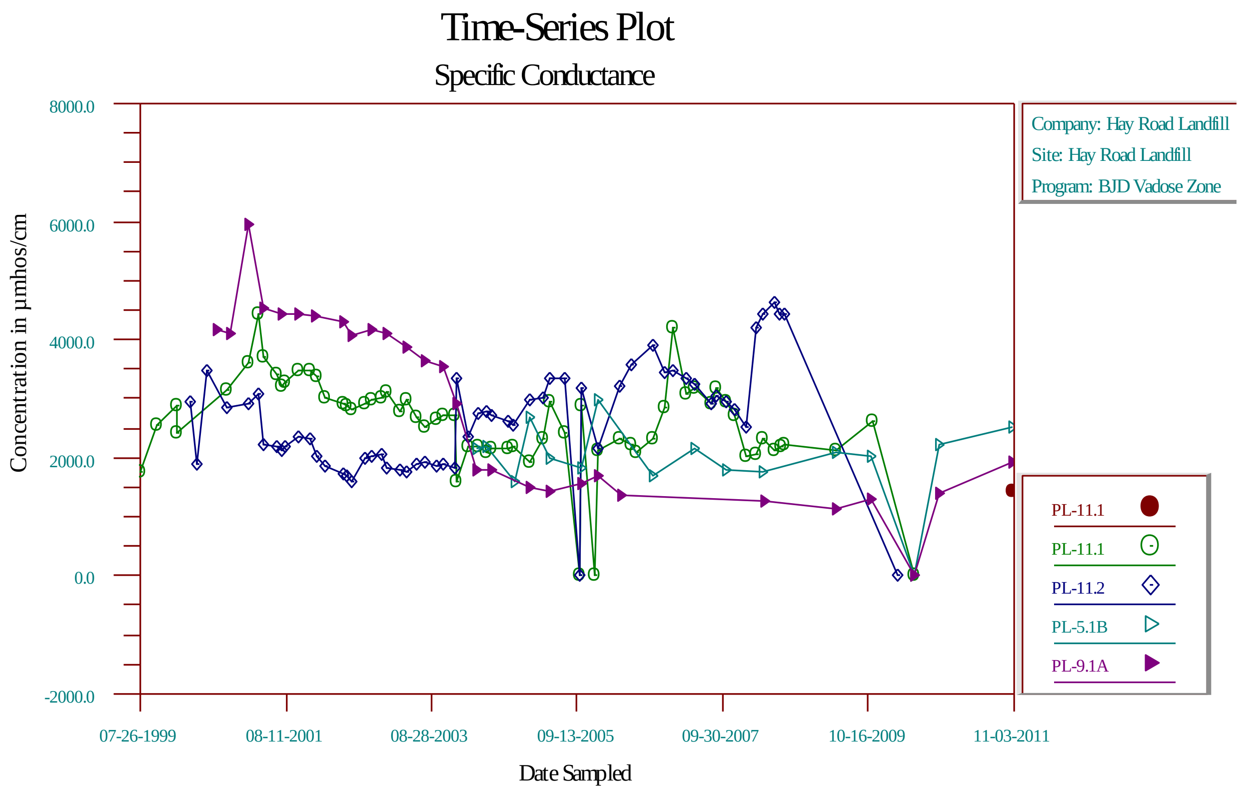

Time-Series Plot
pH
Concentration in s.u.
8.0
7.8
7.6
7.4
7.2
7.0
6.8
06-26-2001
03-16-2003
12-03-2004
08-23-2006
05-12-2008
01-30-2010
10-21-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Groundwater
G-21
G-22
G-23
G-24

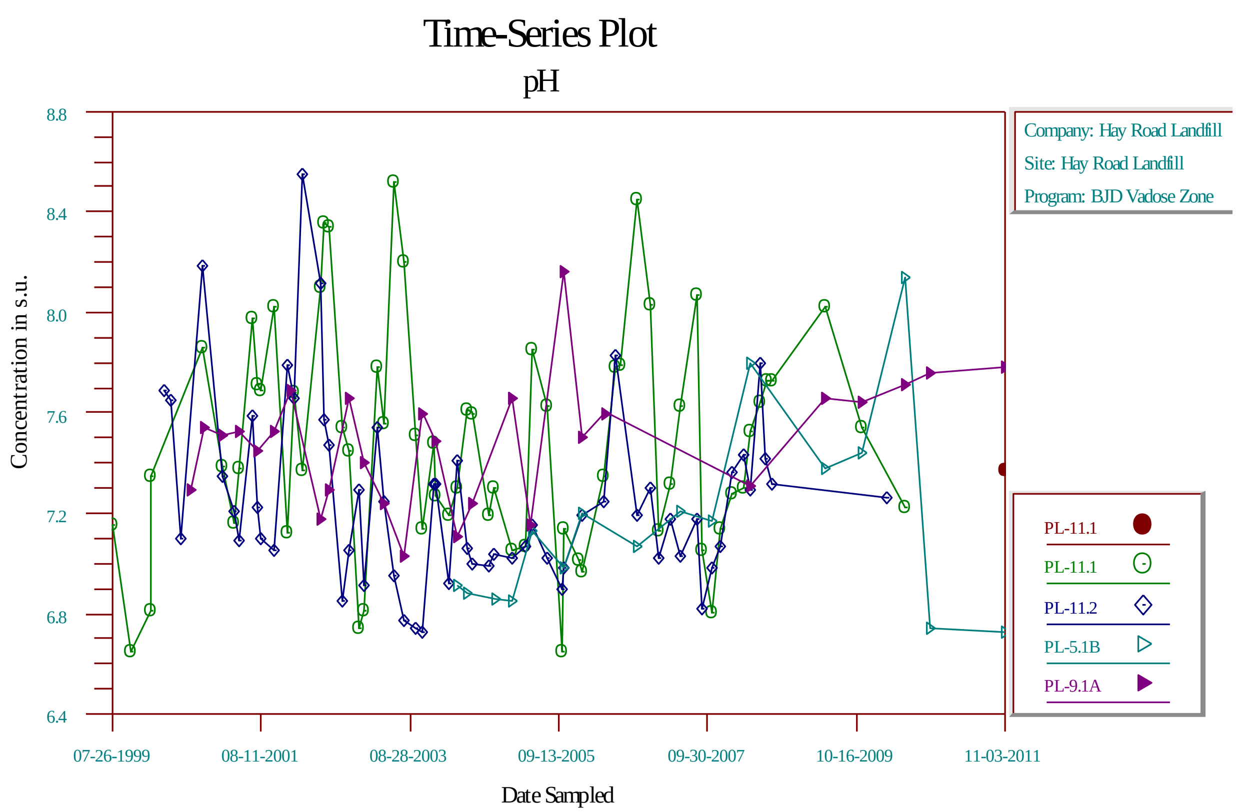


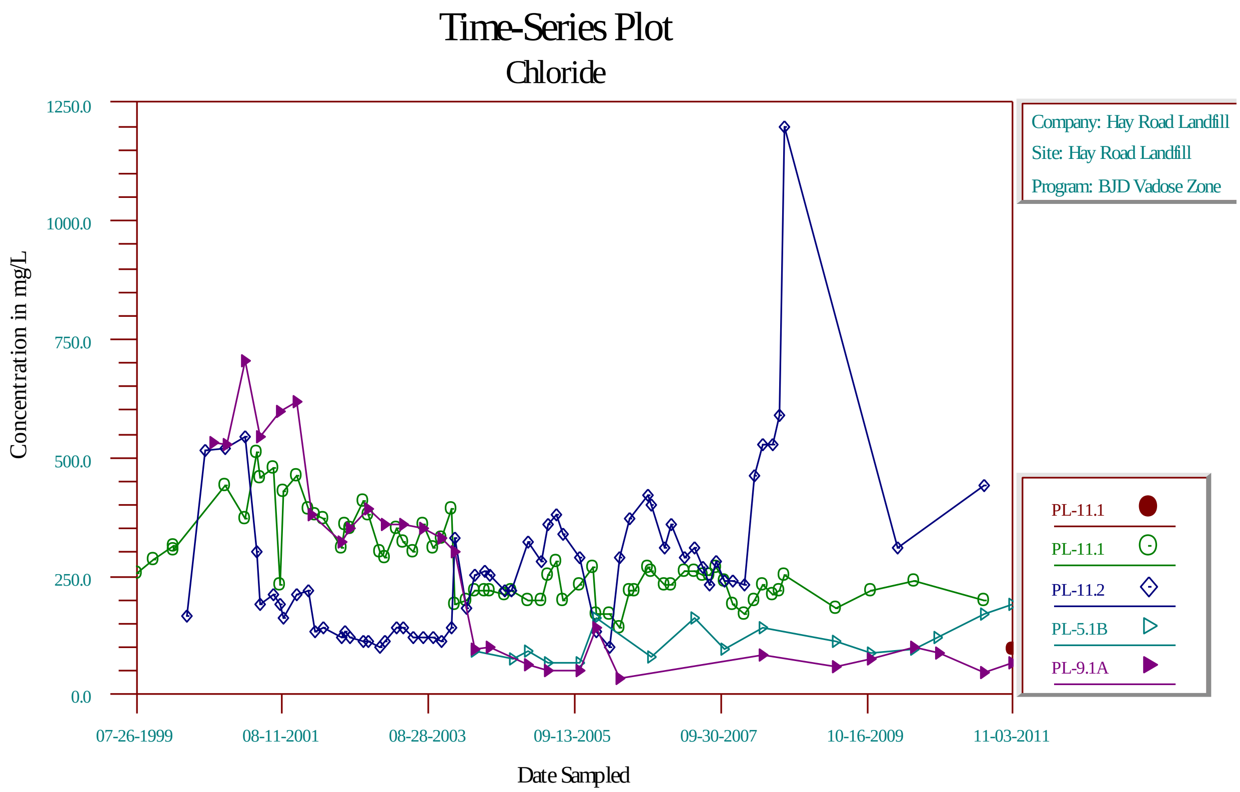
Time-Series Plot
Turbidity
Concentration in NTU
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

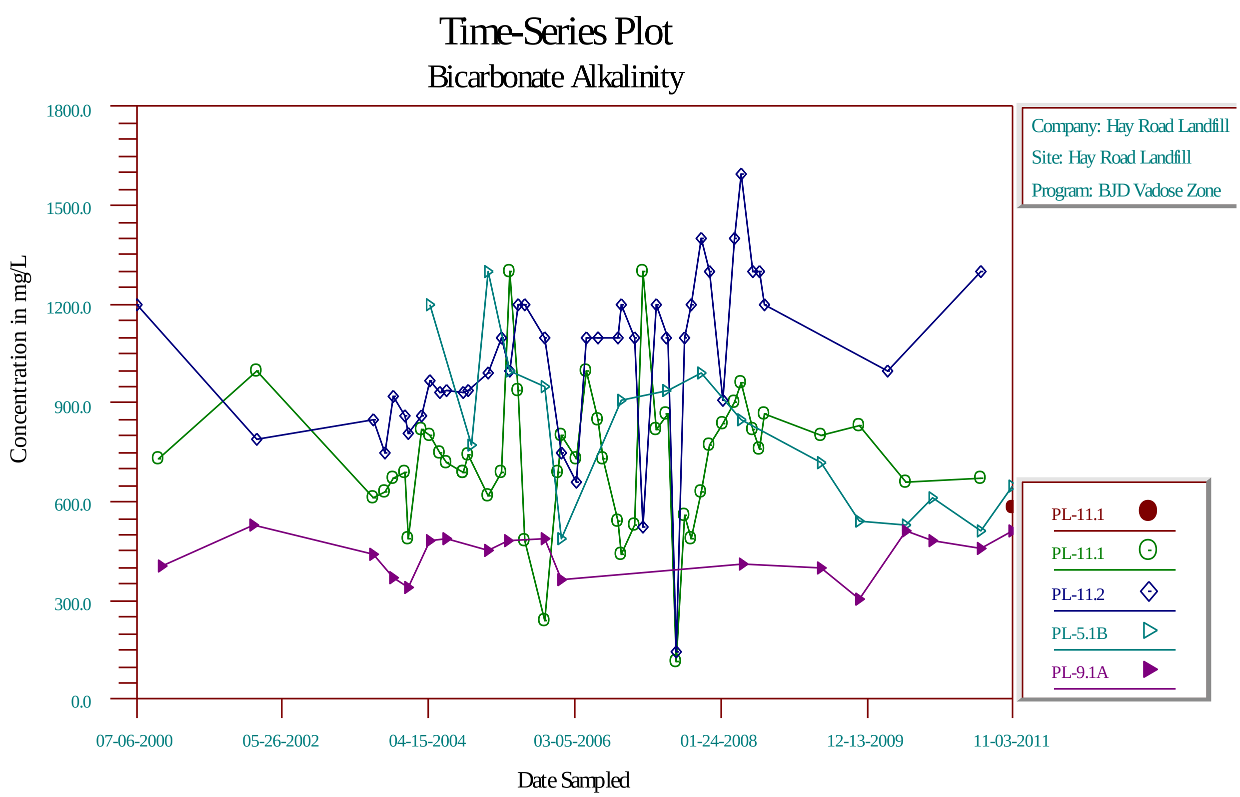


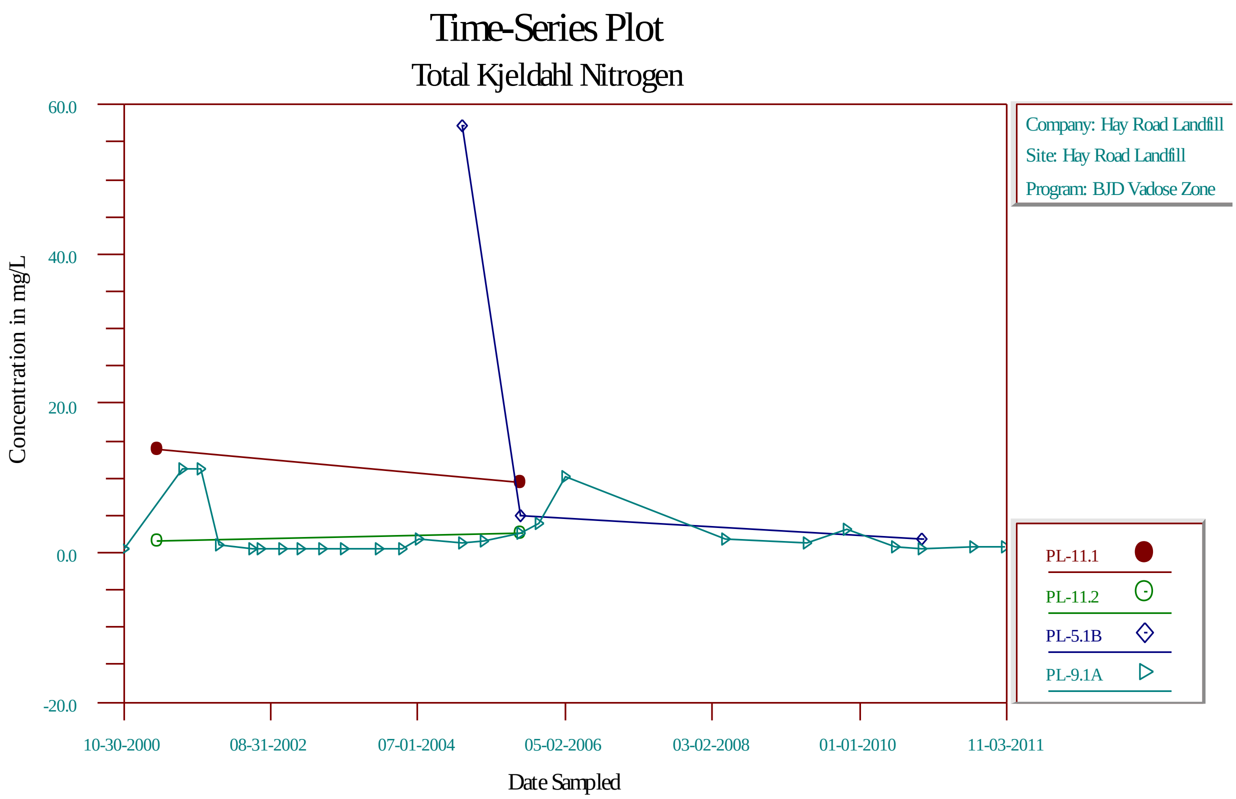
Time-Series Plot
Total Dissolved Solids
Concentration in mg/L
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

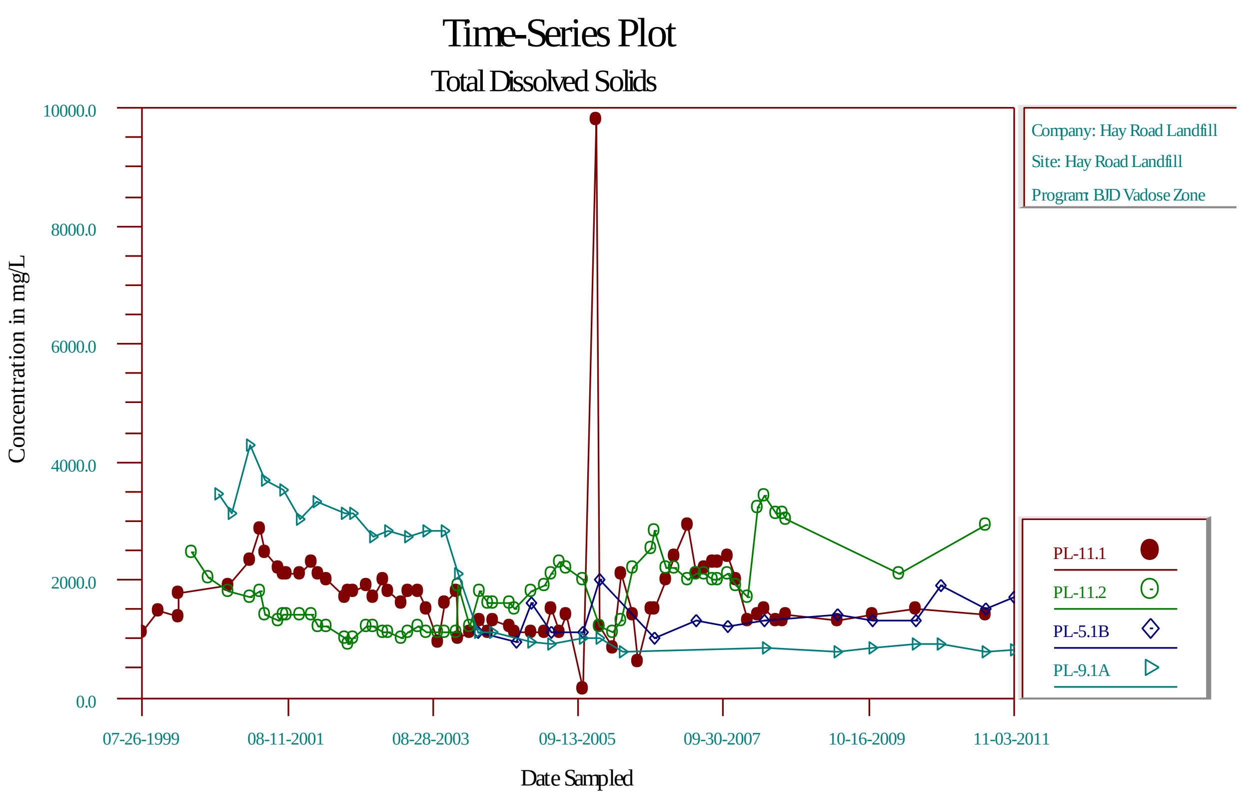

Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
8000.0
6000.0
4000.0
2000.0
0.0
-2000.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
pH
Concentration in s.u.
8.8
8.4
8.0
7.6
7.2
6.8
6.4
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
Chloride
Concentration in mg/L
1250.0
1000.0
750.0
500.0
250.0
0.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

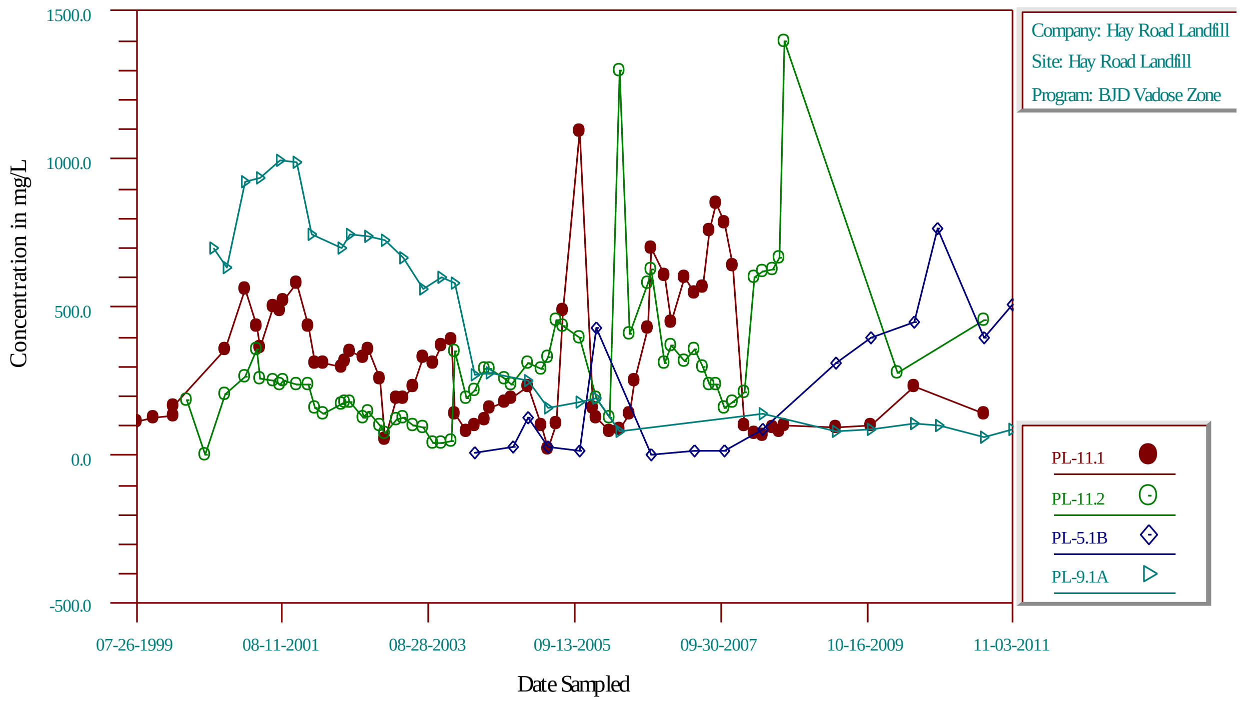

Time-Series Plot
Bicarbonate Alkalinity
Concentration in mg/L
1800.0
1500.0
1200.0
900.0
600.0
300.0
0.0
07-06-2000
05-26-2002
04-15-2004
03-05-2006
01-24-2008
12-13-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
Total Kjeldahl Nitrogen
60.0
40.0
20.0
0.0
-20.0
Concentration in mg/L
10-30-2000
08-31-2002
07-01-2004
05-02-2006
03-02-2008
01-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
Total Dissolved Solids
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
Concentration in mg/L
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

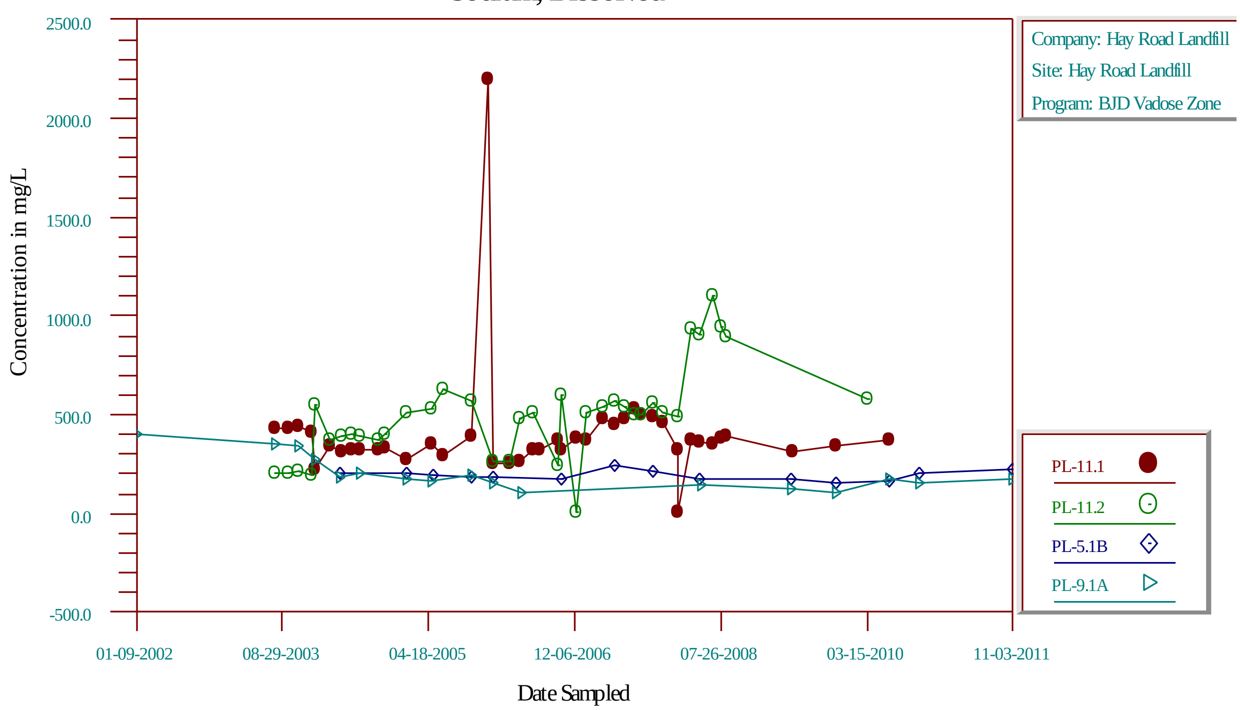
Time-Series Plot

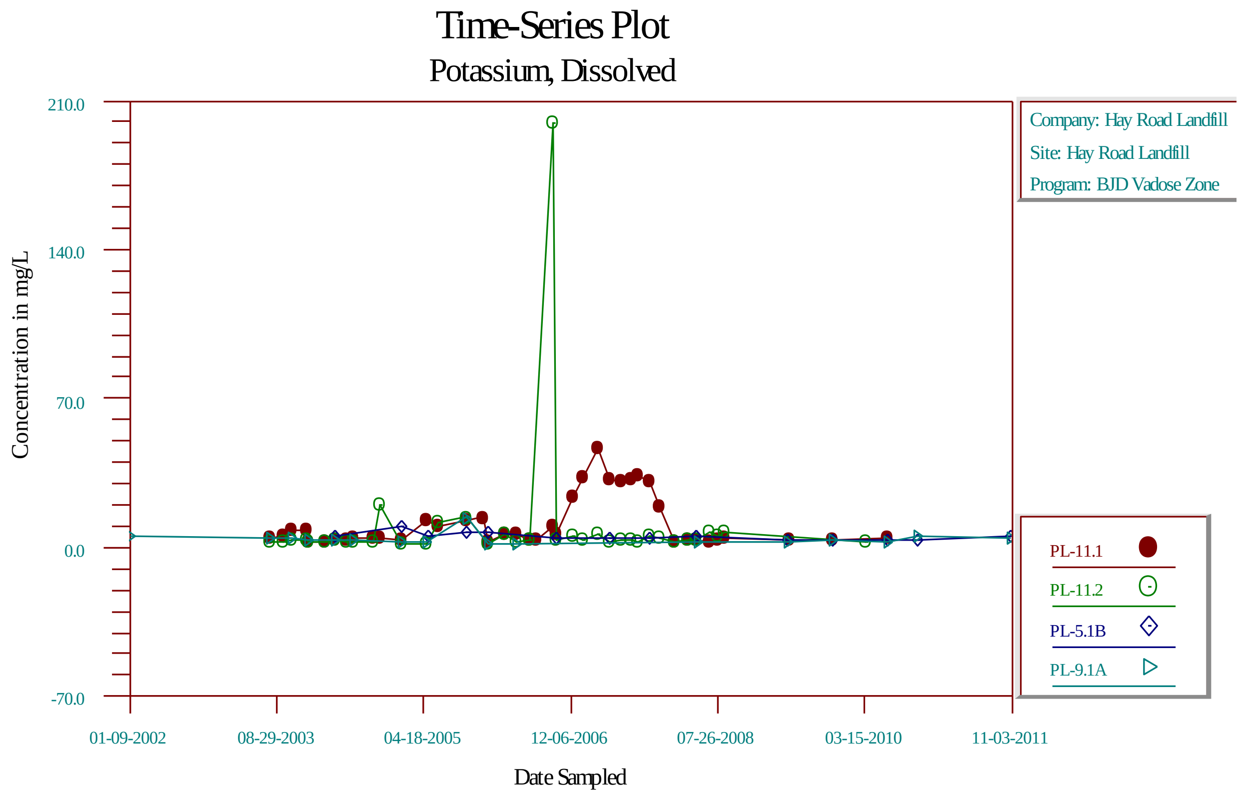
Sulfate as SO4

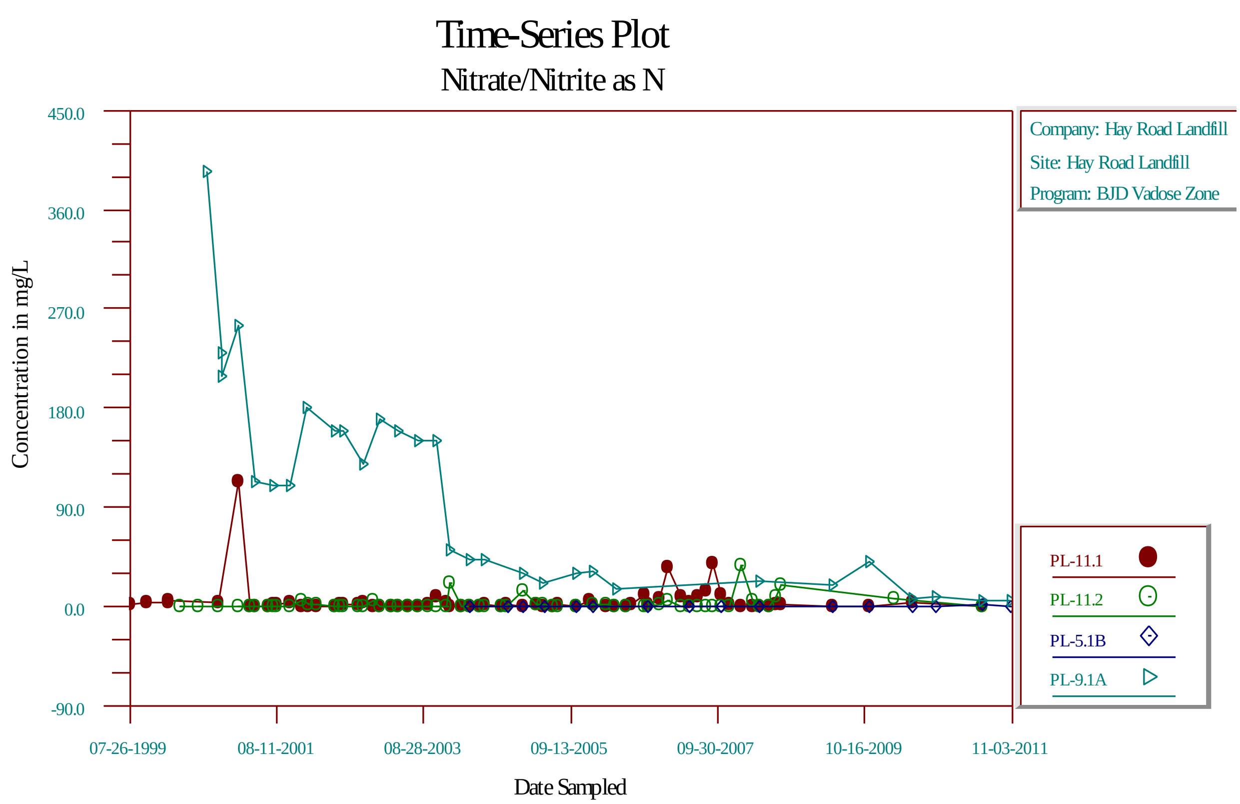


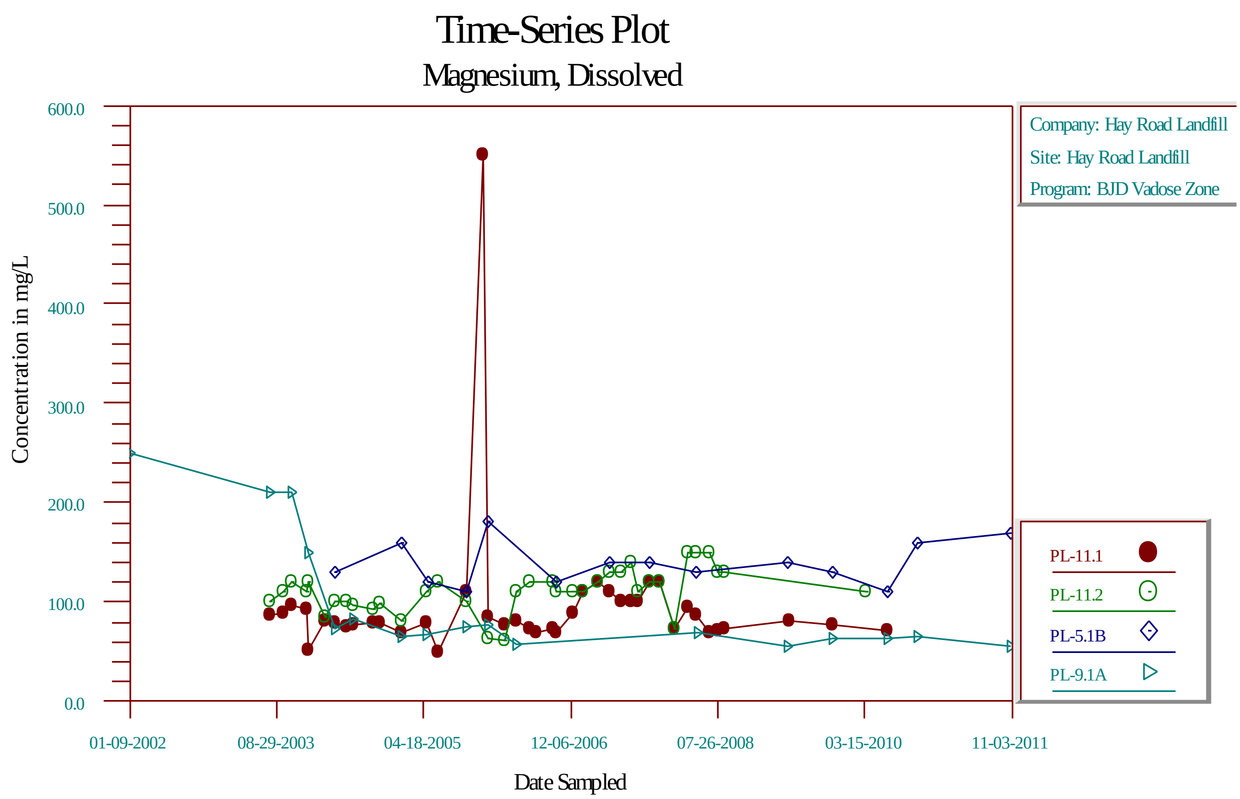
Time-Series Plot

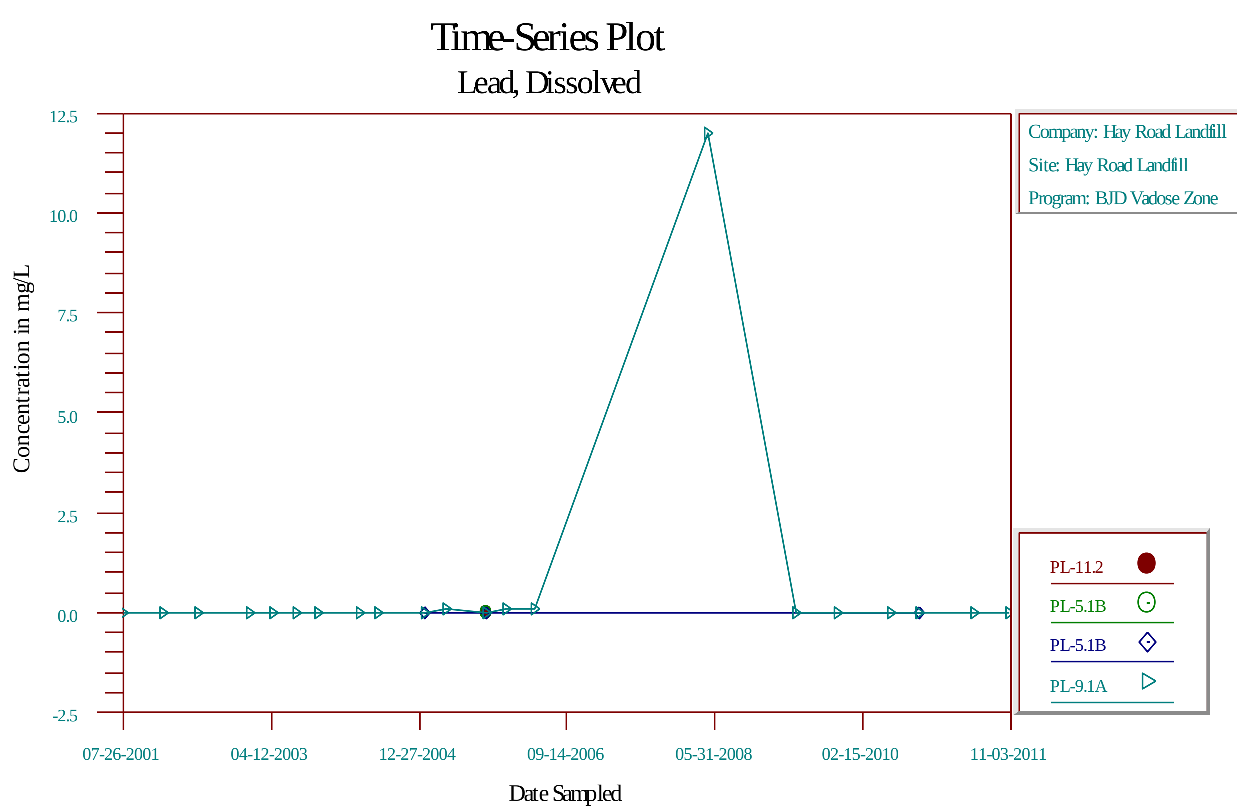
Sodium, Dissolved

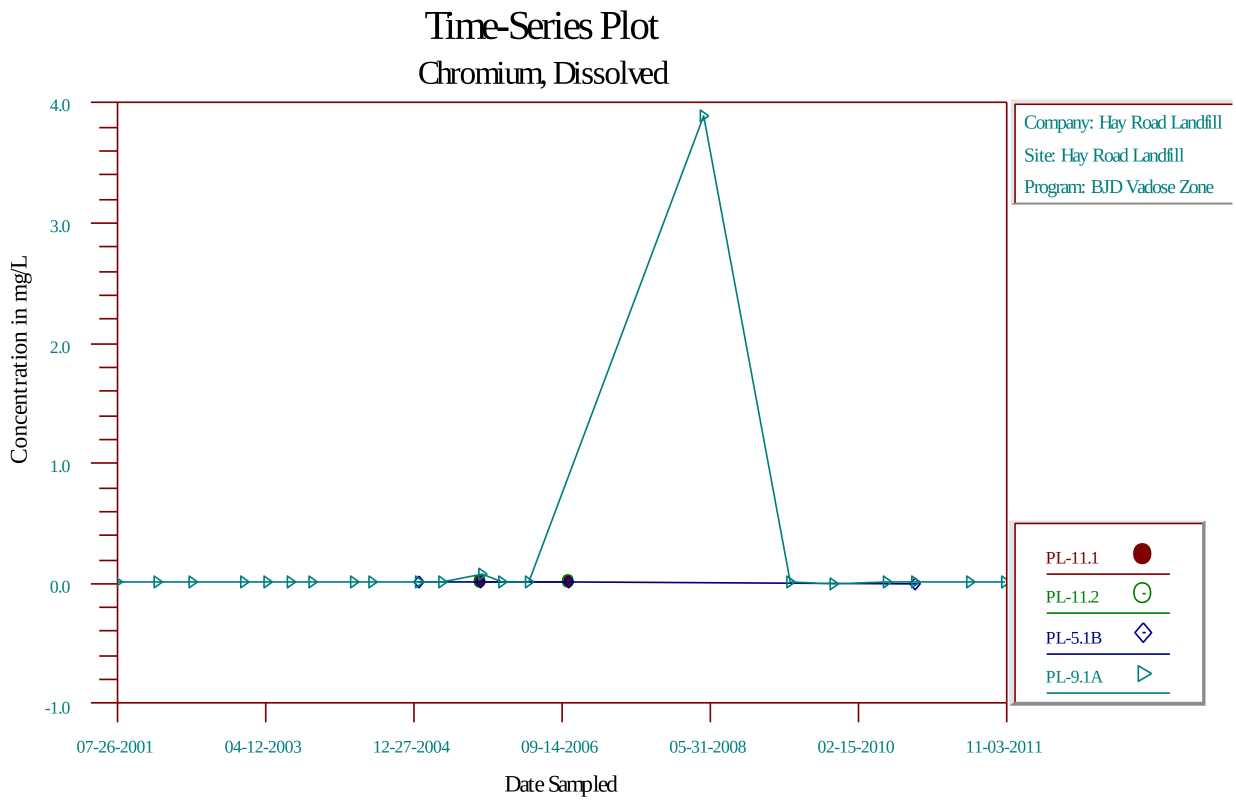


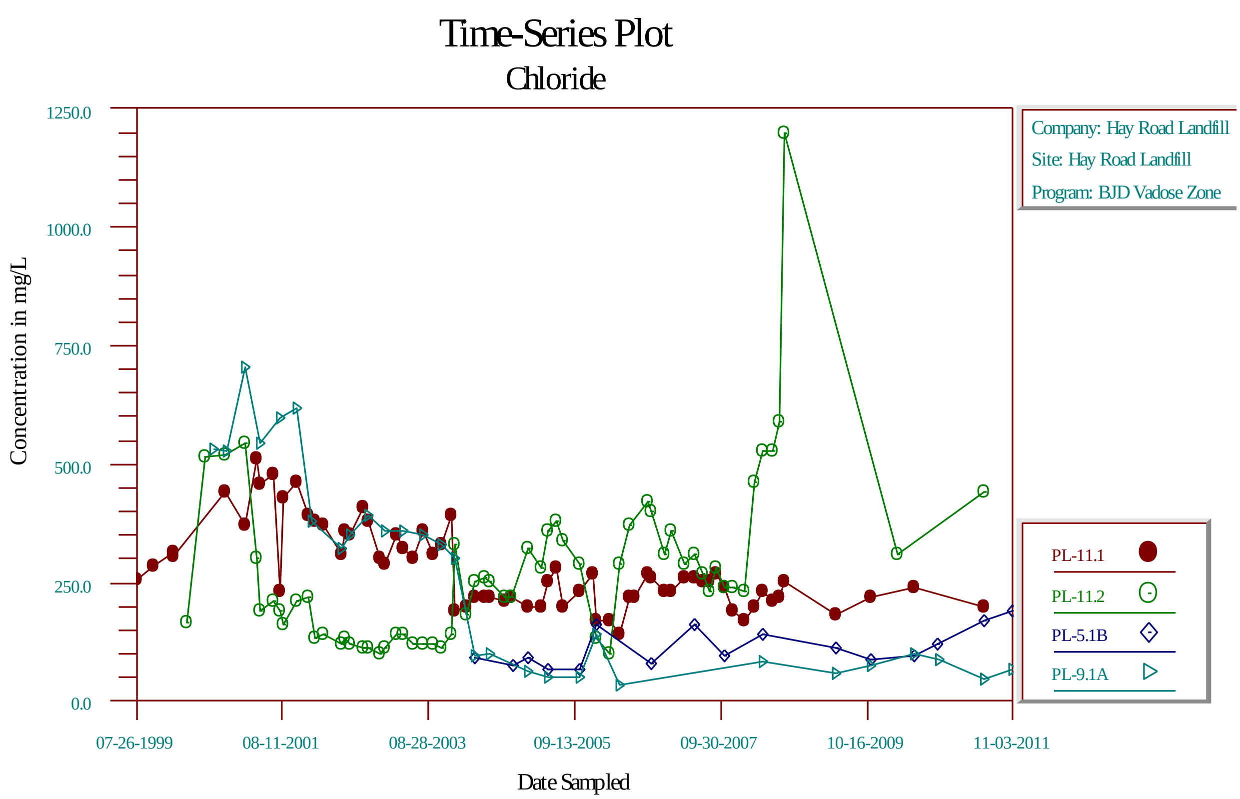

Time-Series Plot
Potassium, Dissolved
Concentration in mg/L
210.0
140.0
70.0
0.0
-70.0
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

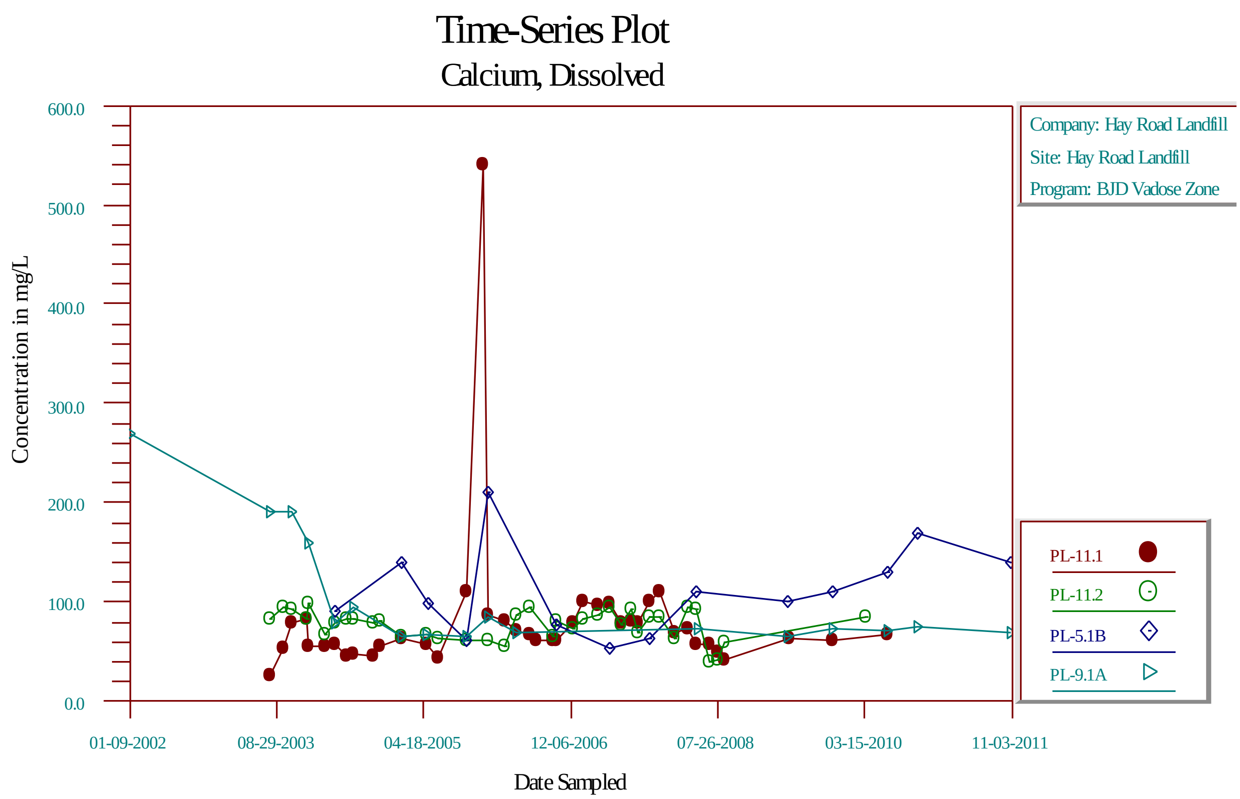

Time-Series Plot
Nitrate/Nitrite as N
Concentration in mg/L
450.0
360.0
270.0
180.0
90.0
0.0
-90.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

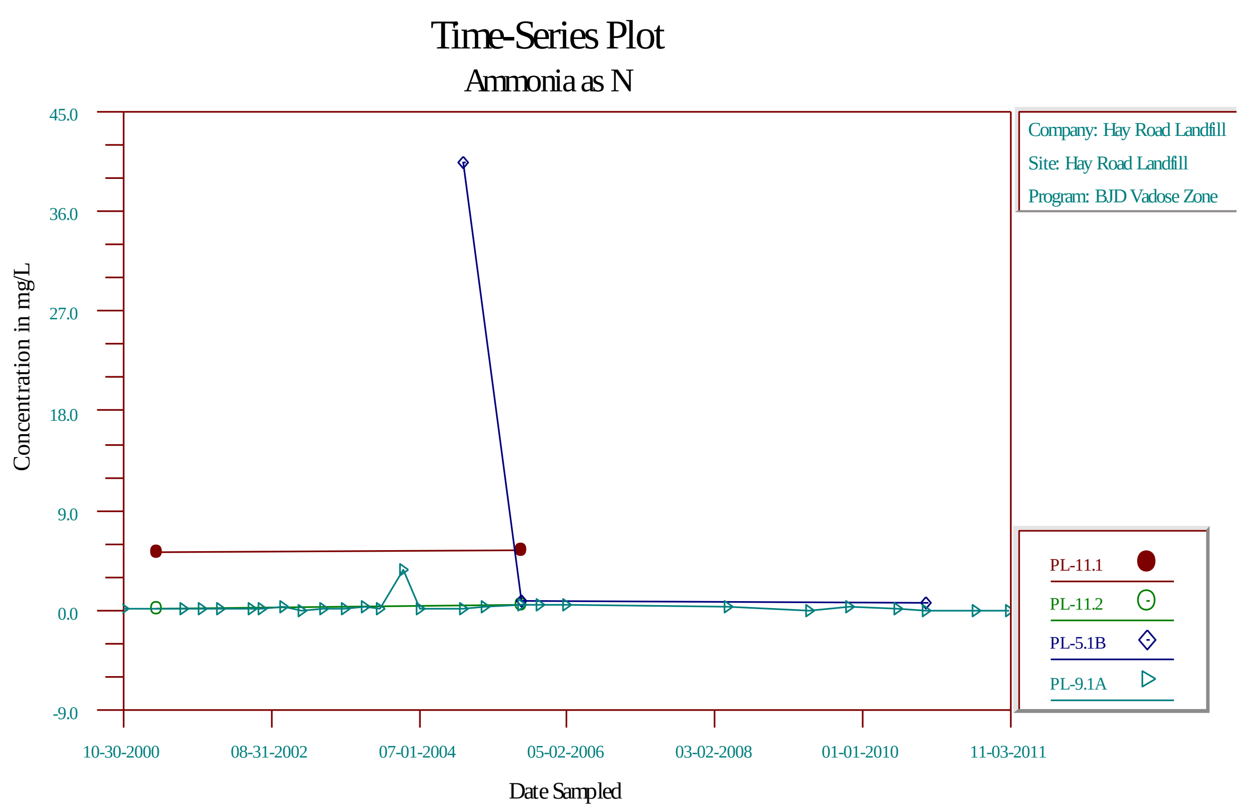

Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
0.0
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled

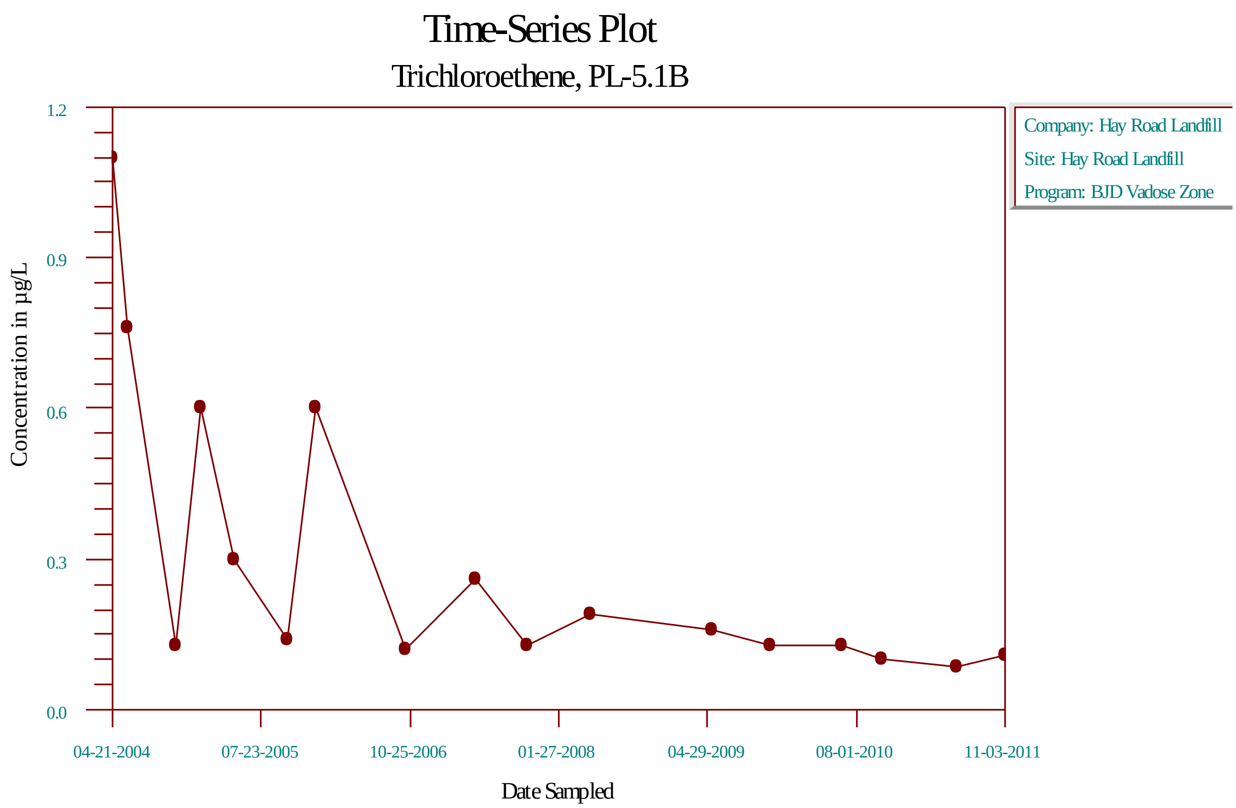

Time-Series Plot
Lead, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.2
PL-5.1B
PL-5.1B
PL-9.1A
Concentration in mg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
07-26-2001
04-12-2003
12-27-2004
09-14-2006
05-31-2008
02-15-2010
11-03-2011
Date Sampled

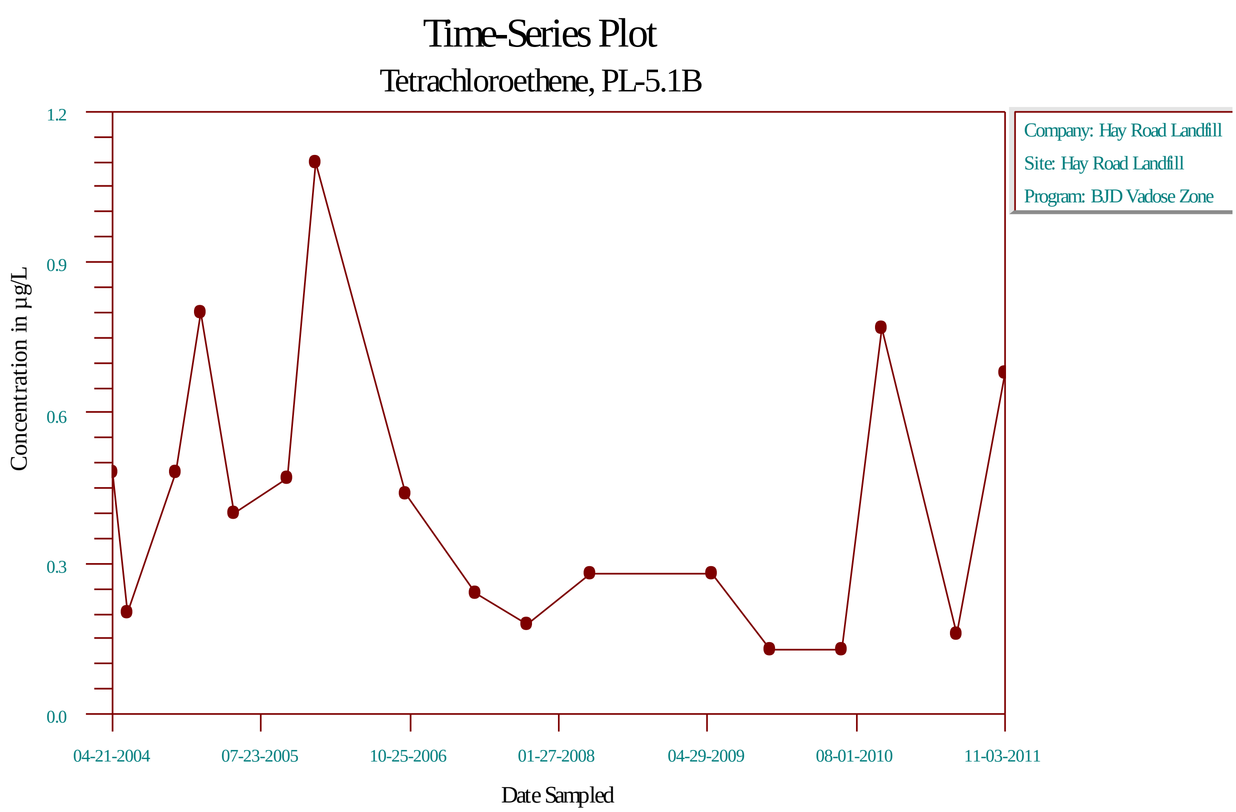

Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
4.0
3.0
2.0
1.0
0.0
-1.0
07-26-2001
04-12-2003
12-27-2004
09-14-2006
05-31-2008
02-15-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

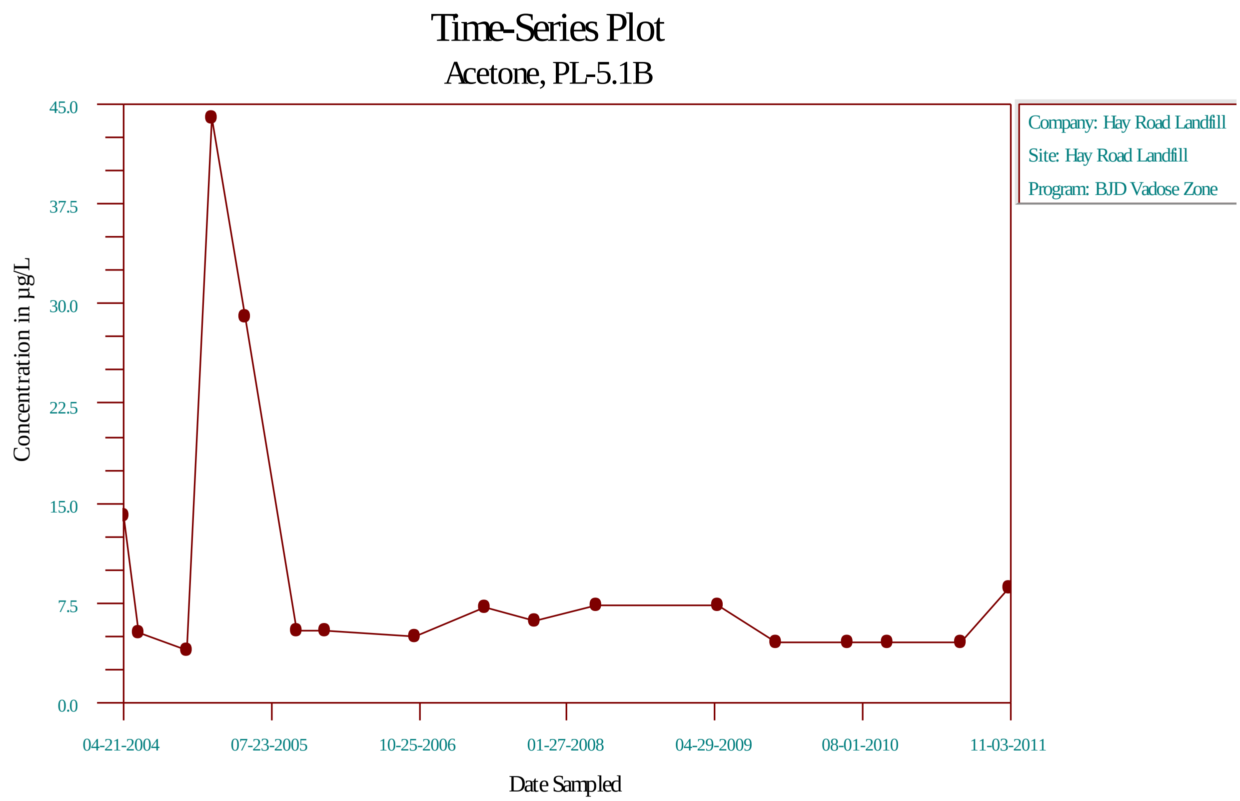

Time-Series Plot
Chloride
Concentration in mg/L
1250.0
1000.0
750.0
500.0
250.0
0.0
07-26-1999
08-11-2001
08-28-2003
09-13-2005
09-30-2007
10-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
Calcium, Dissolved
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
0.0
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A

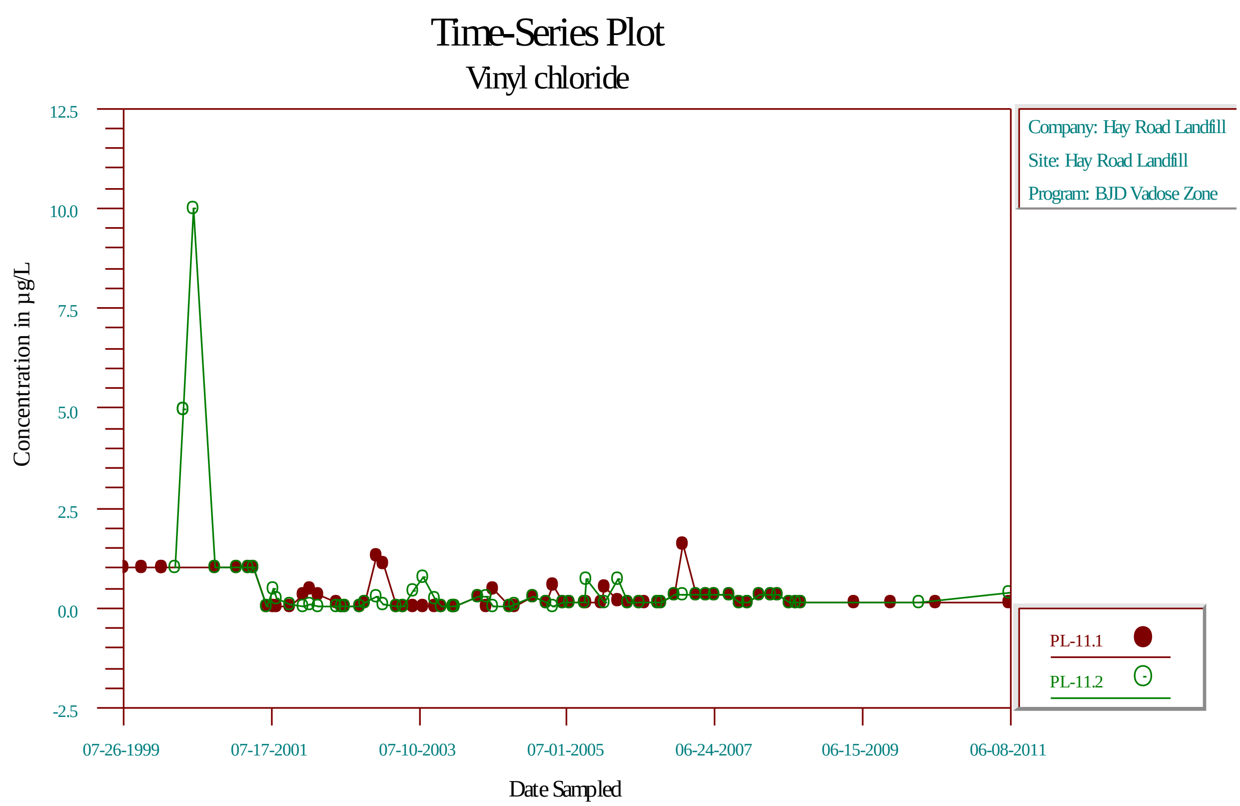

Time-Series Plot
Ammonia as N
Concentration in mg/L
45.0
36.0
27.0
18.0
9.0
0.0
-9.0
10-30-2000
08-31-2002
07-01-2004
05-02-2006
03-02-2008
01-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2
PL-5.1B
PL-9.1A


Time-Series Plot
Trichloroethene, PL-5.1B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
Concentration in µg/L
1.2
0.9
0.6
0.3
0.0
04-21-2004
07-23-2005
10-25-2006
01-27-2008
04-29-2009
08-01-2010
11-03-2011
Date Sampled


Time-Series Plot
Tetrachloroethene, PL-5.1B
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
Concentration in µg/L
1.2
0.9
0.6
0.3
0.0
04-21-2004
07-23-2005
10-25-2006
01-27-2008
04-29-2009
08-01-2010
11-03-2011
Date Sampled



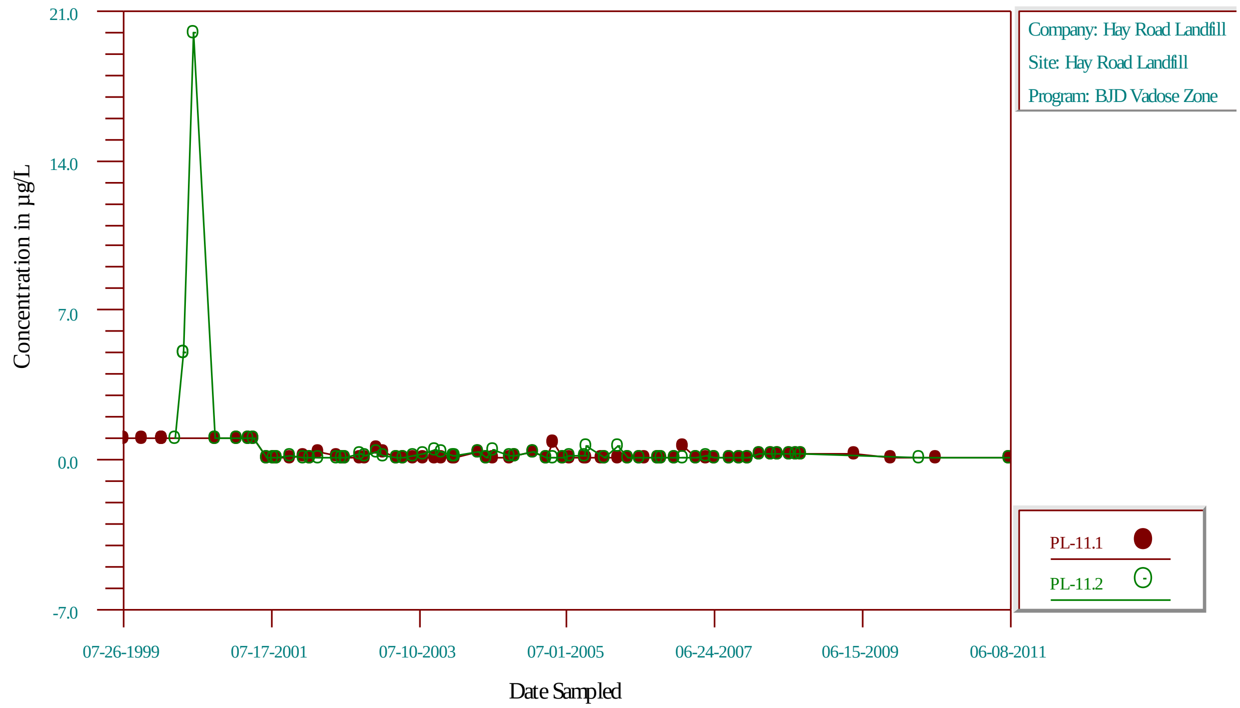
Time-Series Plot
Acetone, PL-5.1B
Concentration in µg/L
45.0
37.5
30.0
22.5
15.0
7.5
0.0
04-21-2004
07-23-2005
10-25-2006
01-27-2008
04-29-2009
08-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone



Time-Series Plot
Vinyl chloride
Concentration in µg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
07-26-1999
07-17-2001
07-10-2003
07-01-2005
06-24-2007
06-15-2009
06-08-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2

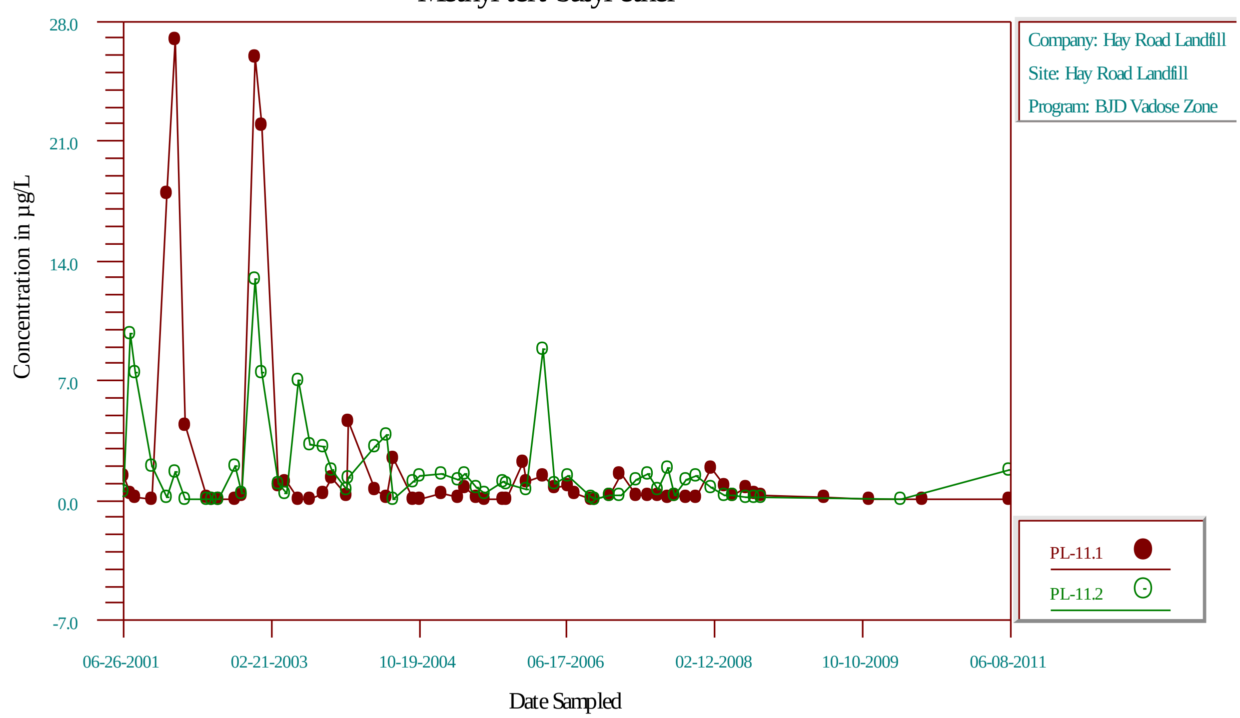
Time-Series Plot

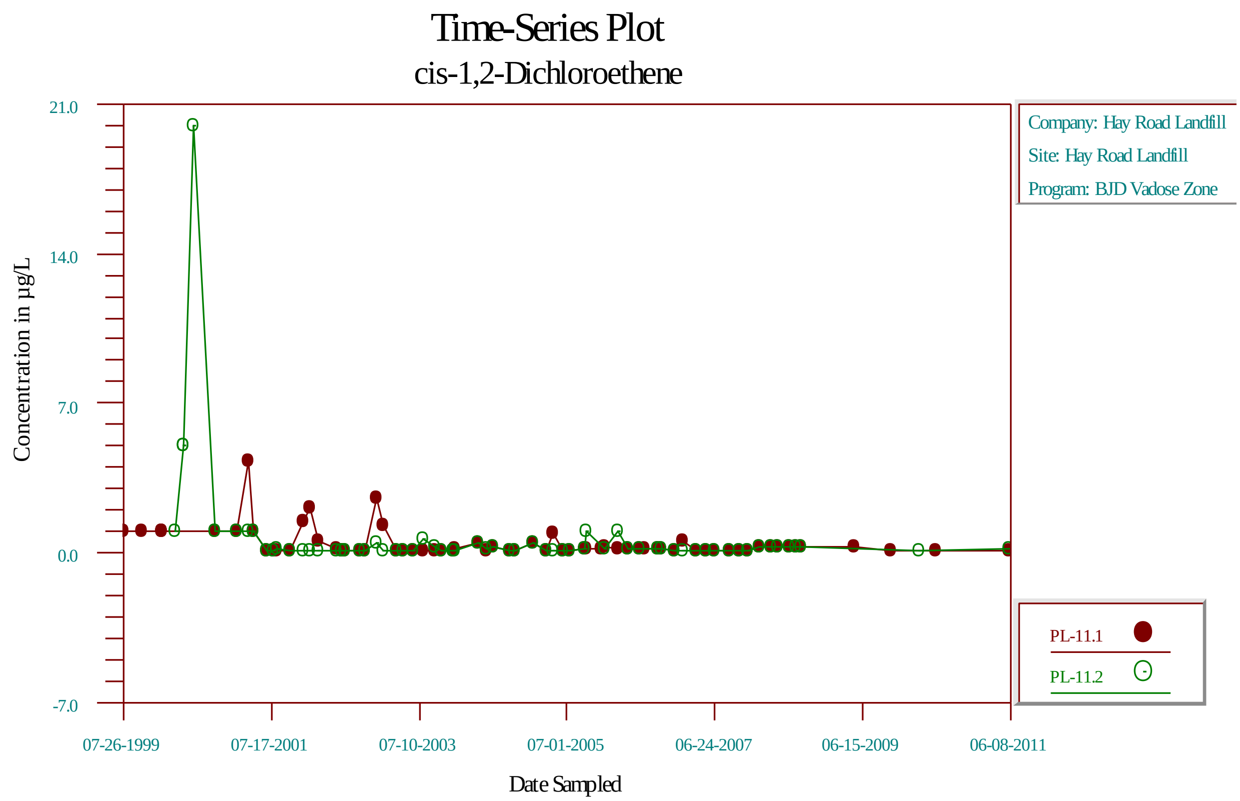
Tetrachloroethene

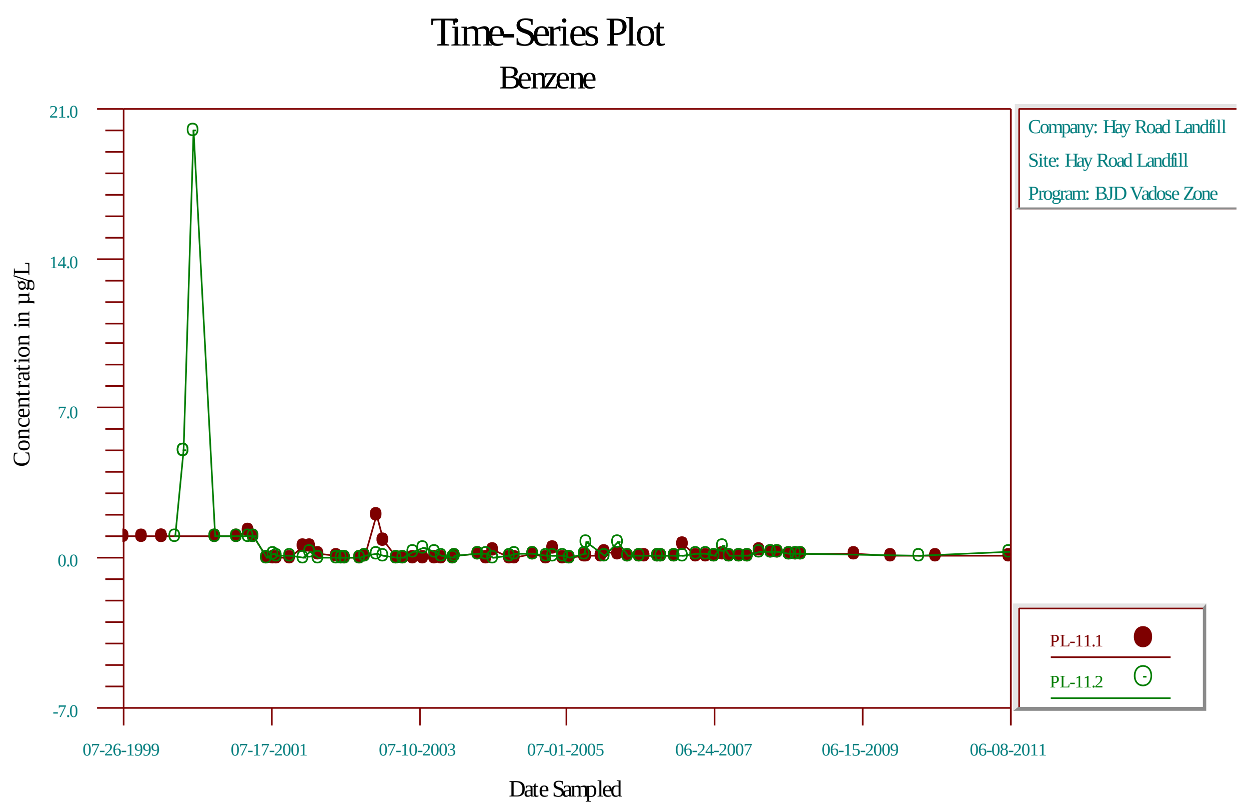


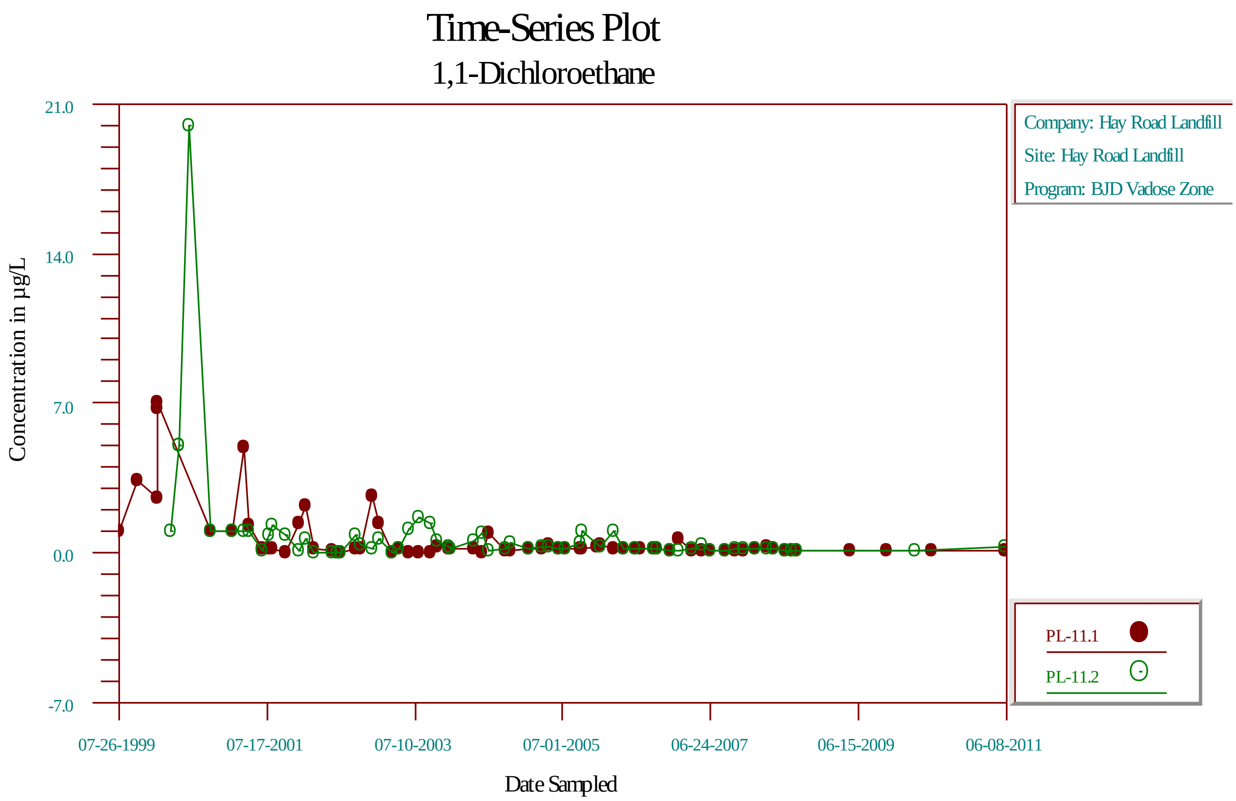
Time-Series Plot

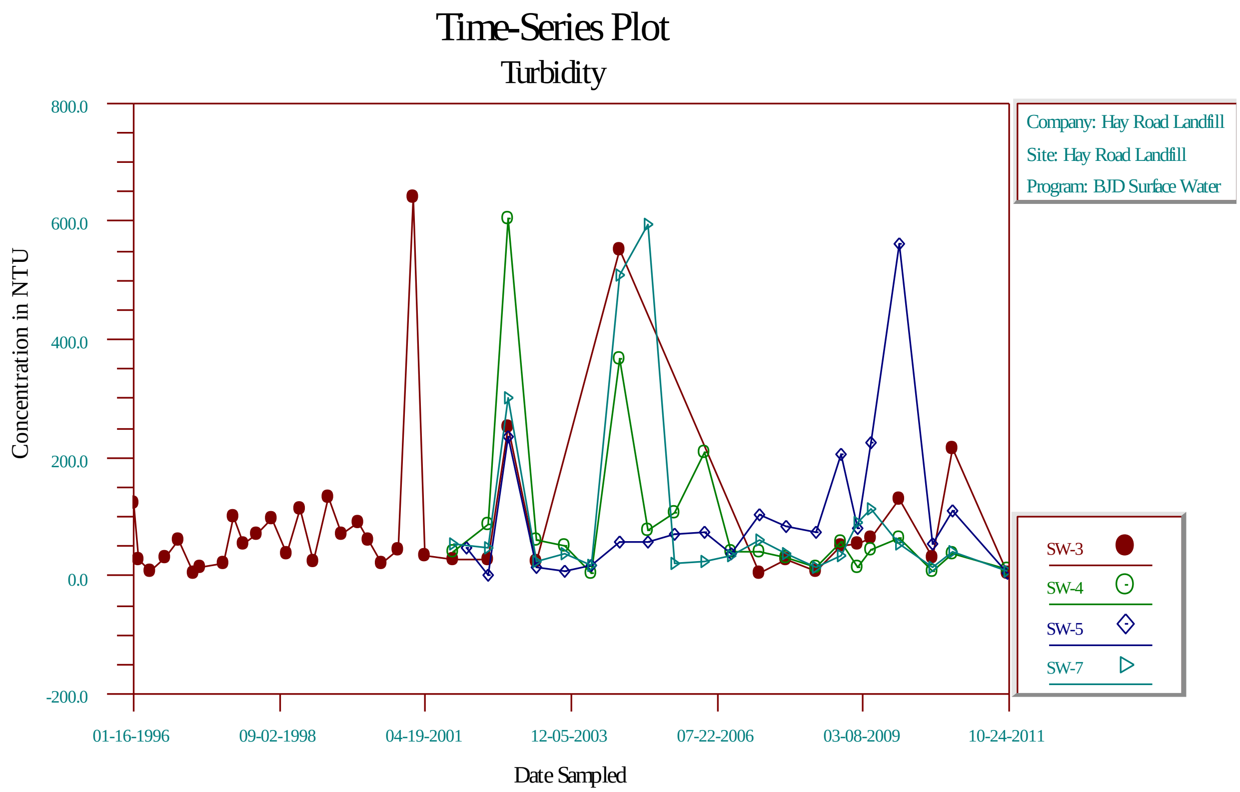
Methyl tert-butyl ether



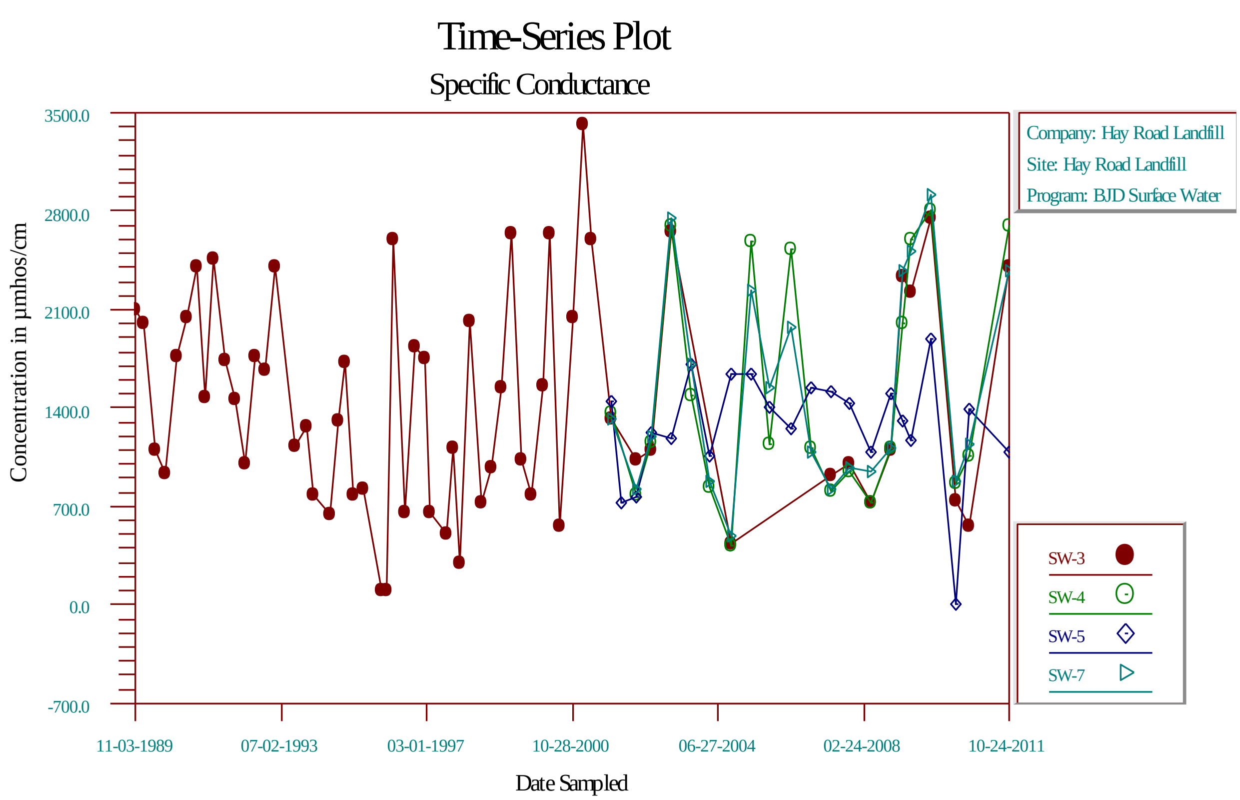

Time-Series Plot
cis-1,2-Dichloroethene
Concentration in µg/L
21.0
14.0
7.0
0.0
-7.0
07-26-1999
07-17-2001
07-10-2003
07-01-2005
06-24-2007
06-15-2009
06-08-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2


Time-Series Plot
Benzene
Concentration in µg/L
21.0
14.0
7.0
0.0
-7.0
07-26-1999
07-17-2001
07-10-2003
07-01-2005
06-24-2007
06-15-2009
06-08-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2

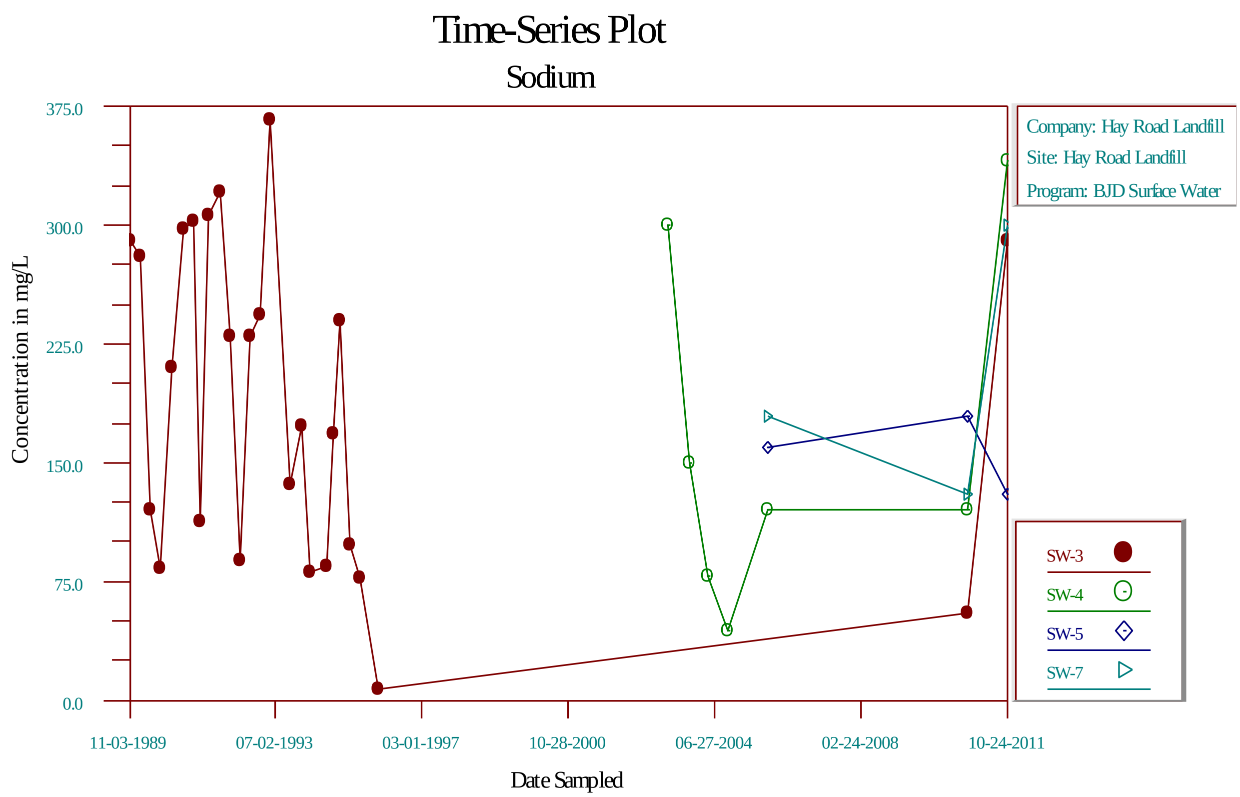

Time-Series Plot
1,1-Dichloroethane
Concentration in µg/L
21.0
14.0
7.0
0.0
-7.0
07-26-1999
07-17-2001
07-10-2003
07-01-2005
06-24-2007
06-15-2009
06-08-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Vadose Zone
PL-11.1
PL-11.2

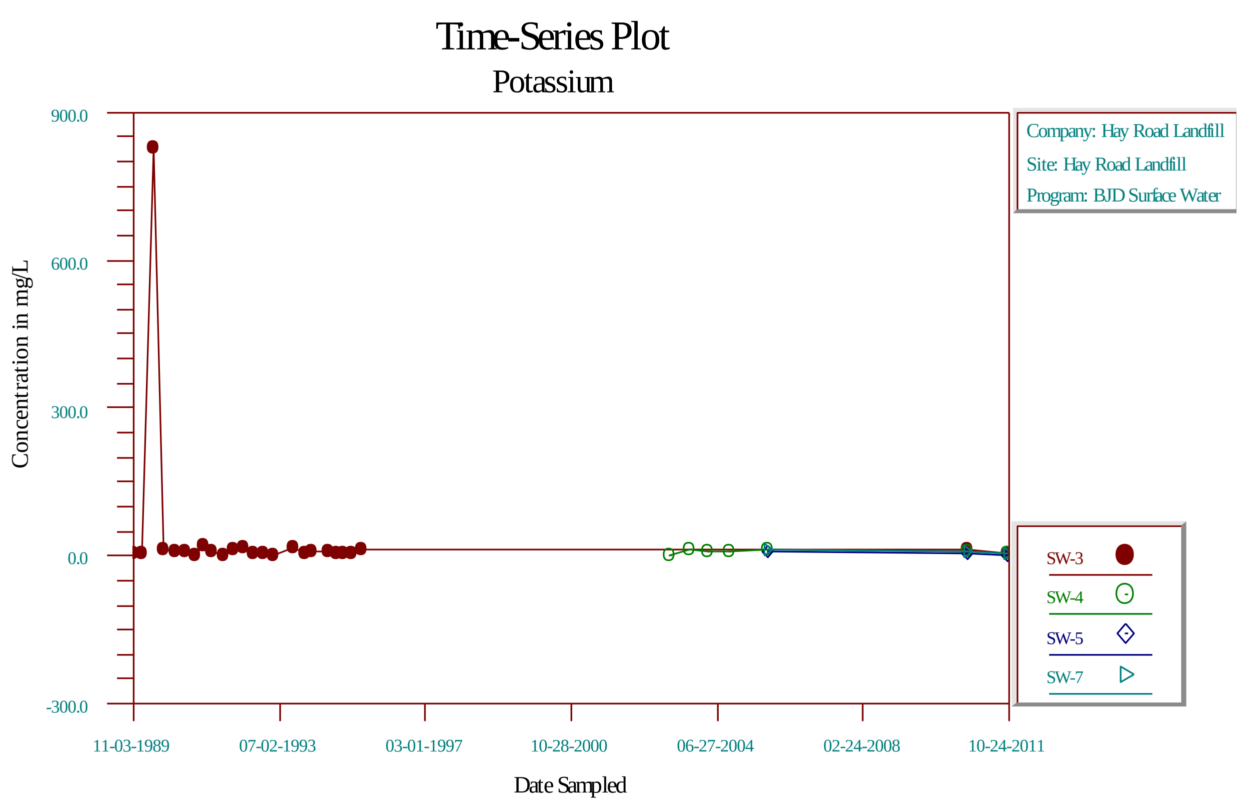


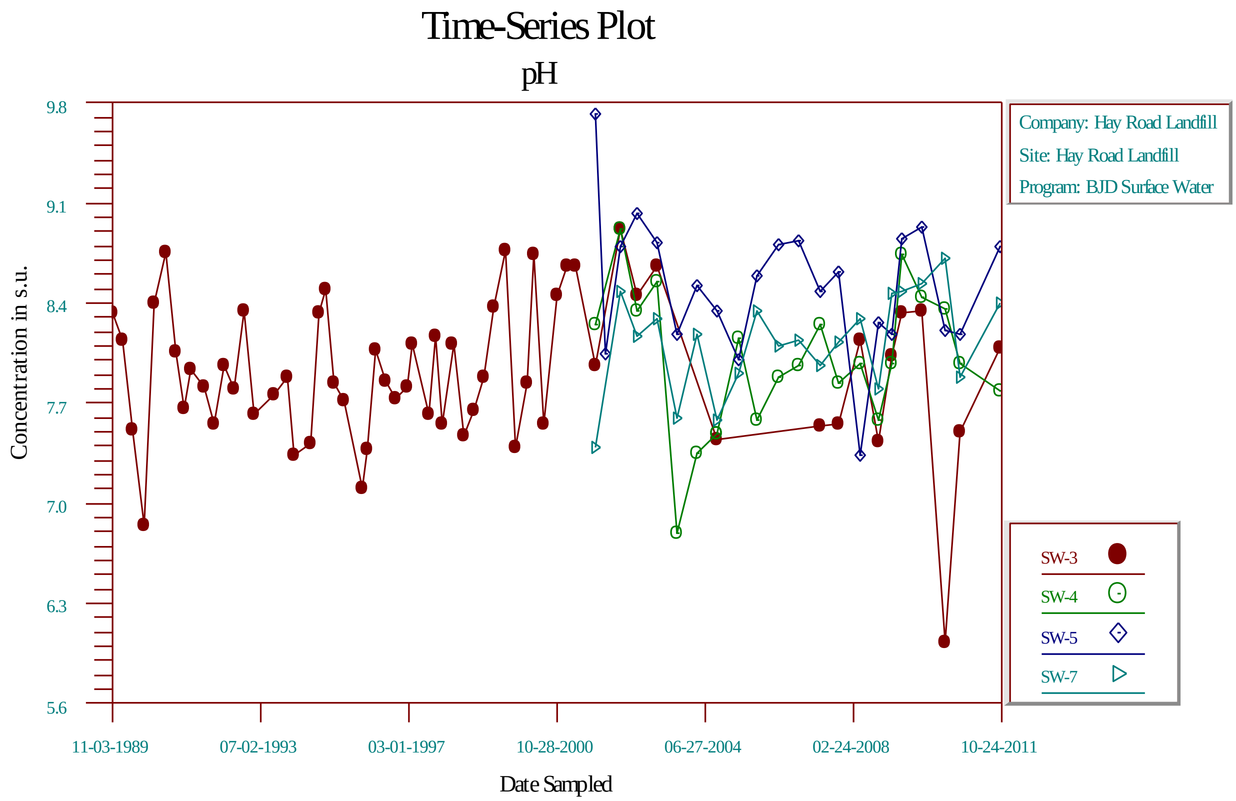
Time-Series Plot
Turbidity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in NTU
800.0
600.0
400.0
200.0
0.0
-200.0
01-16-1996
09-02-1998
04-19-2001
12-05-2003
07-22-2006
03-08-2009
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7



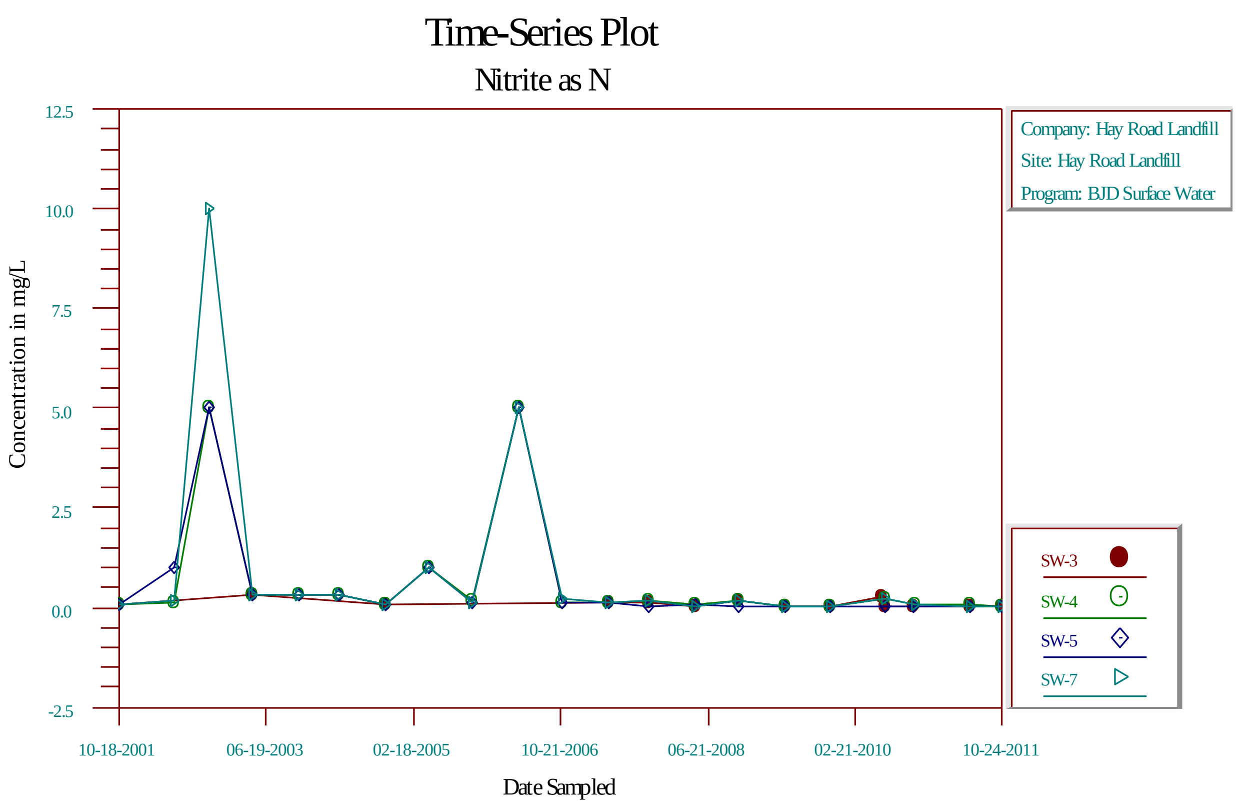
Time-Series Plot
Specific Conductance
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in µmhos/cm
3500.0
2800.0
2100.0
1400.0
700.0
0.0
-700.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7


Time-Series Plot
Sodium
Concentration in mg/L
375.0
300.0
225.0
150.0
75.0
0.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7

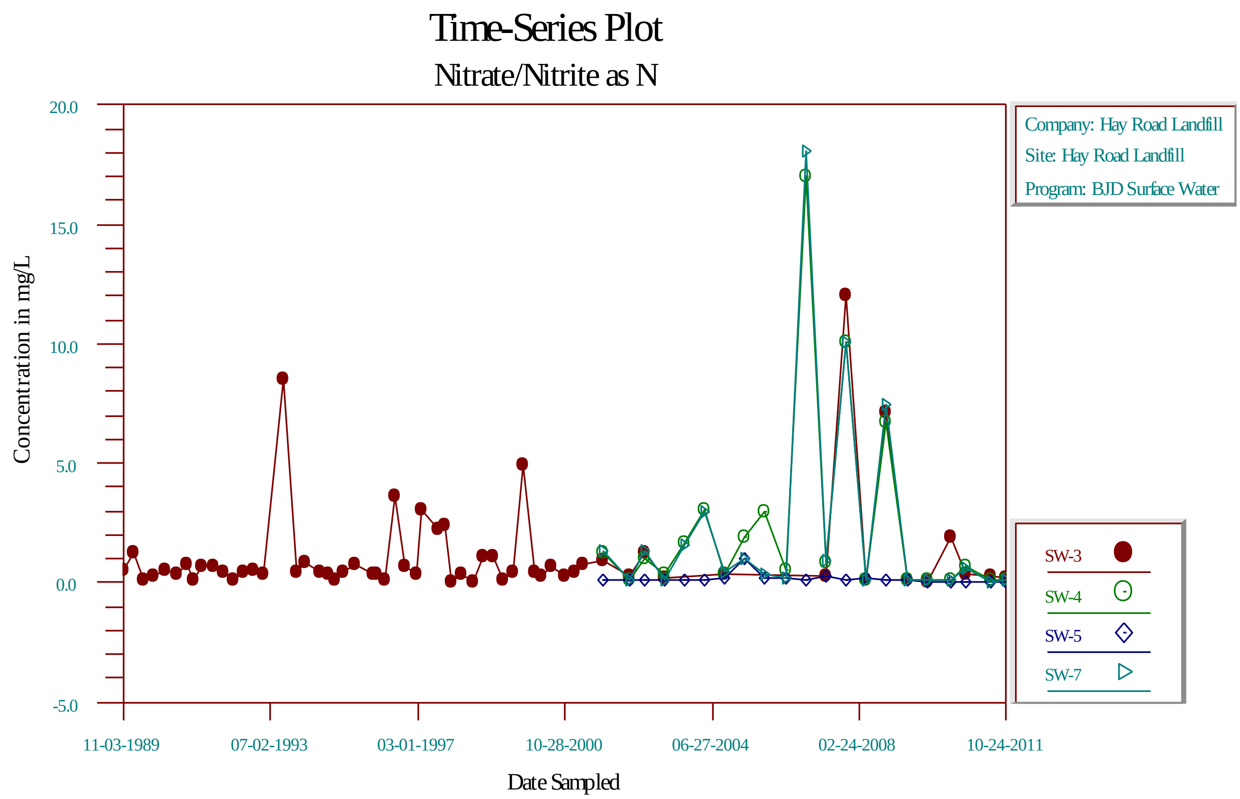

Time-Series Plot
Potassium
Concentration in mg/L
900.0
600.0
300.0
0.0
-300.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7

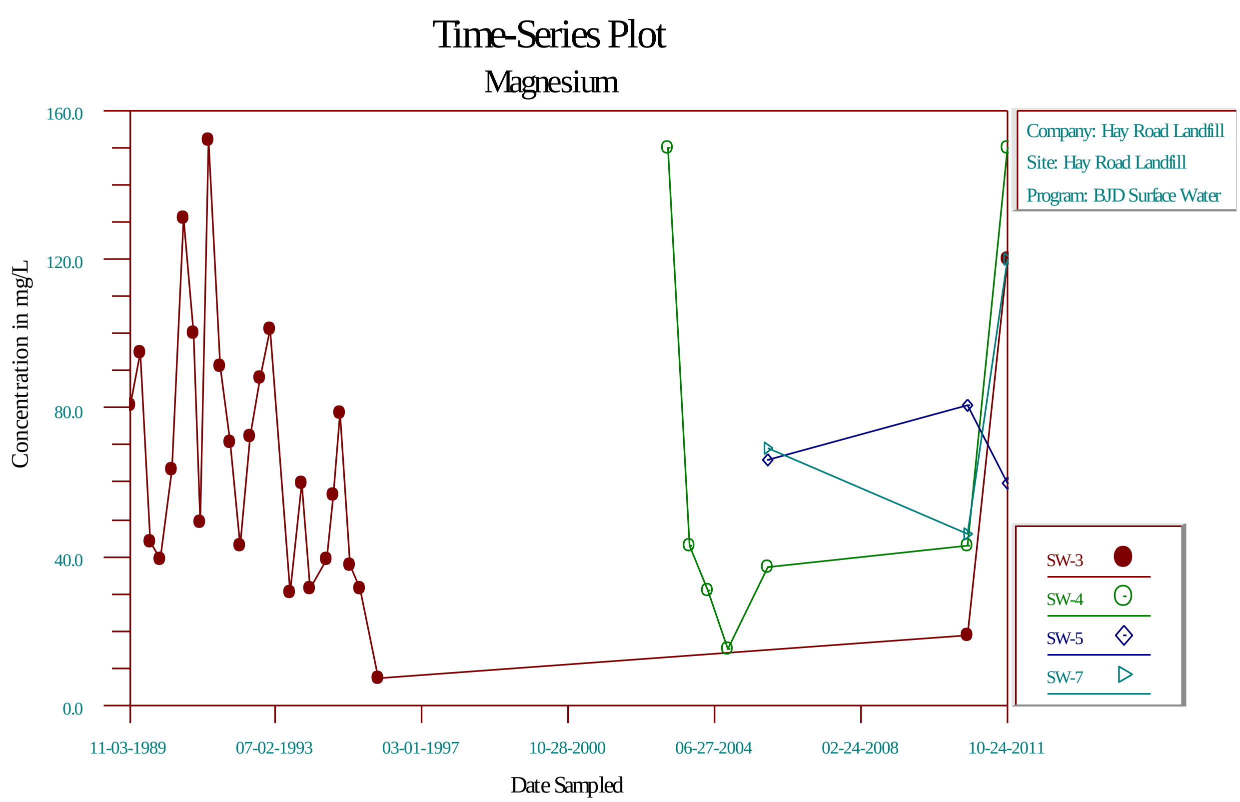


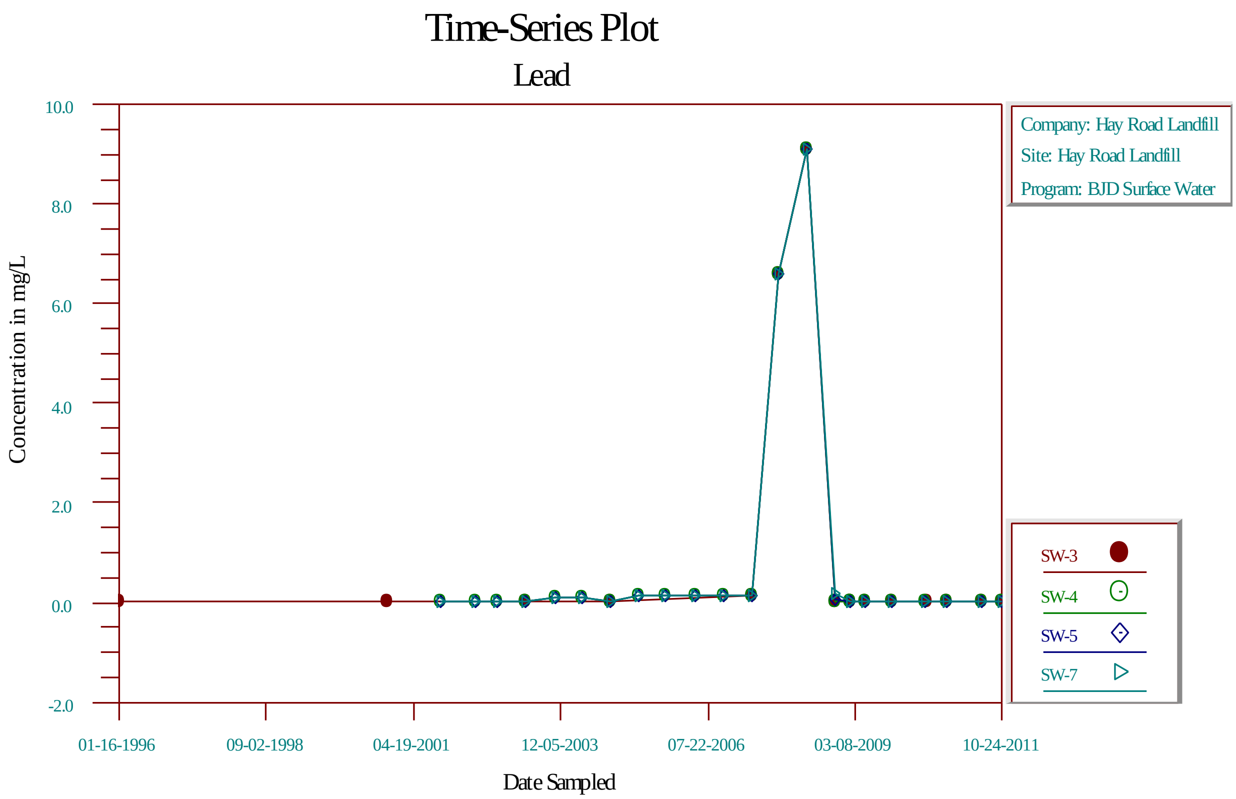
Time-Series Plot
pH
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in s.u.
9.8
9.1
8.4
7.7
7.0
6.3
5.6
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7



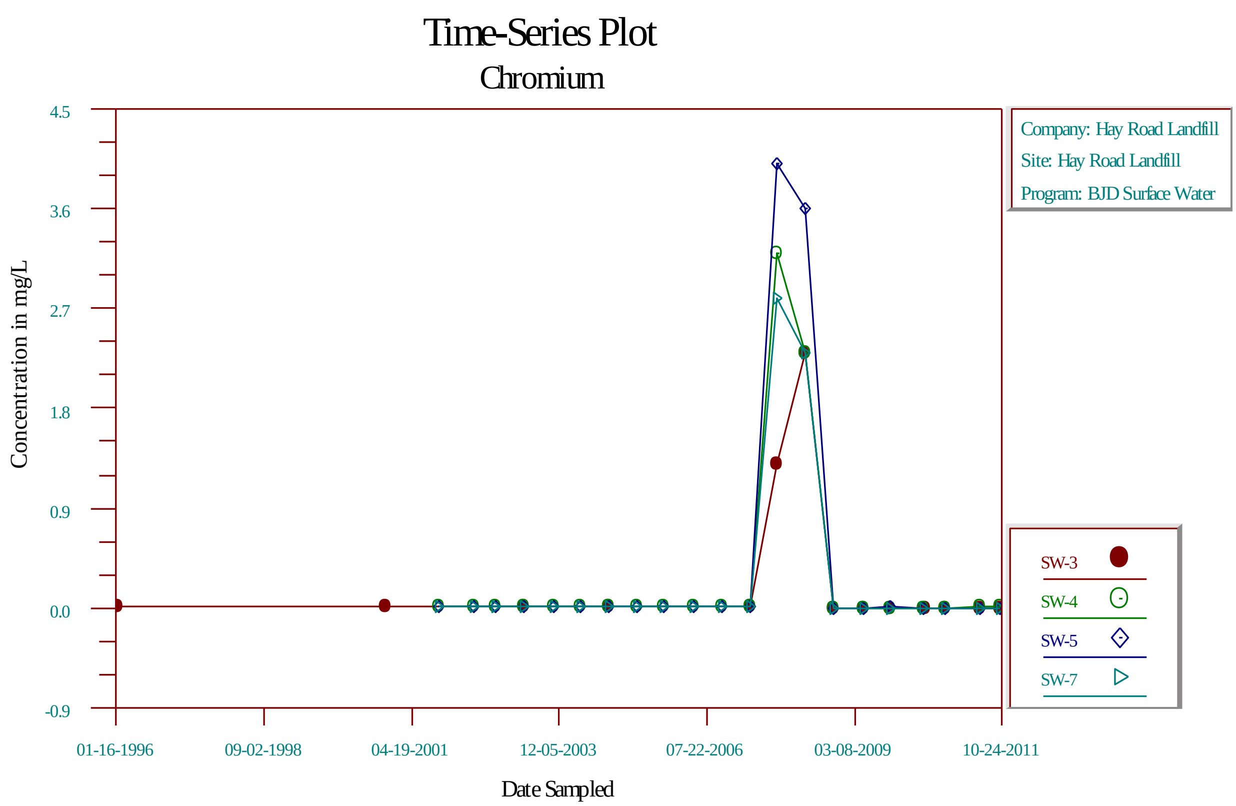
Time-Series Plot
Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
10-18-2001
06-19-2003
02-18-2005
10-21-2006
06-21-2008
02-21-2010
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7


Time-Series Plot
Nitrate/Nitrite as N
Concentration in mg/L
20.0
15.0
10.0
5.0
0.0
-5.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7

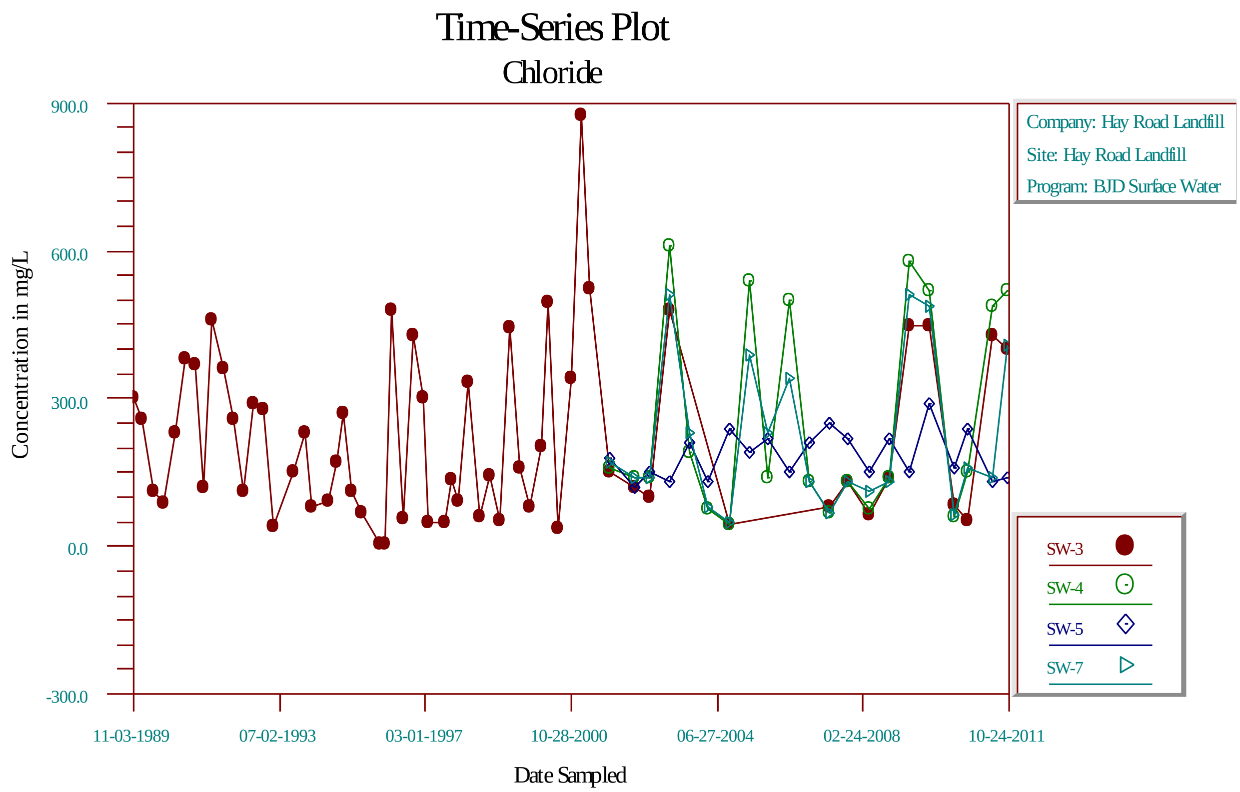

Time-Series Plot
Magnesium
Concentration in mg/L
160.0
120.0
80.0
40.0
0.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7



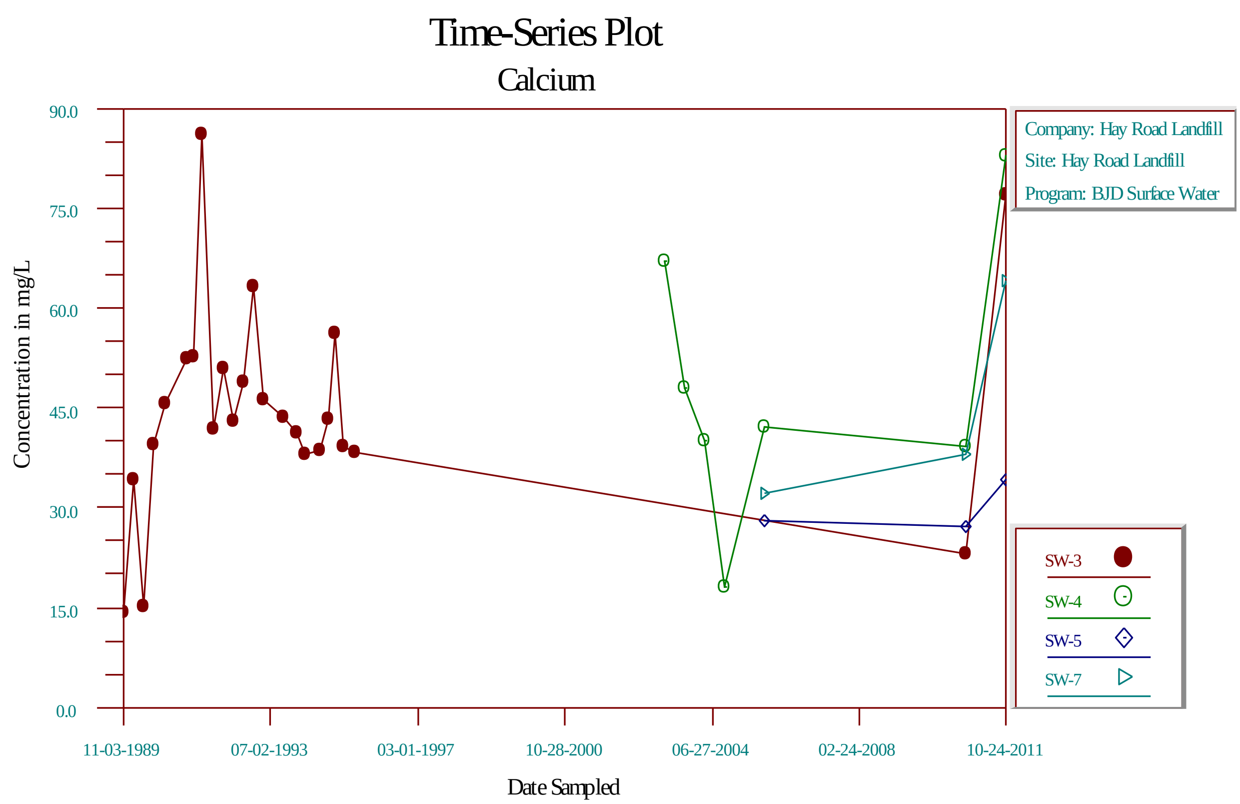
Time-Series Plot
Lead
Concentration in mg/L
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
01-16-1996
09-02-1998
04-19-2001
12-05-2003
07-22-2006
03-08-2009
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7



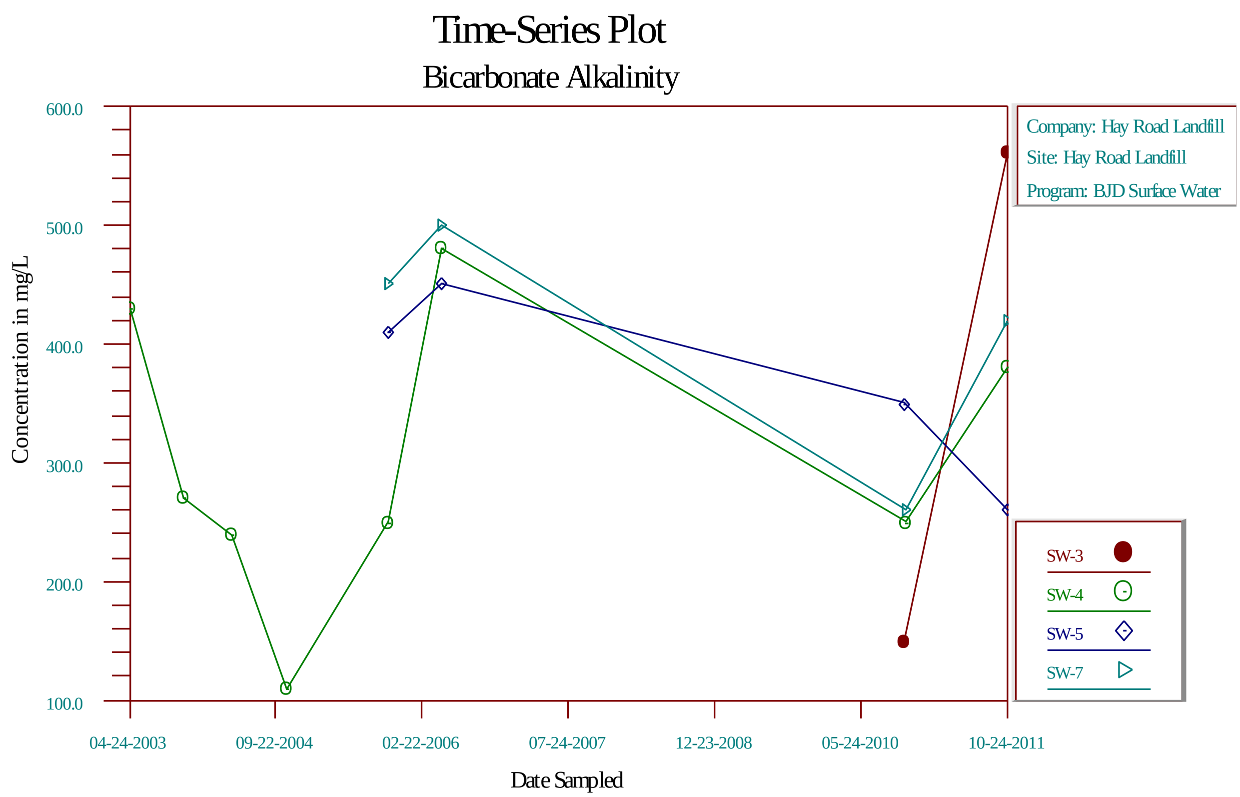
Time-Series Plot
Chromium
Concentration in mg/L
4.5
3.6
2.7
1.8
0.9
0.0
-0.9
01-16-1996
09-02-1998
04-19-2001
12-05-2003
07-22-2006
03-08-2009
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7

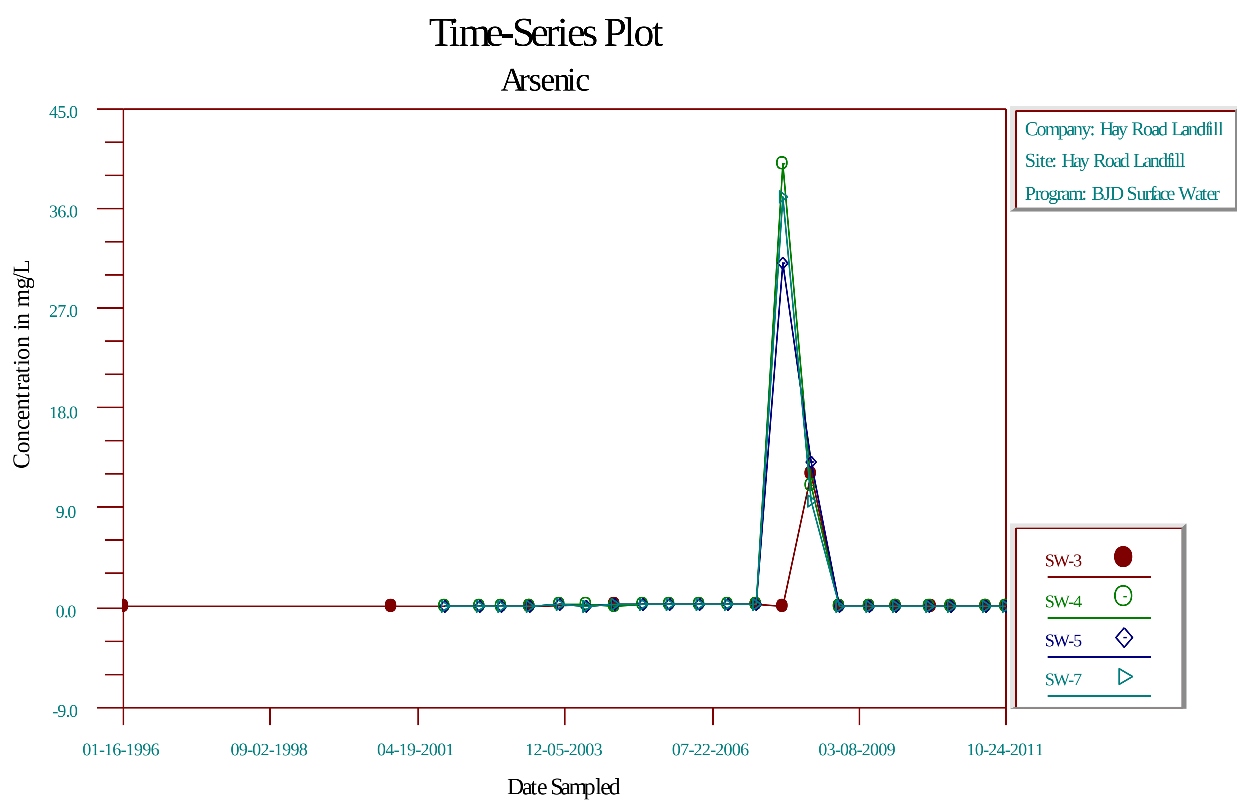


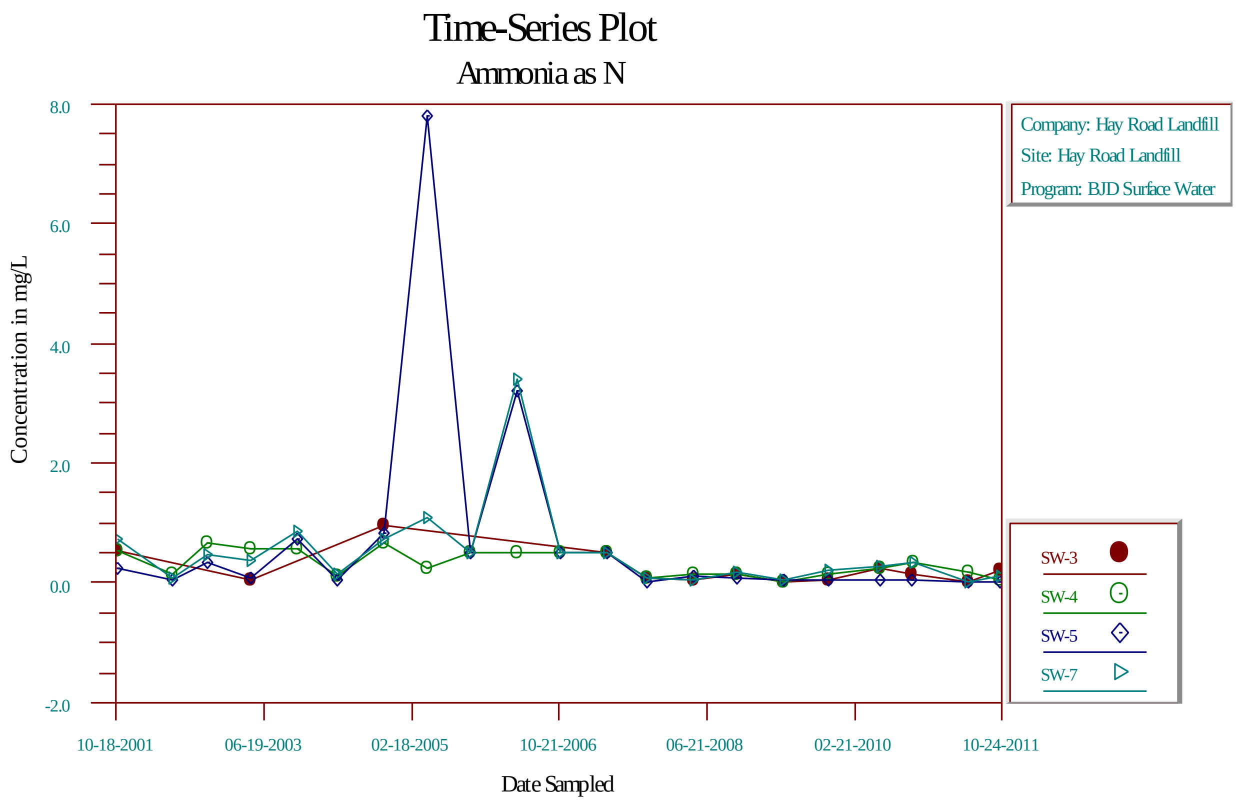
Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7
900.0
600.0
300.0
0.0
-300.0
Concentration in mg/L
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled

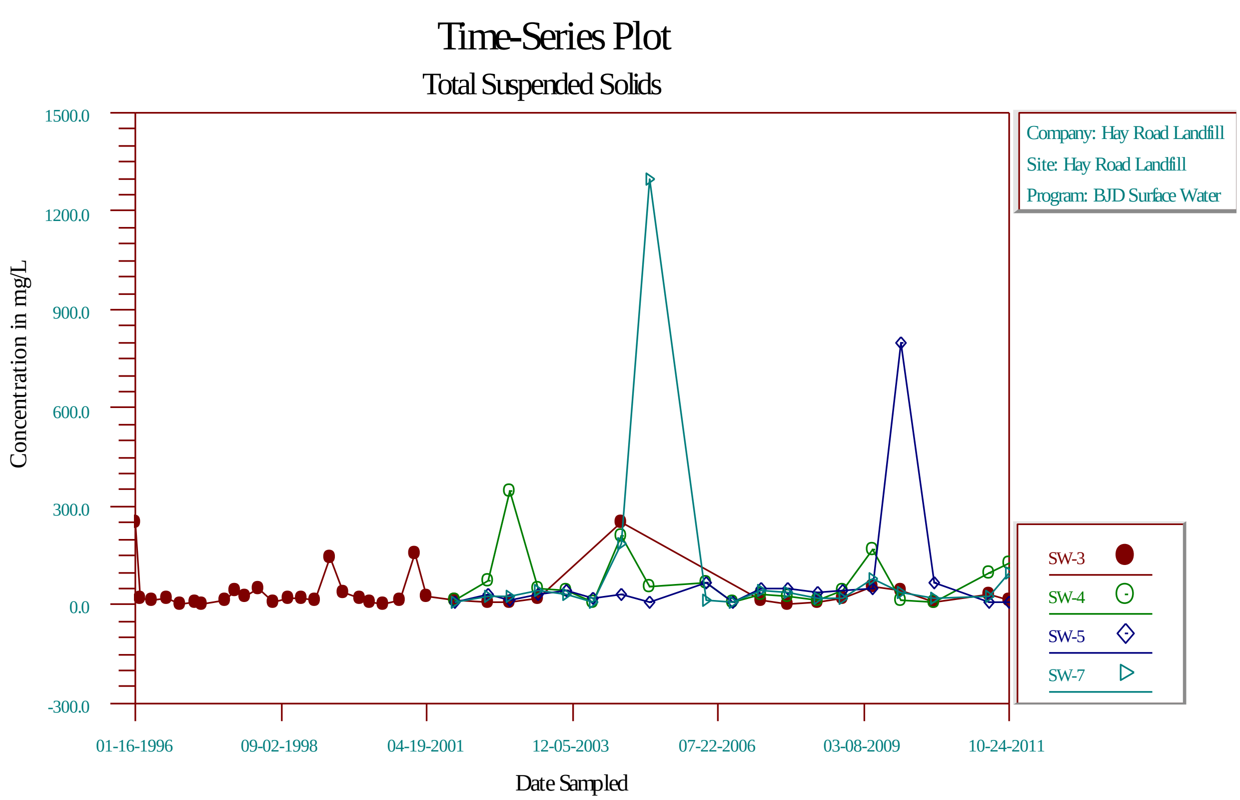


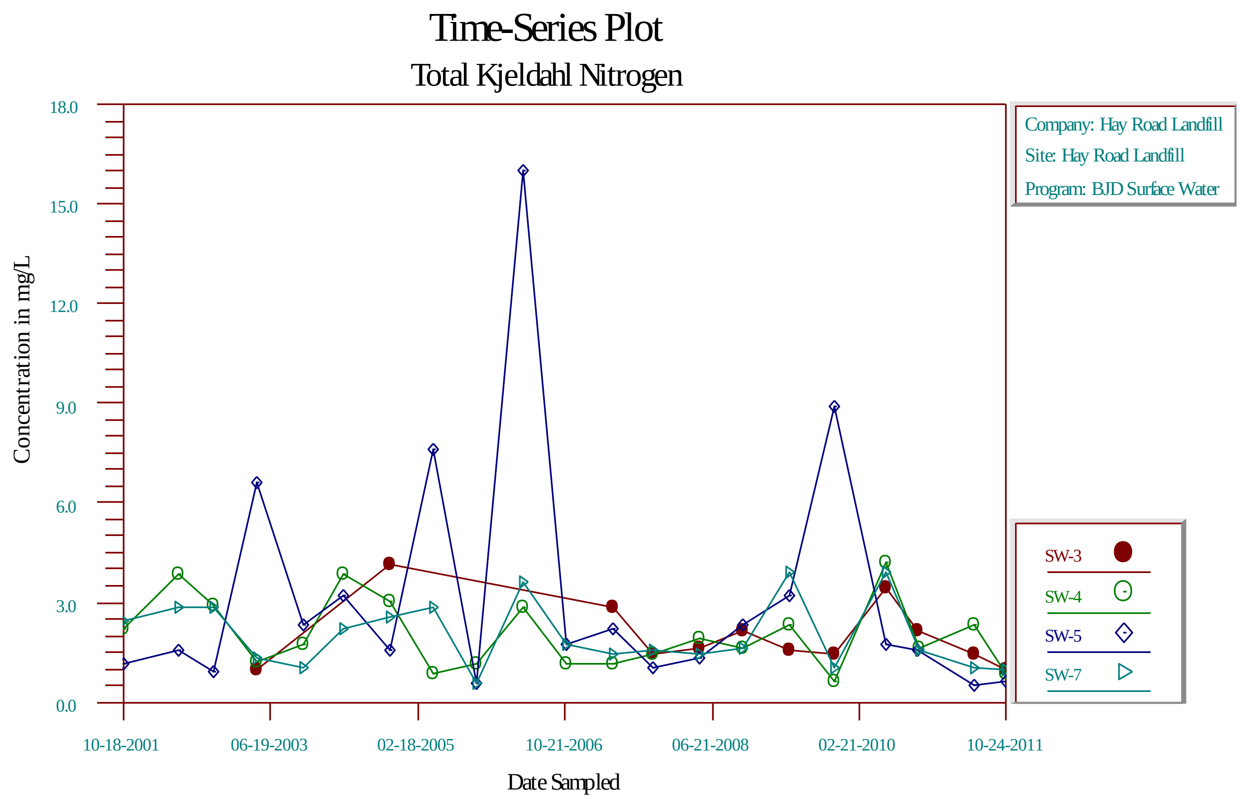
Time-Series Plot
Calcium
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7
90.0
75.0
60.0
45.0
30.0
15.0
0.0
Concentration in mg/L
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled


Time-Series Plot
Bicarbonate Alkalinity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
04-24-2003
09-22-2004
02-22-2006
07-24-2007
12-23-2008
05-24-2010
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7

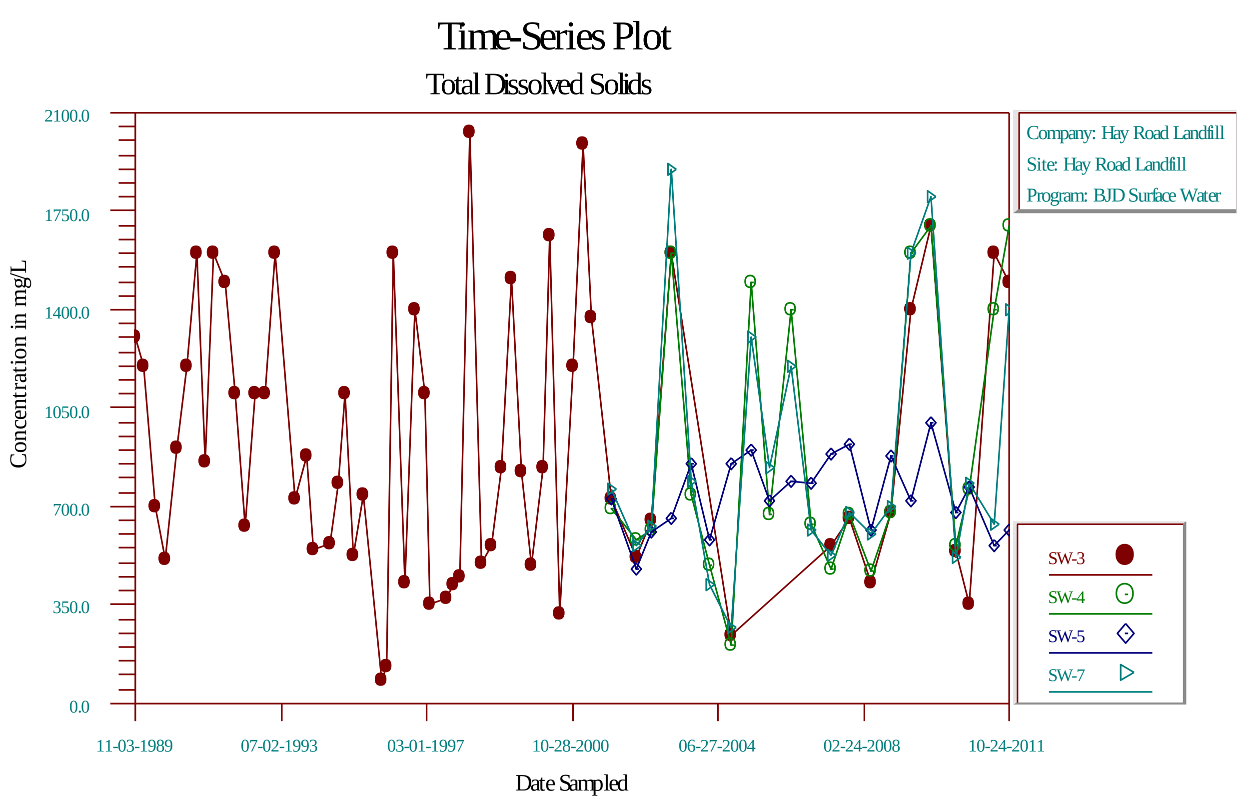

Time-Series Plot
Arsenic
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
45.0
36.0
27.0
18.0
9.0
0.0
-9.0
01-16-1996
09-02-1998
04-19-2001
12-05-2003
07-22-2006
03-08-2009
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7


Time-Series Plot
Ammonia as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
8.0
6.0
4.0
2.0
0.0
-2.0
10-18-2001
06-19-2003
02-18-2005
10-21-2006
06-21-2008
02-21-2010
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7

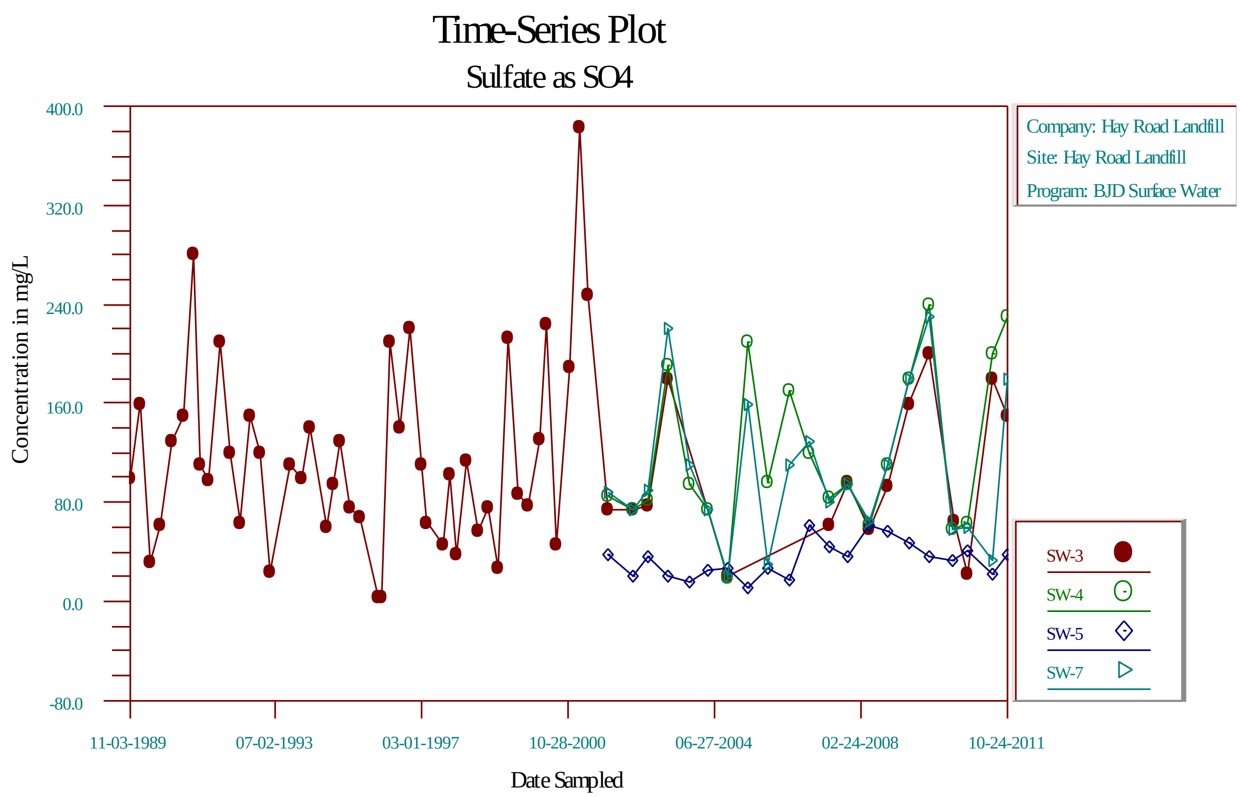

Time-Series Plot
Total Suspended Solids
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
1500.0
1200.0
900.0
600.0
300.0
0.0
-300.0
01-16-1996
09-02-1998
04-19-2001
12-05-2003
07-22-2006
03-08-2009
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7

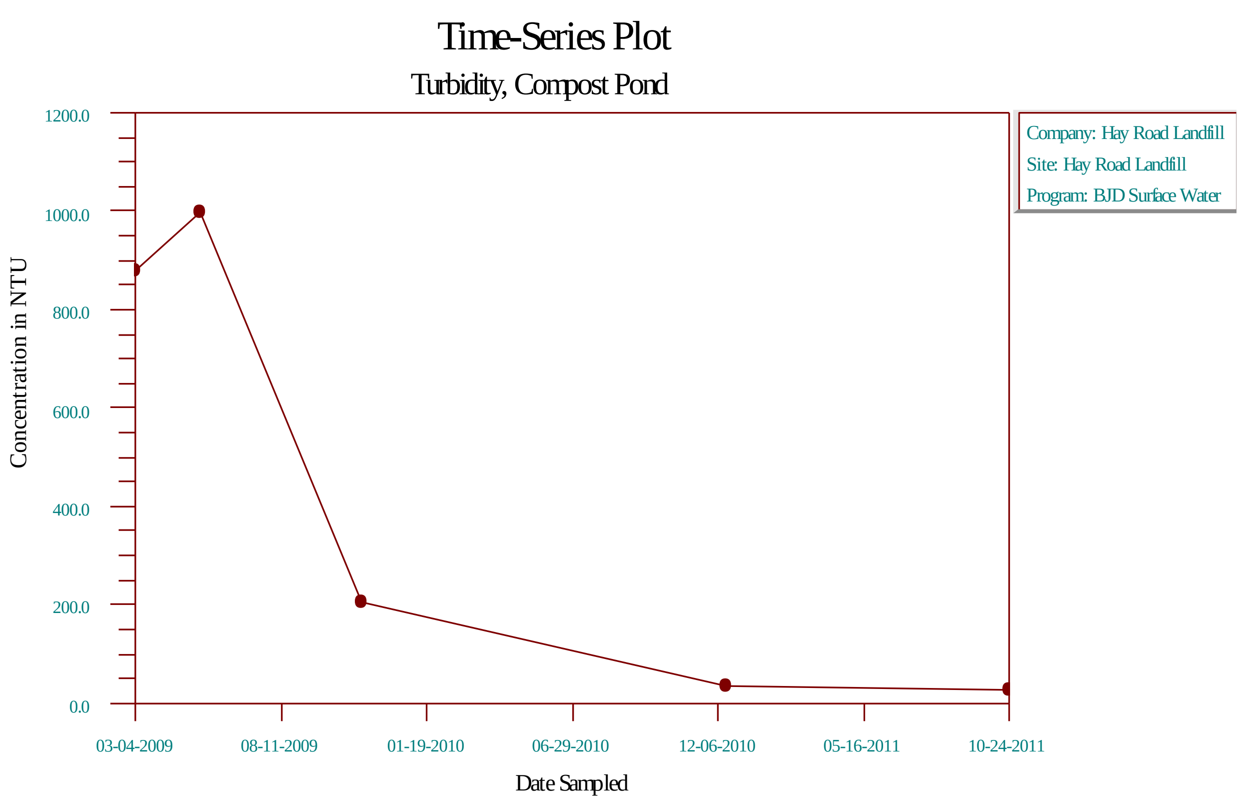


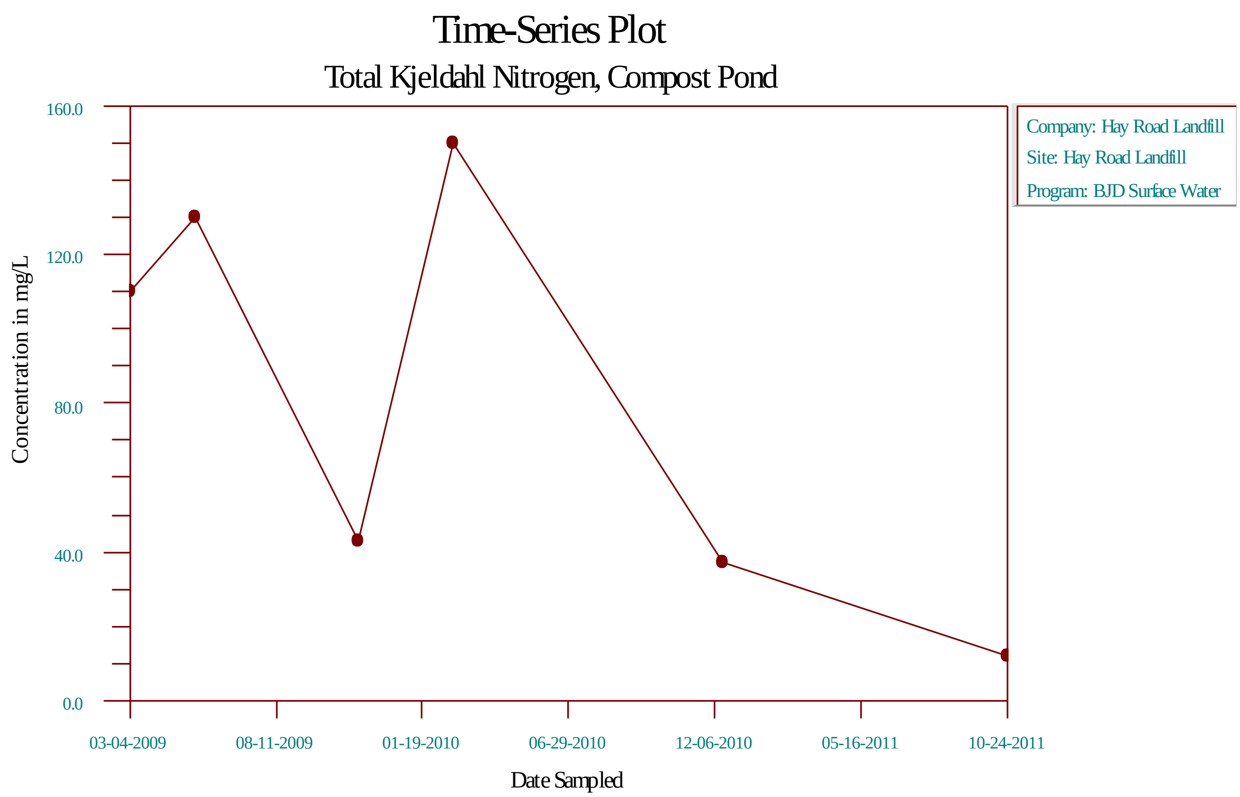
Time-Series Plot
Total Kjeldahl Nitrogen
Concentration in mg/L
18.0
15.0
12.0
9.0
6.0
3.0
0.0
10-18-2001
06-19-2003
02-18-2005
10-21-2006
06-21-2008
02-21-2010
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7



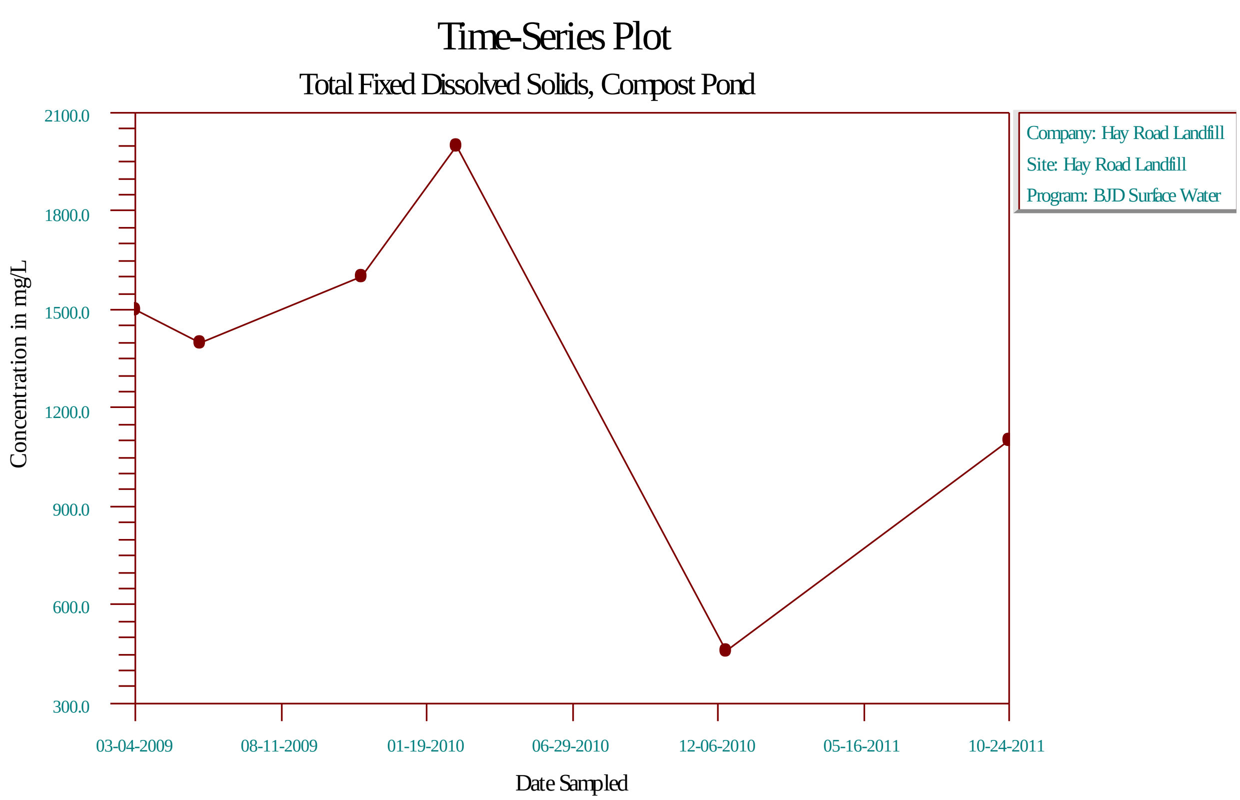
Time-Series Plot
Total Dissolved Solids
Concentration in mg/L
2100.0
1750.0
1400.0
1050.0
700.0
350.0
0.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
SW-3
SW-4
SW-5
SW-7


Time-Series Plot
Sulfate as SO4
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
400.0
320.0
240.0
160.0
80.0
0.0
-80.0
11-03-1989
07-02-1993
03-01-1997
10-28-2000
06-27-2004
02-24-2008
10-24-2011
Date Sampled
SW-3
SW-4
SW-5
SW-7

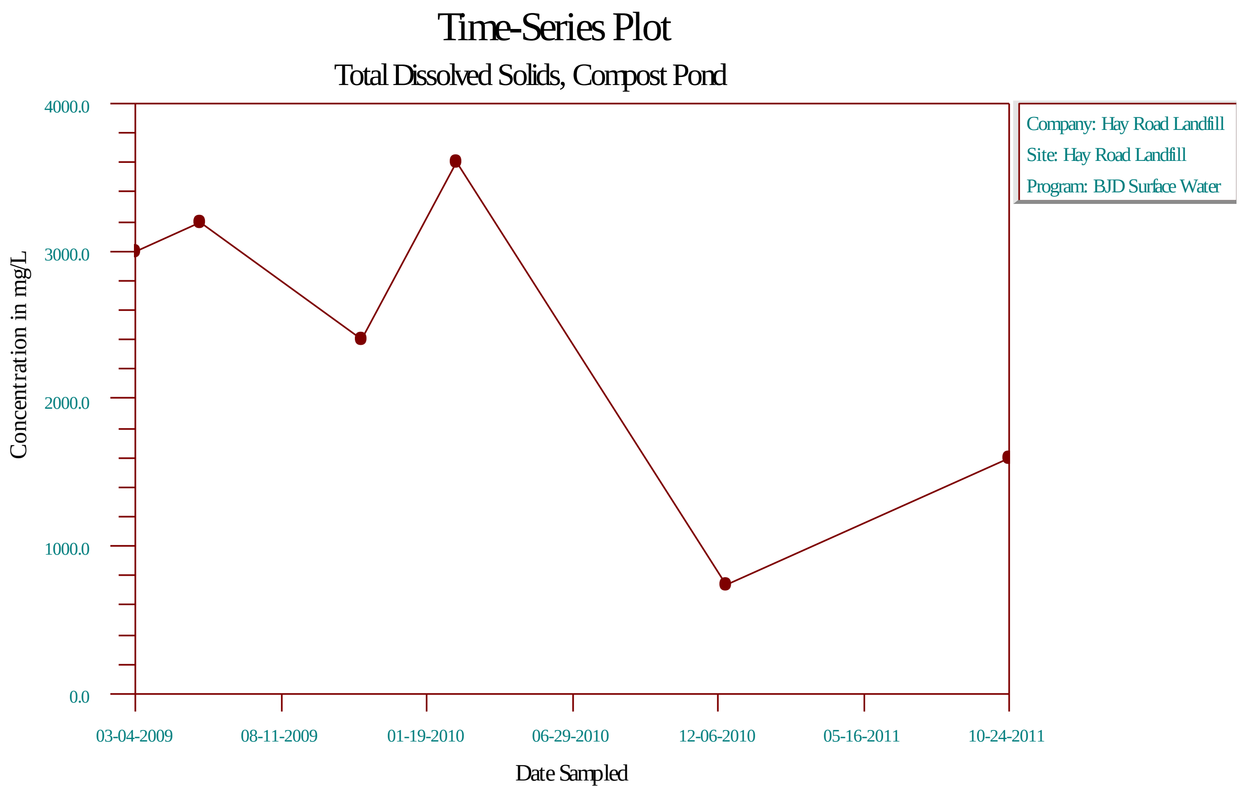

Time-Series Plot
Turbidity, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in NTU
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



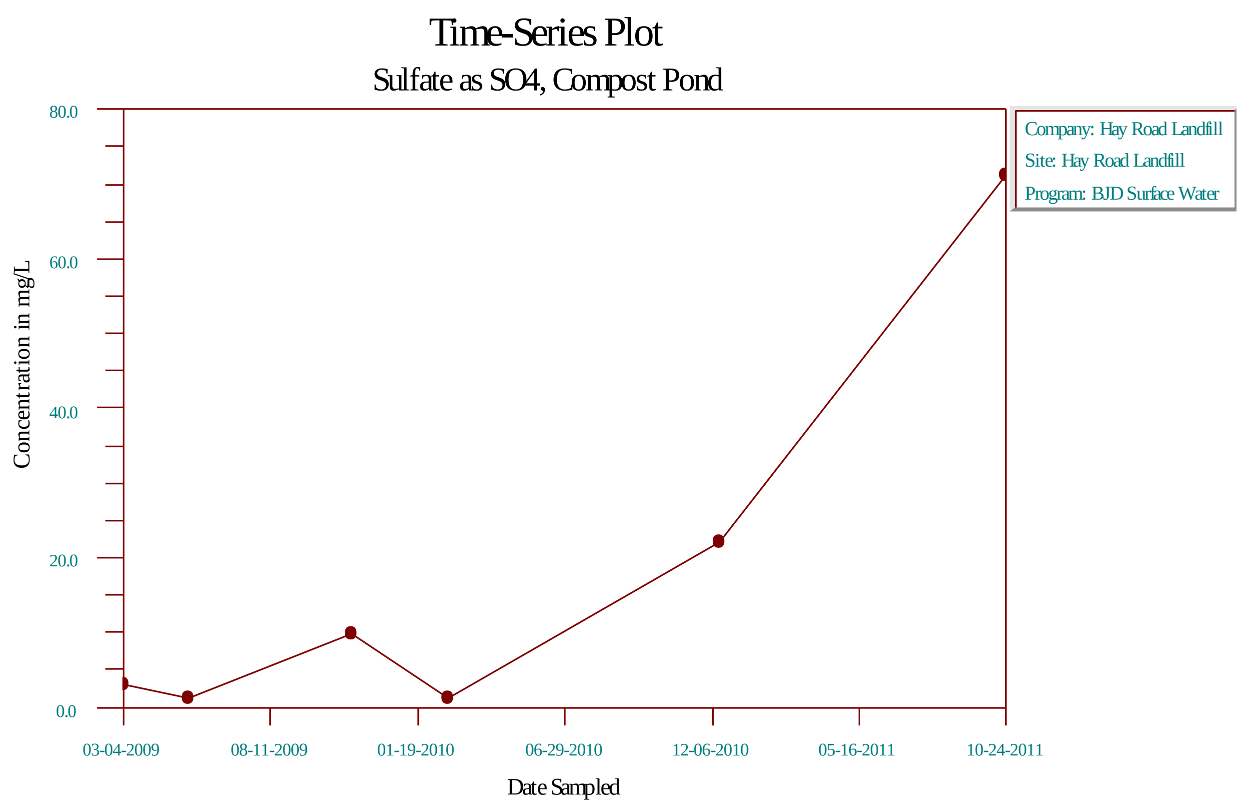
Time-Series Plot
Total Kjeldahl Nitrogen, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
160.0
120.0
80.0
40.0
0.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



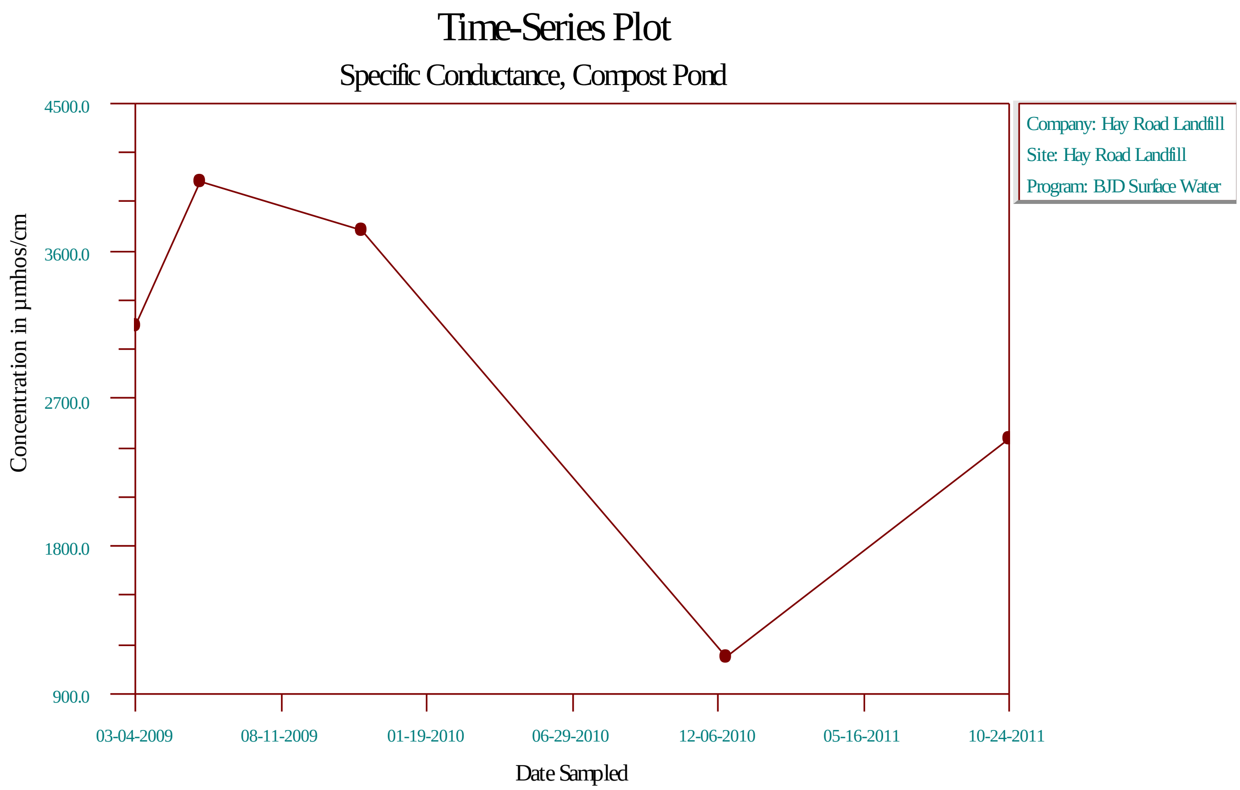
Time-Series Plot
Total Fixed Dissolved Solids, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
2100.0
1800.0
1500.0
1200.0
900.0
600.0
300.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



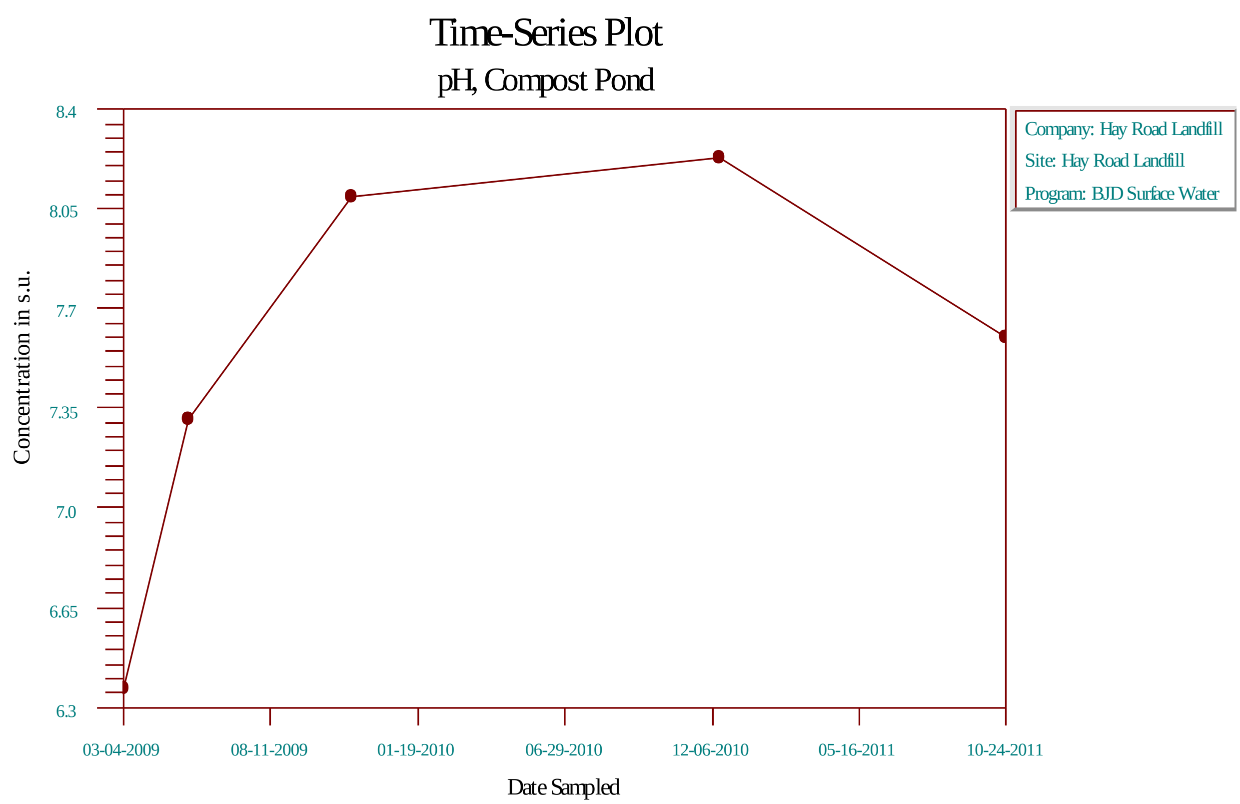
Time-Series Plot
Total Dissolved Solids, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
4000.0
3000.0
2000.0
1000.0
0.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



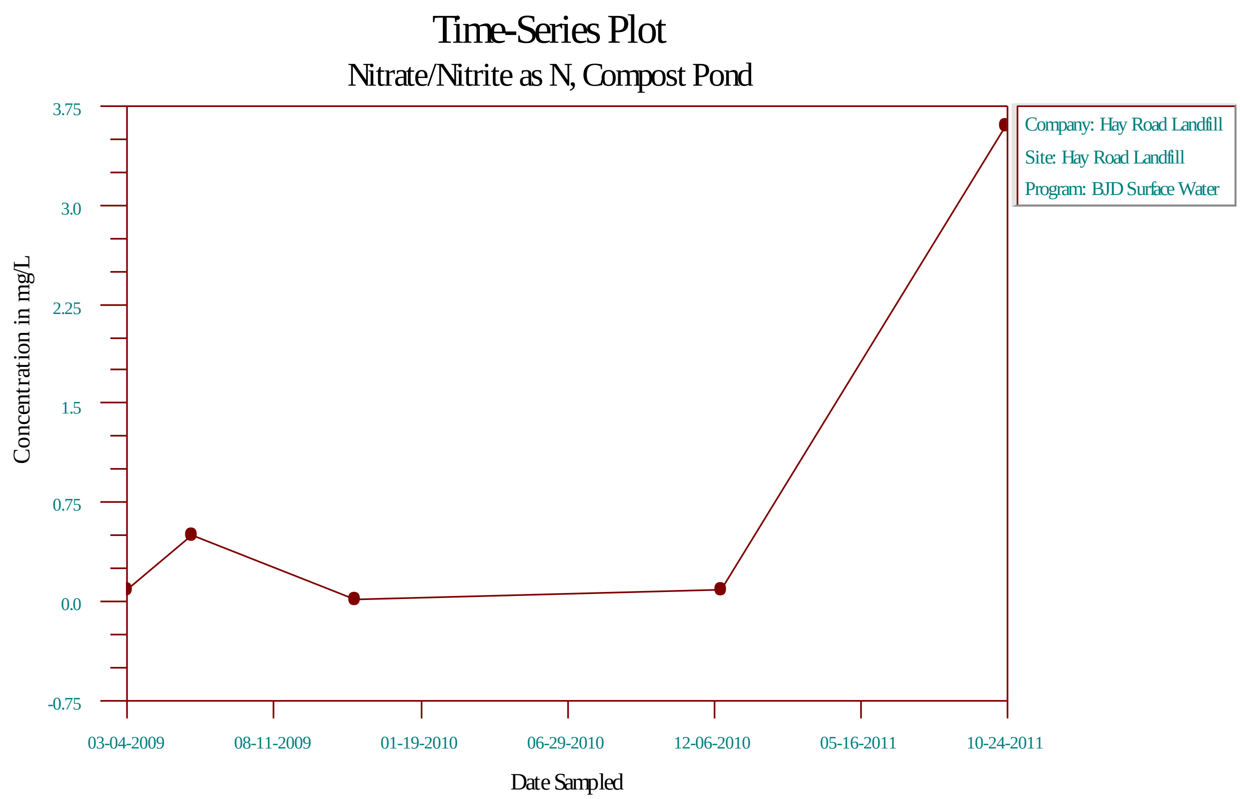
Time-Series Plot
Sulfate as SO4, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
80.0
60.0
40.0
20.0
0.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



Time-Series Plot
Specific Conductance, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
4500.0
3600.0
2700.0
1800.0
900.0
Concentration in µmhos/cm
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled

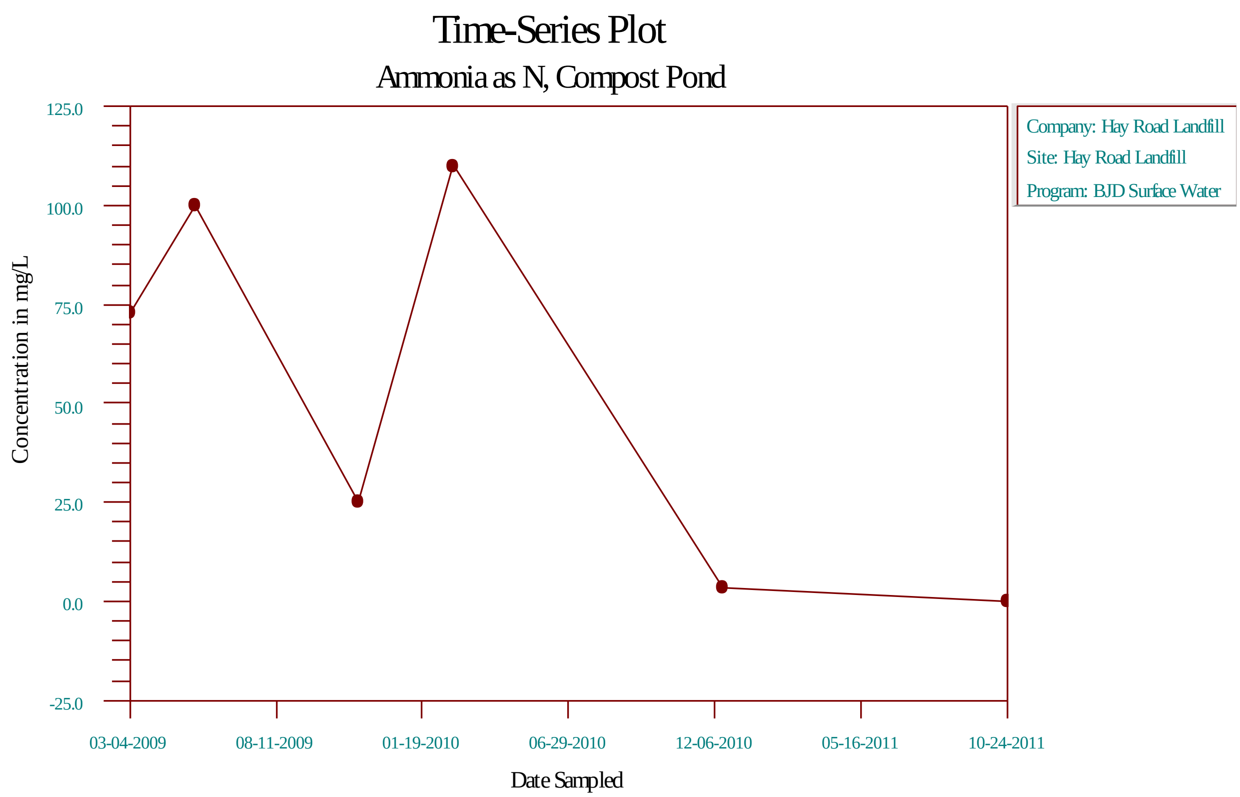


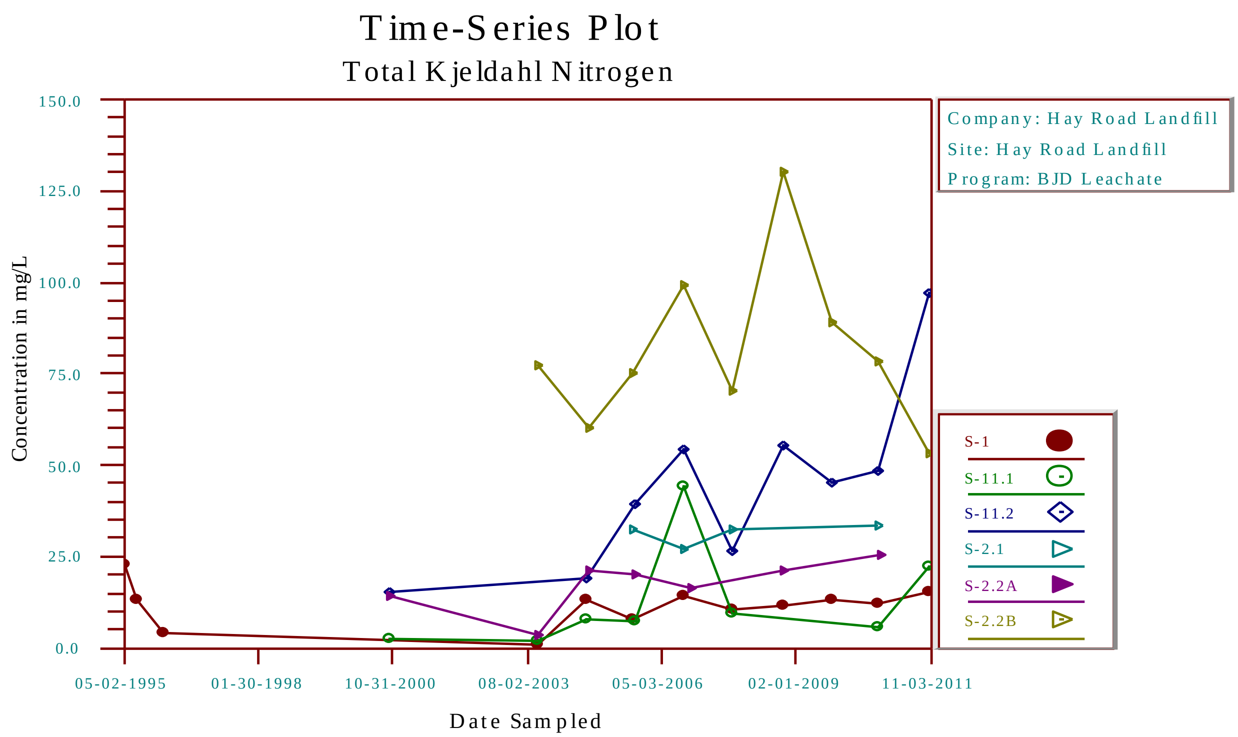
Time-Series Plot
pH, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
8.4
8.05
7.7
7.35
7.0
6.65
6.3
Concentration in s.u.
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled



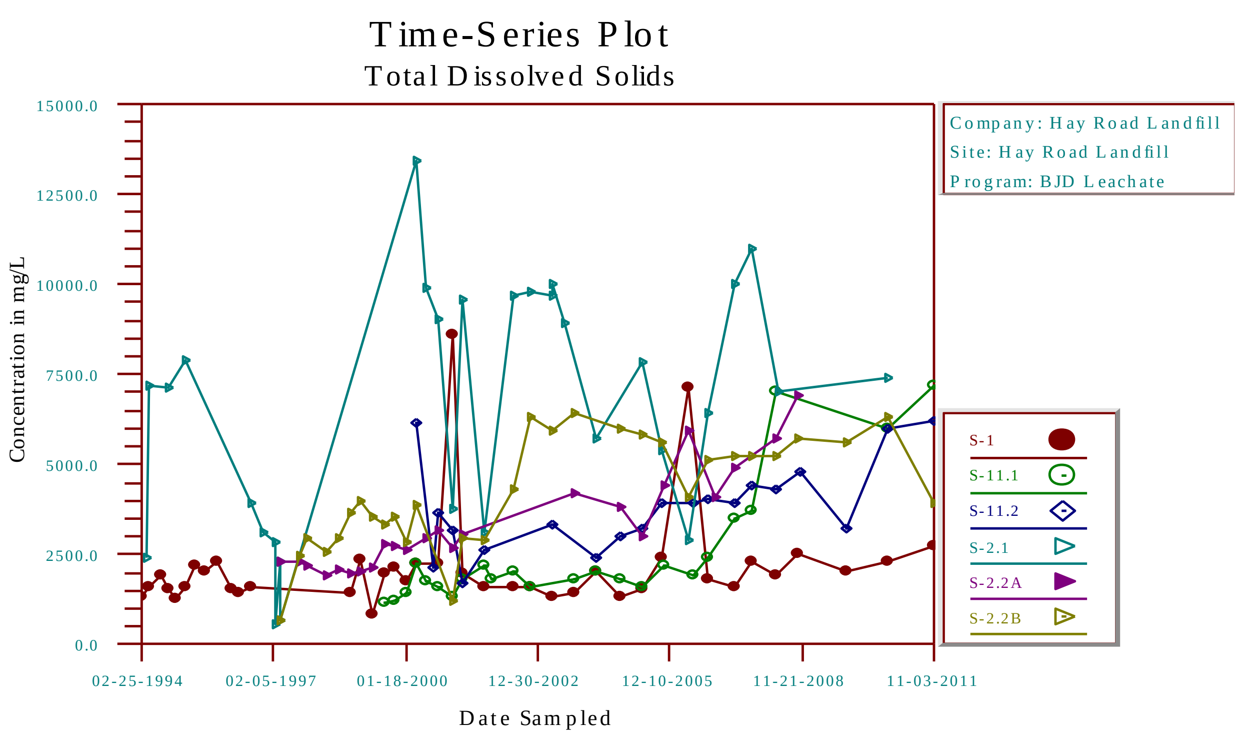
Time-Series Plot
Nitrate/Nitrite as N, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
3.75
3.0
2.25
1.5
0.75
0.0
-0.75
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled

Time-Series Plot
Chloride, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
480.0
420.0
360.0
300.0
240.0
180.0
120.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled

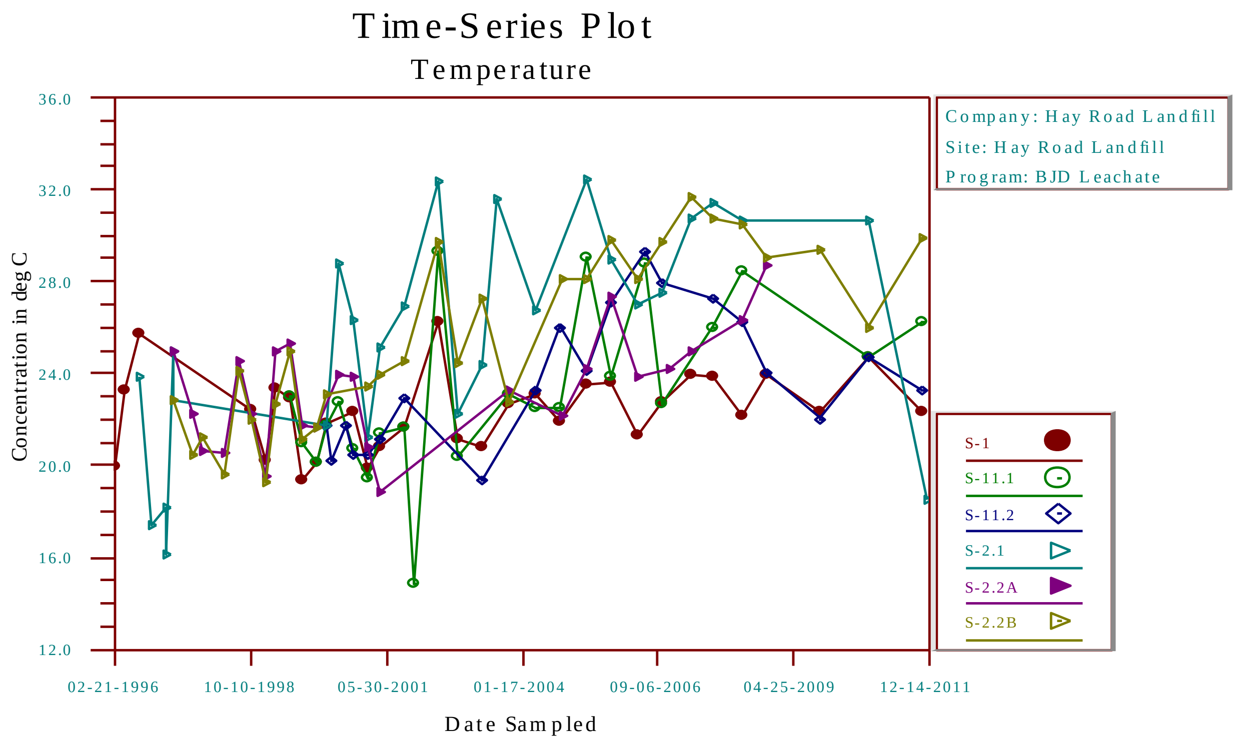

Time-Series Plot
Ammonia as N, Compost Pond
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Surface Water
Concentration in mg/L
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
03-04-2009
08-11-2009
01-19-2010
06-29-2010
12-06-2010
05-16-2011
10-24-2011
Date Sampled

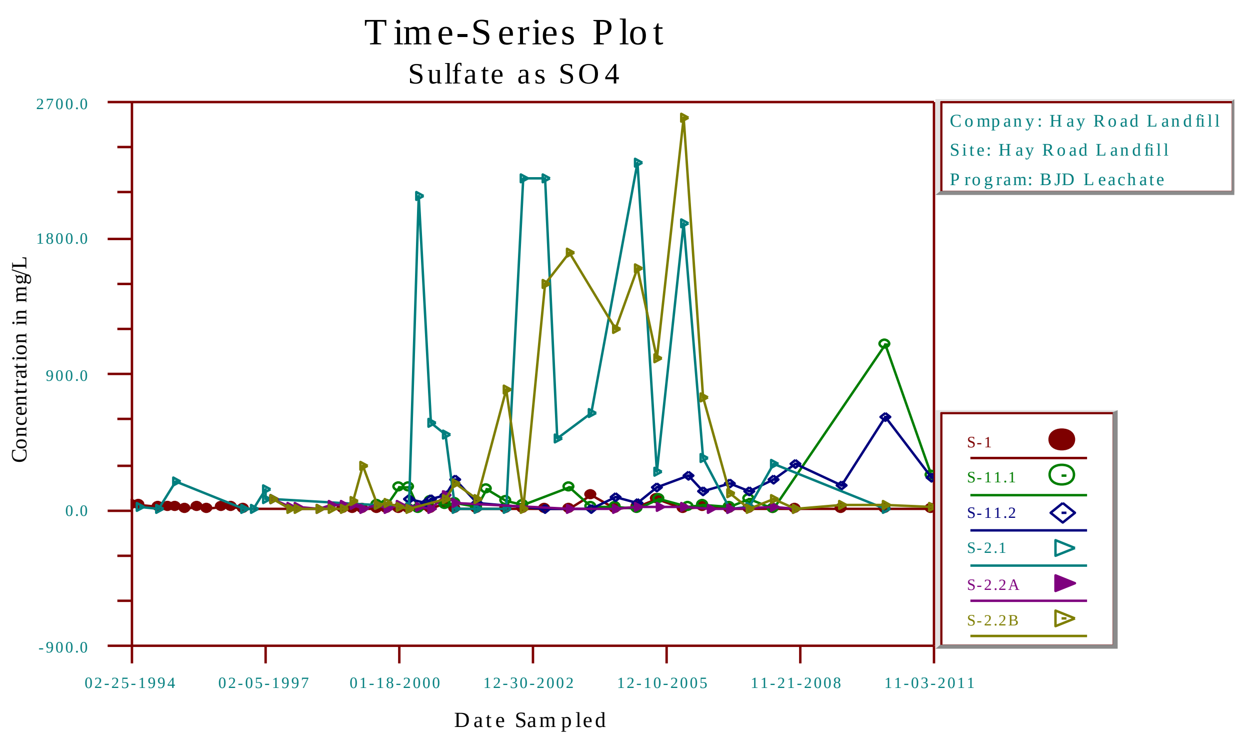


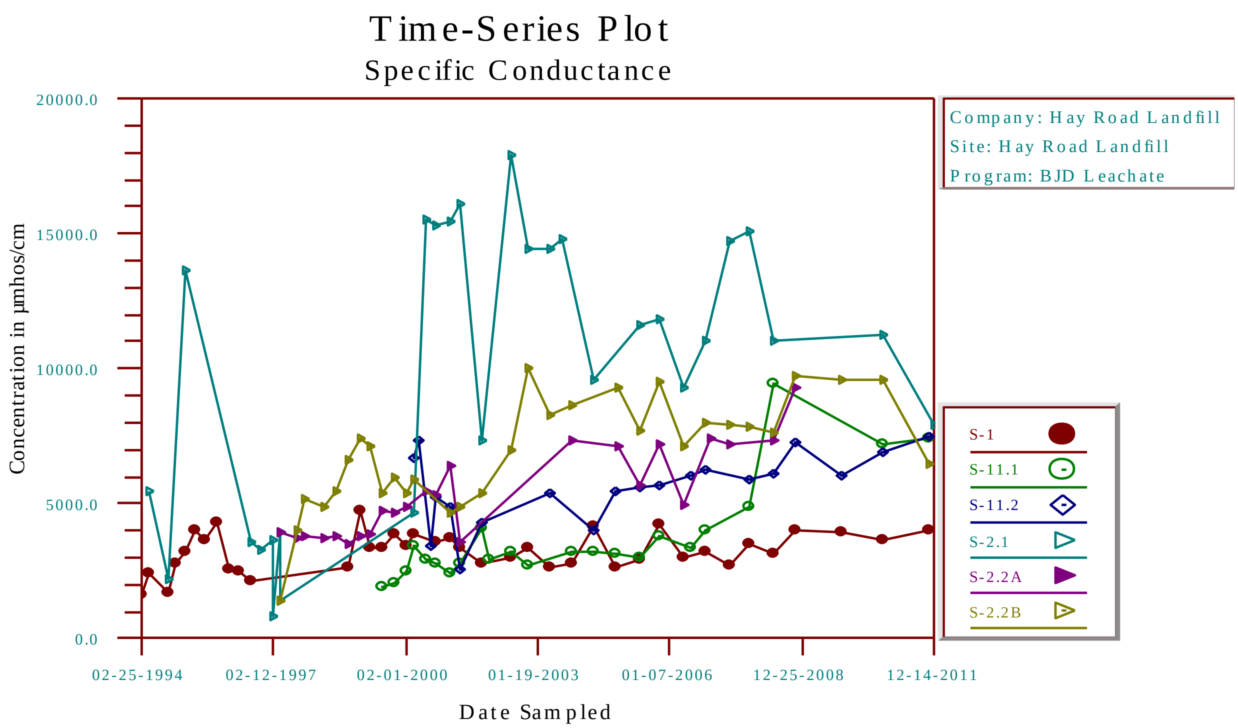
Time-Series Plot
Total Kjeldahl Nitrogen
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
150.0
125.0
100.0
75.0
50.0
25.0
0.0
05-02-1995
01-30-1998
10-31-2000
08-02-2003
05-03-2006
02-01-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



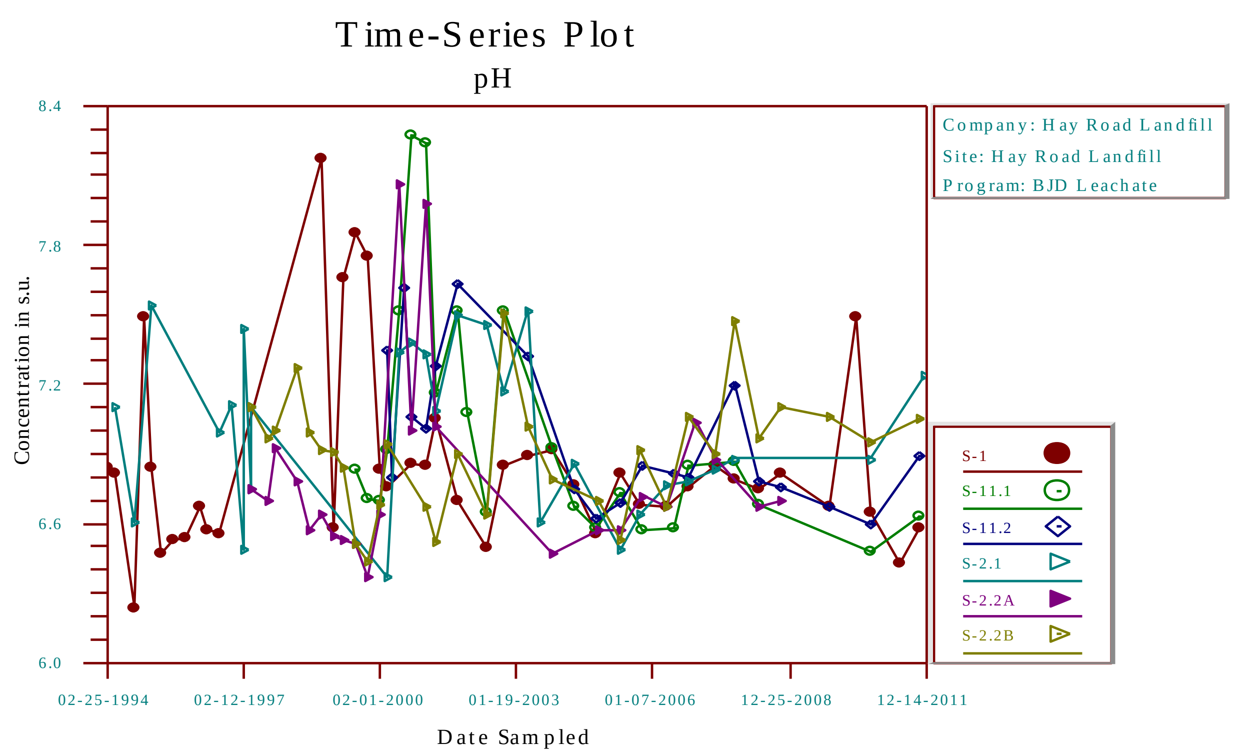
Time-Series Plot
Total Dissolved Solids
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
15000.0
12500.0
10000.0
7500.0
5000.0
2500.0
0.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Temperature
Concentration in deg C
36.0
32.0
28.0
24.0
20.0
16.0
12.0
02-21-1996
10-10-1998
05-30-2001
01-17-2004
09-06-2006
04-25-2009
12-14-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

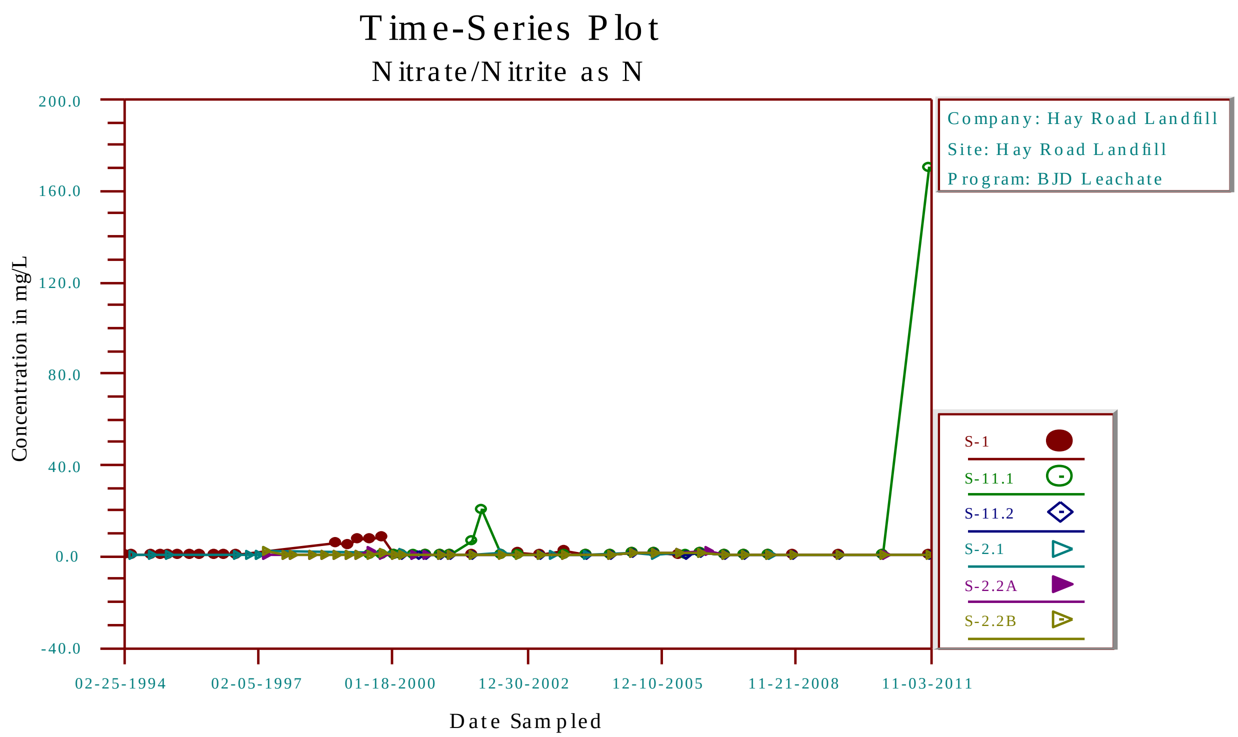

Time-Series Plot
Sulfate as SO4
Concentration in mg/L
2700.0
1800.0
900.0
0.0
-900.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



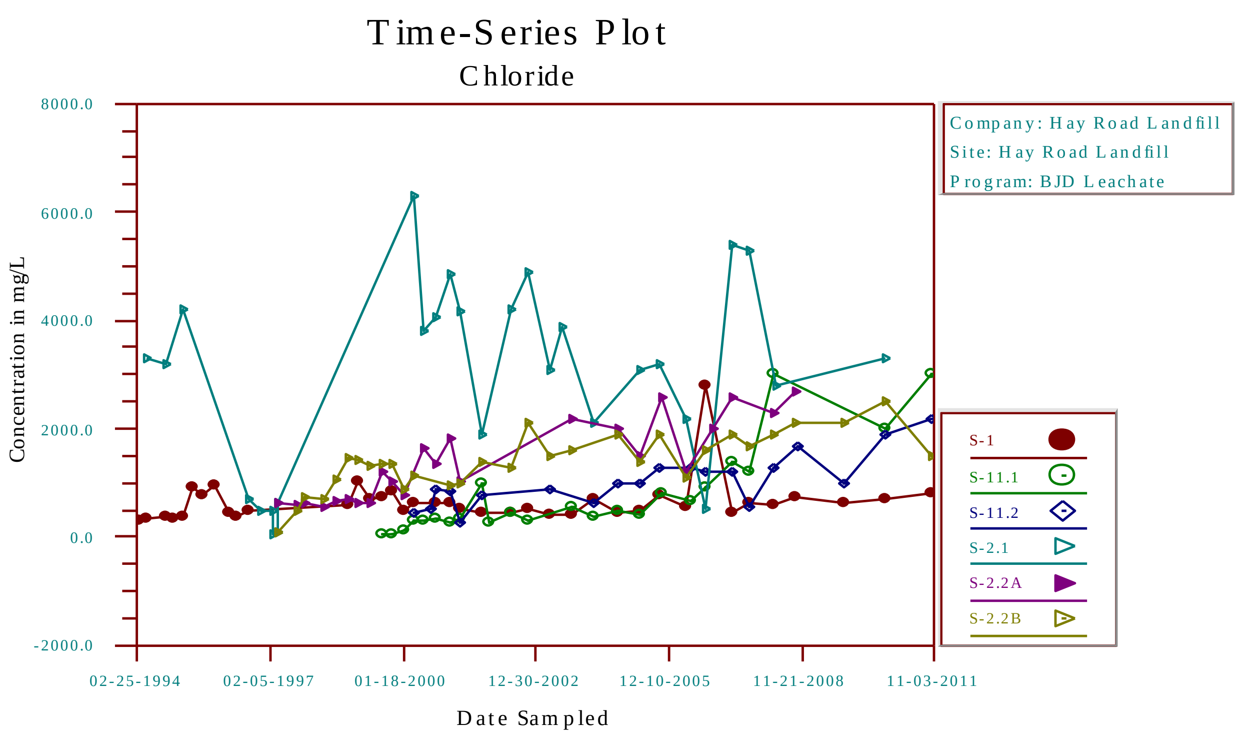
Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
20000.0
15000.0
10000.0
5000.0
0.0
02-25-1994
02-12-1997
02-01-2000
01-19-2003
01-07-2006
12-25-2008
12-14-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



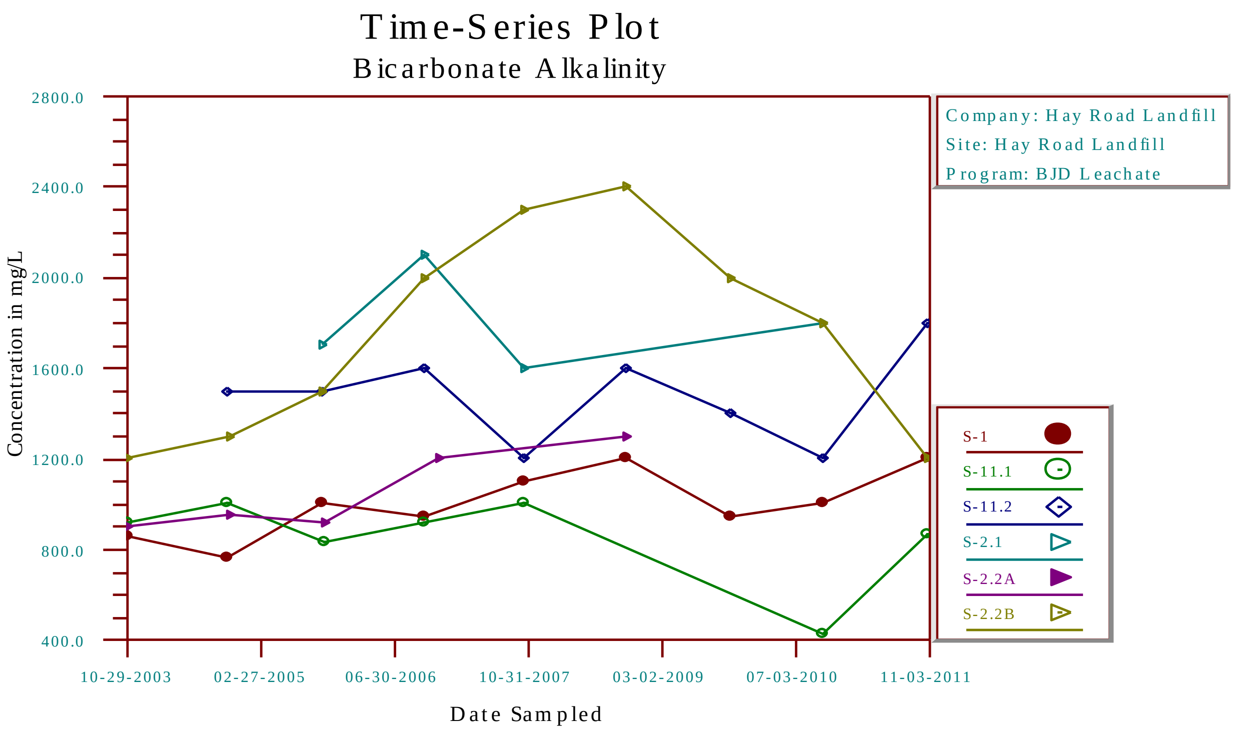
Time-Series Plot
pH
Concentration in s.u.
8.4
7.8
7.2
6.6
6.0
02-25-1994
02-12-1997
02-01-2000
01-19-2003
01-07-2006
12-25-2008
12-14-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



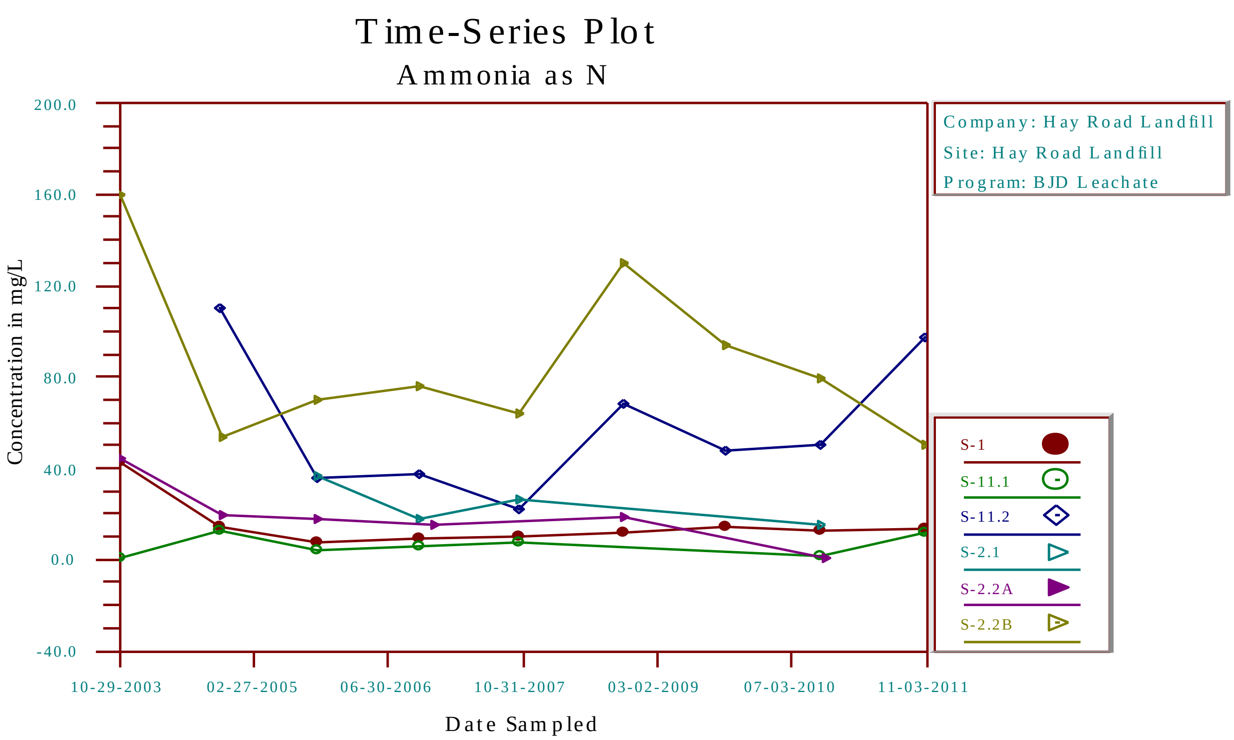
Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
200.0
160.0
120.0
80.0
40.0
0.0
-40.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



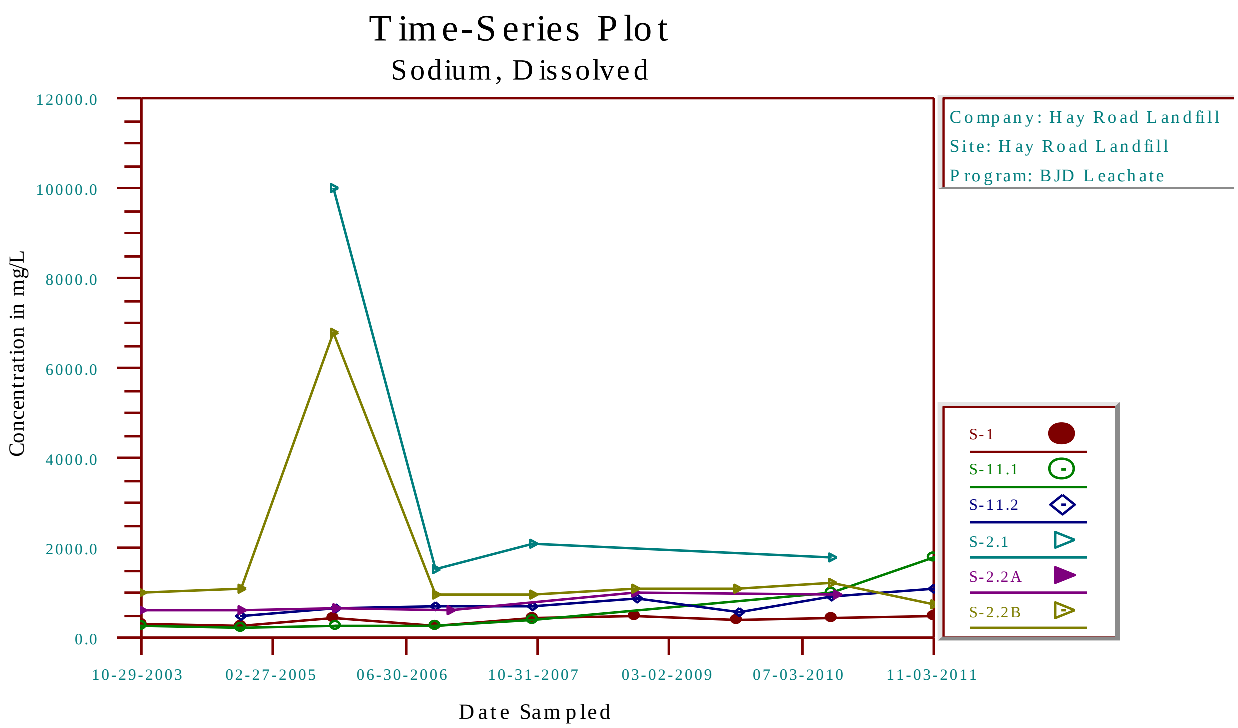
Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
8000.0
6000.0
4000.0
2000.0
0.0
-2000.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

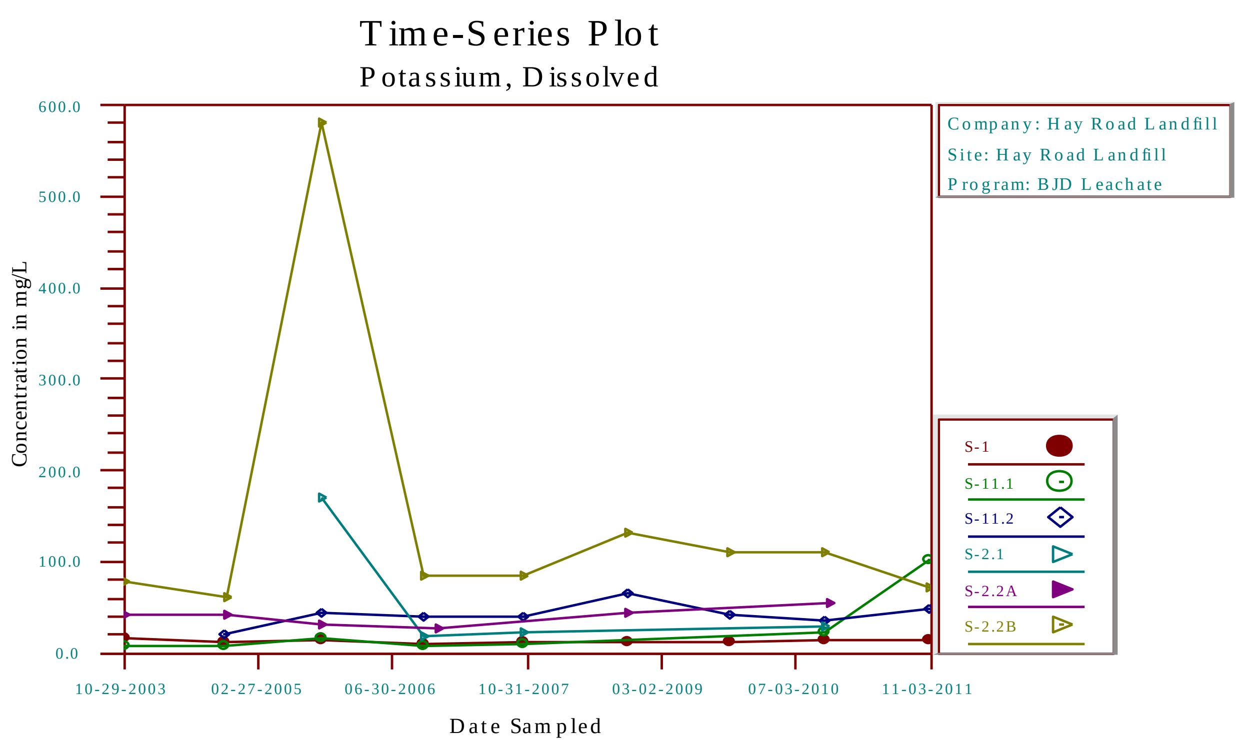


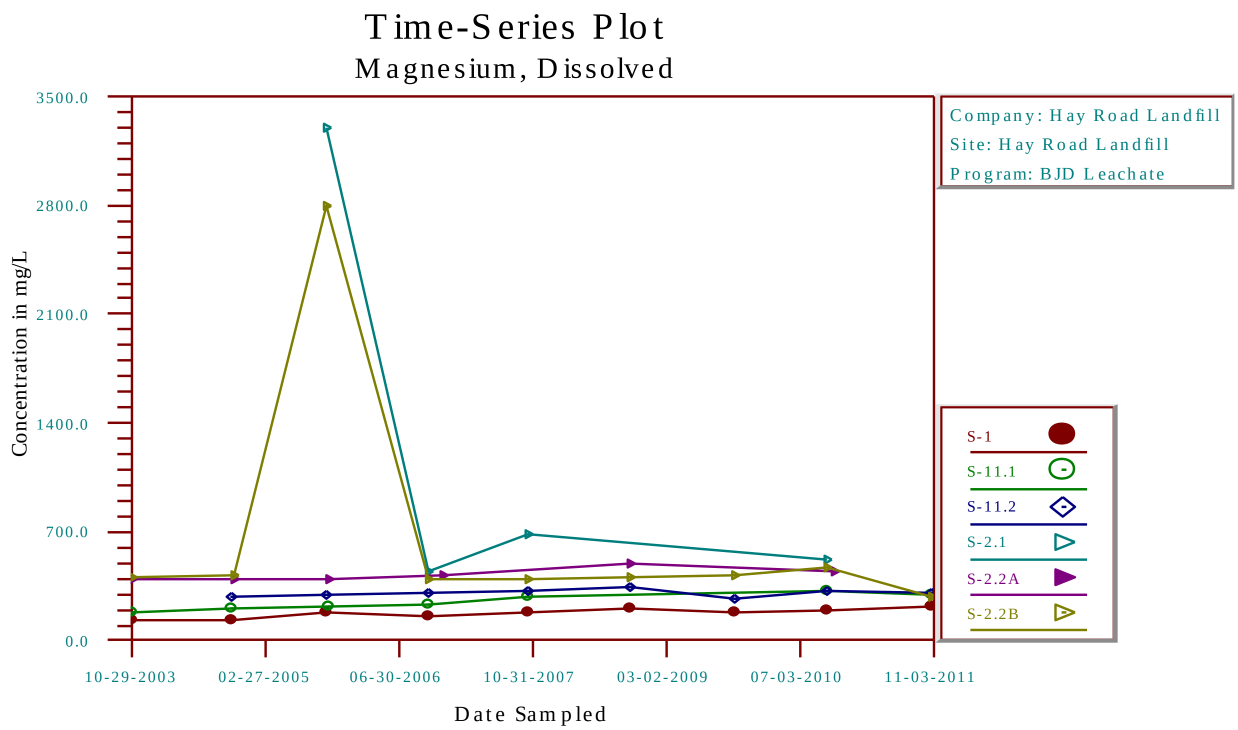
Time-Series Plot
Bicarbonate Alkalinity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
2800.0
2400.0
2000.0
1600.0
1200.0
800.0
400.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

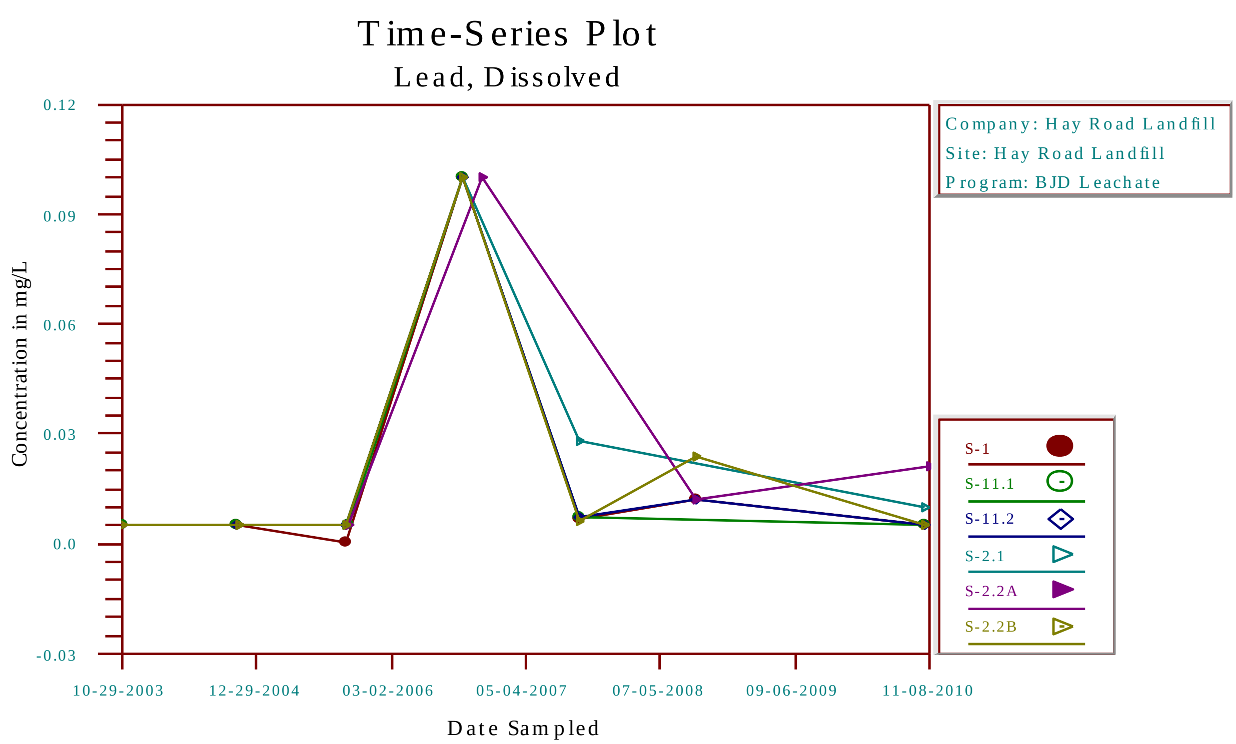


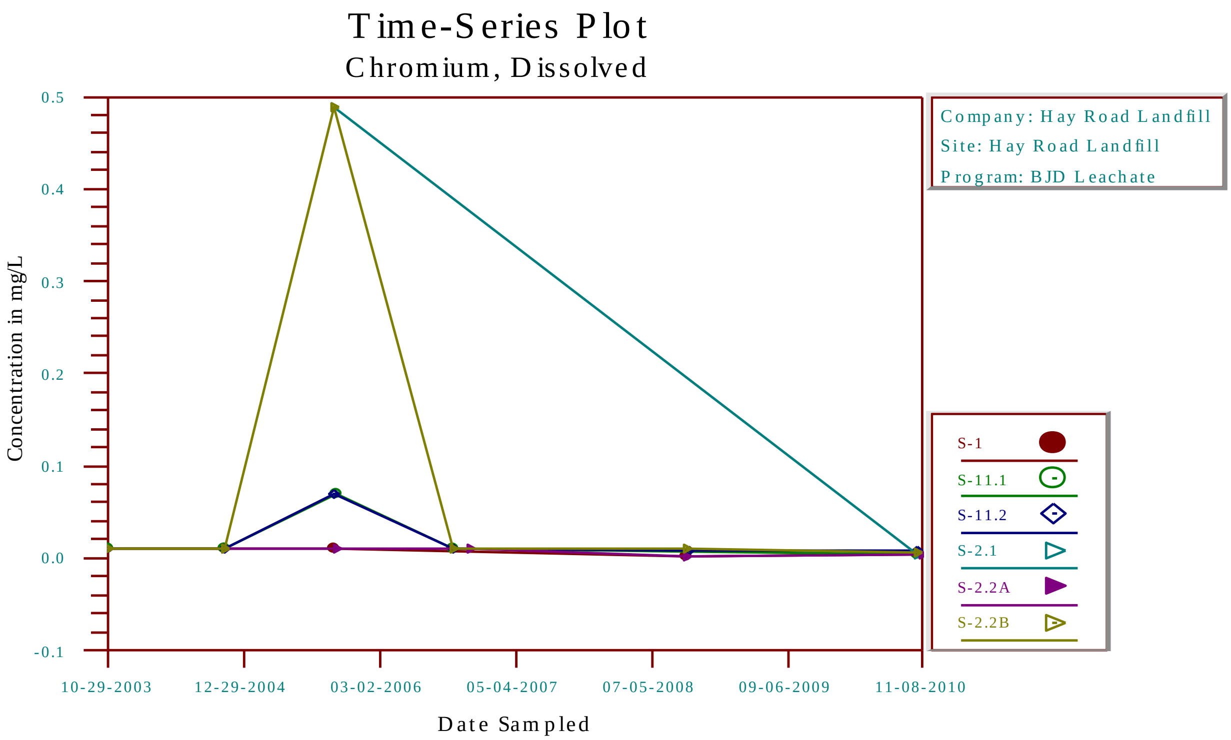
Time-Series Plot
Ammonia as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
200.0
160.0
120.0
80.0
40.0
0.0
-40.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

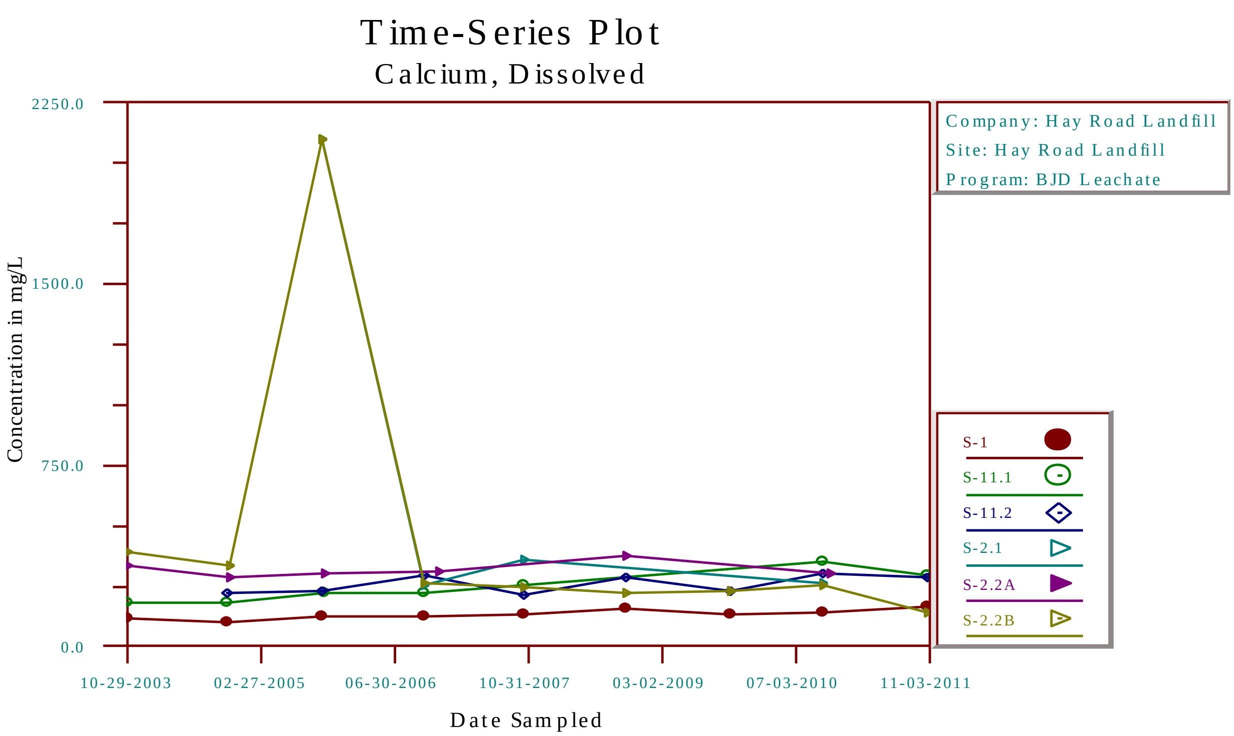

Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
12000.0
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

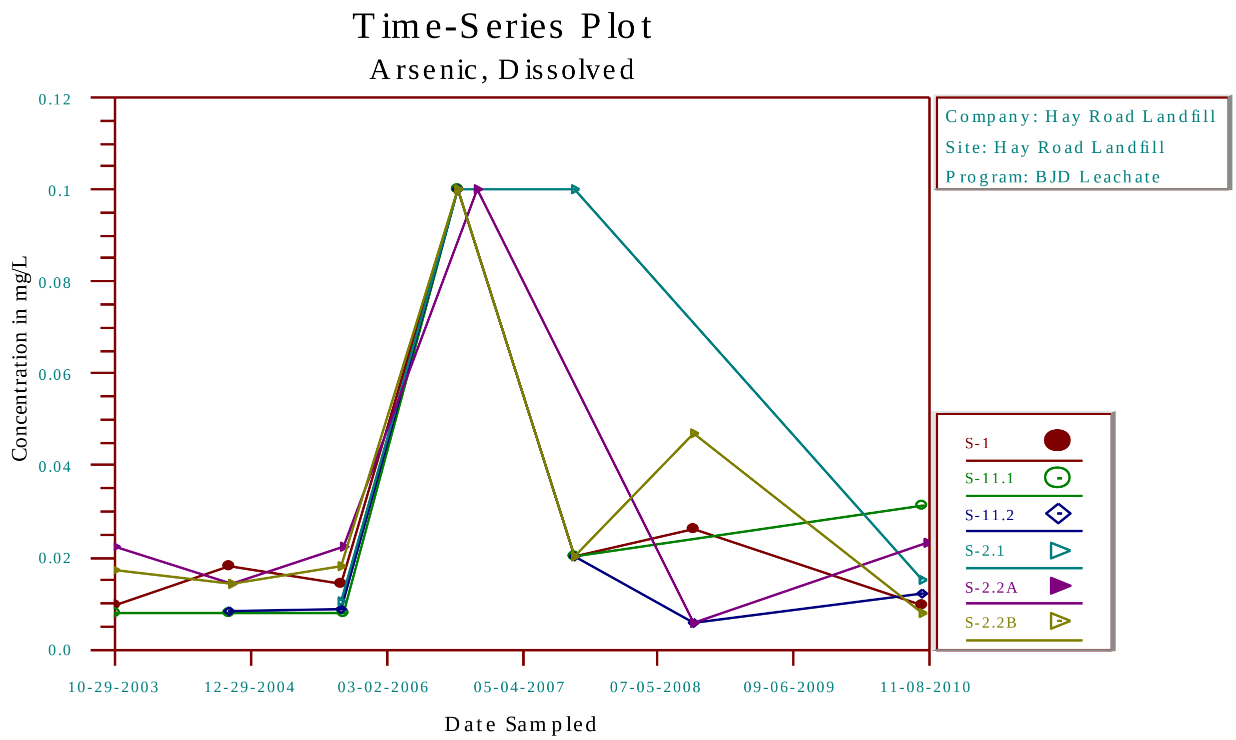

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
600.0
500.0
400.0
300.0
200.0
100.0
0.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

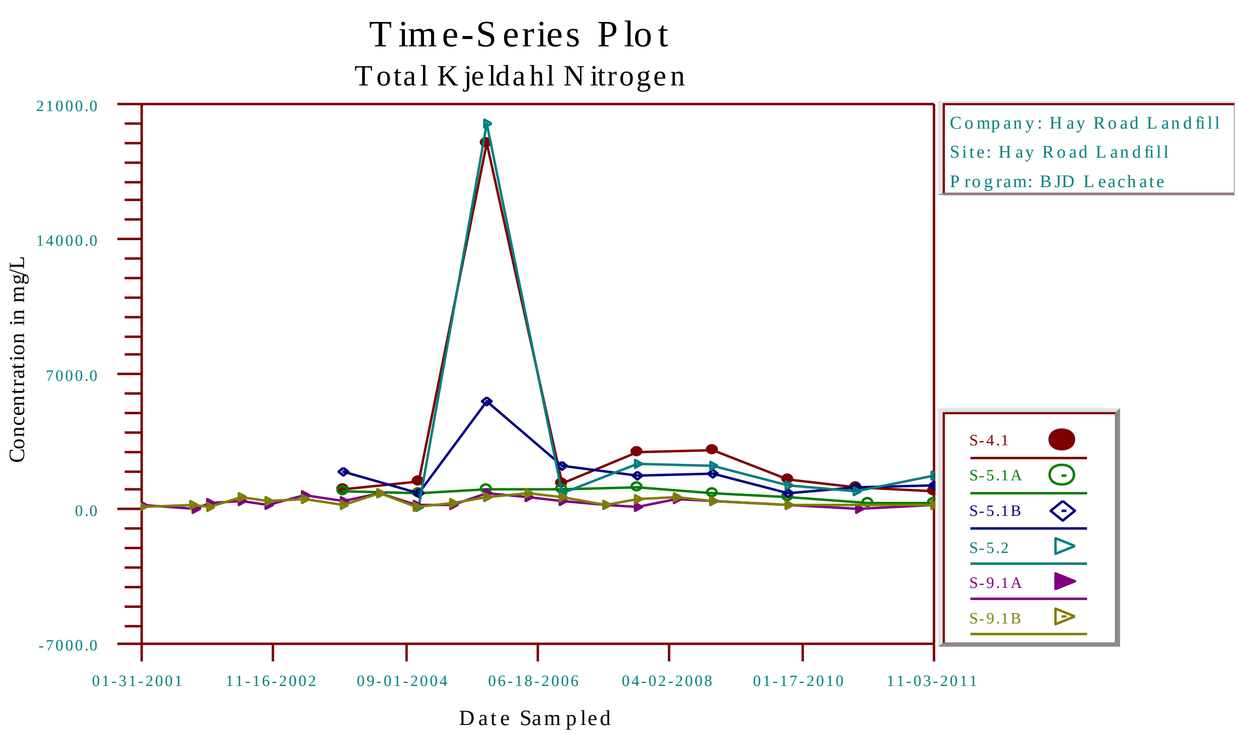

Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
3500.0
2800.0
2100.0
1400.0
700.0
0.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

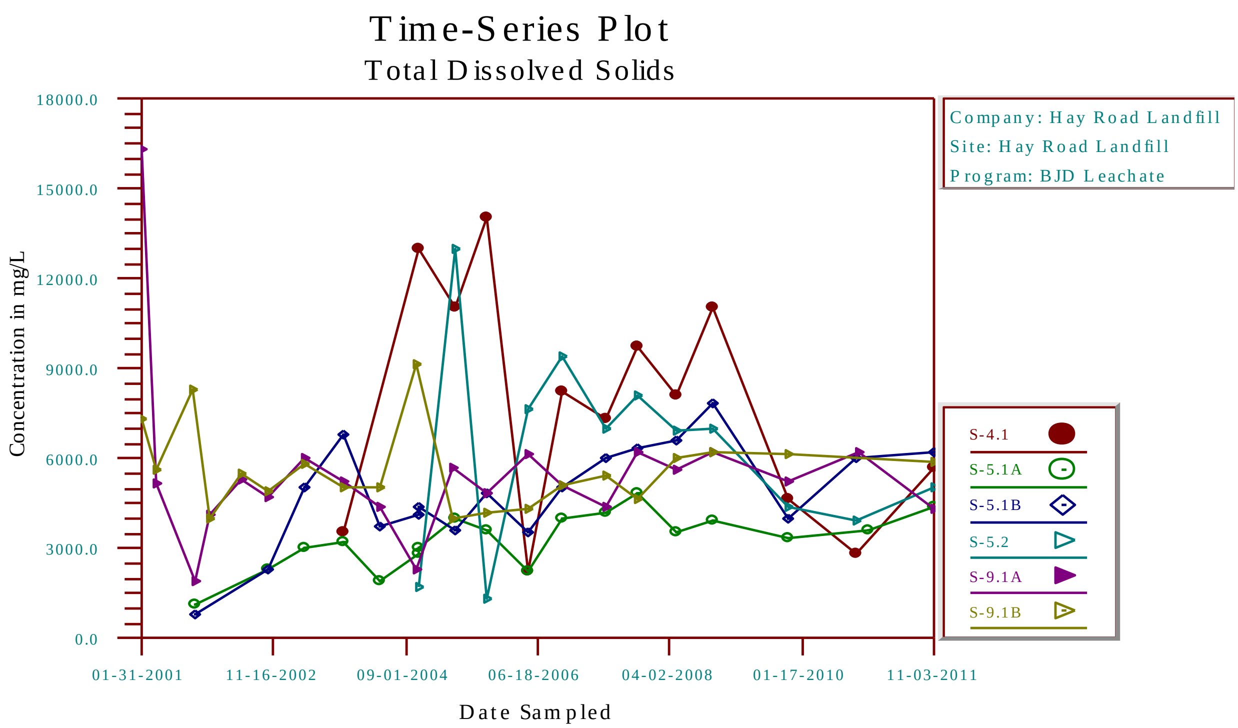

Time-Series Plot
Lead, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
0.12
0.09
0.06
0.03
0.0
-0.03
10-29-2003
12-29-2004
03-02-2006
05-04-2007
07-05-2008
09-06-2009
11-08-2010
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

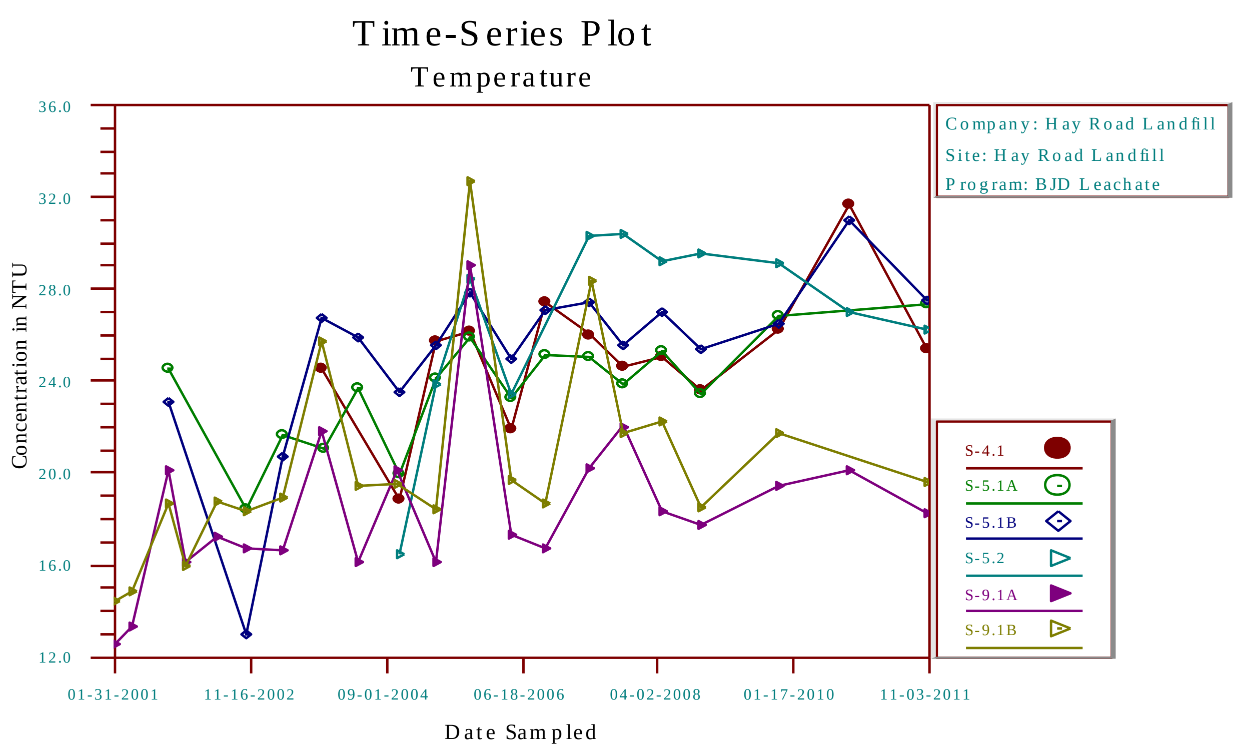

Time-Series Plot
Chromium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
Concentration in mg/L
10-29-2003
12-29-2004
03-02-2006
05-04-2007
07-05-2008
09-06-2009
11-08-2010
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

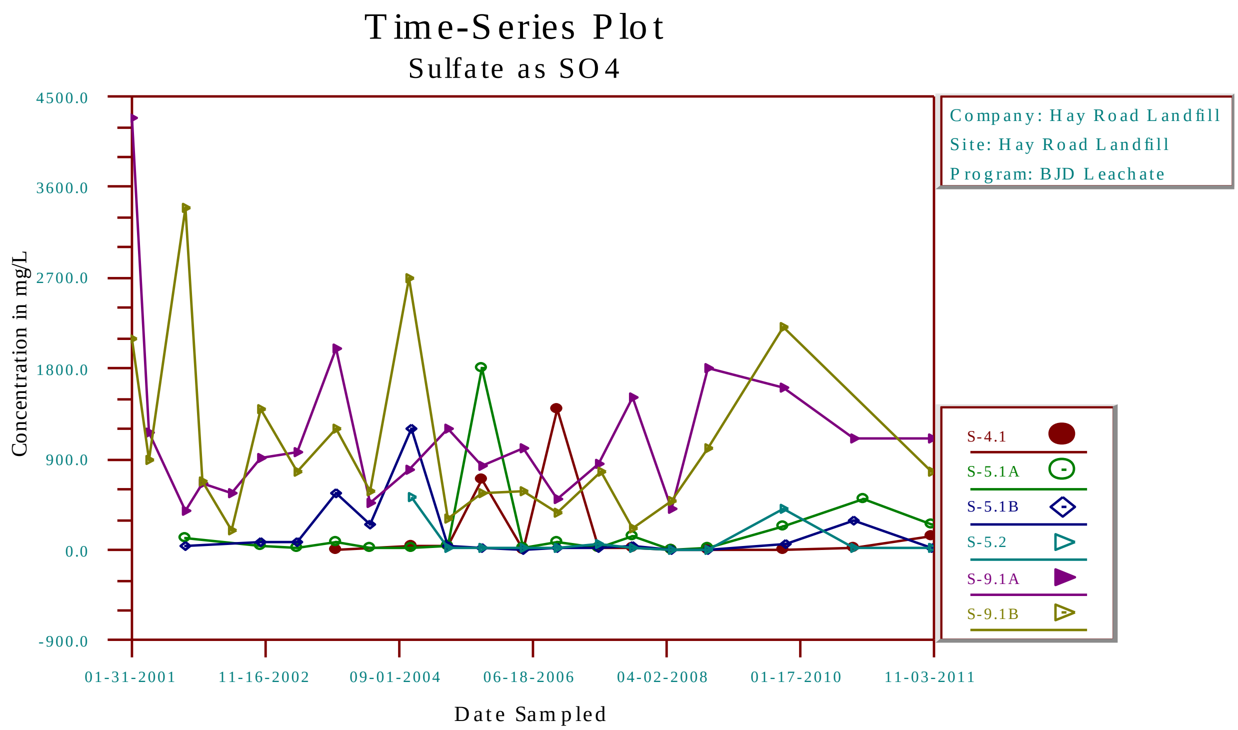

Time-Series Plot
Calcium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
2250.0
1500.0
750.0
0.0
Concentration in mg/L
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Arsenic, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
0.12
0.1
0.08
0.06
0.04
0.02
0.0
10-29-2003
12-29-2004
03-02-2006
05-04-2007
07-05-2008
09-06-2009
11-08-2010
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

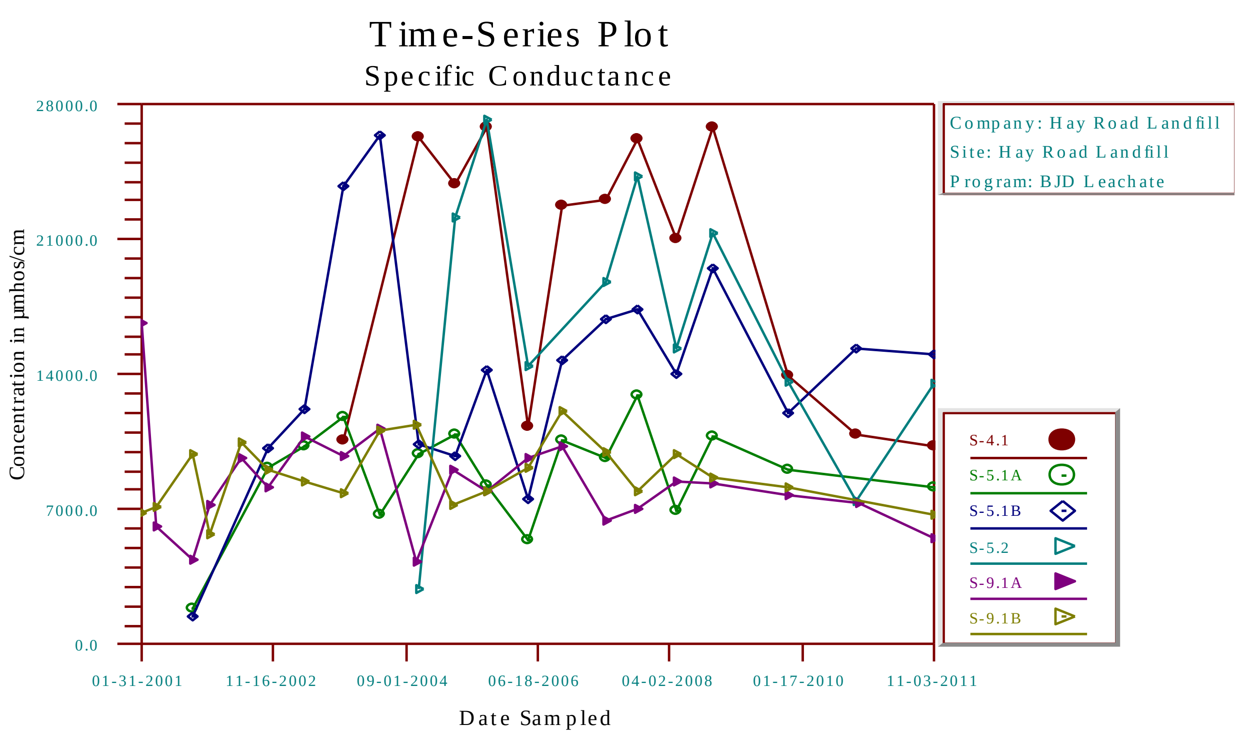

Time-Series Plot
Total Kjeldahl Nitrogen
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
21000.0
14000.0
7000.0
0.0
-7000.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
Total Dissolved Solids
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
18000.0
15000.0
12000.0
9000.0
6000.0
3000.0
0.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

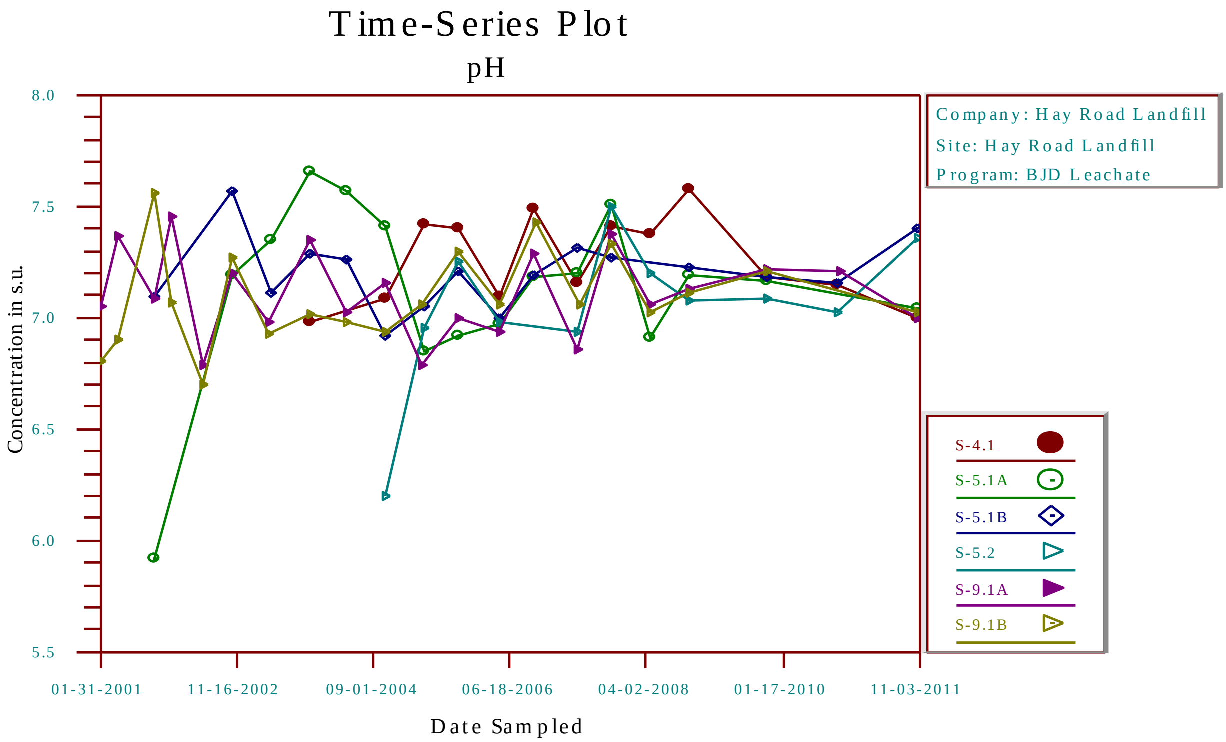

Time-Series Plot
Temperature
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in NTU
36.0
32.0
28.0
24.0
20.0
16.0
12.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

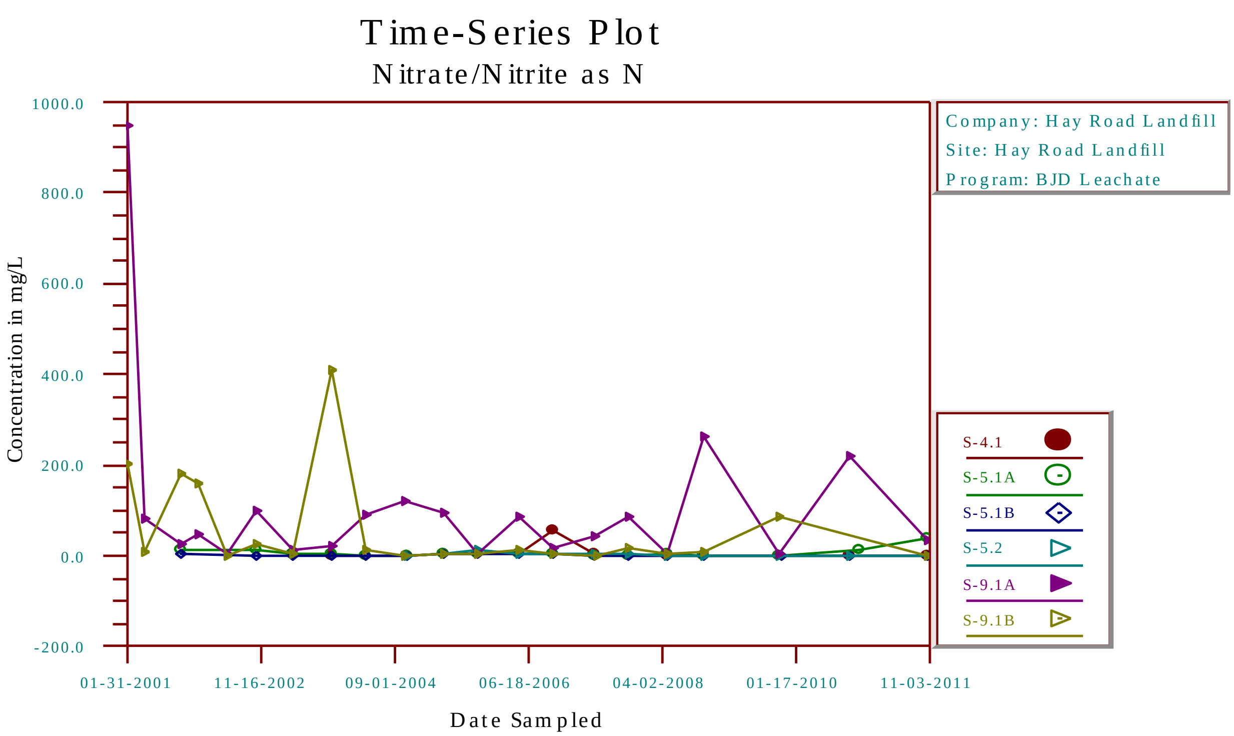


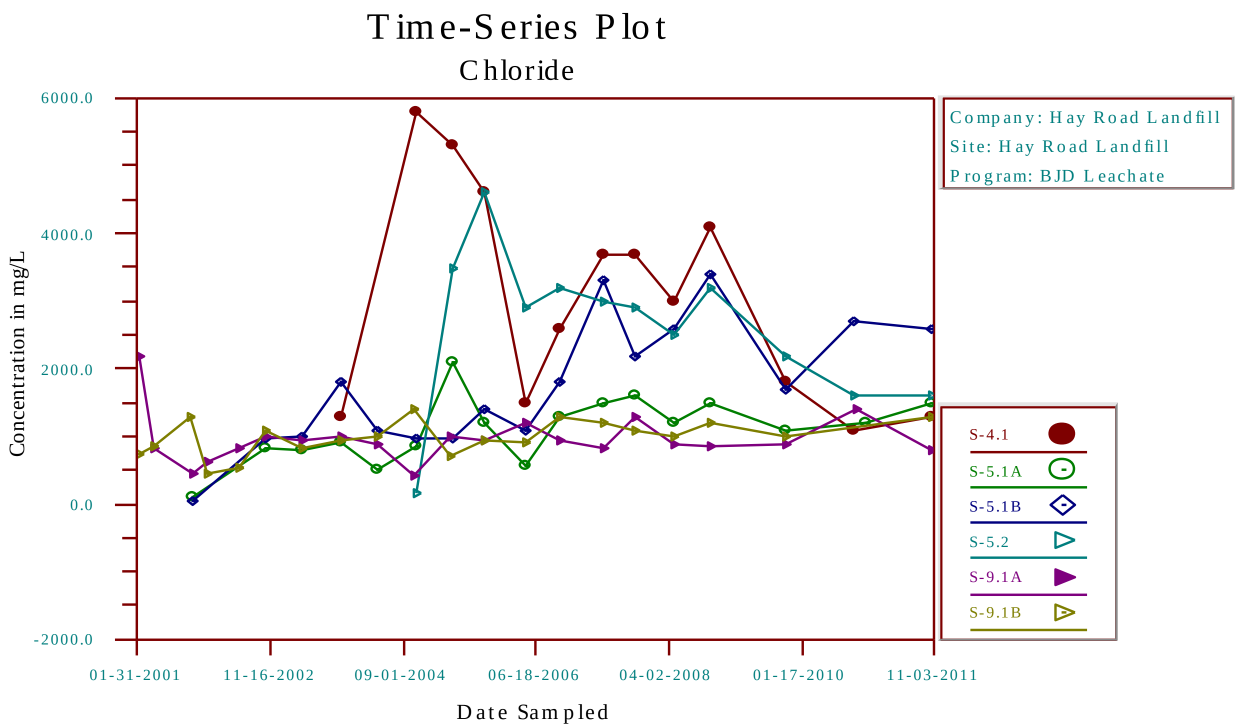
Time-Series Plot
Sulfate as SO4
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
4500.0
3600.0
2700.0
1800.0
900.0
0.0
-900.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

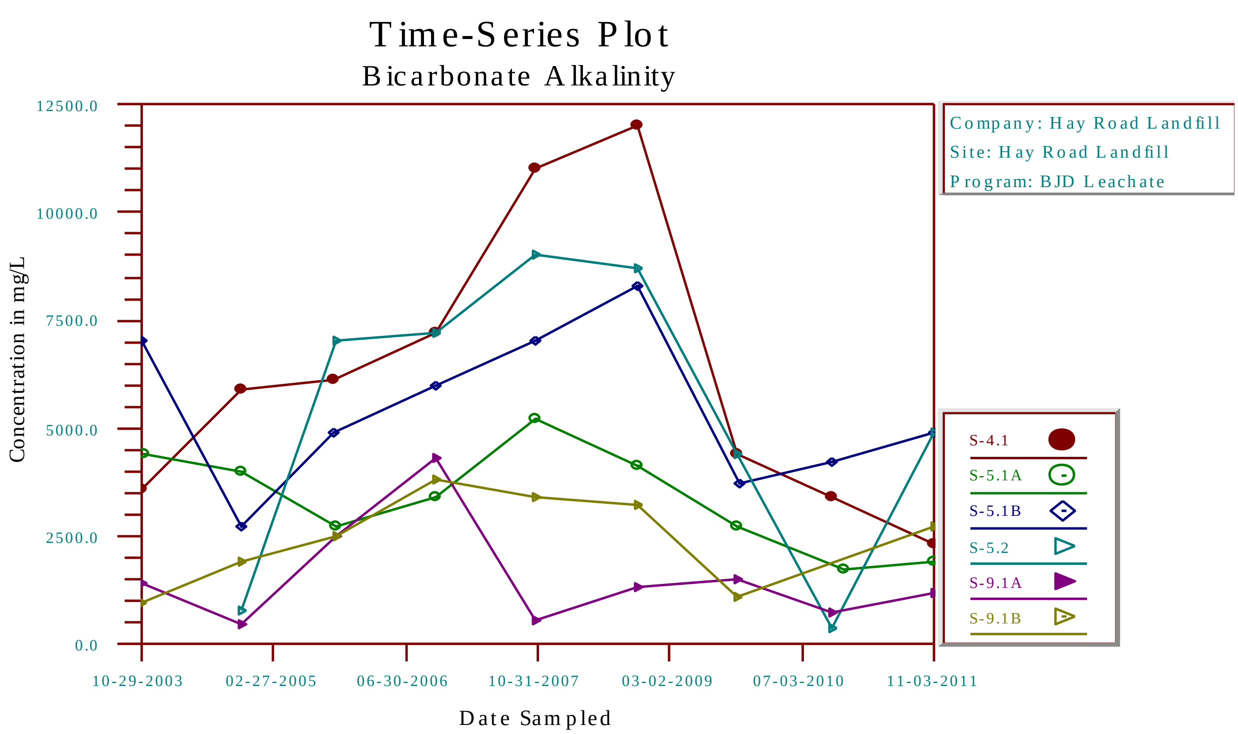


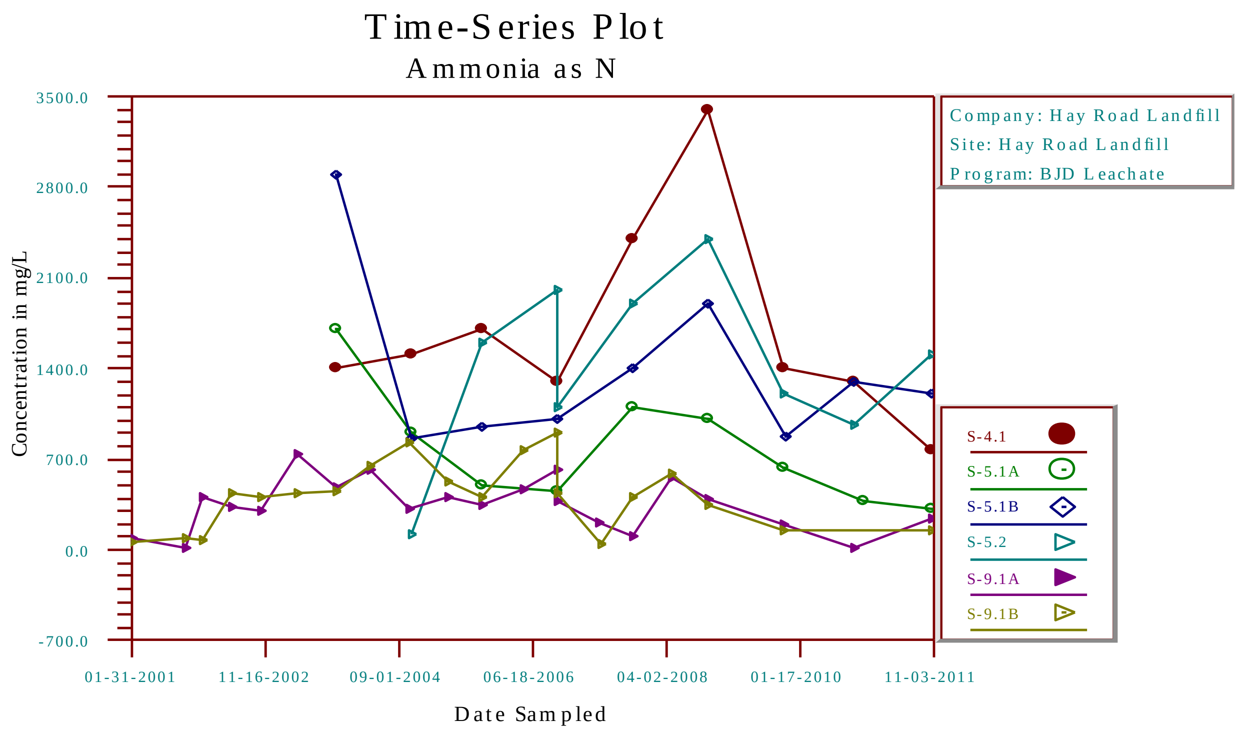
Time-Series Plot
Specific Conductance
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µmhos/cm
28000.0
21000.0
14000.0
7000.0
0.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

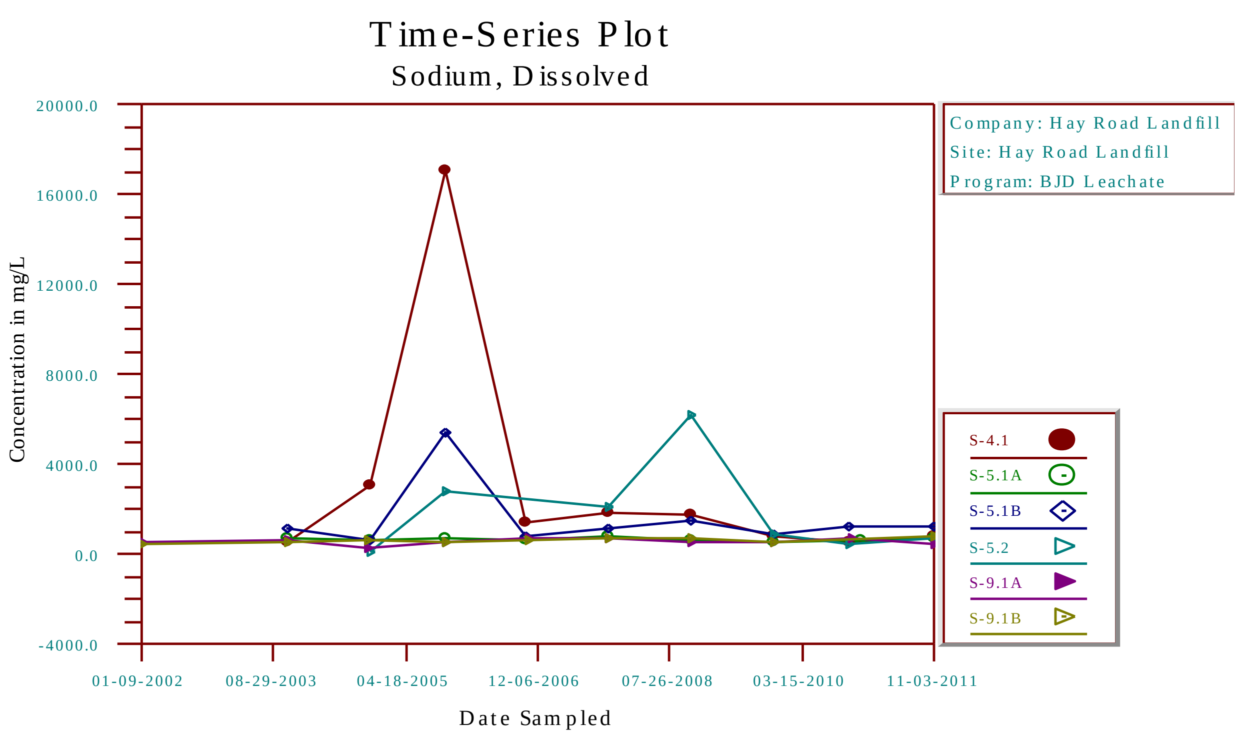

Time-Series Plot
pH
8.0
7.5
7.0
6.5
6.0
5.5
Concentration in s.u.
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

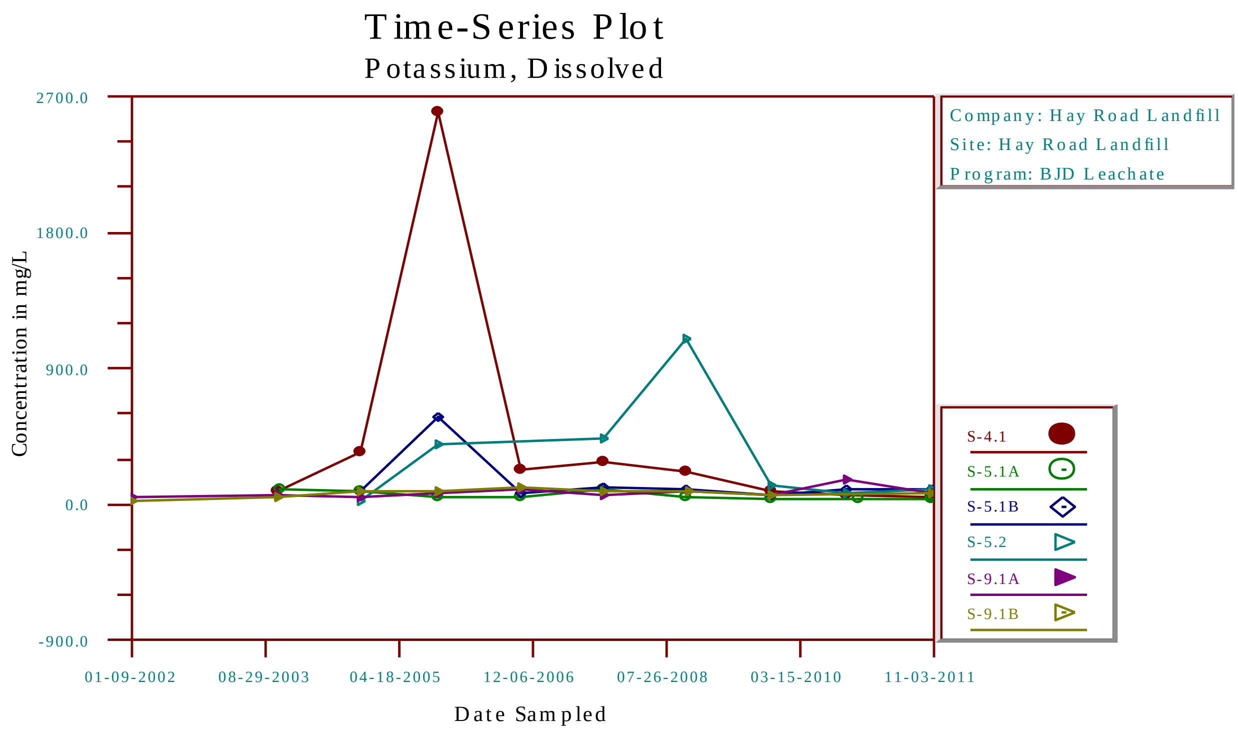

Time-Series Plot
Nitrate/Nitrite as N
1000.0
800.0
600.0
400.0
200.0
0.0
-200.0
Concentration in mg/L
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

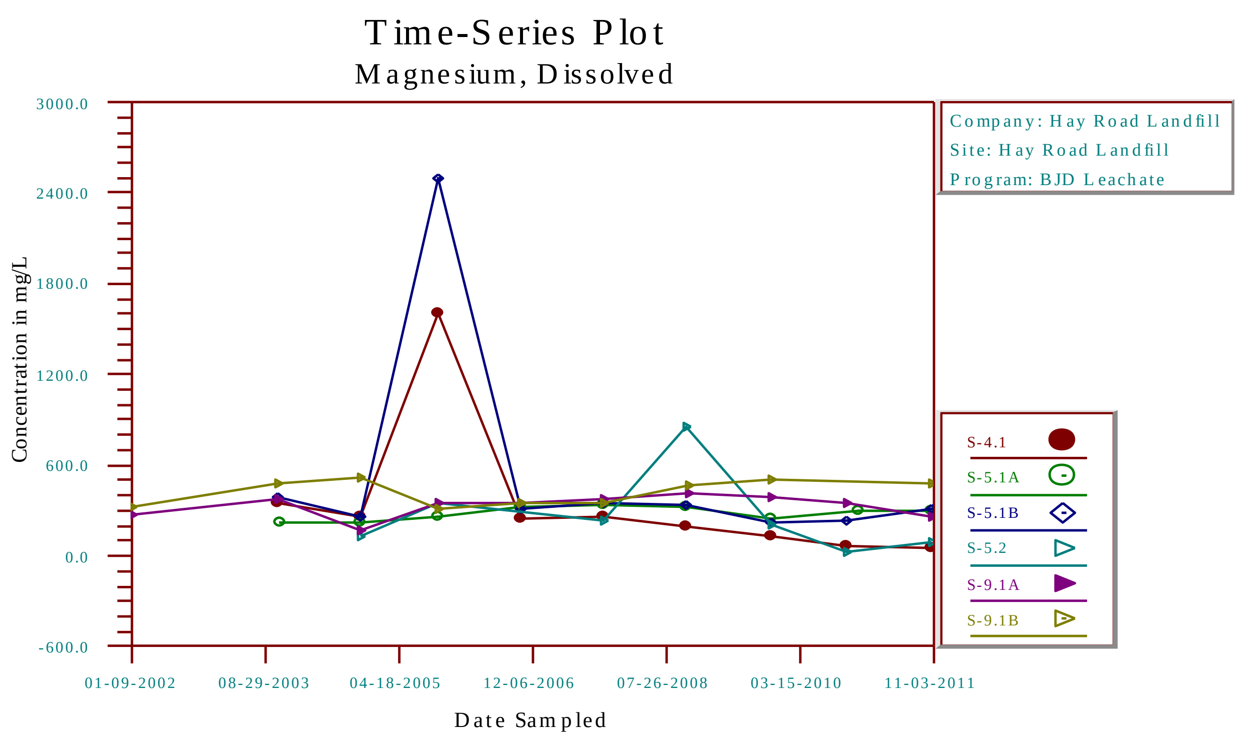

Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
6000.0
4000.0
2000.0
0.0
-2000.0
Concentration in mg/L
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

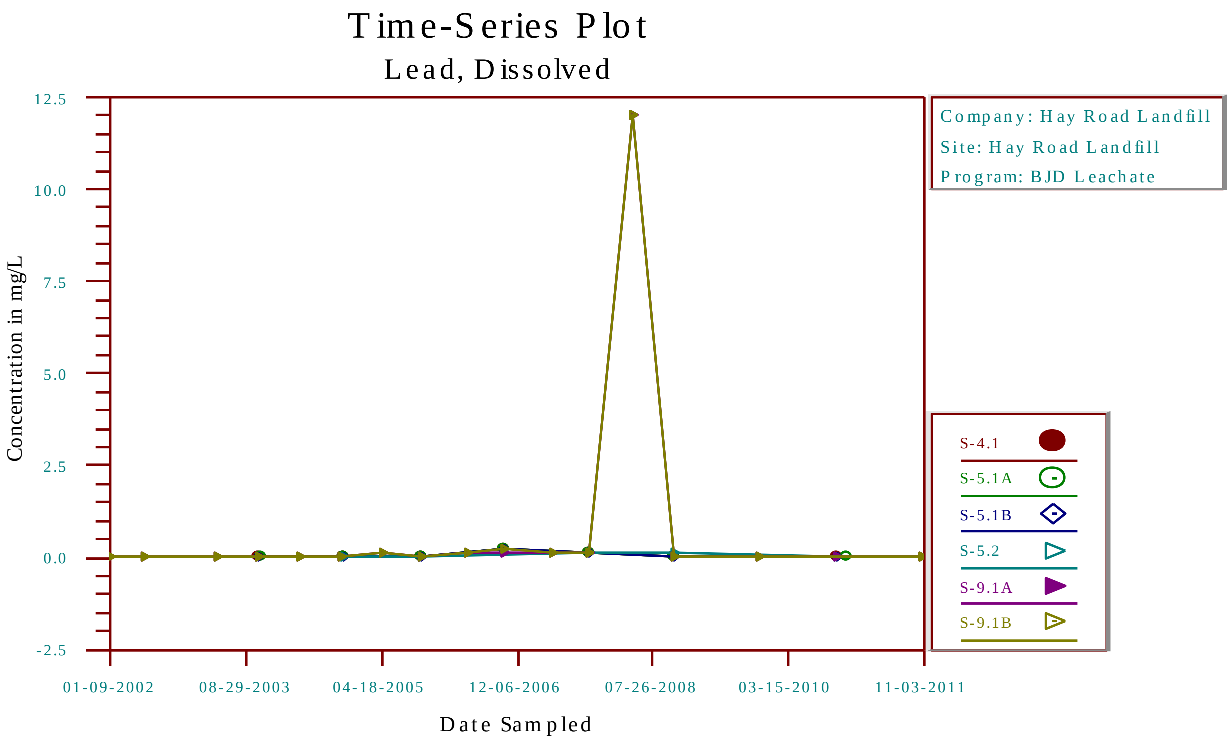

Time-Series Plot
Bicarbonate Alkalinity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
12500.0
10000.0
7500.0
5000.0
2500.0
0.0
Concentration in mg/L
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

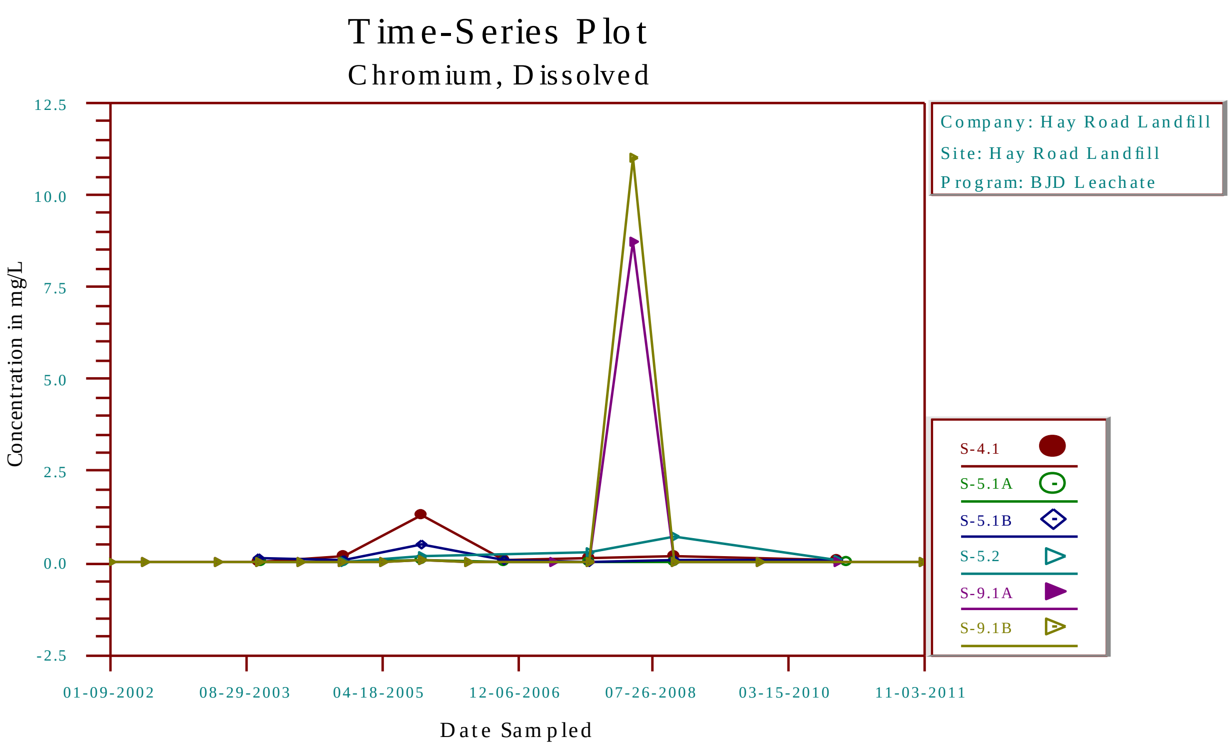

Time-Series Plot
Ammonia as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
3500.0
2800.0
2100.0
1400.0
700.0
0.0
-700.0
01-31-2001
11-16-2002
09-01-2004
06-18-2006
04-02-2008
01-17-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

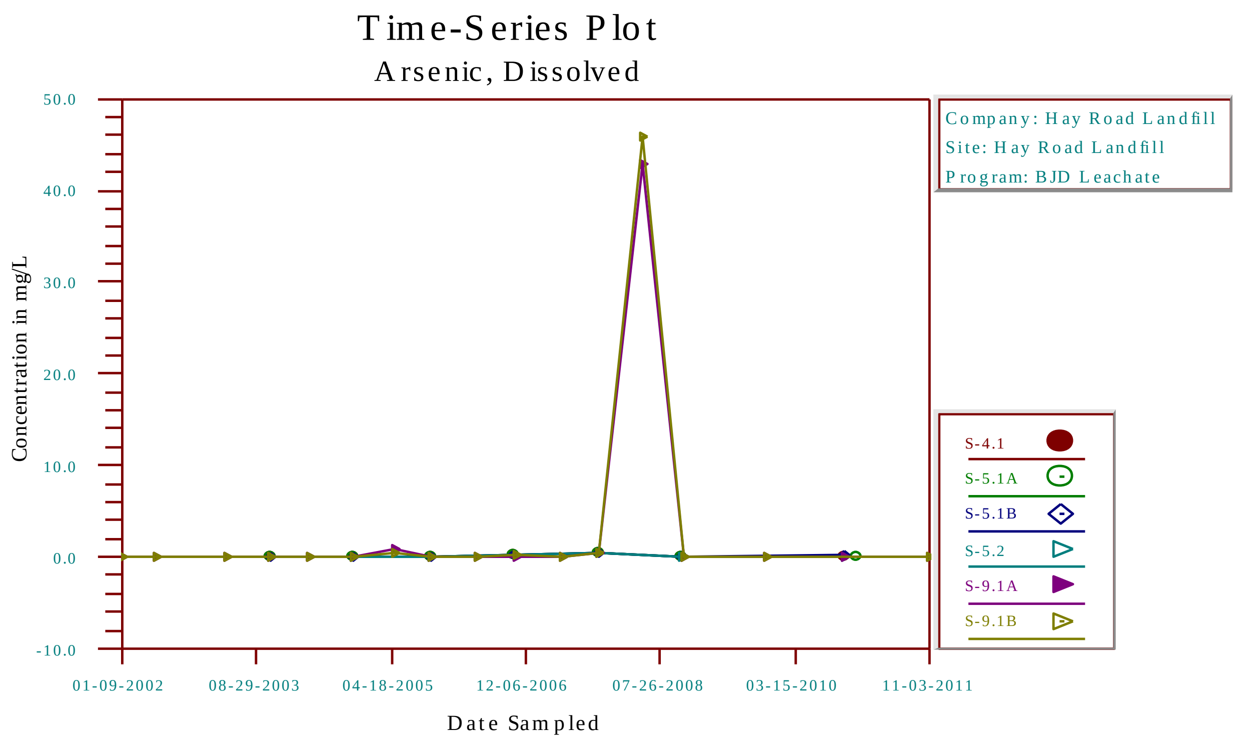

Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
20000.0
16000.0
12000.0
8000.0
4000.0
0.0
-4000.0
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

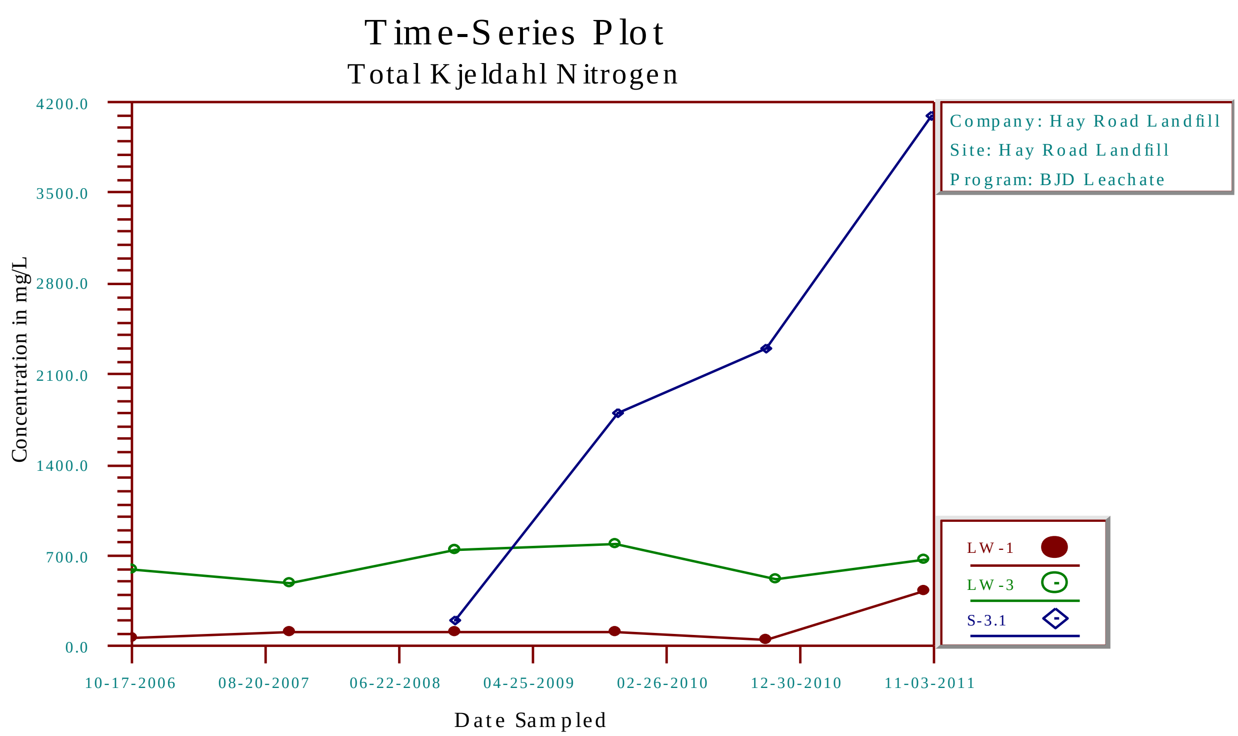

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
2700.0
1800.0
900.0
0.0
-900.0
Concentration in mg/L
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

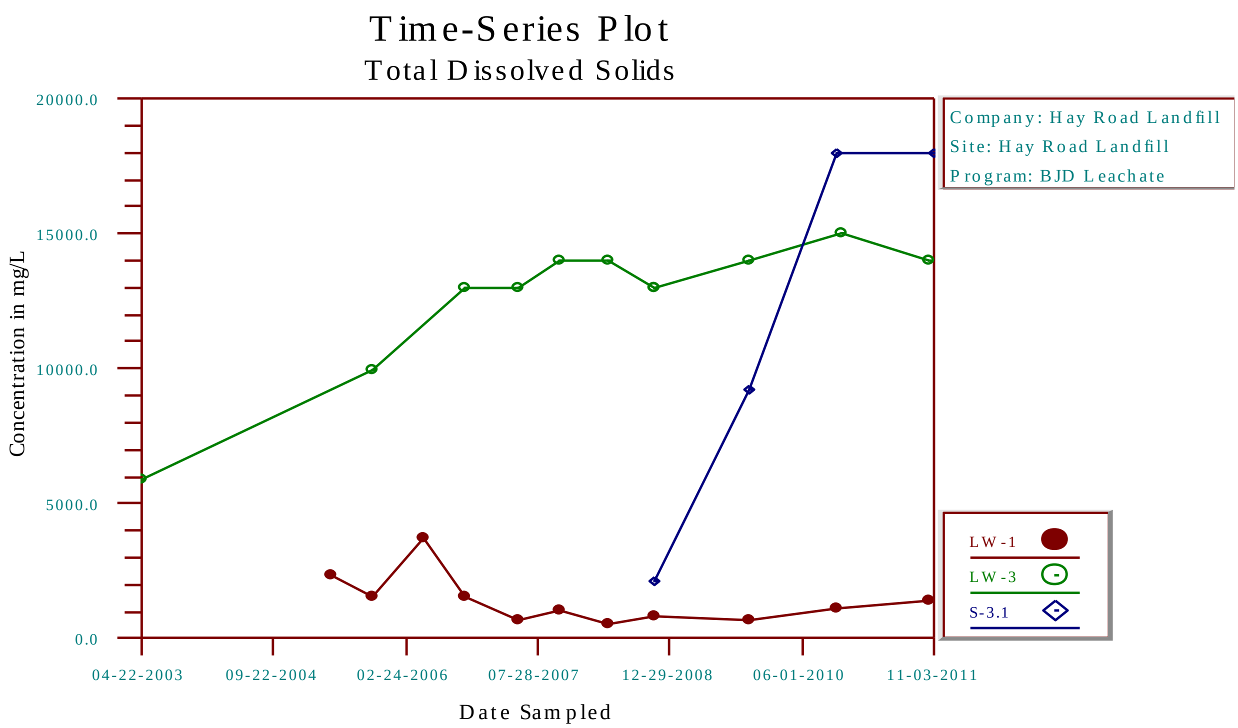

Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
3000.0
2400.0
1800.0
1200.0
600.0
0.0
-600.0
Concentration in mg/L
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

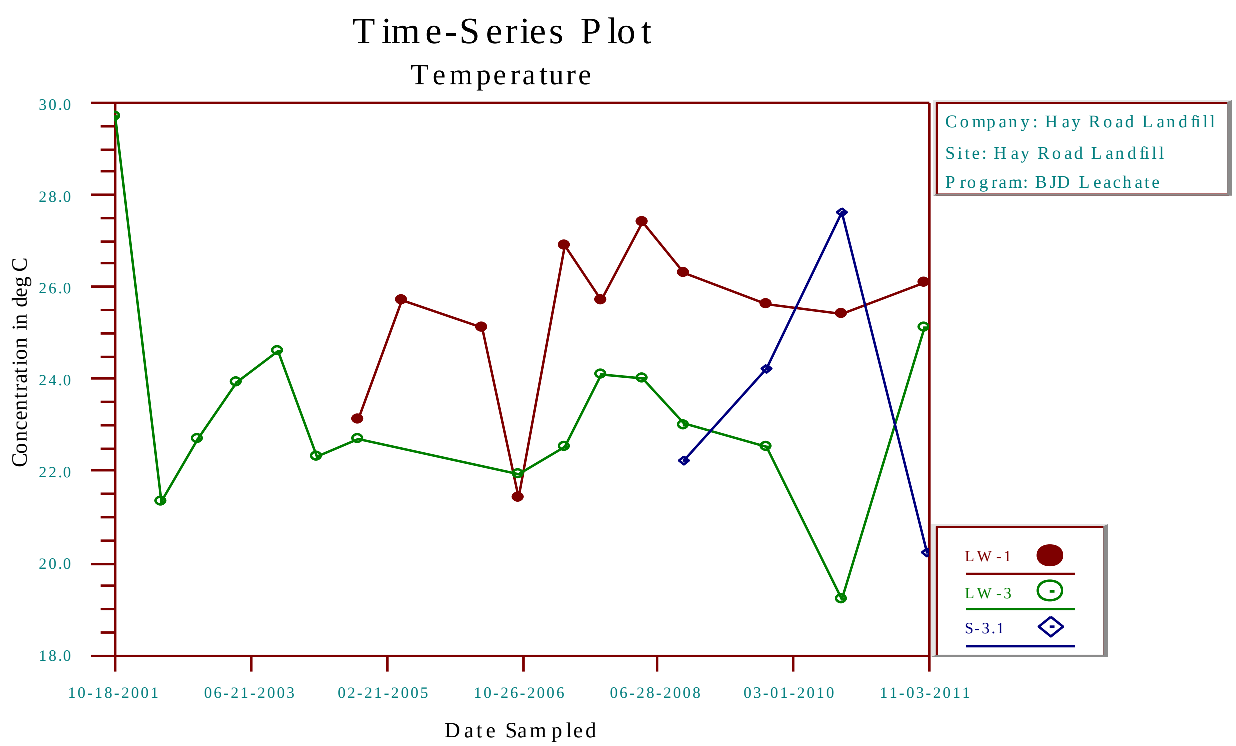

Time-Series Plot
Lead, Dissolved
Concentration in mg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

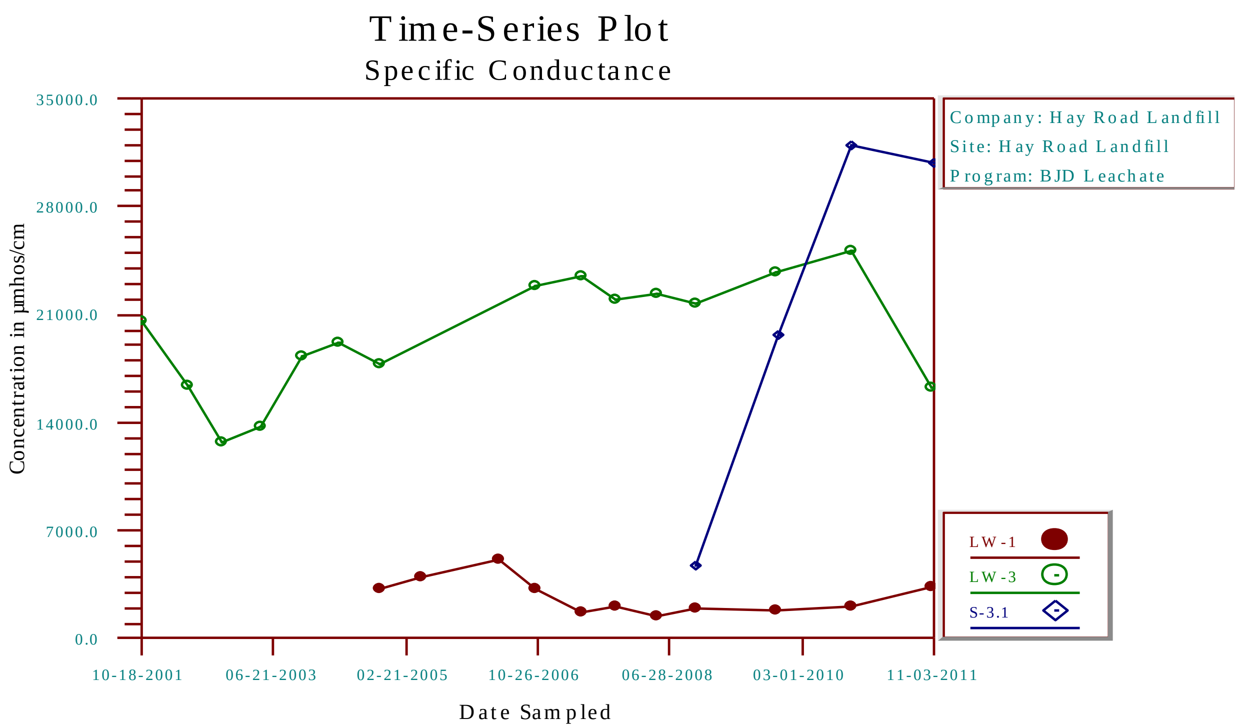

Time-Series Plot
Chromium, Dissolved
Concentration in mg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

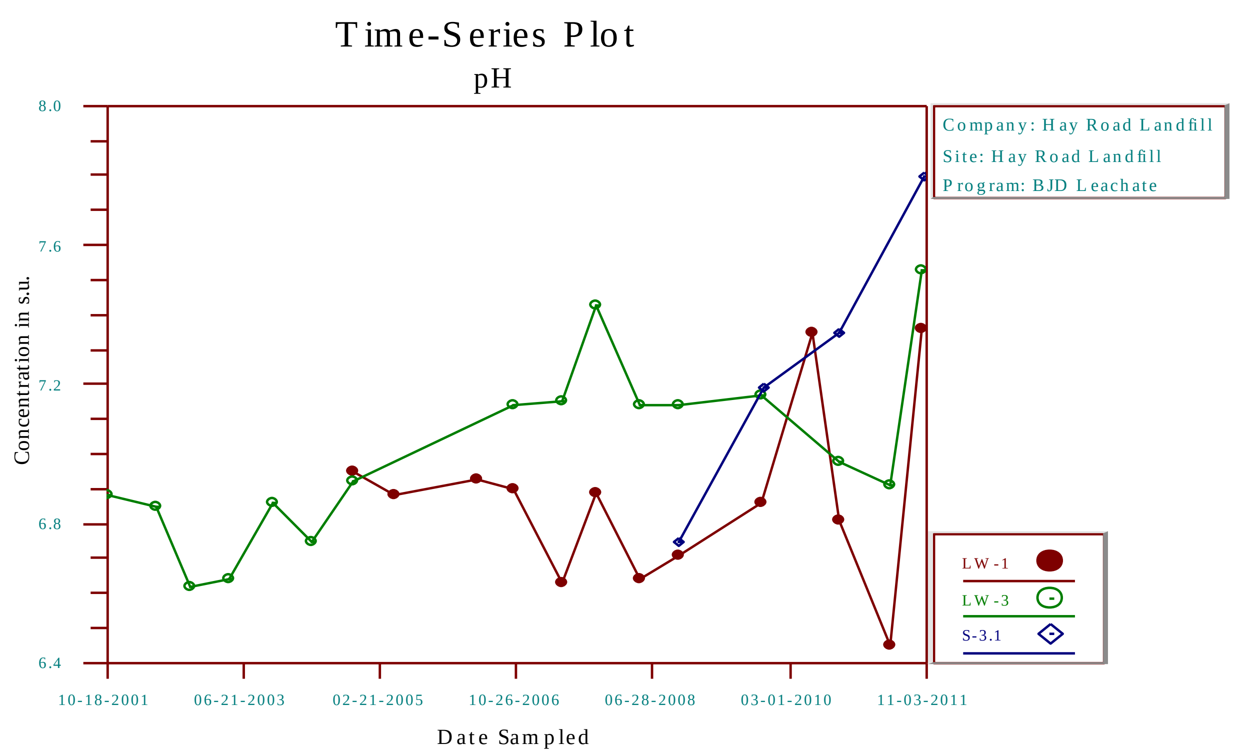

Time-Series Plot
Arsenic, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
01-09-2002
08-29-2003
04-18-2005
12-06-2006
07-26-2008
03-15-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

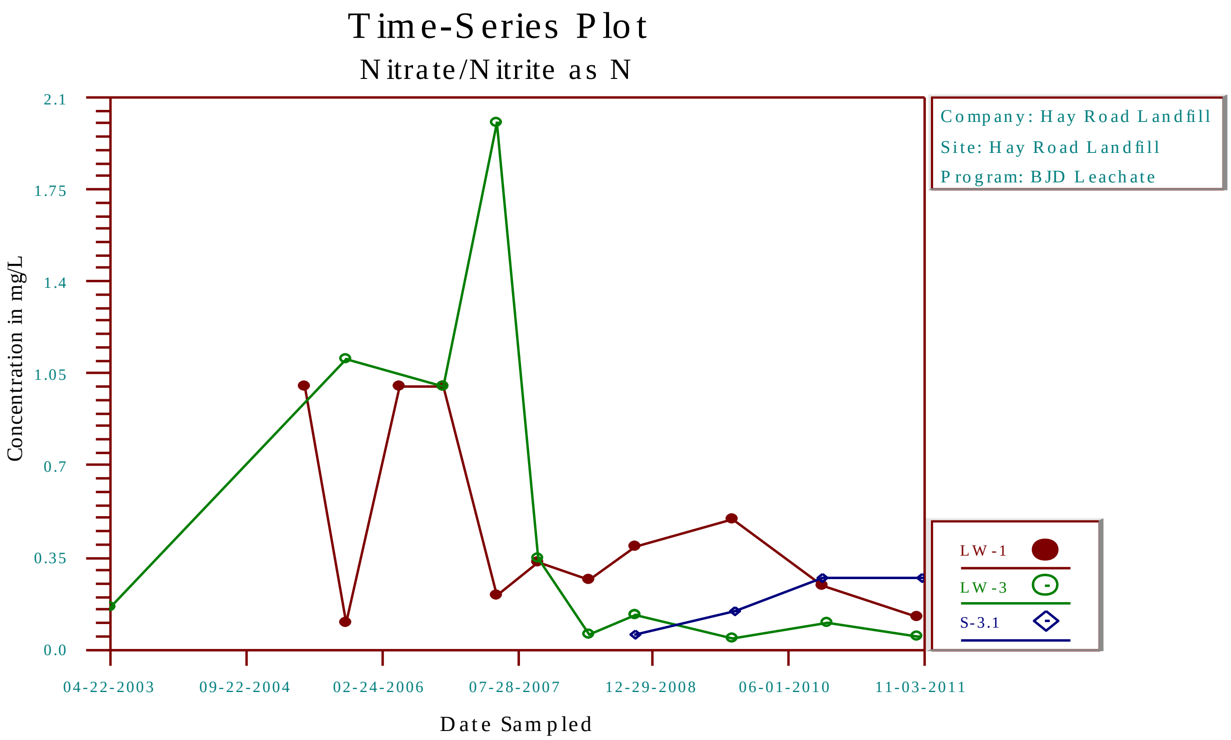

Time-Series Plot
Total Kjeldahl Nitrogen
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
4200.0
3500.0
2800.0
2100.0
1400.0
700.0
0.0
10-17-2006
08-20-2007
06-22-2008
04-25-2009
02-26-2010
12-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

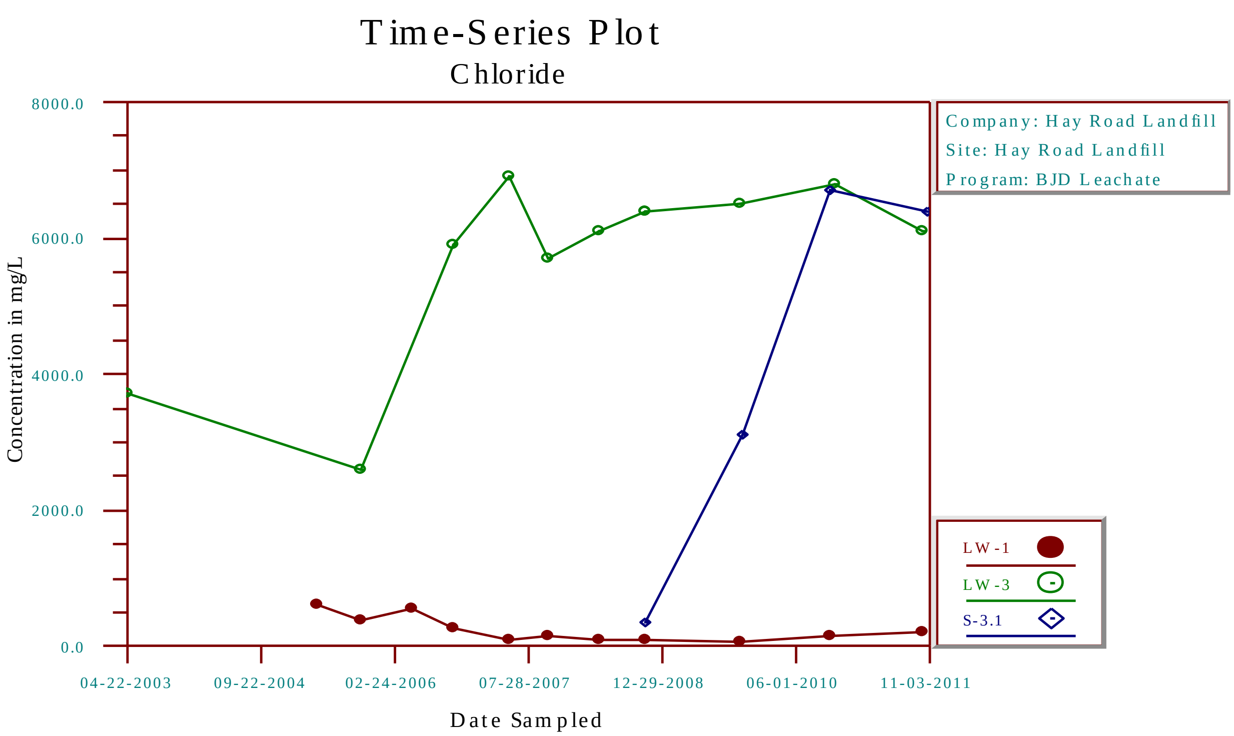

Time-Series Plot
Total Dissolved Solids
20000.0
15000.0
10000.0
5000.0
0.0
Concentration in mg/L
04-22-2003
09-22-2004
02-24-2006
07-28-2007
12-29-2008
06-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

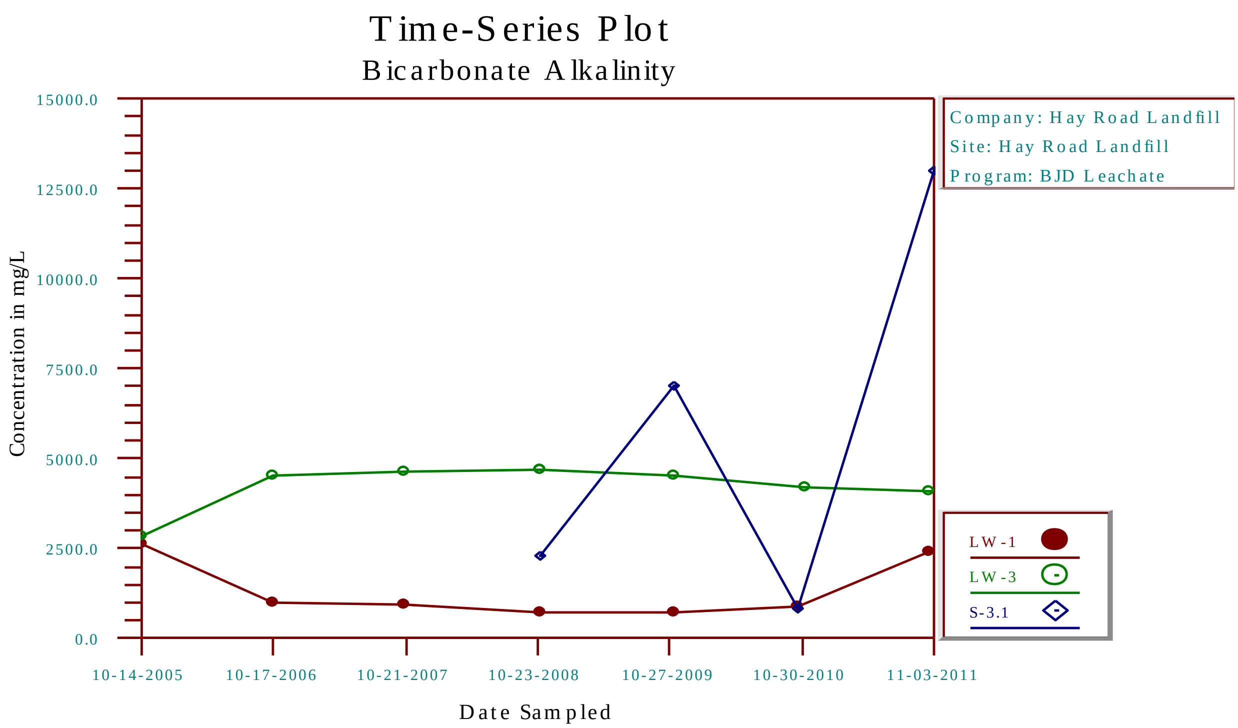

Time-Series Plot
Temperature
30.0
28.0
26.0
24.0
22.0
20.0
18.0
Concentration in deg C
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

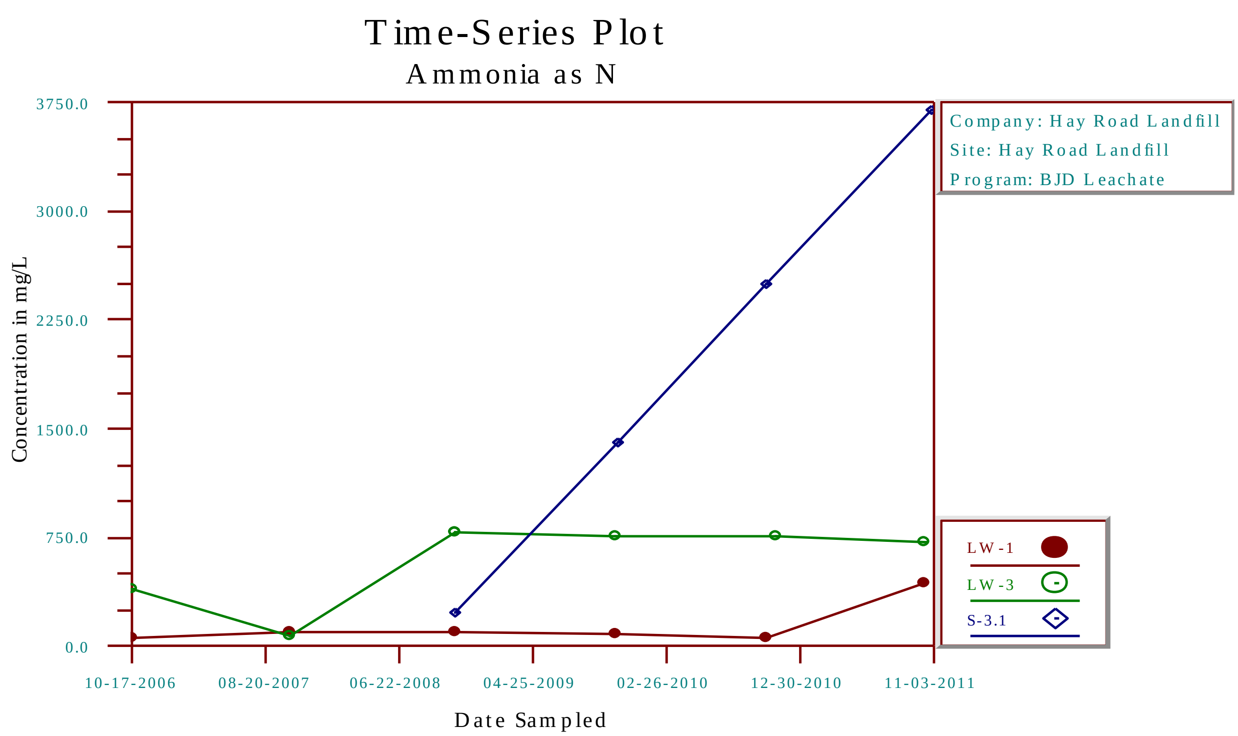

Time-Series Plot
Specific Conductance
Concentration in µmhos/cm
35000.0
28000.0
21000.0
14000.0
7000.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

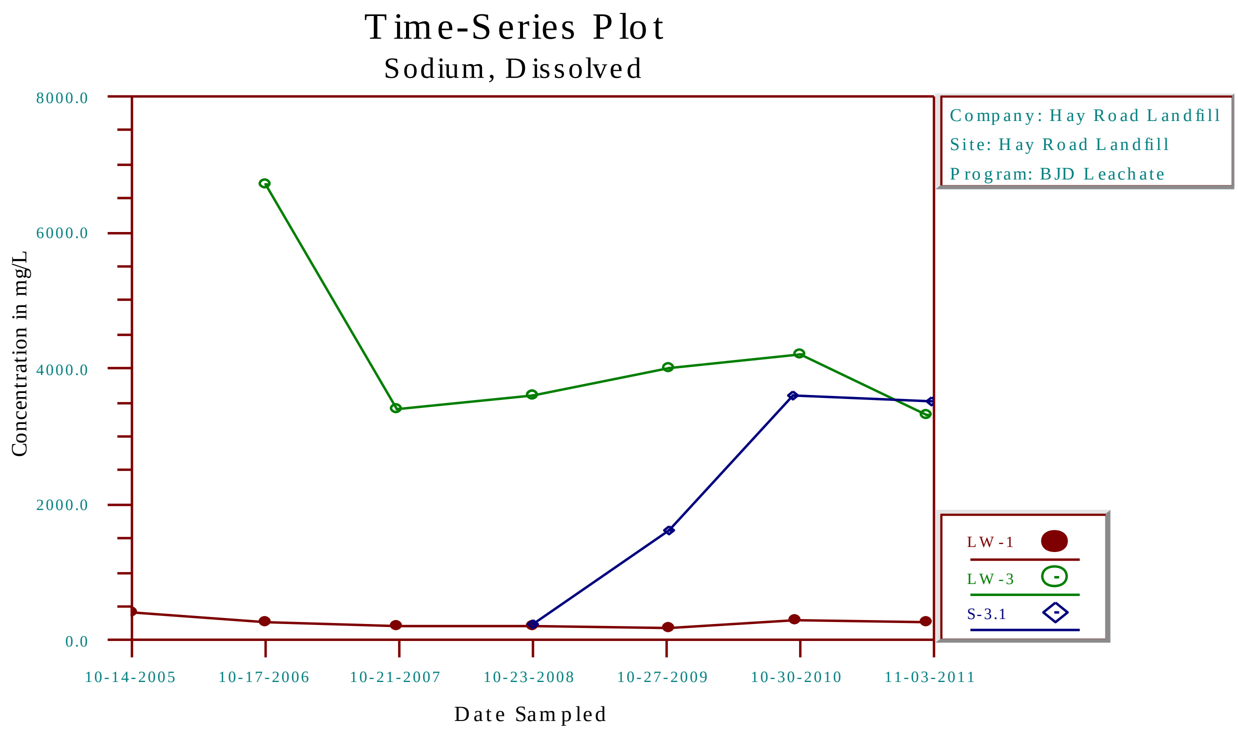

Time-Series Plot
pH
Concentration in s.u.
8.0
7.6
7.2
6.8
6.4
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

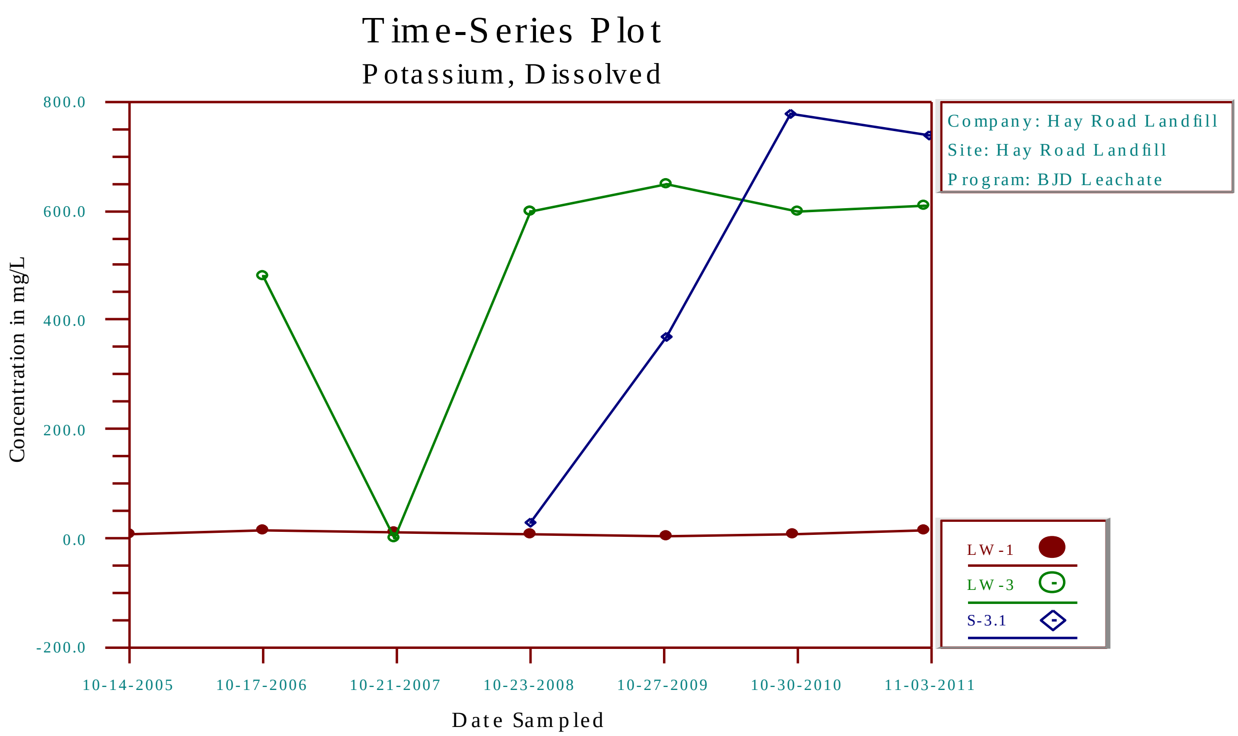

Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
2.1
1.75
1.4
1.05
0.7
0.35
0.0
04-22-2003
09-22-2004
02-24-2006
07-28-2007
12-29-2008
06-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

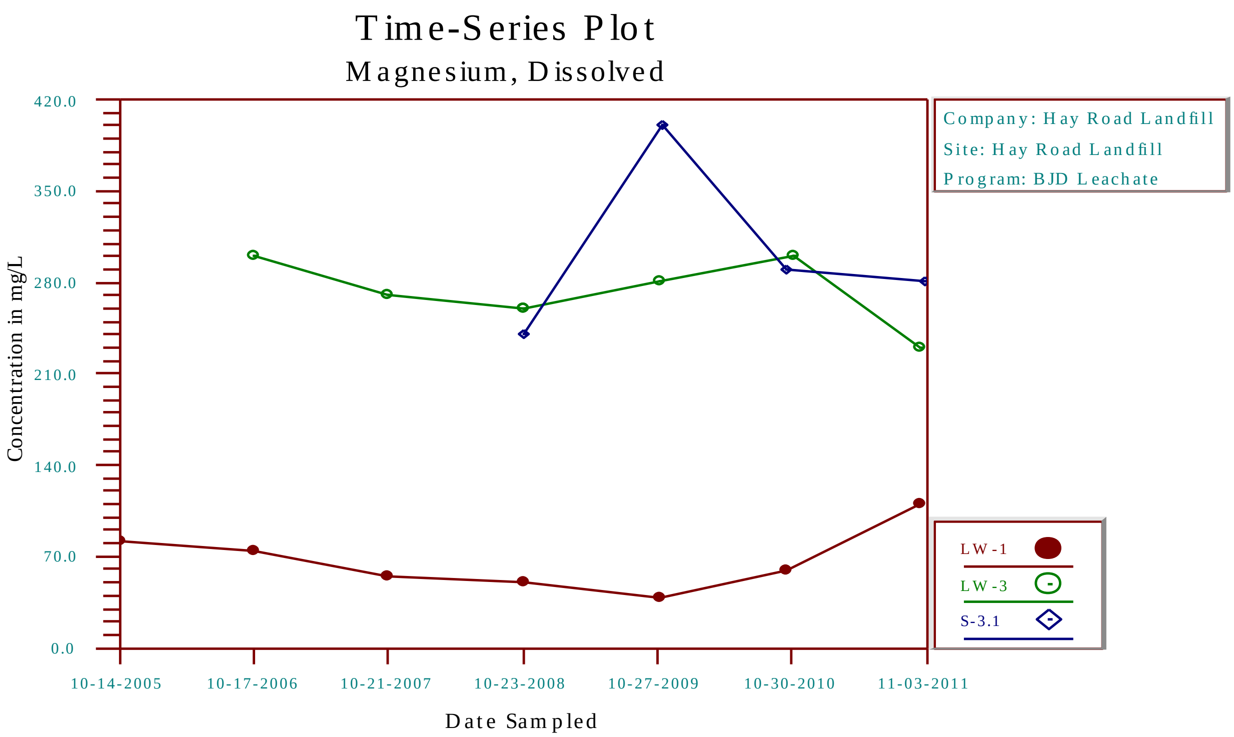

Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
8000.0
6000.0
4000.0
2000.0
0.0
04-22-2003
09-22-2004
02-24-2006
07-28-2007
12-29-2008
06-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

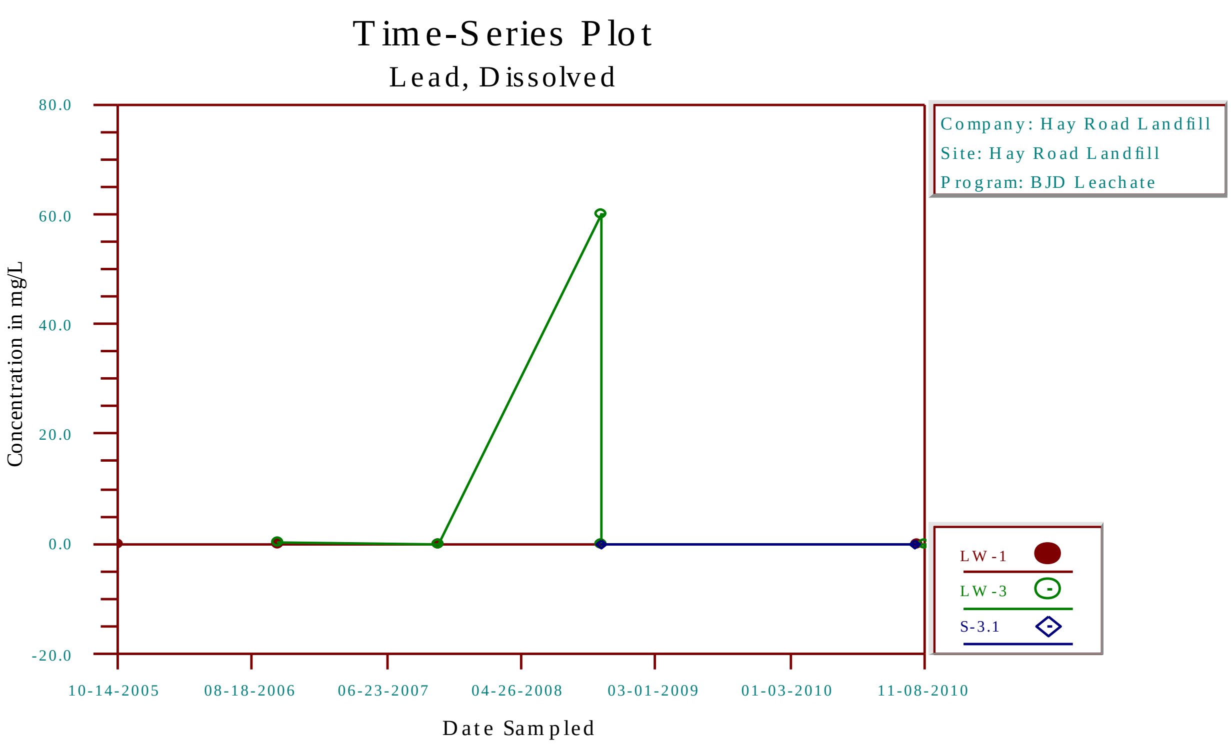

Time-Series Plot
Bicarbonate Alkalinity
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
15000.0
12500.0
10000.0
7500.0
5000.0
2500.0
0.0
10-14-2005
10-17-2006
10-21-2007
10-23-2008
10-27-2009
10-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

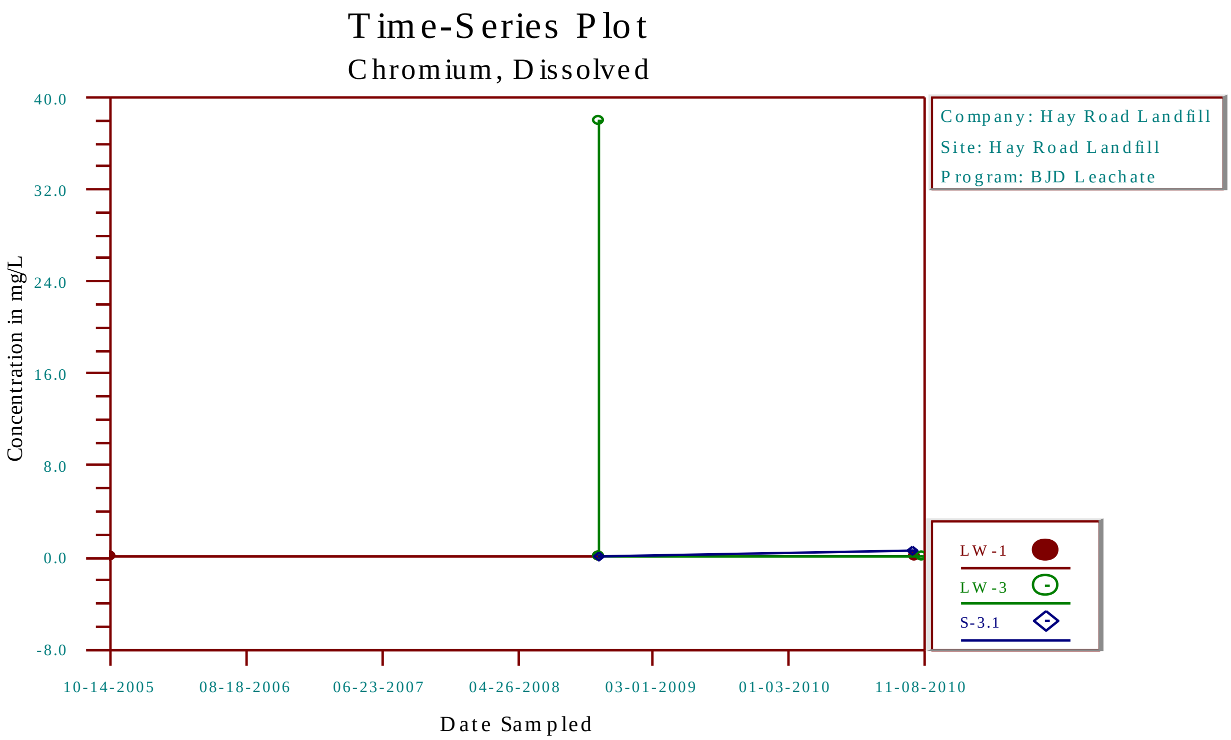

Time-Series Plot
Ammonia as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
3750.0
3000.0
2250.0
1500.0
750.0
0.0
10-17-2006
08-20-2007
06-22-2008
04-25-2009
02-26-2010
12-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1


Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
8000.0
6000.0
4000.0
2000.0
0.0
Concentration in mg/L
10-14-2005
10-17-2006
10-21-2007
10-23-2008
10-27-2009
10-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

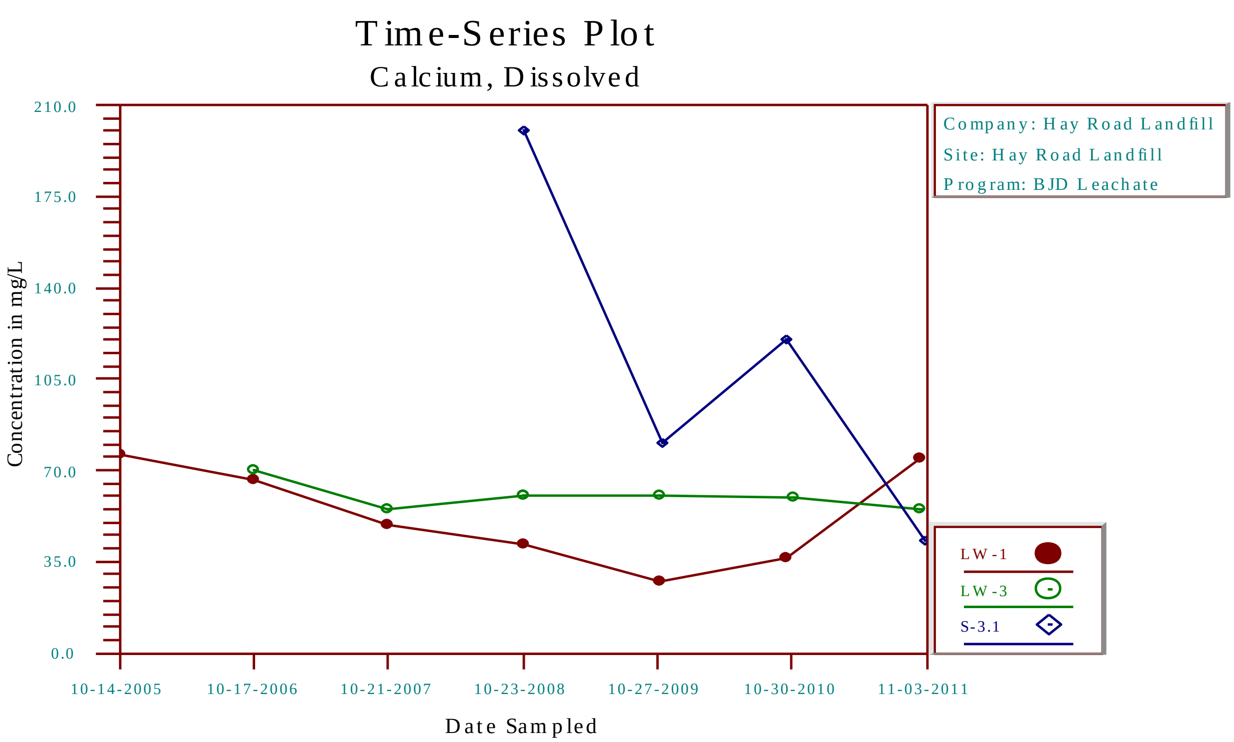

Time-Series Plot
Potassium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
800.0
600.0
400.0
200.0
0.0
-200.0
Concentration in mg/L
10-14-2005
10-17-2006
10-21-2007
10-23-2008
10-27-2009
10-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1


Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
420.0
350.0
280.0
210.0
140.0
70.0
0.0
10-14-2005
10-17-2006
10-21-2007
10-23-2008
10-27-2009
10-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

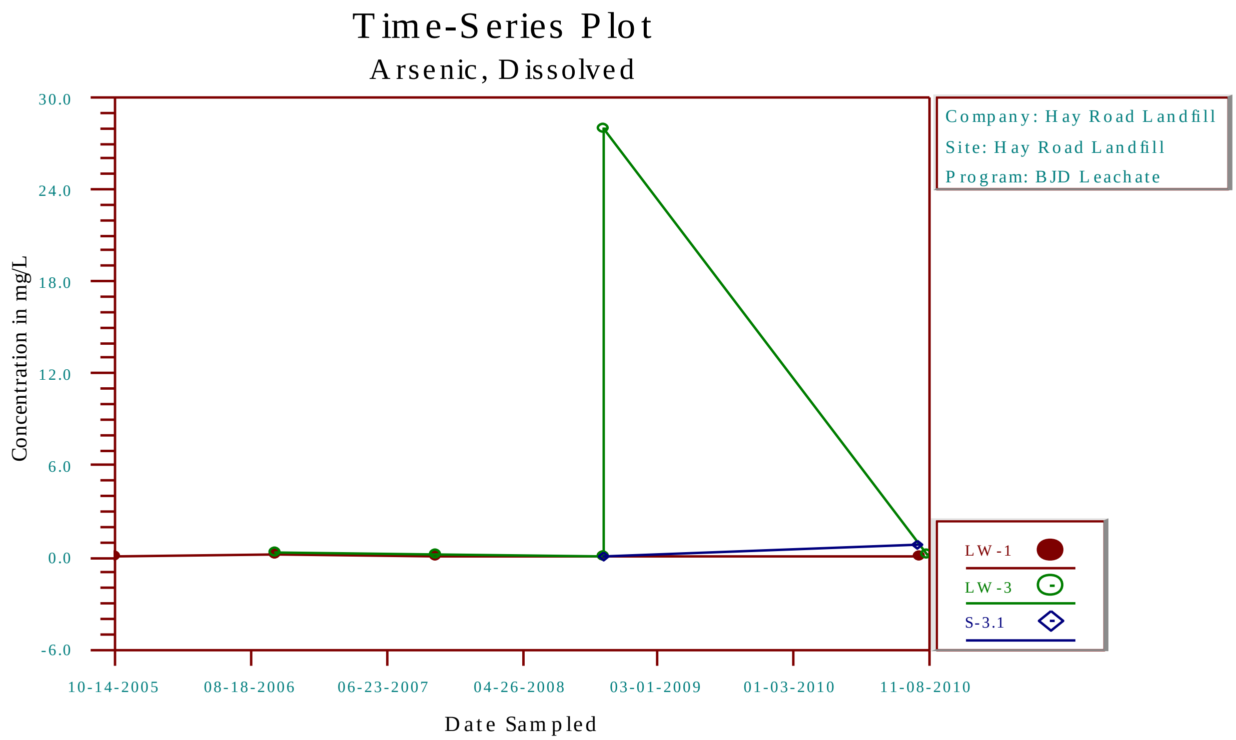

Time-Series Plot
Lead, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
80.0
60.0
40.0
20.0
0.0
-20.0
10-14-2005
08-18-2006
06-23-2007
04-26-2008
03-01-2009
01-03-2010
11-08-2010
Date Sampled
LW-1
LW-3
S-3.1



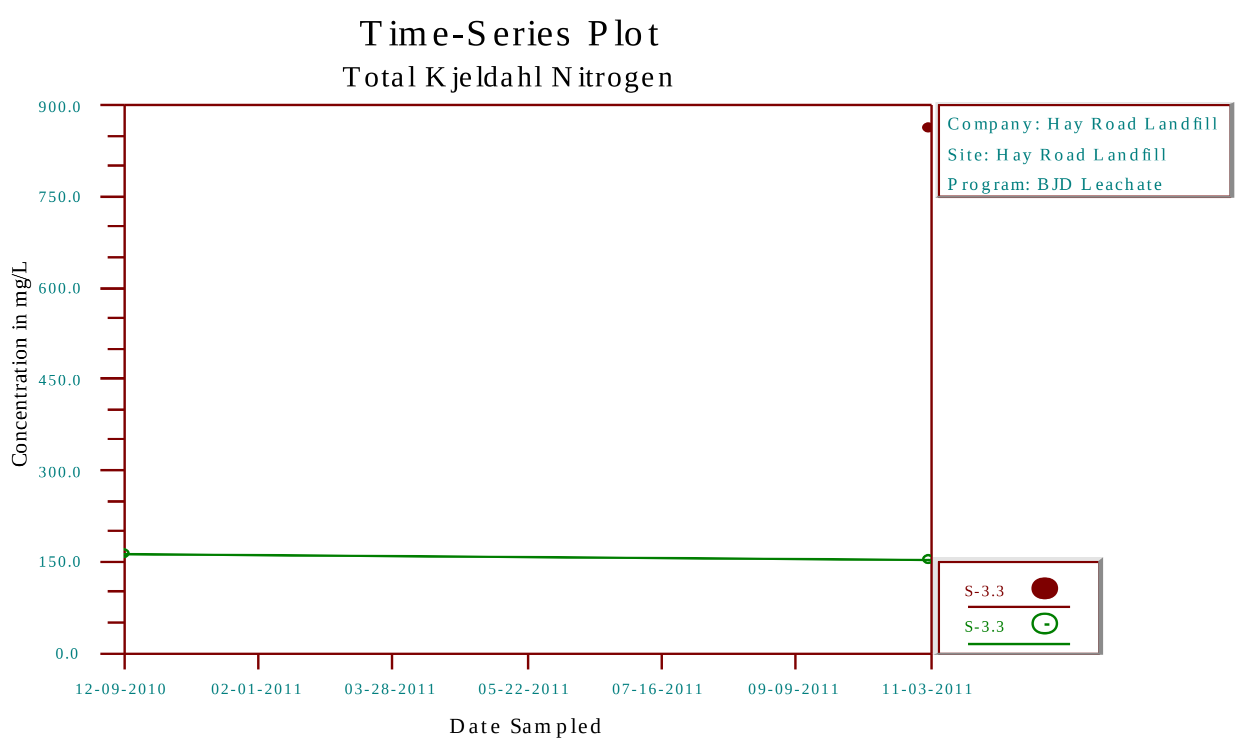
Time-Series Plot
Chromium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
40.0
32.0
24.0
16.0
8.0
0.0
-8.0
10-14-2005
08-18-2006
06-23-2007
04-26-2008
03-01-2009
01-03-2010
11-08-2010
Date Sampled
LW-1
LW-3
S-3.1



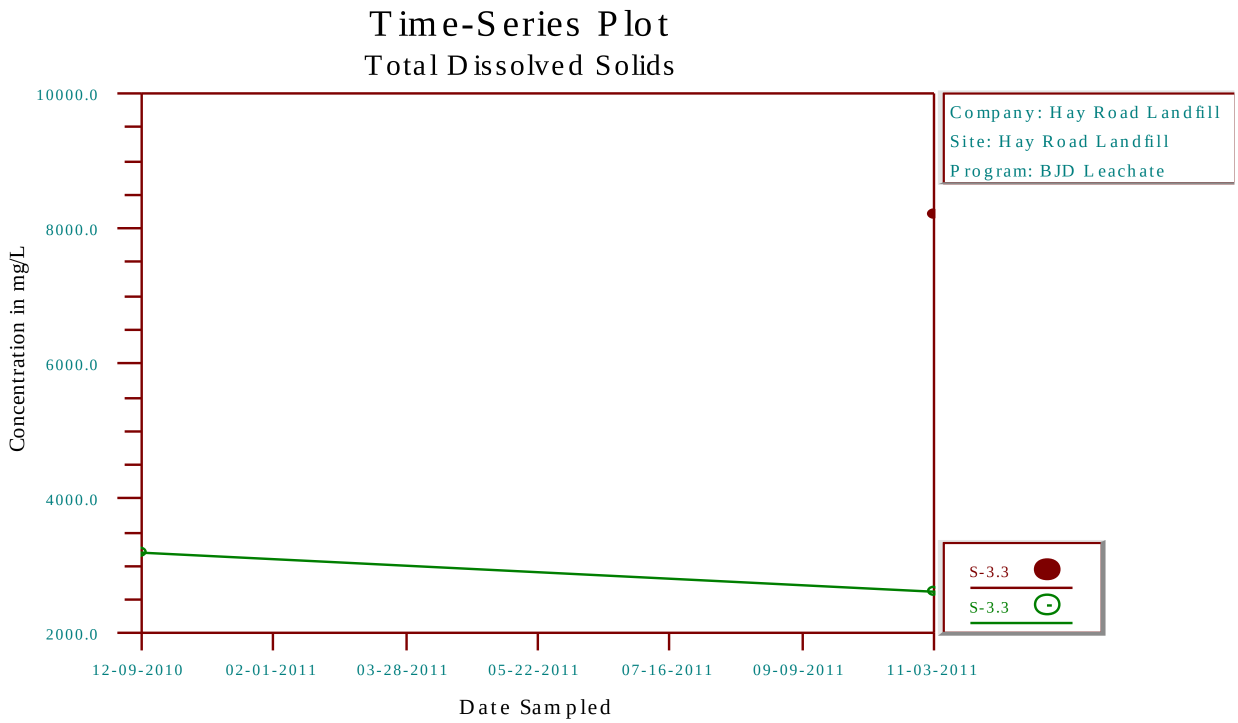
Time-Series Plot
Calcium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
210.0
175.0
140.0
105.0
70.0
35.0
0.0
10-14-2005
10-17-2006
10-21-2007
10-23-2008
10-27-2009
10-30-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1



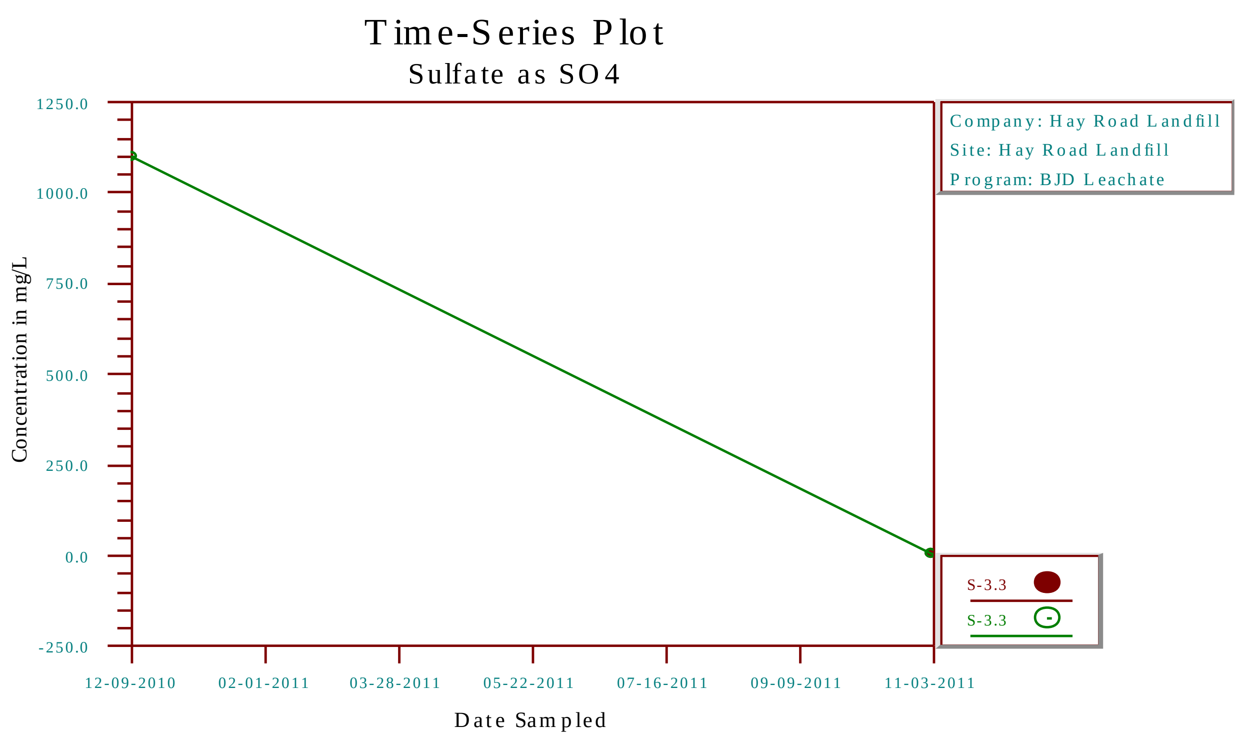
Time-Series Plot
Arsenic, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
30.0
24.0
18.0
12.0
6.0
0.0
-6.0
10-14-2005
08-18-2006
06-23-2007
04-26-2008
03-01-2009
01-03-2010
11-08-2010
Date Sampled
LW-1
LW-3
S-3.1



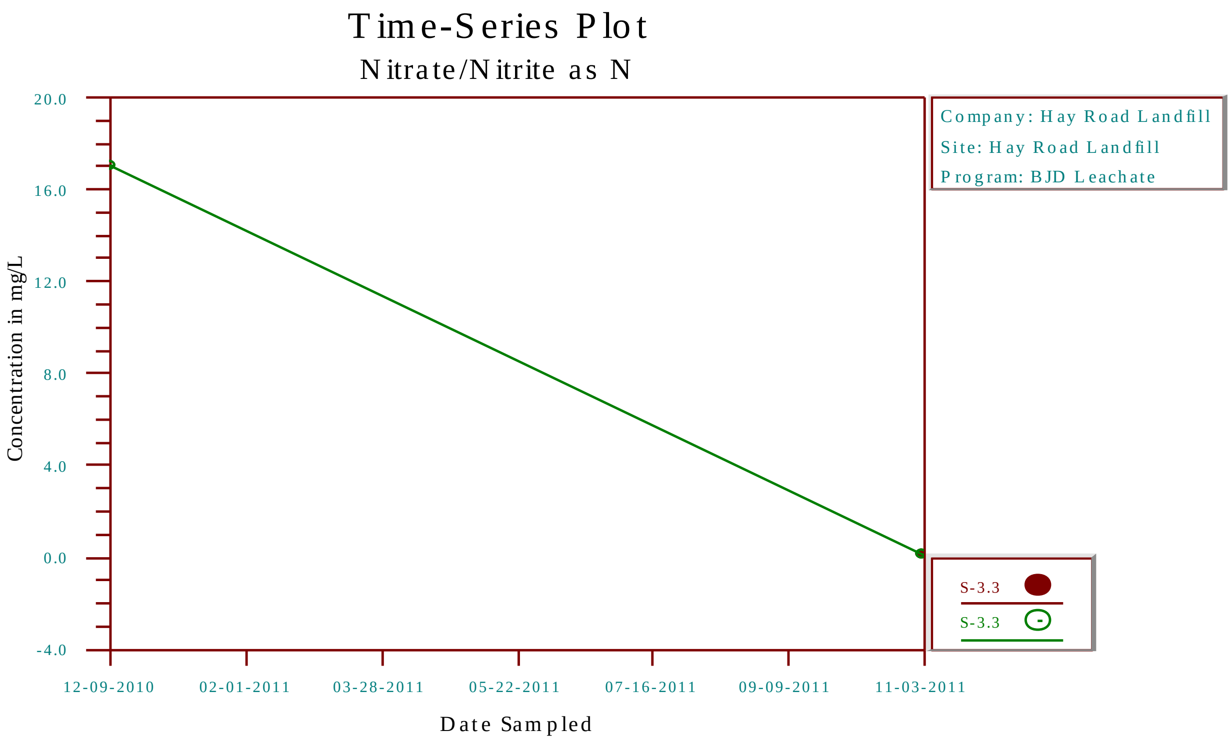
Time-Series Plot
Total Kjeldahl Nitrogen
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
900.0
750.0
600.0
450.0
300.0
150.0
0.0
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
S-3.3
S-3.3

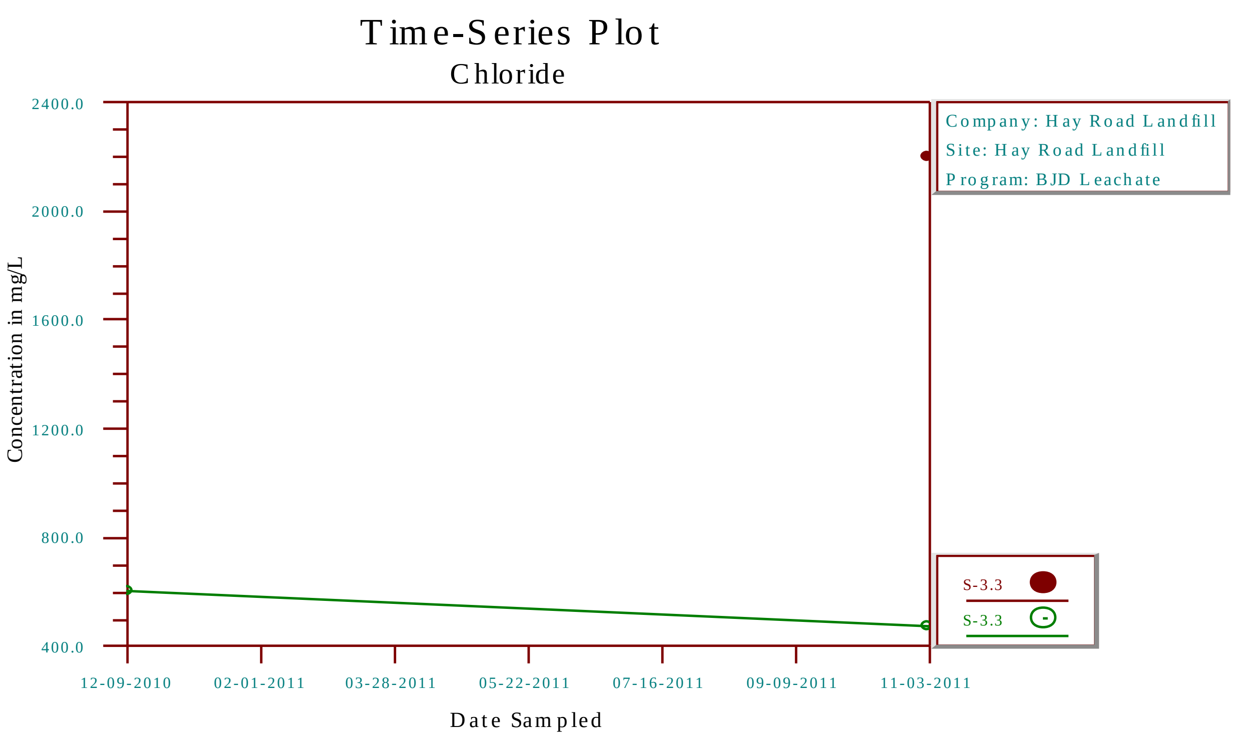


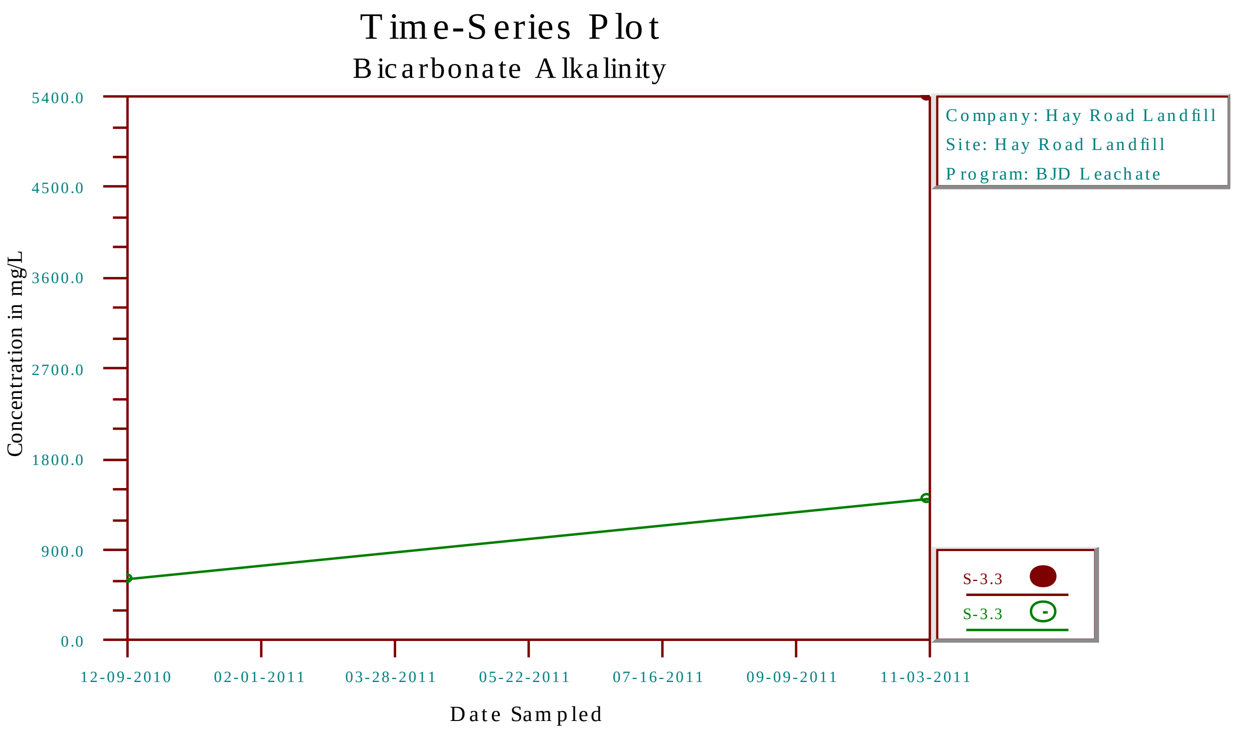
Time-Series Plot
Total Dissolved Solids
10000.0
8000.0
6000.0
4000.0
2000.0
Concentration in mg/L
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled

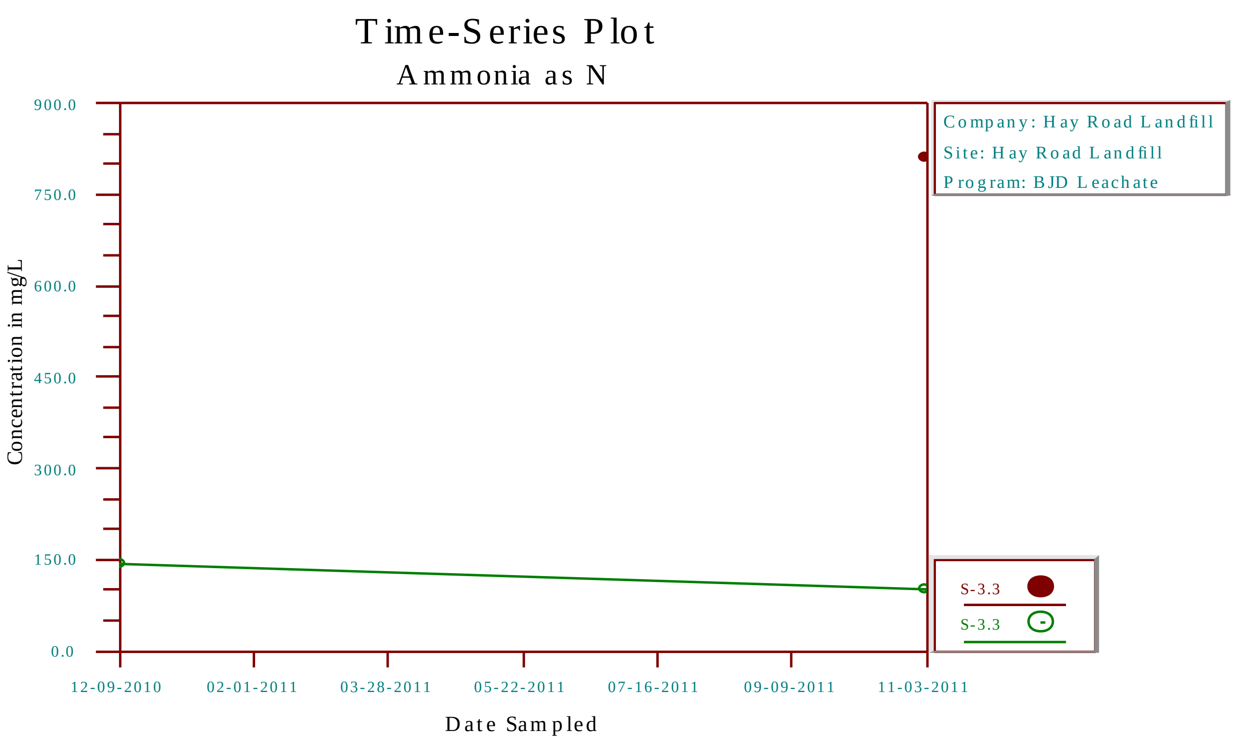


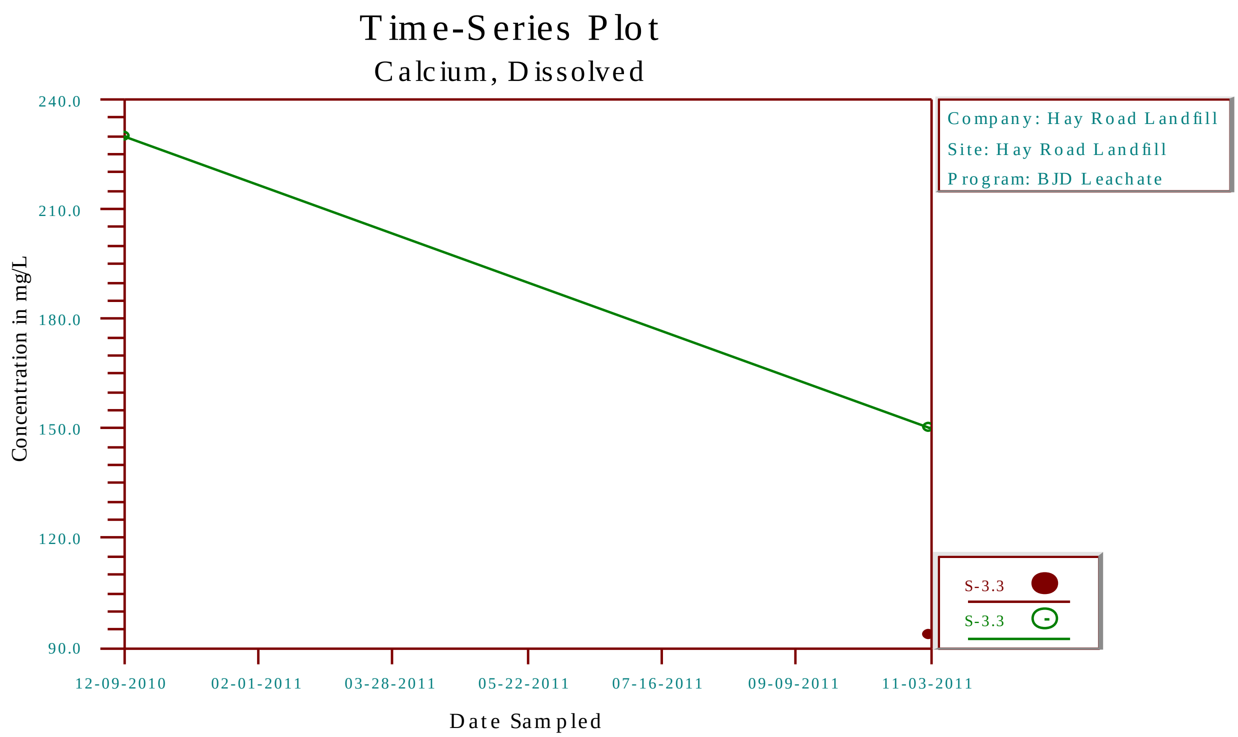
Time-Series Plot
Sulfate as SO4
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
Concentration in mg/L
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled


Time-Series Plot
Nitrate/Nitrite as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
20.0
16.0
12.0
8.0
4.0
0.0
-4.0
Concentration in mg/L
S-3.3
S-3.3
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled

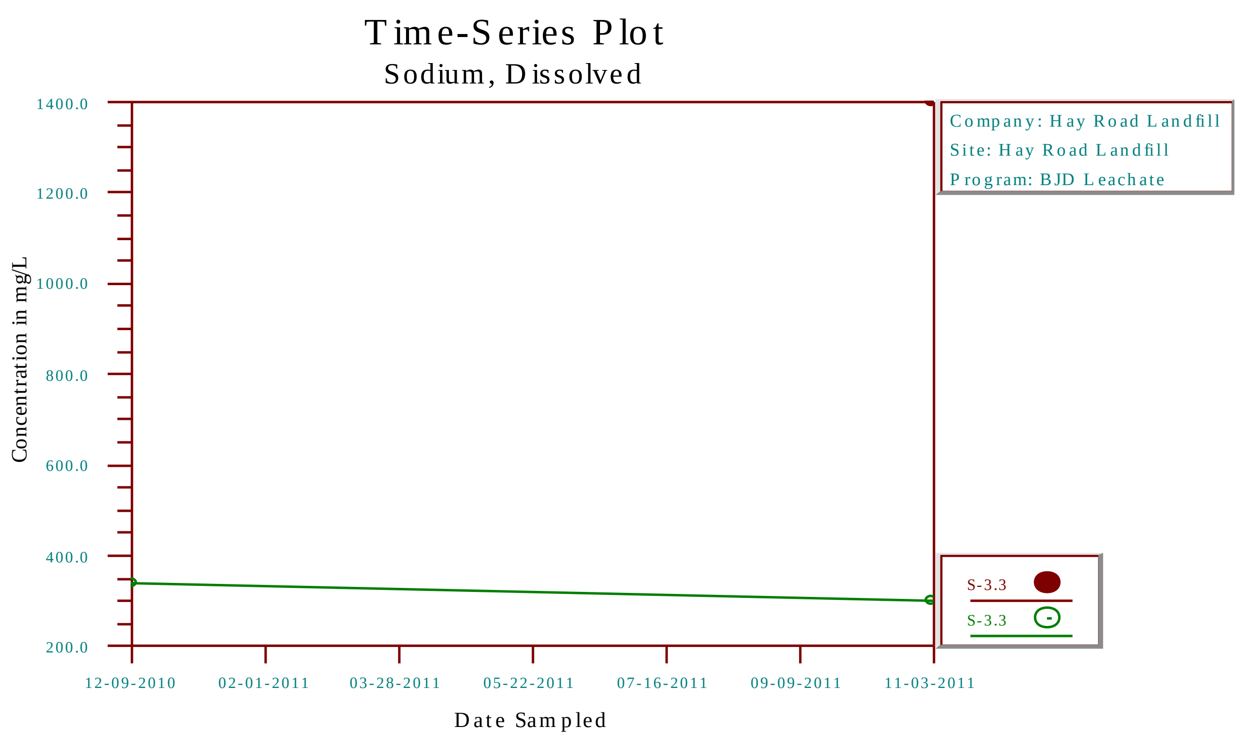

Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
2400.0
2000.0
1600.0
1200.0
800.0
400.0
Concentration in mg/L
S-3.3
S-3.3
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled


Time-Series Plot
Bicarbonate Alkalinity
Concentration in mg/L
5400.0
4500.0
3600.0
2700.0
1800.0
900.0
0.0
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3

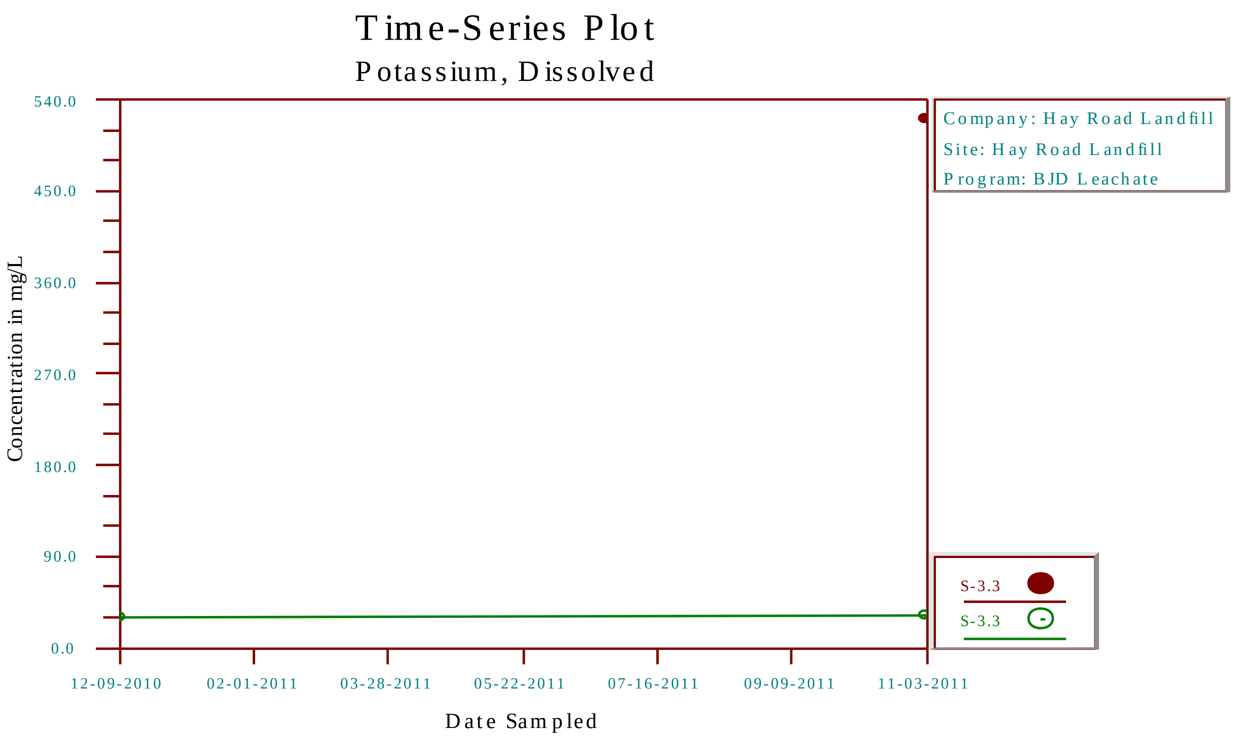

Time-Series Plot
Ammonia as N
Concentration in mg/L
900.0
750.0
600.0
450.0
300.0
150.0
0.0
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3

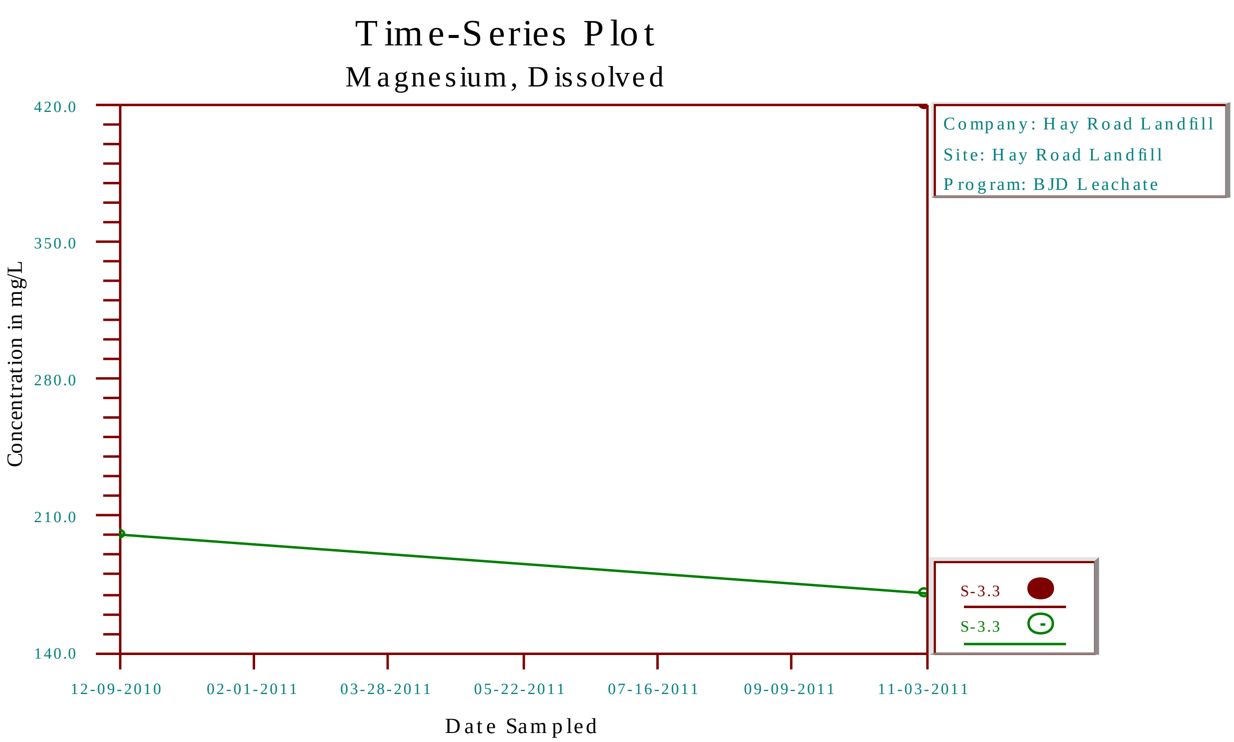


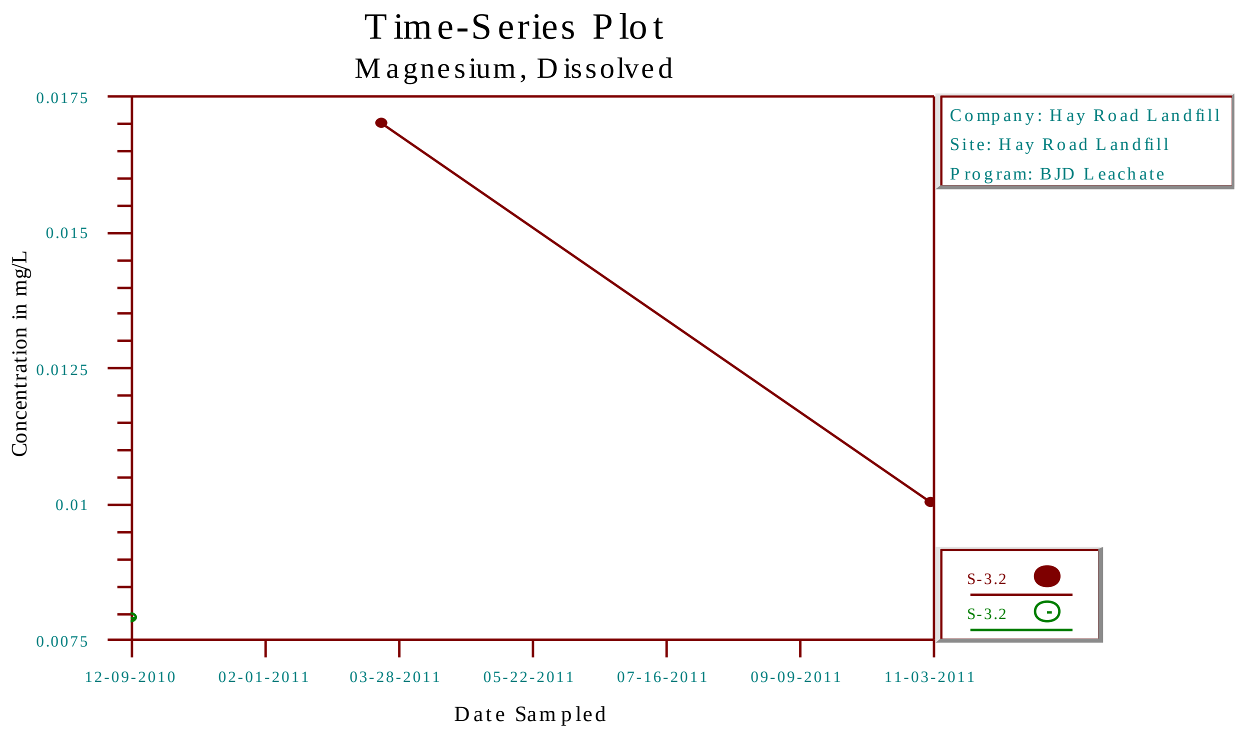
Time-Series Plot
Calcium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
240.0
210.0
180.0
150.0
120.0
90.0
Concentration in mg/L
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
S-3.3
S-3.3

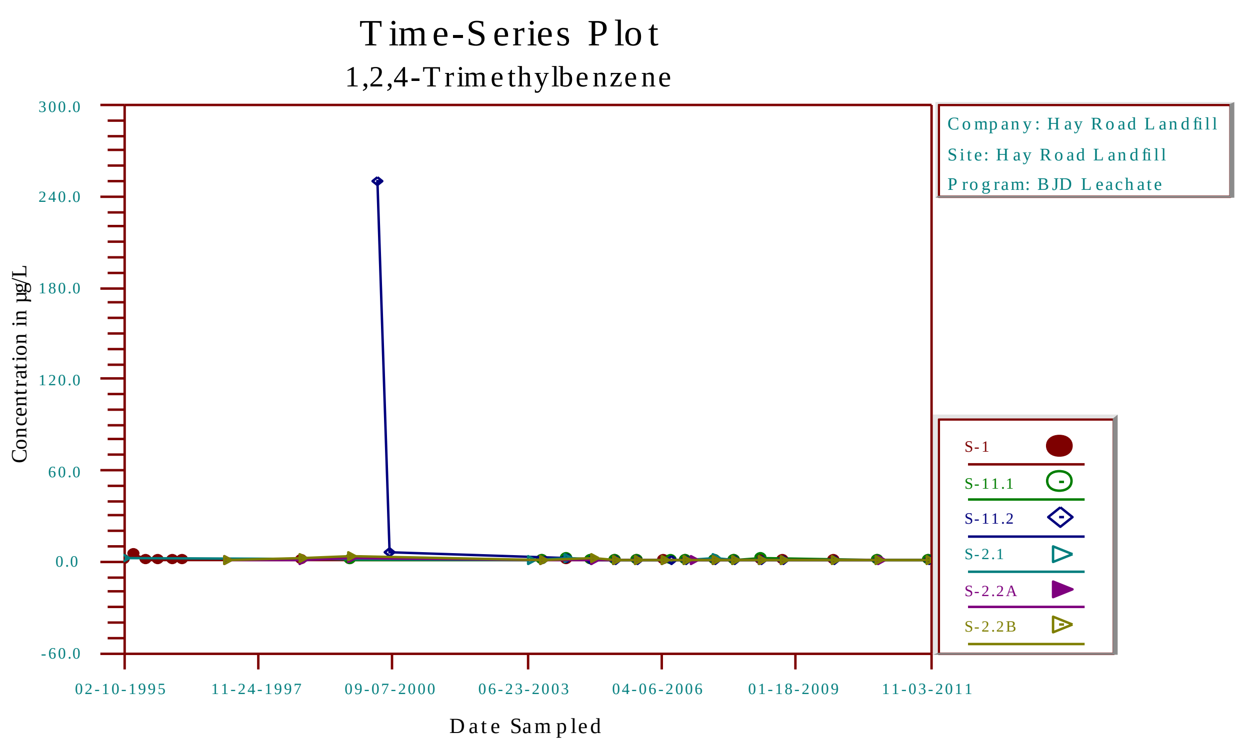


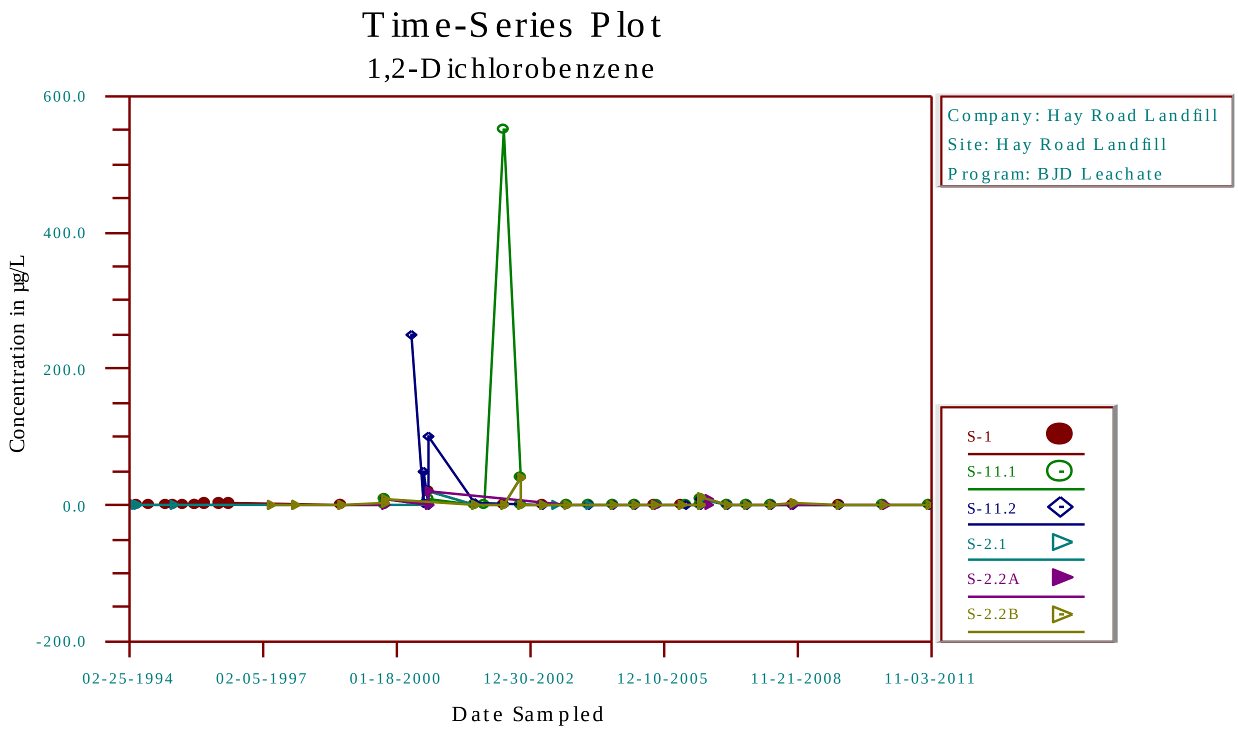
Time-Series Plot
Sodium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
Concentration in mg/L
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
S-3.3
S-3.3


Time-Series Plot
Potassium, Dissolved
Concentration in mg/L
540.0
450.0
360.0
270.0
180.0
90.0
0.0
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3

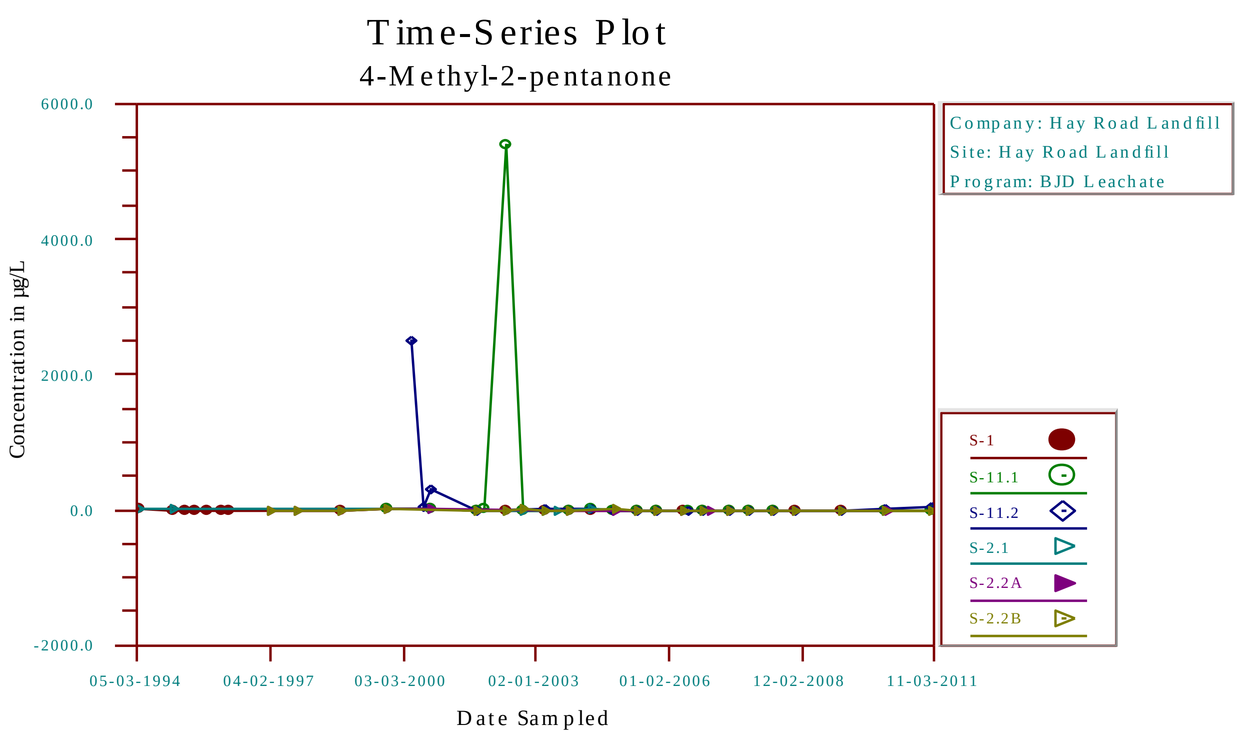

Time-Series Plot
Magnesium, Dissolved
Concentration in mg/L
420.0
350.0
280.0
210.0
140.0
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-3.3
S-3.3


Time-Series Plot
Magnesium, Dissolved
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in mg/L
0.0175
0.015
0.0125
0.01
0.0075
12-09-2010
02-01-2011
03-28-2011
05-22-2011
07-16-2011
09-09-2011
11-03-2011
Date Sampled
S-3.2
S-3.2

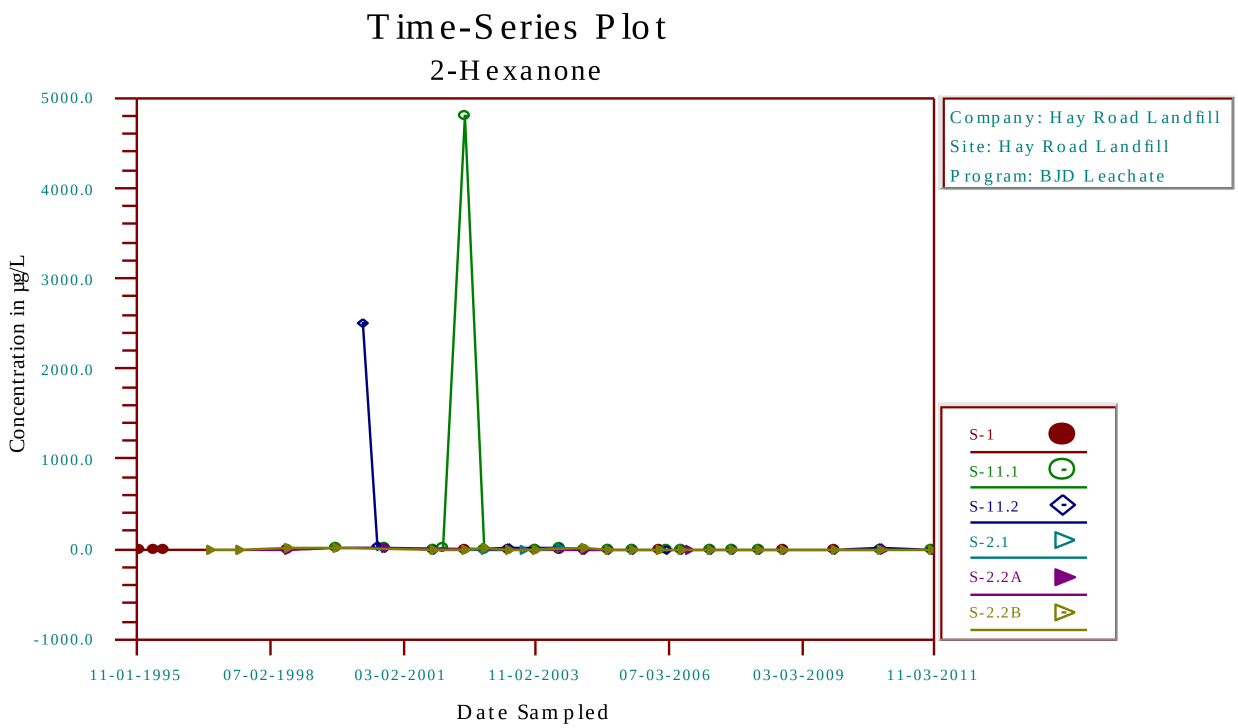

Time-Series Plot
1,2,4-Trimethylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
02-10-1995
11-24-1997
09-07-2000
06-23-2003
04-06-2006
01-18-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

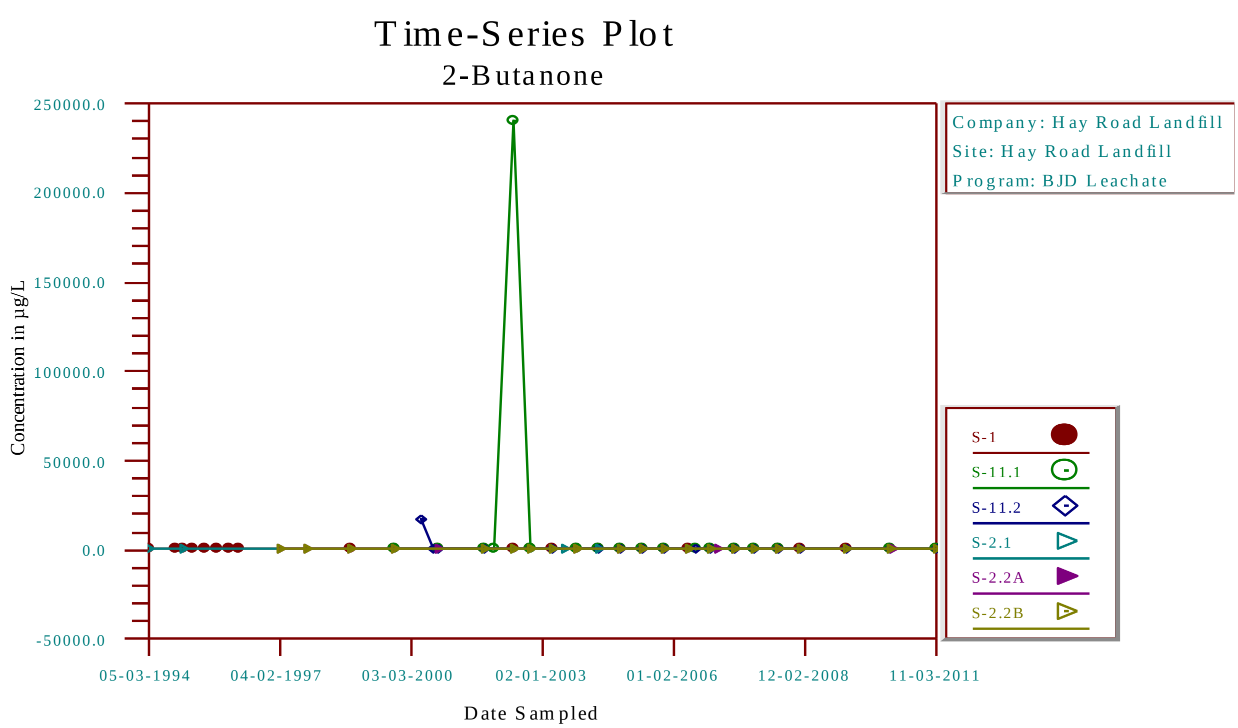


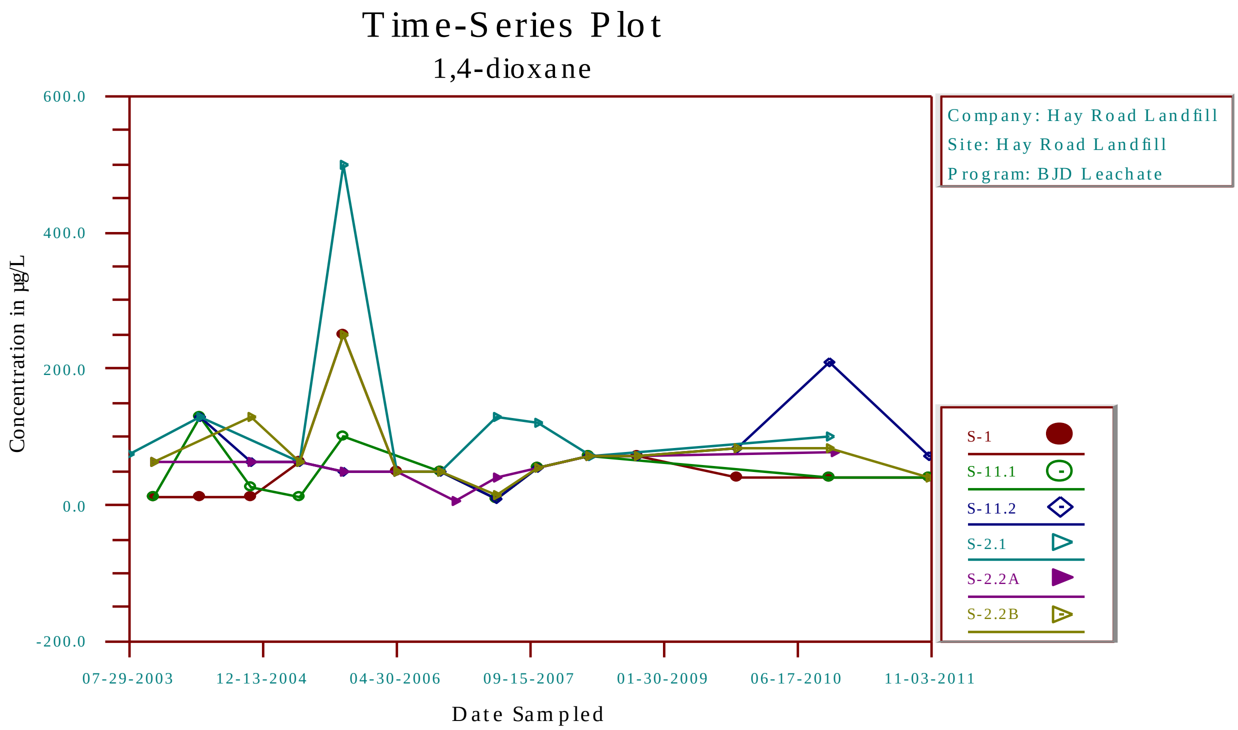
Time-Series Plot
1,2-Dichlorobenzene
600.0
400.0
200.0
0.0
-200.0
Concentration in µg/L
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

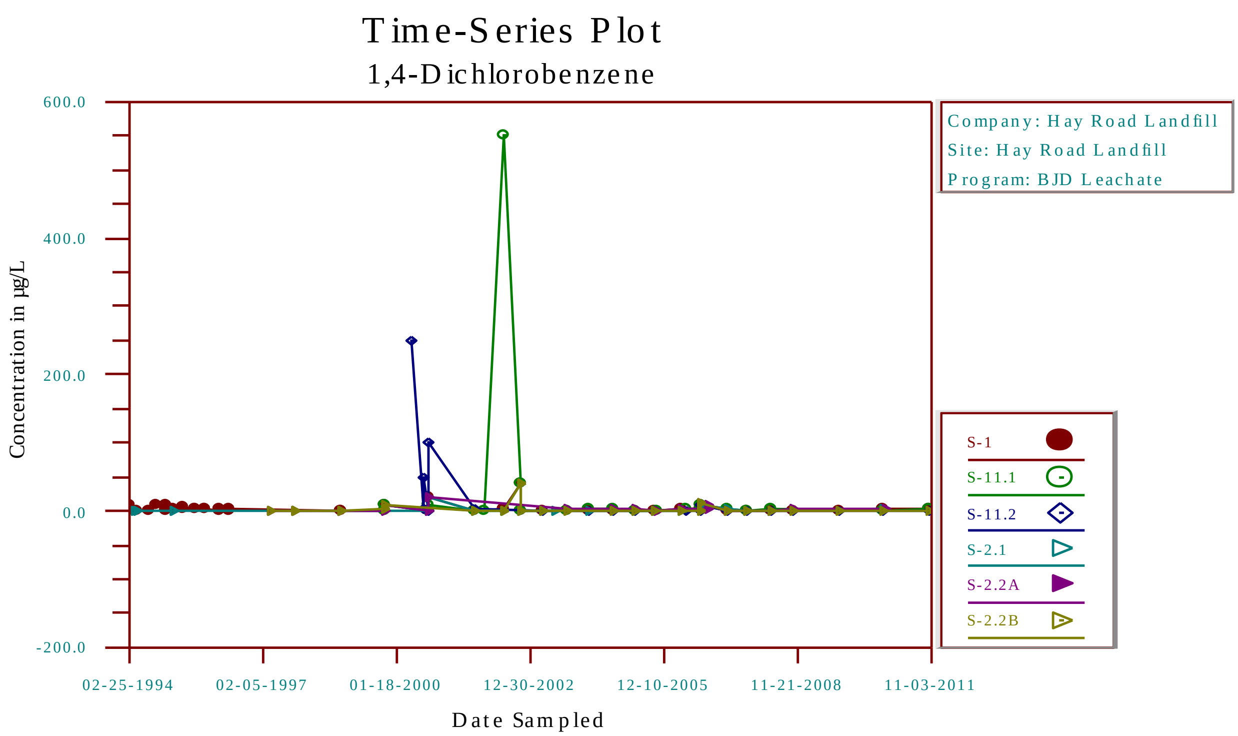


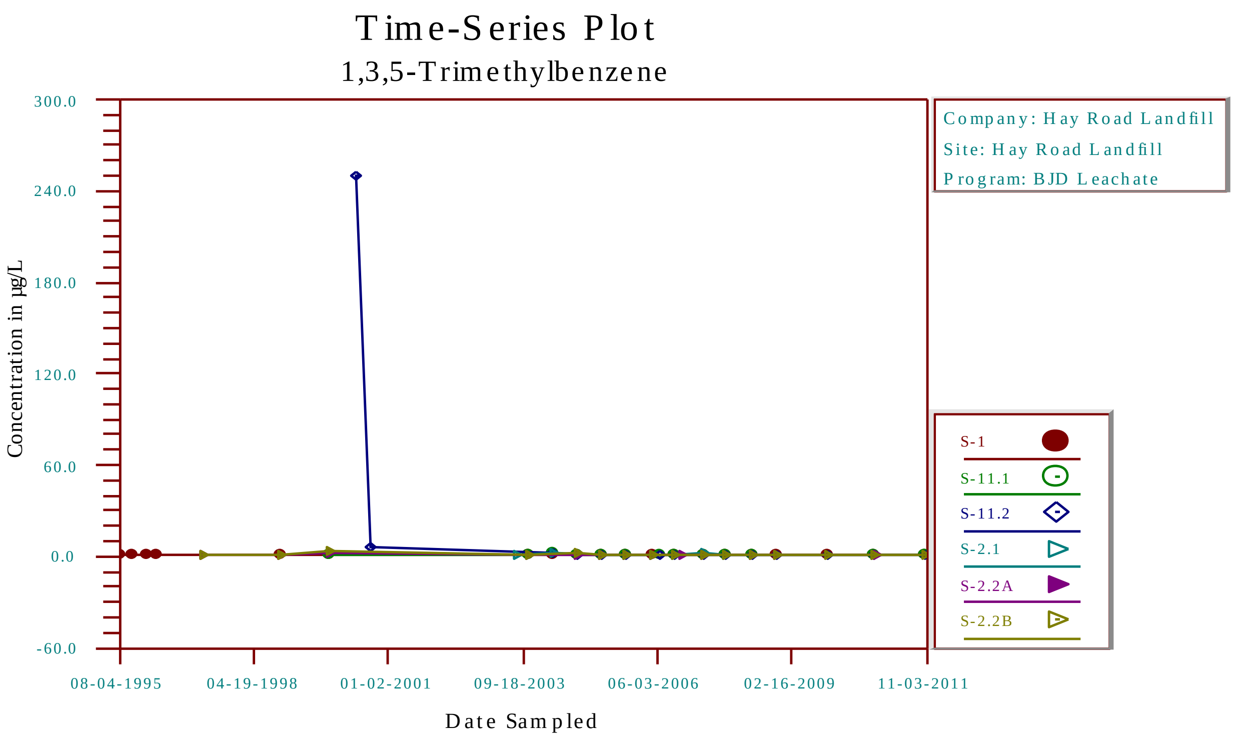
Time-Series Plot
4-Methyl-2-pentanone
6000.0
4000.0
2000.0
0.0
-2000.0
Concentration in µg/L
05-03-1994
04-02-1997
03-03-2000
02-01-2003
01-02-2006
12-02-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
2-Hexanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
5000.0
4000.0
3000.0
2000.0
1000.0
0.0
-1000.0
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B
11-01-1995
07-02-1998
03-02-2001
11-02-2003
07-03-2006
03-03-2009
11-03-2011
Date Sampled

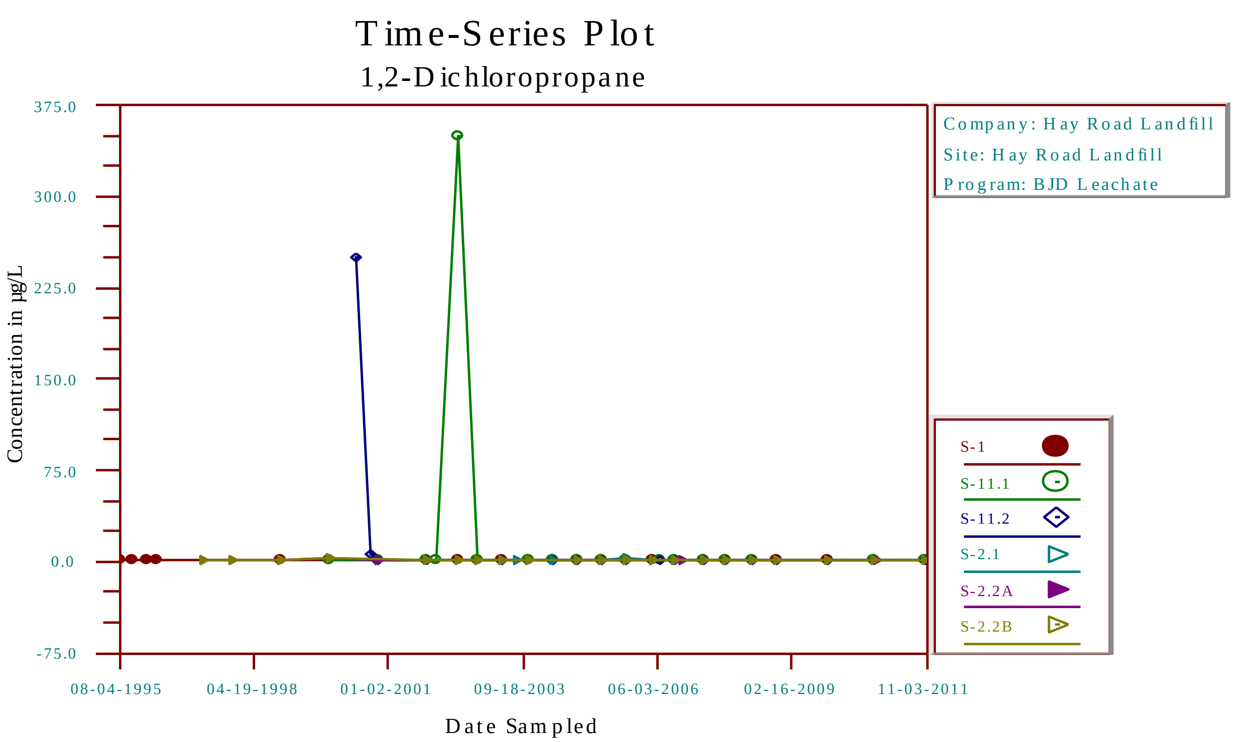

Time-Series Plot
2-Butanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
250000.0
200000.0
150000.0
100000.0
50000.0
0.0
-50000.0
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B
05-03-1994
04-02-1997
03-03-2000
02-01-2003
01-02-2006
12-02-2008
11-03-2011
Date Sampled


Time-Series Plot
1,4-dioxane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
600.0
400.0
200.0
0.0
-200.0
Concentration in µg/L
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

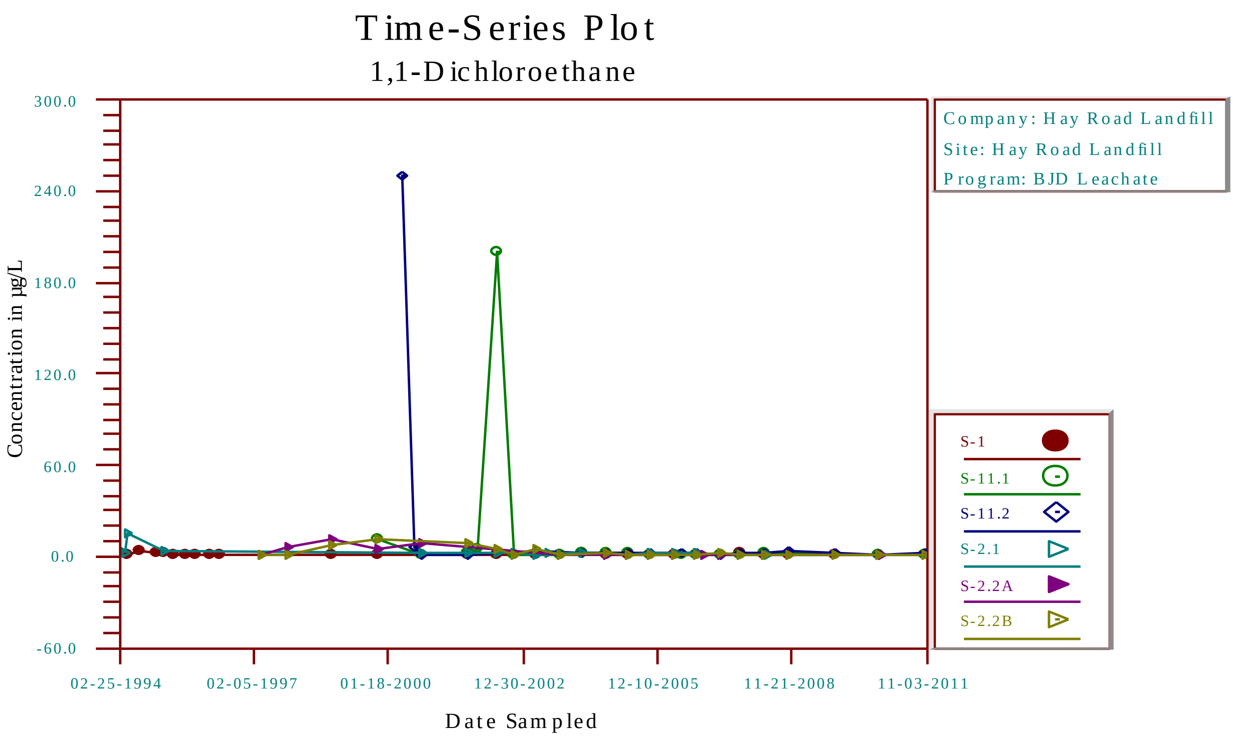

Time-Series Plot
1,4-Dichlorobenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
600.0
400.0
200.0
0.0
-200.0
Concentration in µg/L
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

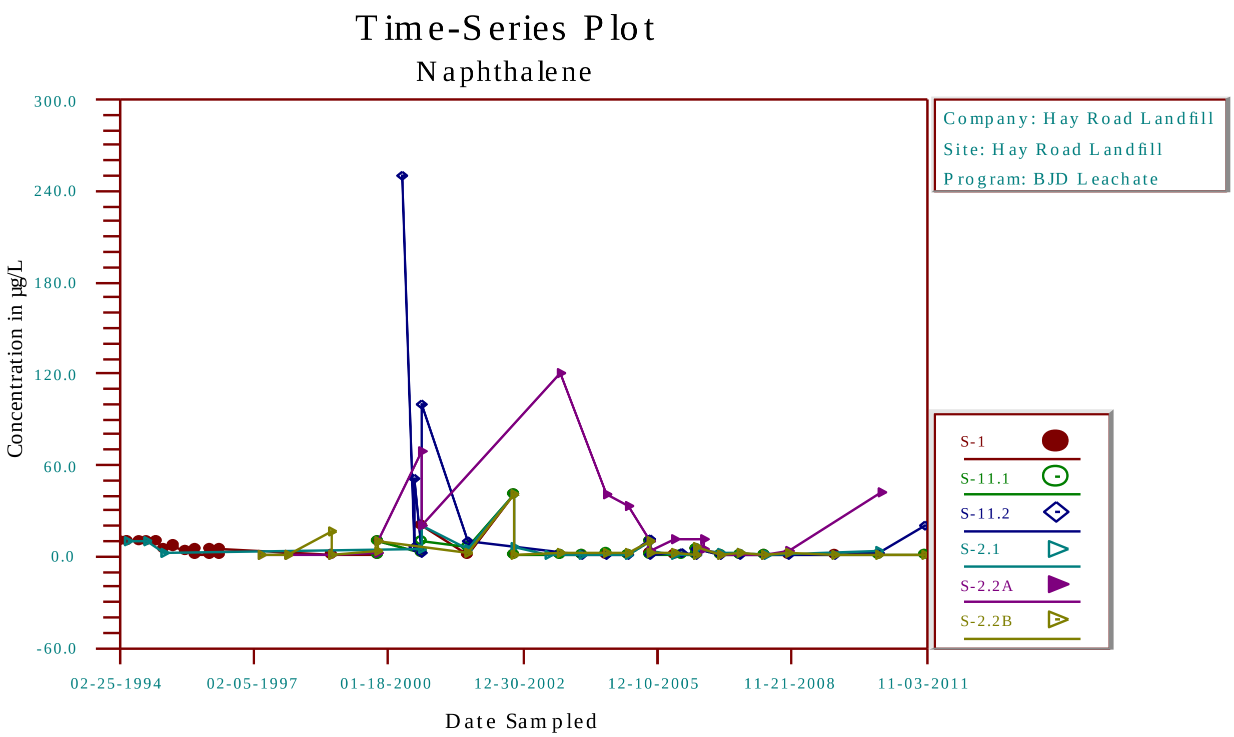


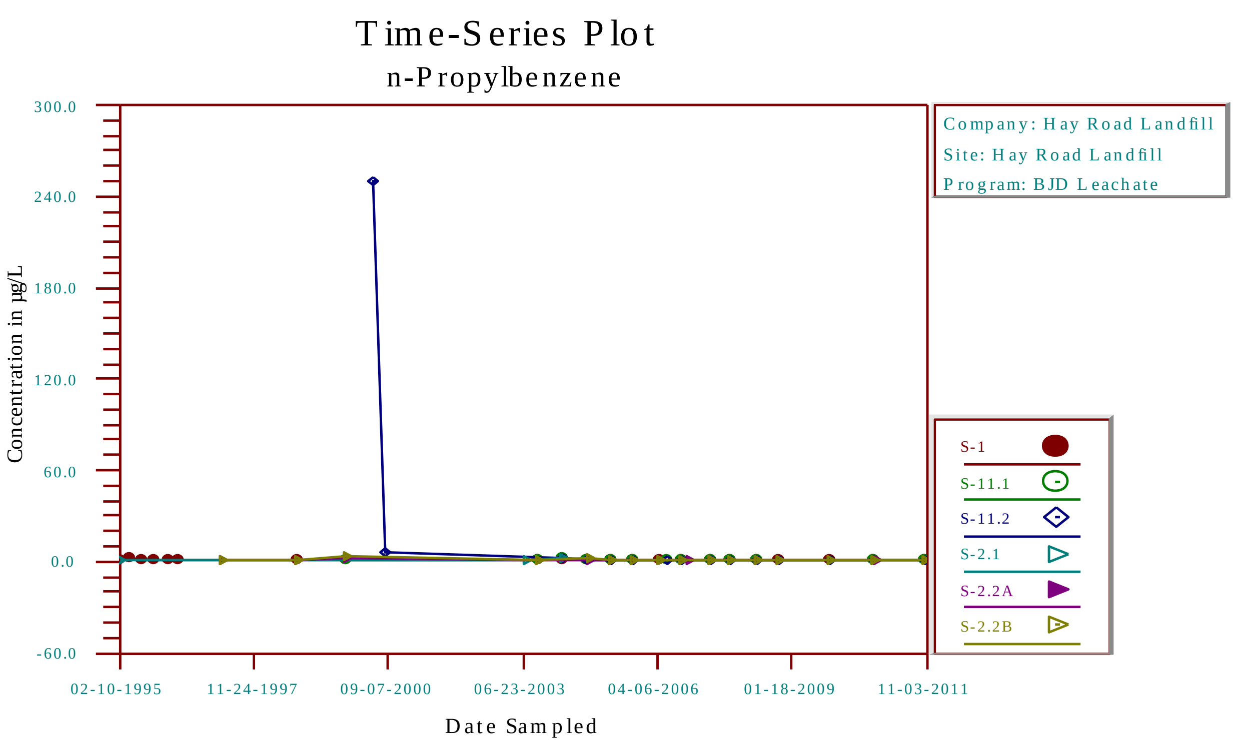
Time-Series Plot
1,3,5-Trimethylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
Concentration in µg/L
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

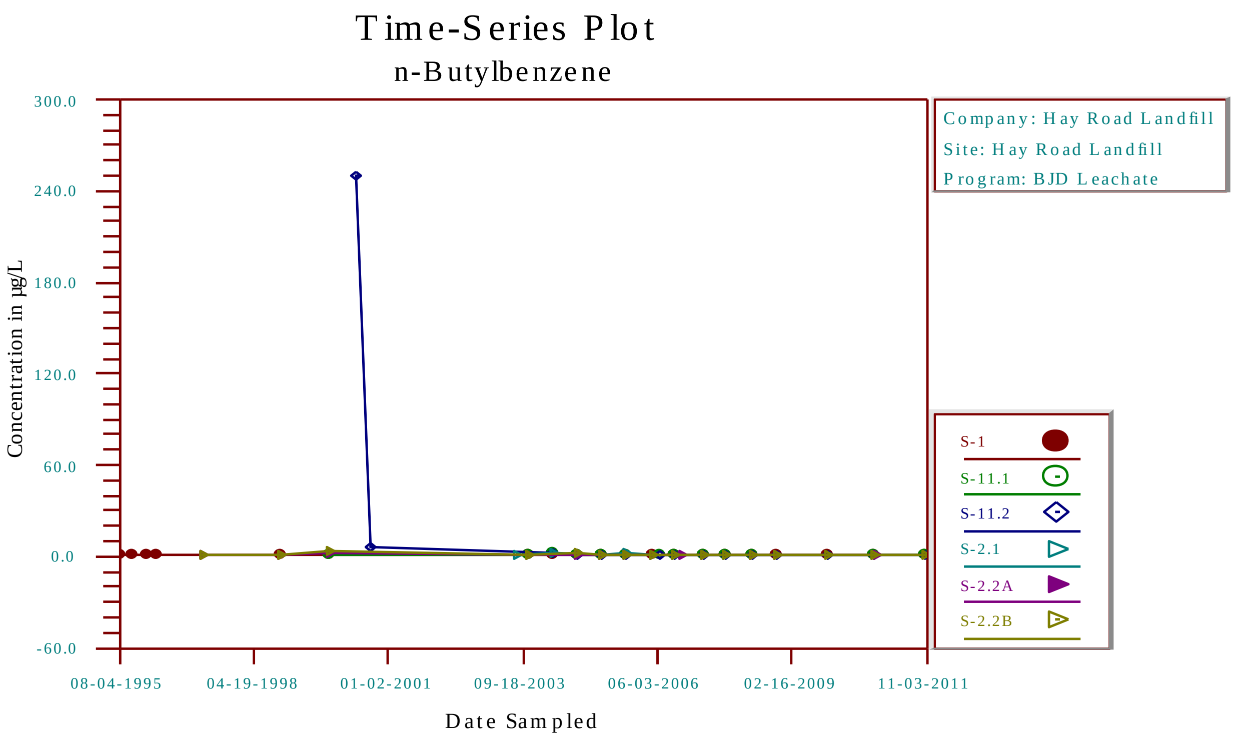


Time-Series Plot
1,2-Dichloropropane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
375.0
300.0
225.0
150.0
75.0
0.0
-75.0
Concentration in µg/L
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

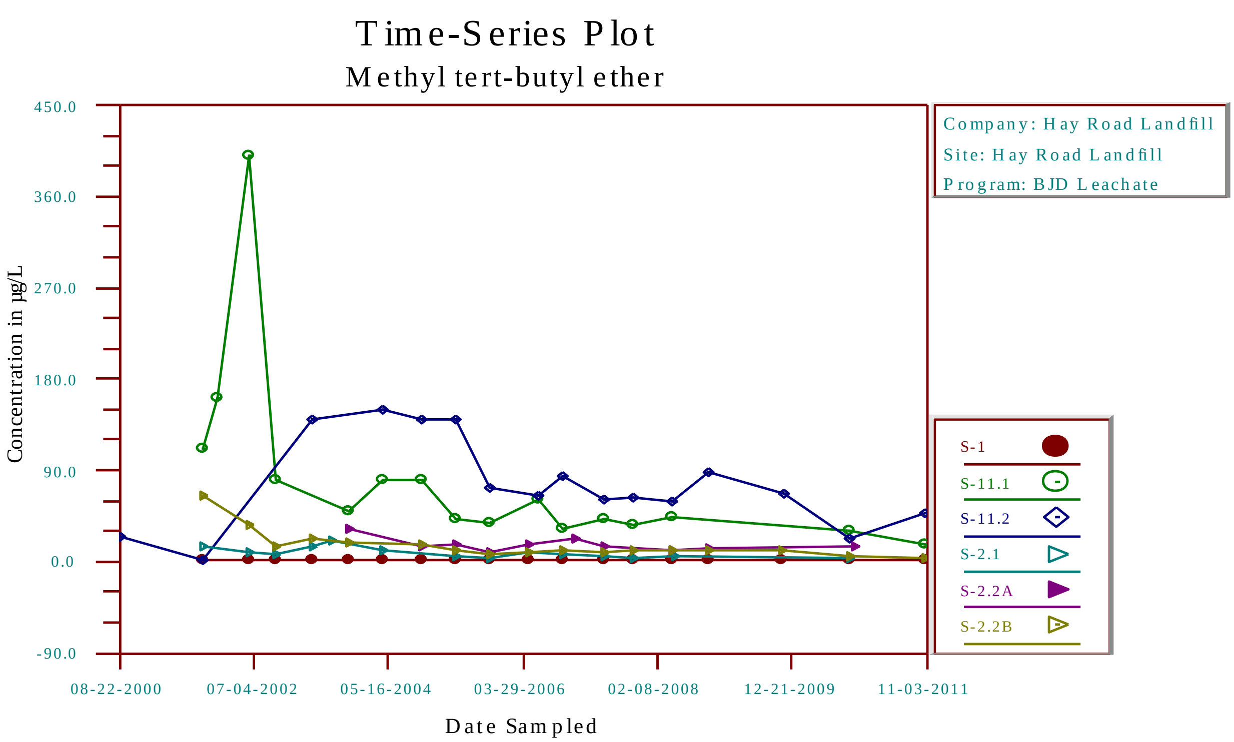

Time-Series Plot
1,1-Dichloroethane
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Naphthalene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

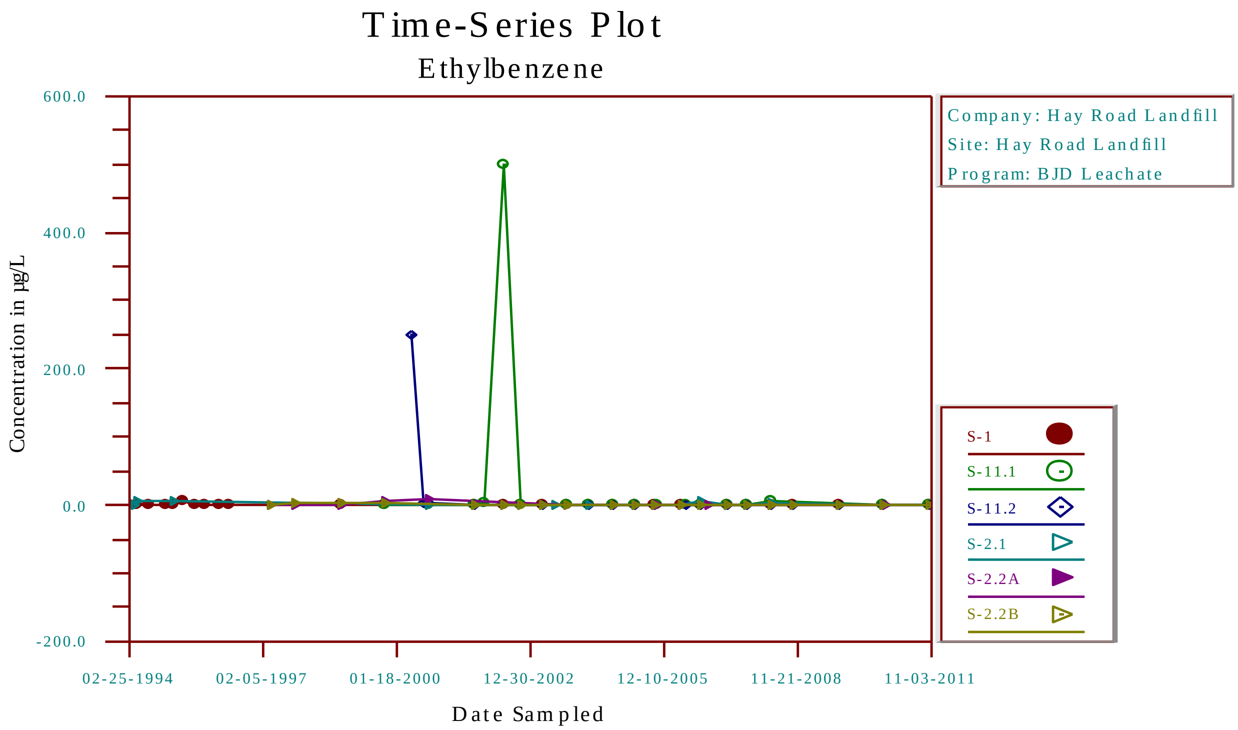

Time-Series Plot
n-Propylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
02-10-1995
11-24-1997
09-07-2000
06-23-2003
04-06-2006
01-18-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



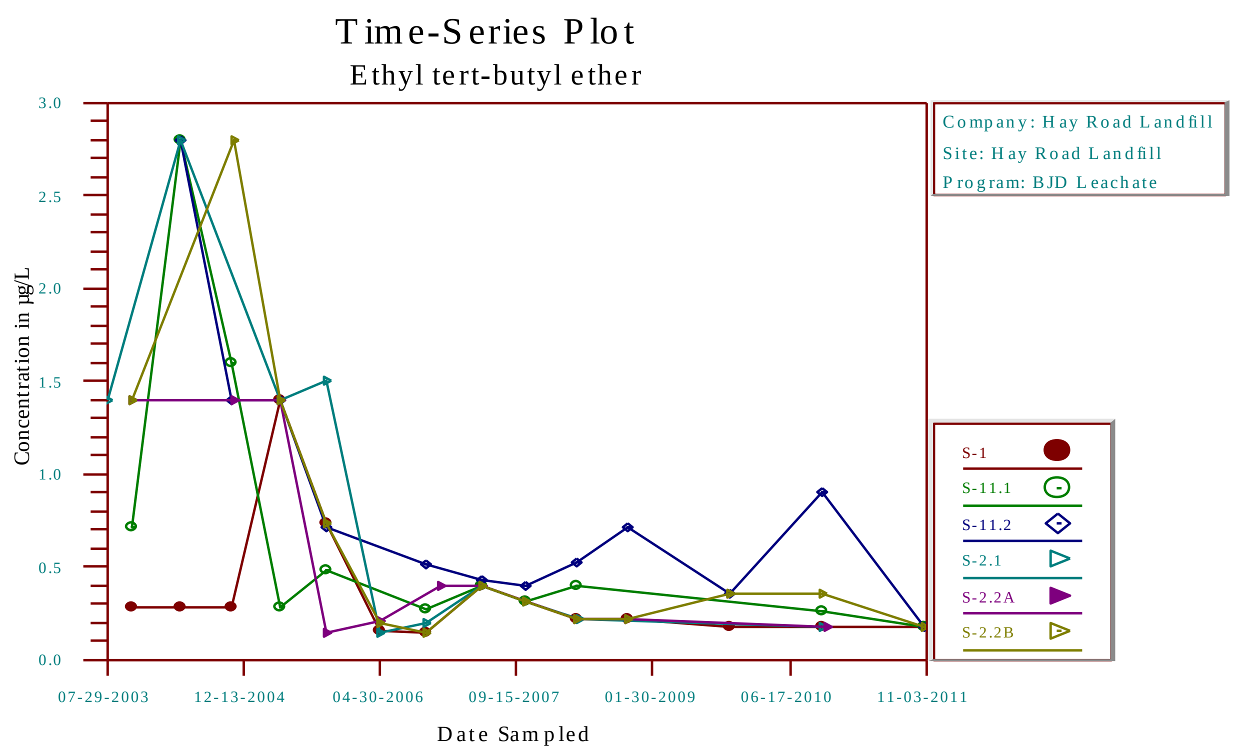
Time-Series Plot
n-Butylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



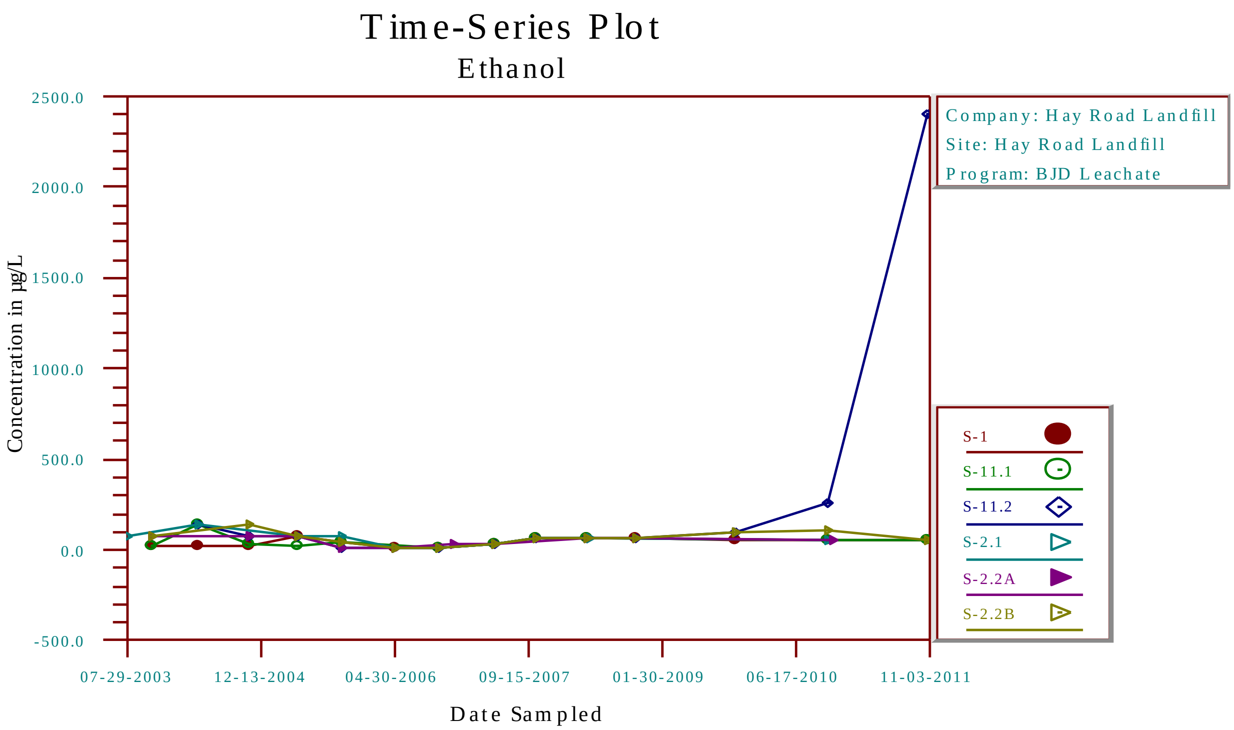
Time-Series Plot
Methyl tert-butyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
450.0
360.0
270.0
180.0
90.0
0.0
-90.0
08-22-2000
07-04-2002
05-16-2004
03-29-2006
02-08-2008
12-21-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

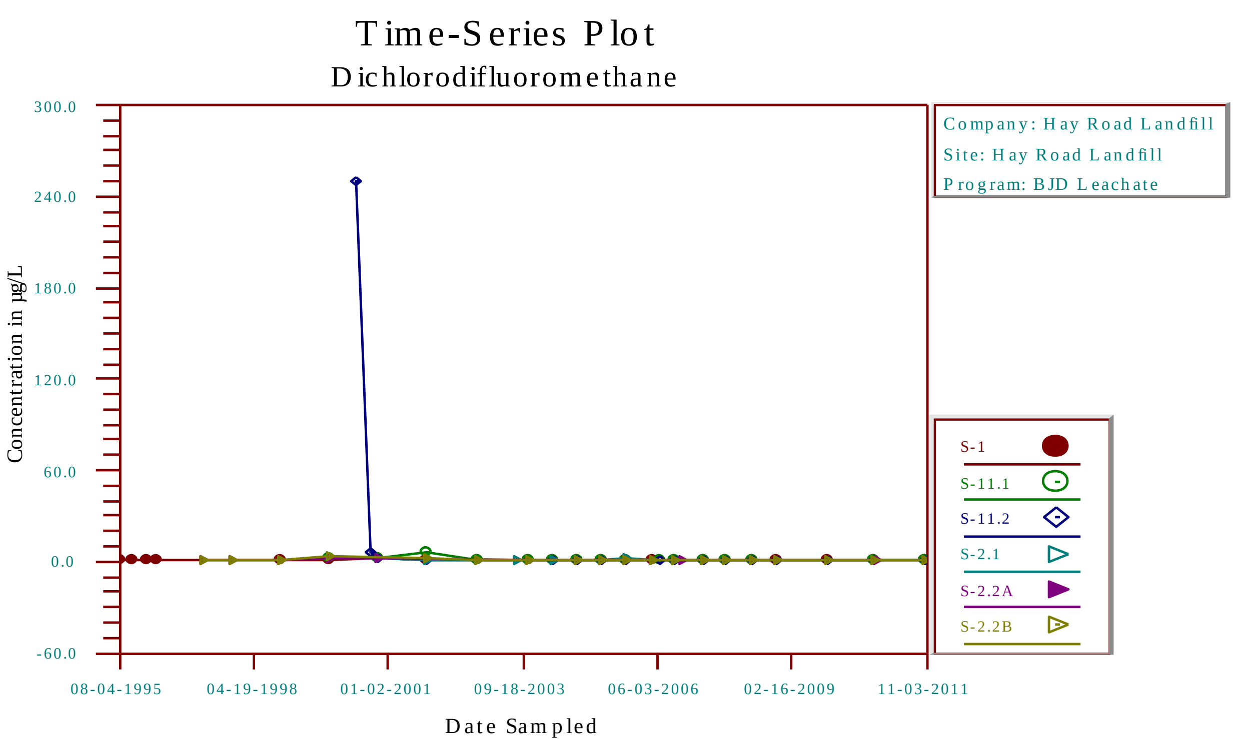


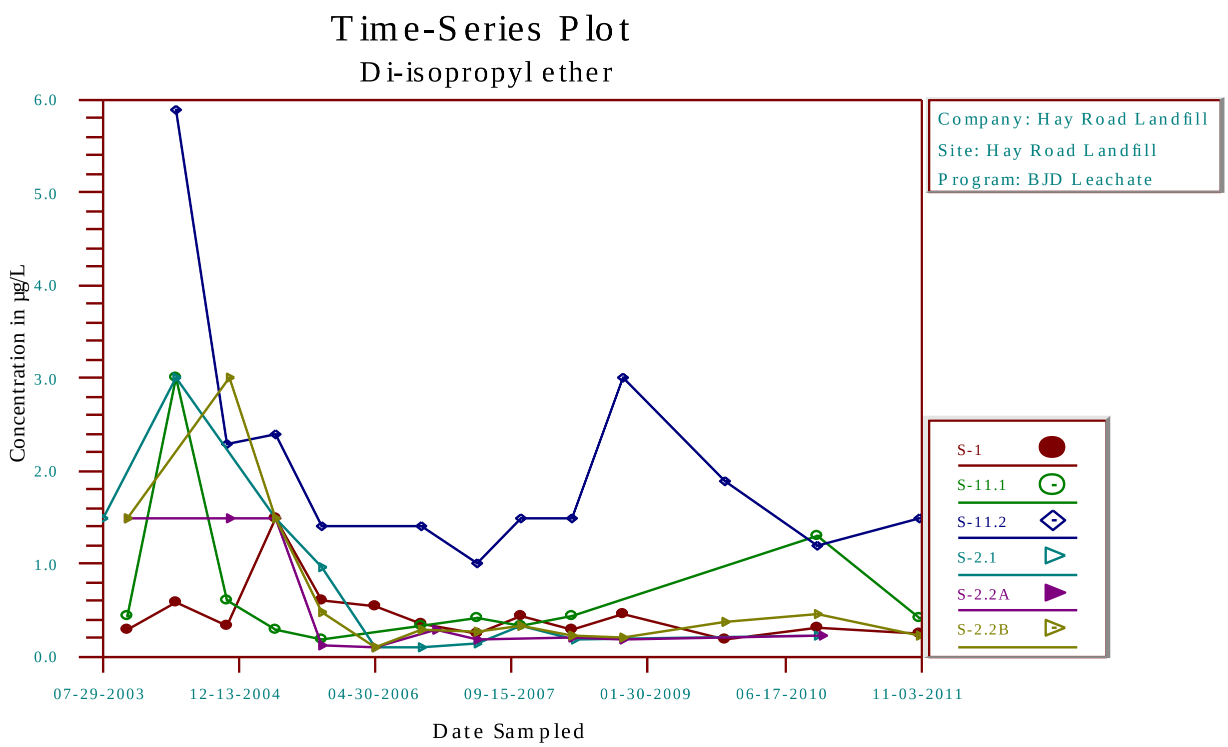
Time-Series Plot
Ethylbenzene
600.0
400.0
200.0
0.0
-200.0
Concentration in µg/L
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

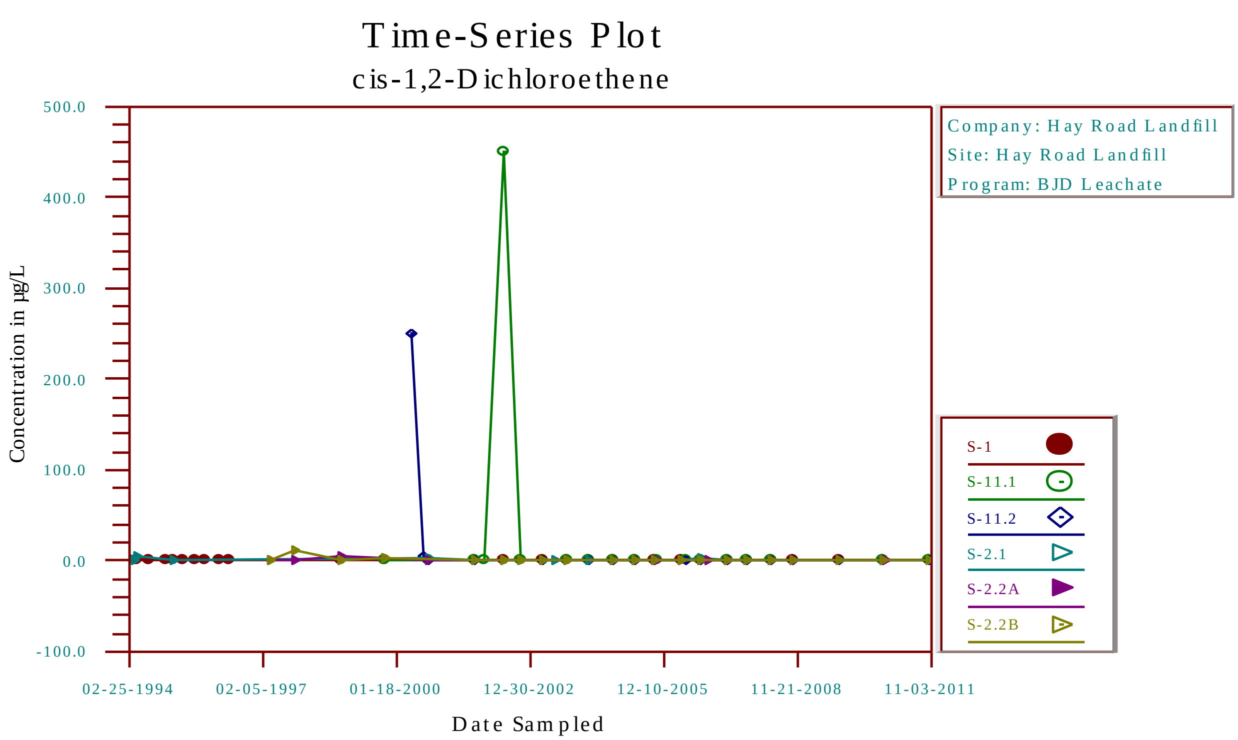


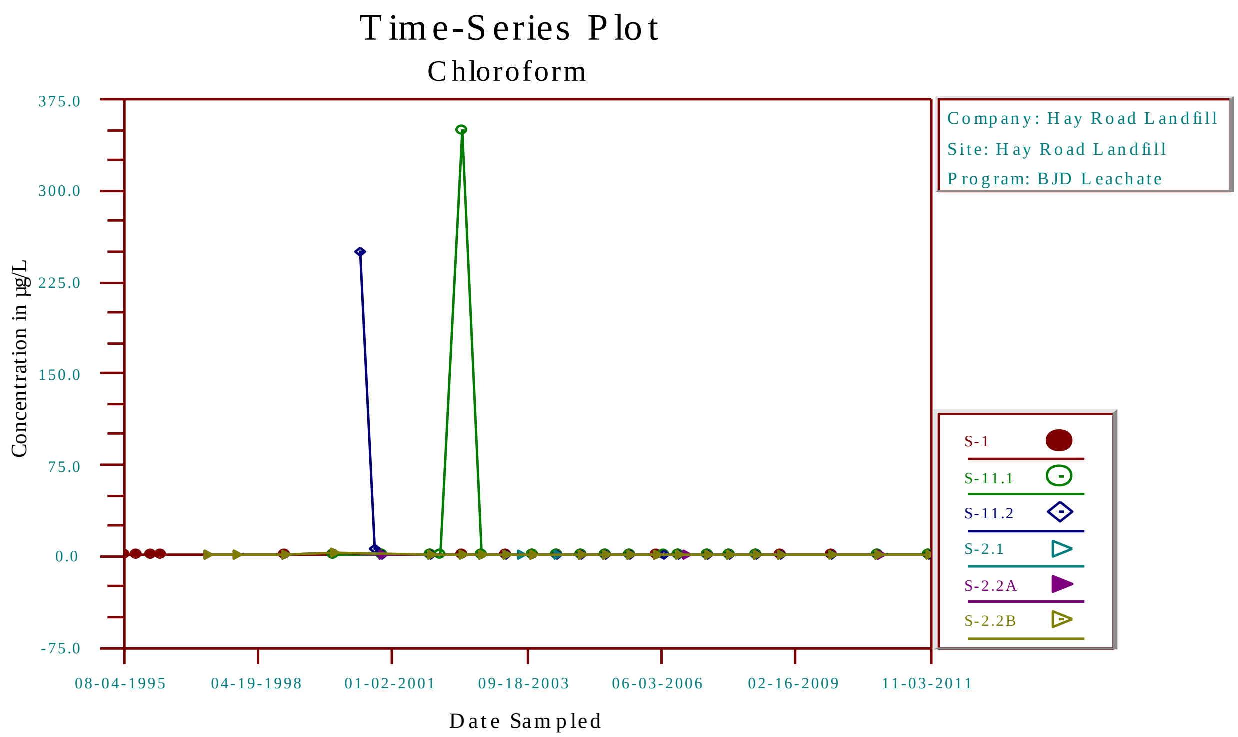
Time-Series Plot
Ethyl tert-butyl ether
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Concentration in µg/L
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Ethanol
Concentration in µg/L
2500.0
2000.0
1500.0
1000.0
500.0
0.0
-500.0
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

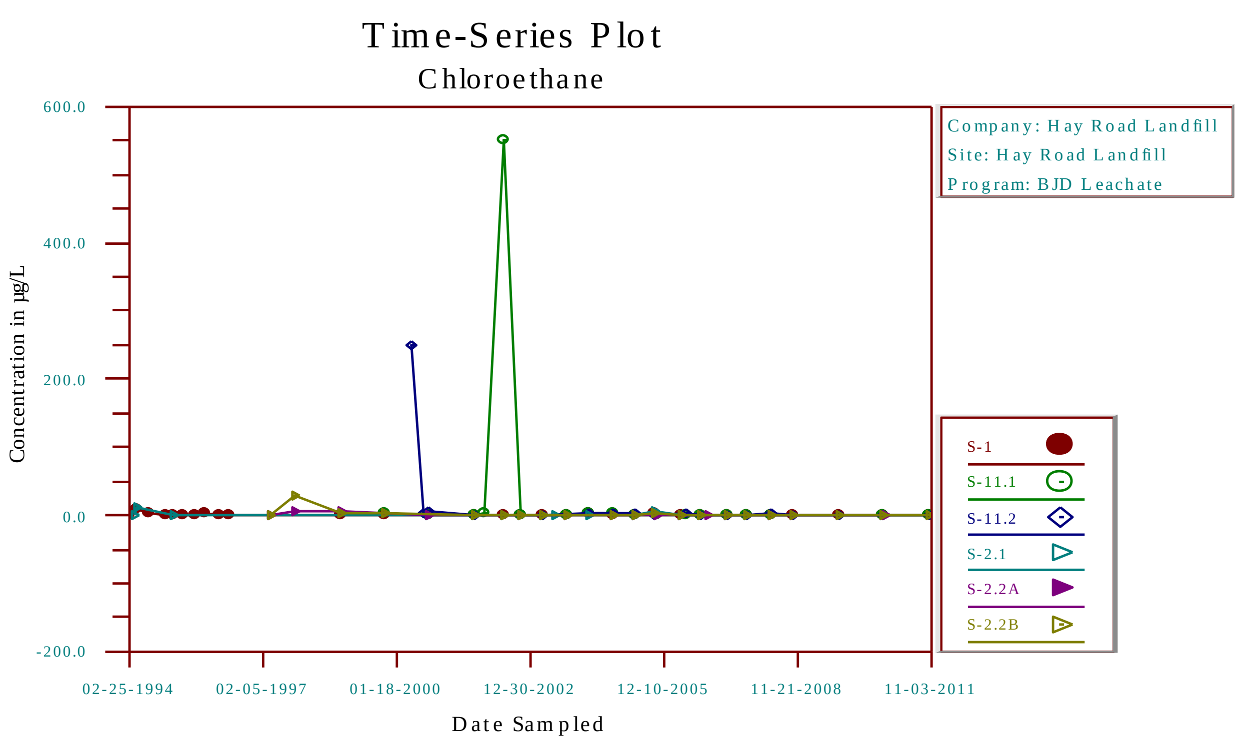

Time-Series Plot
Dichlorodifluoromethane
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Di-isopropyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
6.0
5.0
4.0
3.0
2.0
1.0
0.0
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

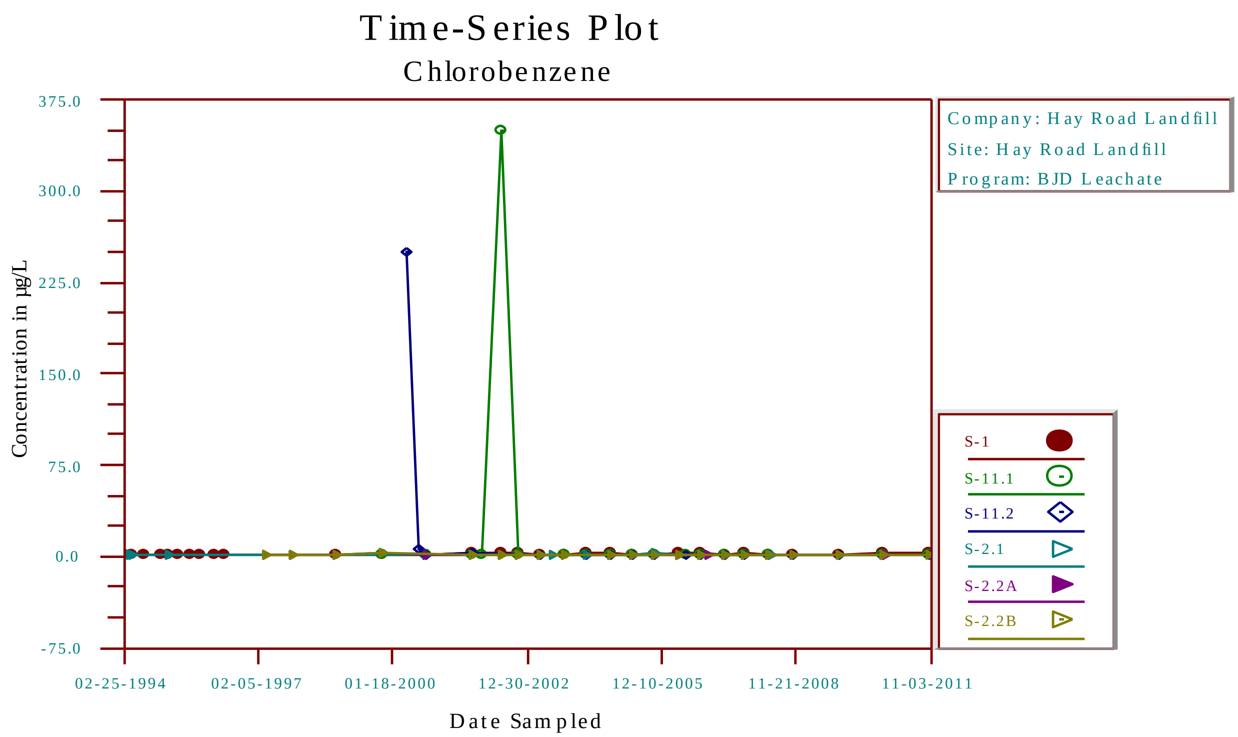

Time-Series Plot
cis-1,2-Dichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
500.0
400.0
300.0
200.0
100.0
0.0
-100.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

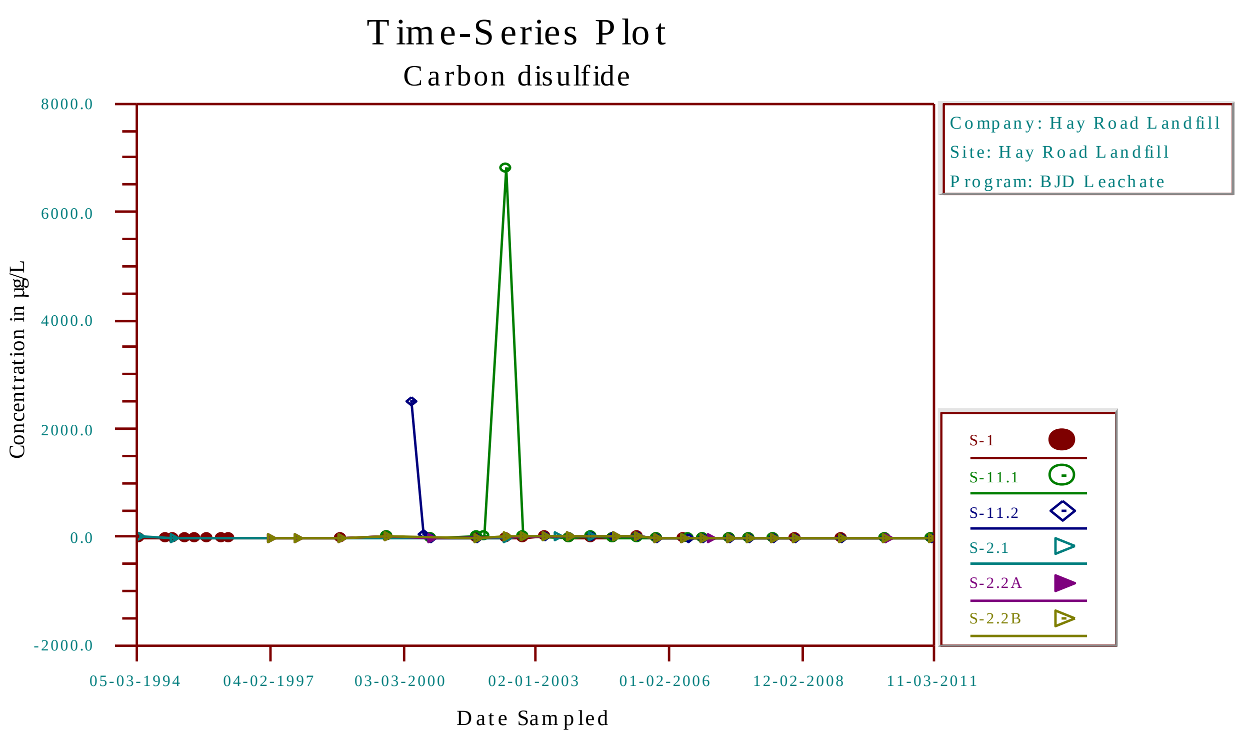


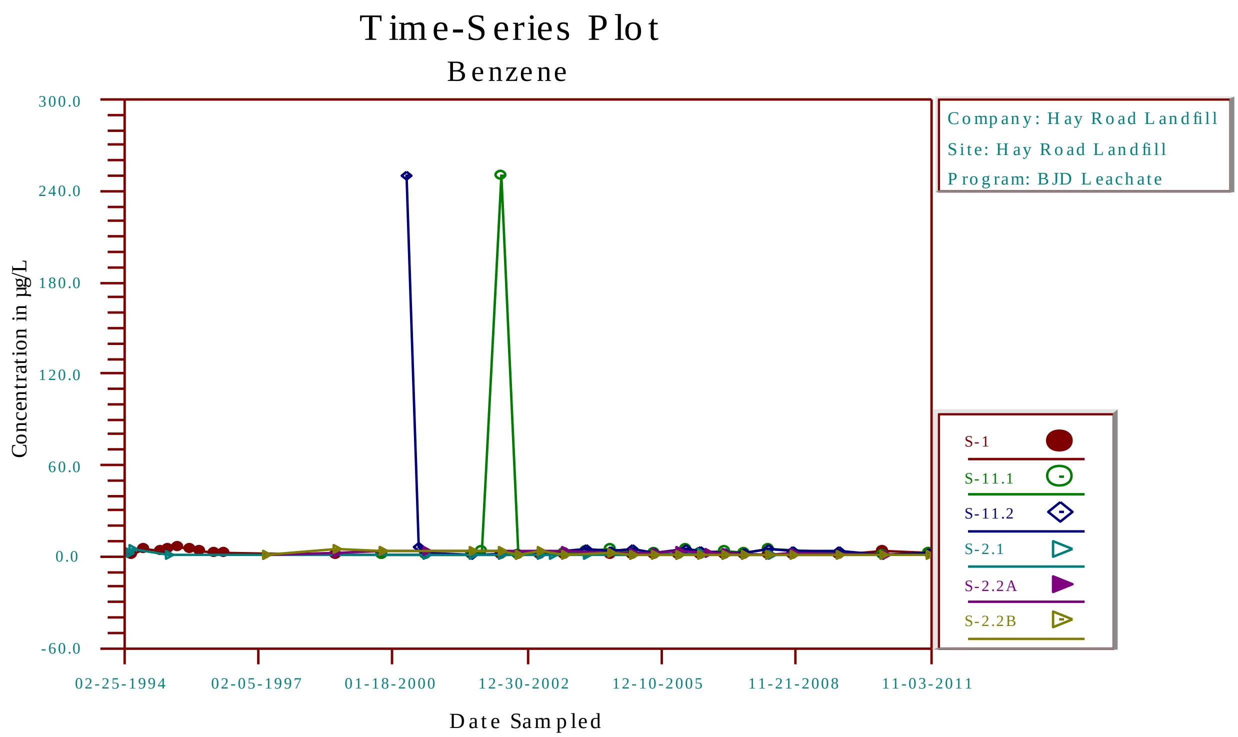
Time-Series Plot
Chloroform
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
375.0
300.0
225.0
150.0
75.0
0.0
-75.0
Concentration in µg/L
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled

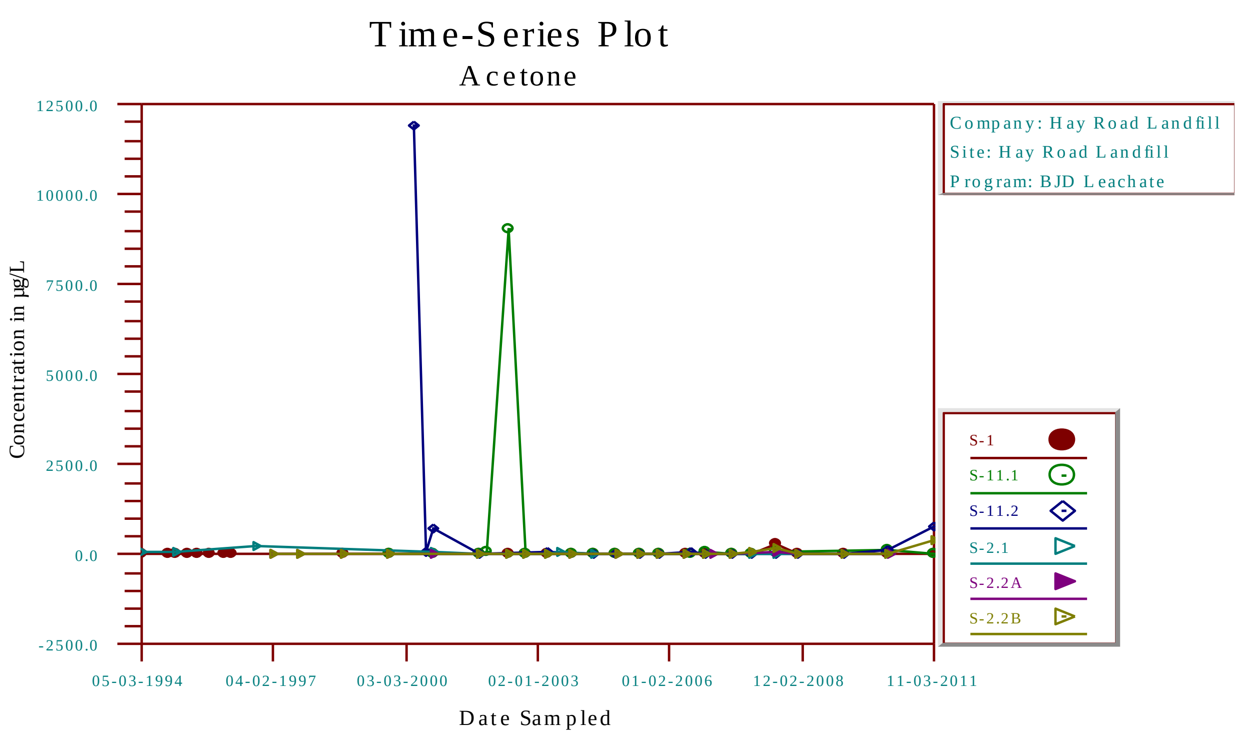


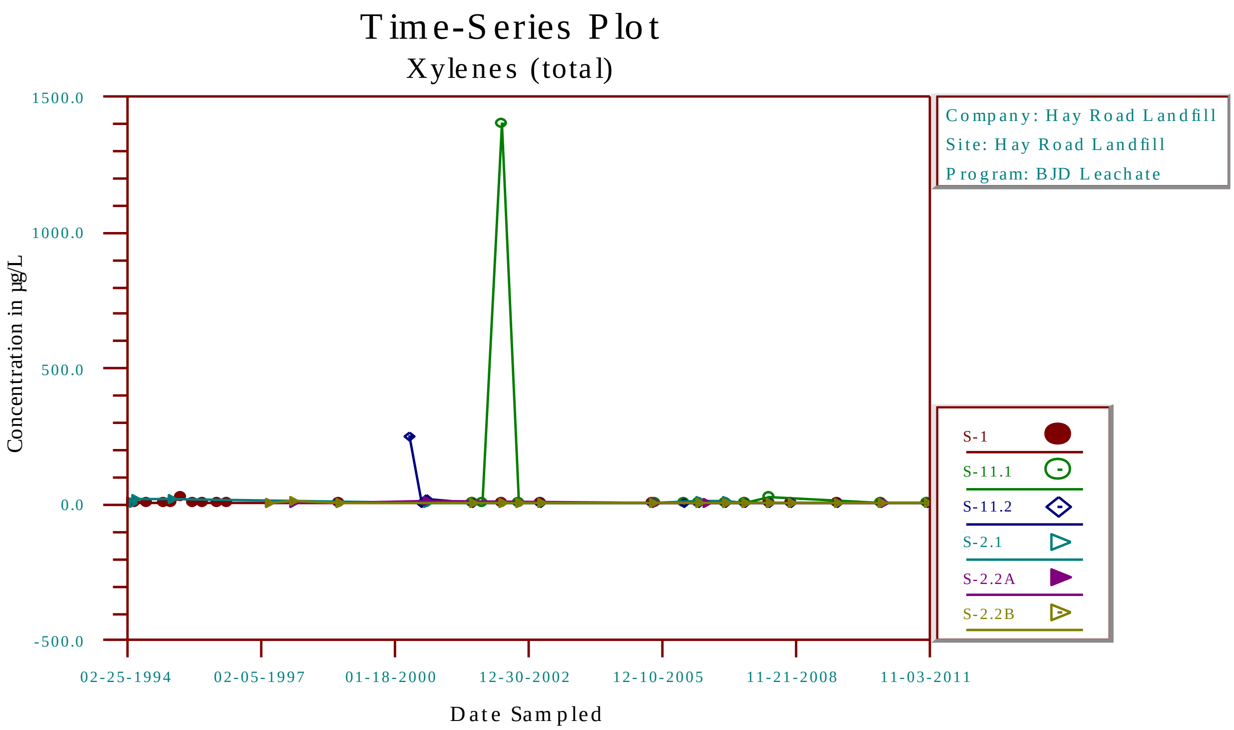
Time-Series Plot
Chloroethane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
600.0
400.0
200.0
0.0
-200.0
Concentration in µg/L
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled


Time-Series Plot
Chlorobenzene
375.0
300.0
225.0
150.0
75.0
0.0
-75.0
Concentration in µg/L
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

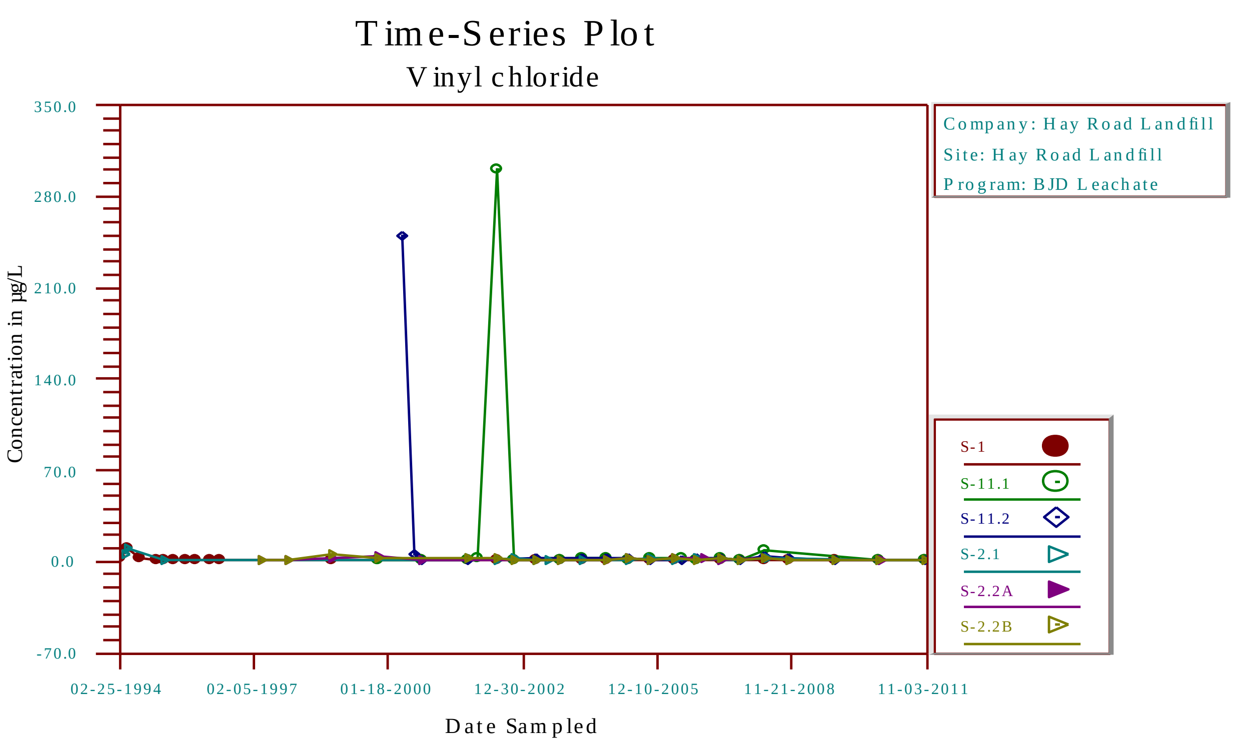

Time-Series Plot
Carbon disulfide
8000.0
6000.0
4000.0
2000.0
0.0
-2000.0
Concentration in µg/L
05-03-1994
04-02-1997
03-03-2000
02-01-2003
01-02-2006
12-02-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Benzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

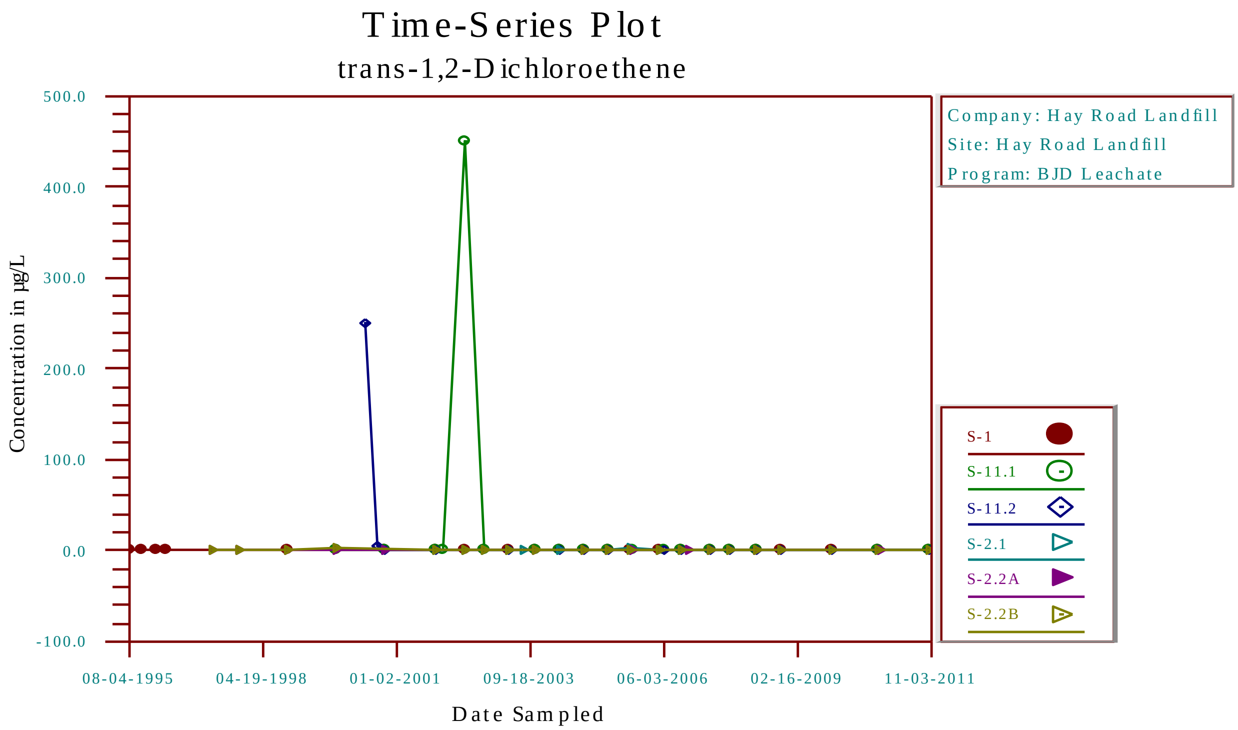

Time-Series Plot
Acetone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
12500.0
10000.0
7500.0
5000.0
2500.0
0.0
-2500.0
05-03-1994
04-02-1997
03-03-2000
02-01-2003
01-02-2006
12-02-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

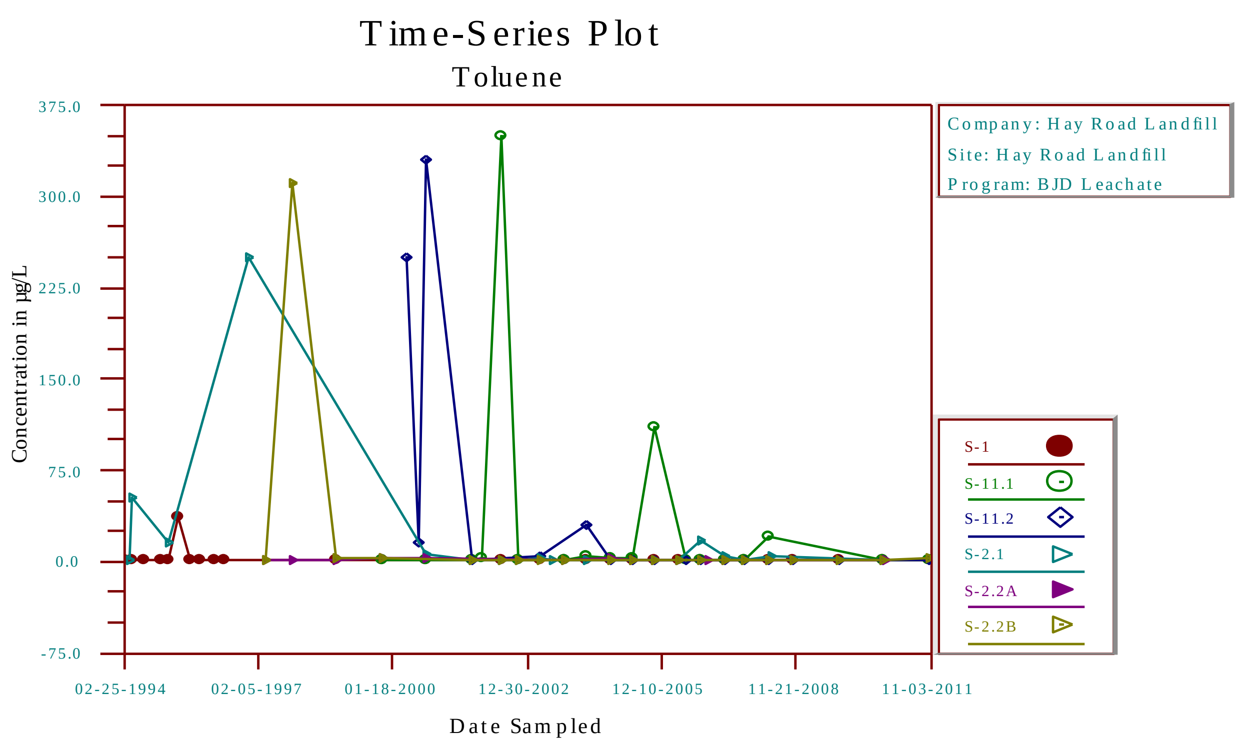


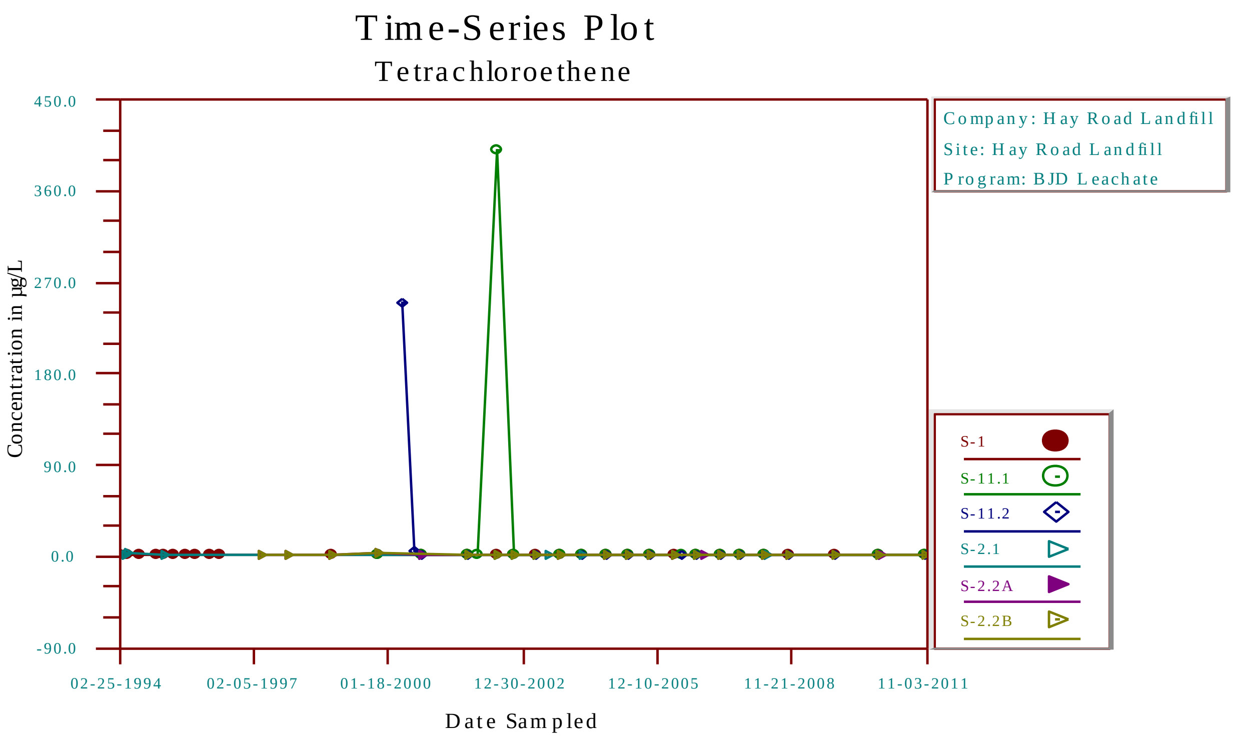
Time-Series Plot
Xylenes (total)
Concentration in µg/L
1500.0
1000.0
500.0
0.0
-500.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



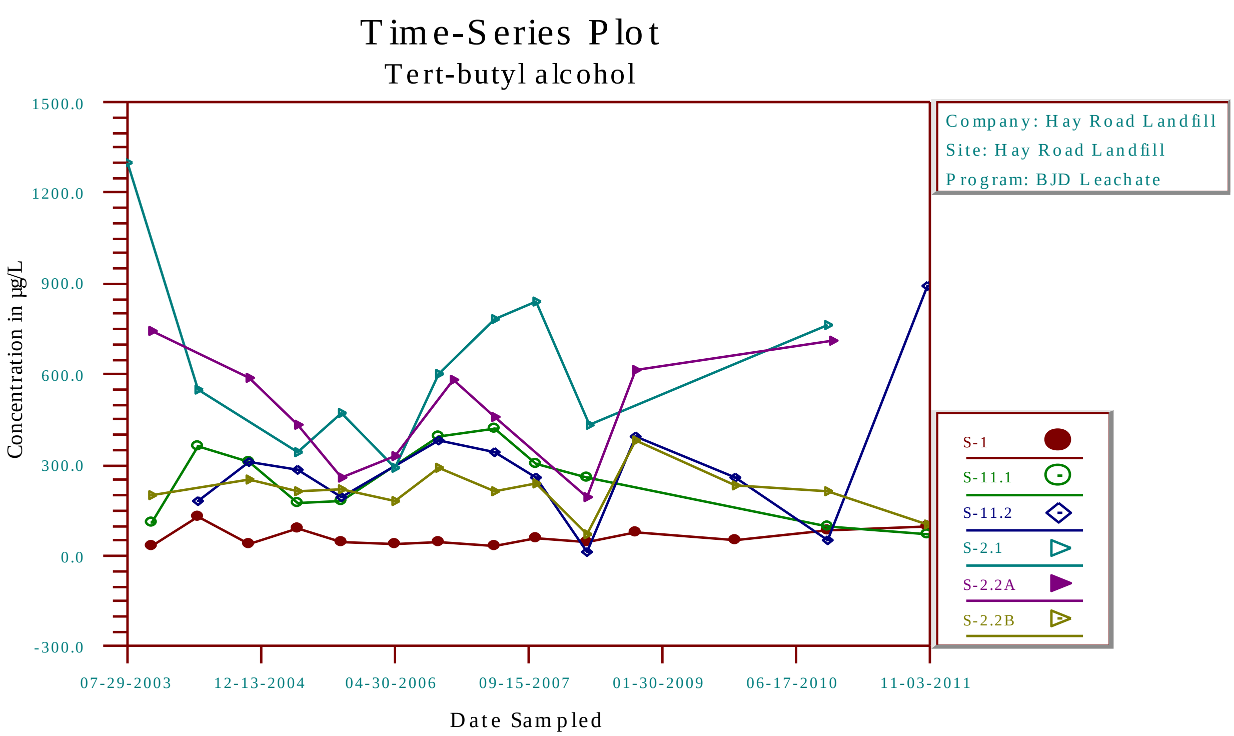
Time-Series Plot
Vinyl chloride
Concentration in µg/L
350.0
280.0
210.0
140.0
70.0
0.0
-70.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
trans-1,2-Dichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
500.0
400.0
300.0
200.0
100.0
0.0
-100.0
08-04-1995
04-19-1998
01-02-2001
09-18-2003
06-03-2006
02-16-2009
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

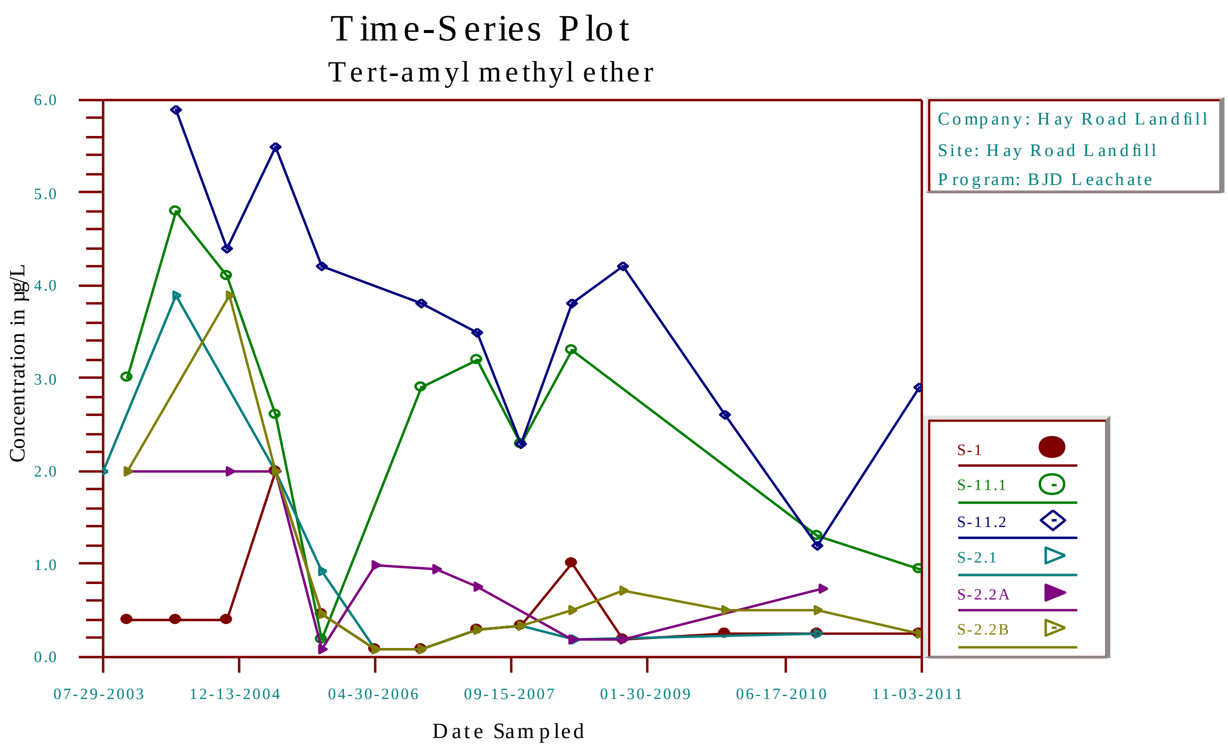

Time-Series Plot
Toluene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
375.0
300.0
225.0
150.0
75.0
0.0
-75.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

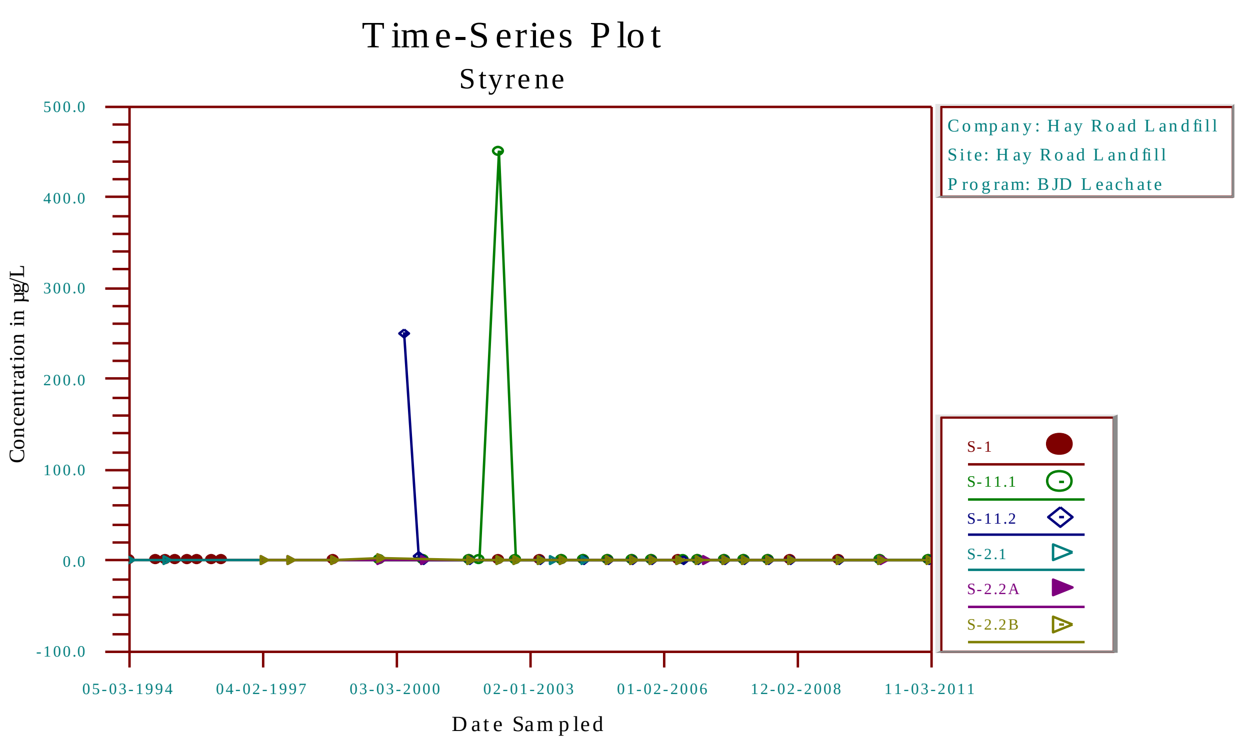


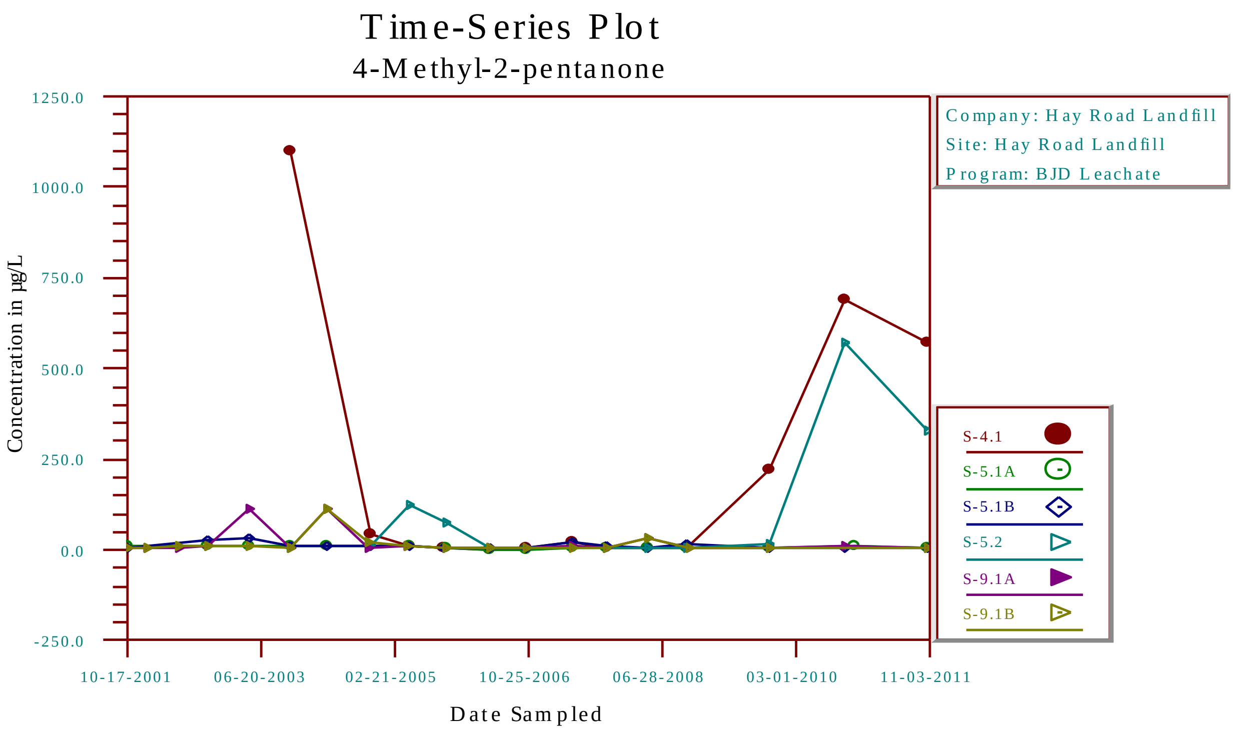
Time-Series Plot
Tetrachloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
450.0
360.0
270.0
180.0
90.0
0.0
-90.0
02-25-1994
02-05-1997
01-18-2000
12-30-2002
12-10-2005
11-21-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B



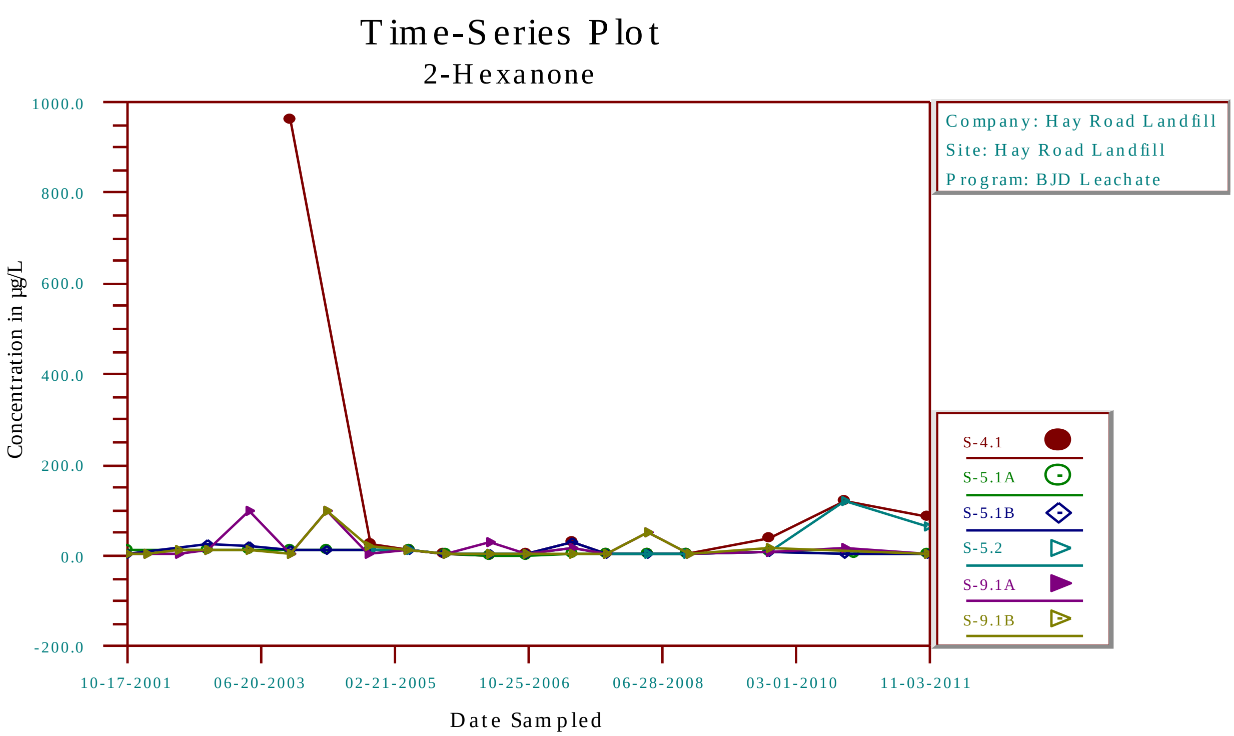
Time-Series Plot
Tert-butyl alcohol
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
1500.0
1200.0
900.0
600.0
300.0
0.0
-300.0
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B


Time-Series Plot
Tert-amyl methyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
6.0
5.0
4.0
3.0
2.0
1.0
0.0
07-29-2003
12-13-2004
04-30-2006
09-15-2007
01-30-2009
06-17-2010
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

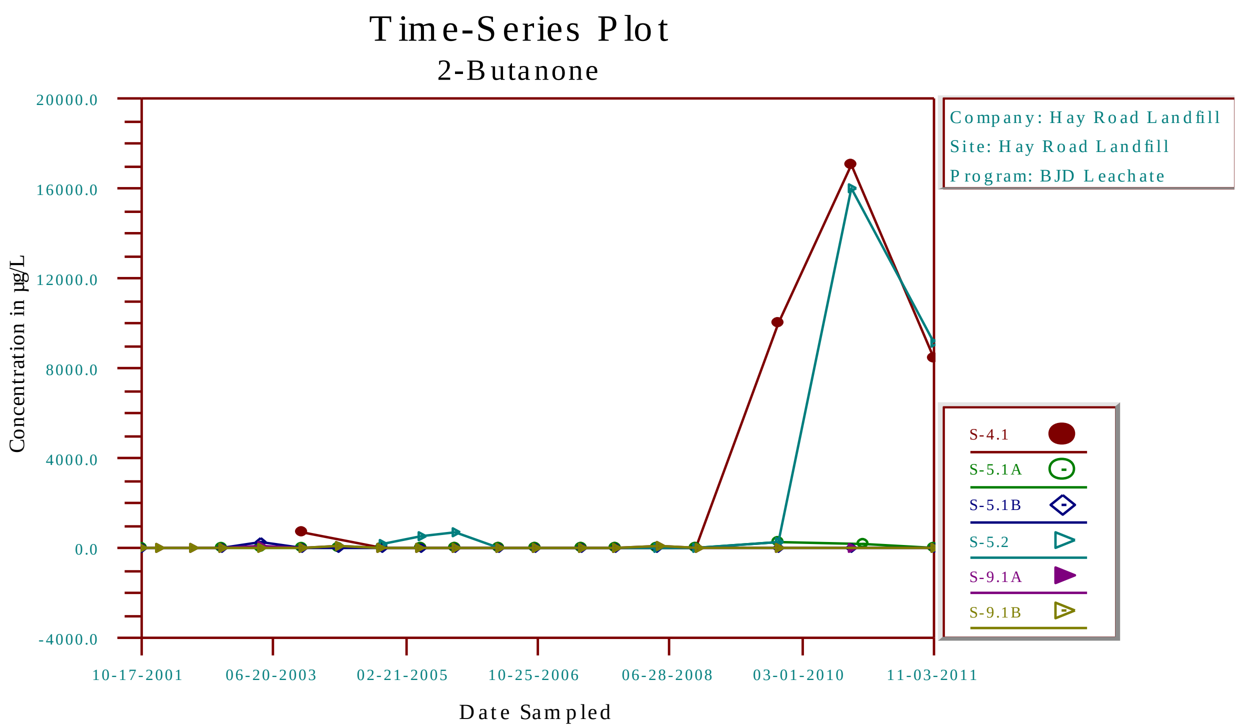

Time-Series Plot
Styrene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
500.0
400.0
300.0
200.0
100.0
0.0
-100.0
05-03-1994
04-02-1997
03-03-2000
02-01-2003
01-02-2006
12-02-2008
11-03-2011
Date Sampled
S-1
S-11.1
S-11.2
S-2.1
S-2.2A
S-2.2B

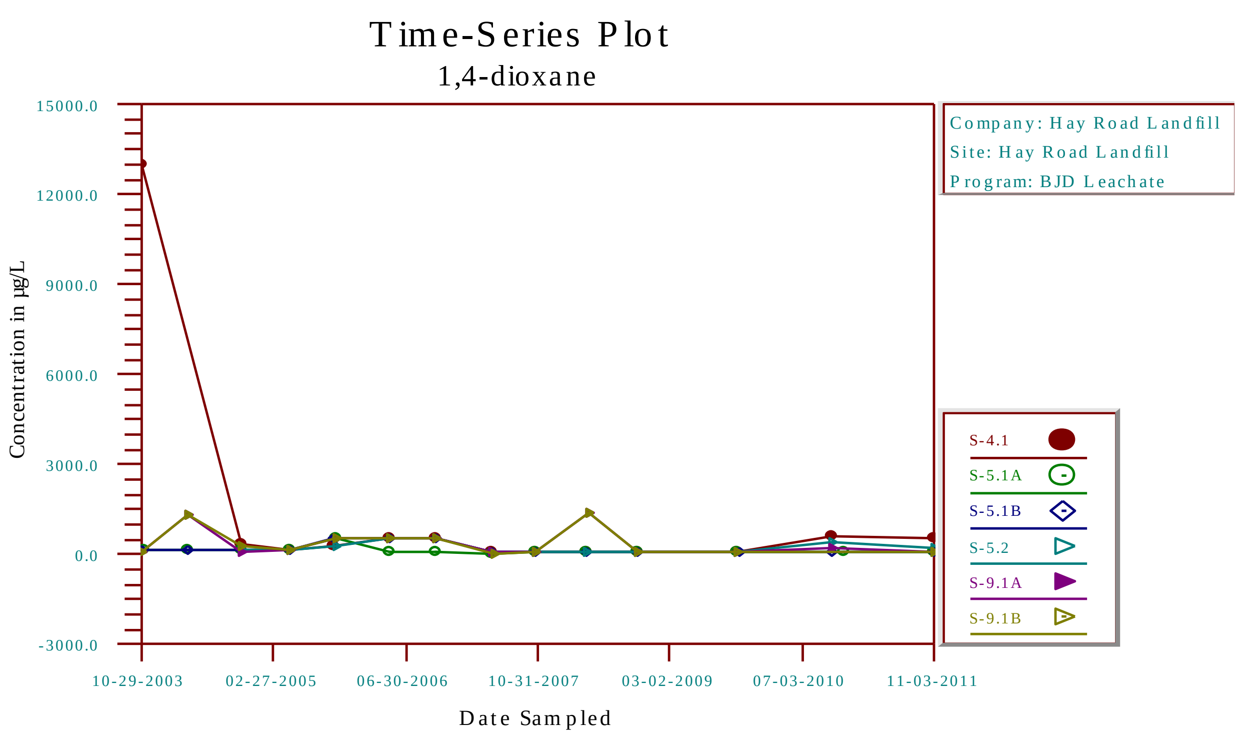


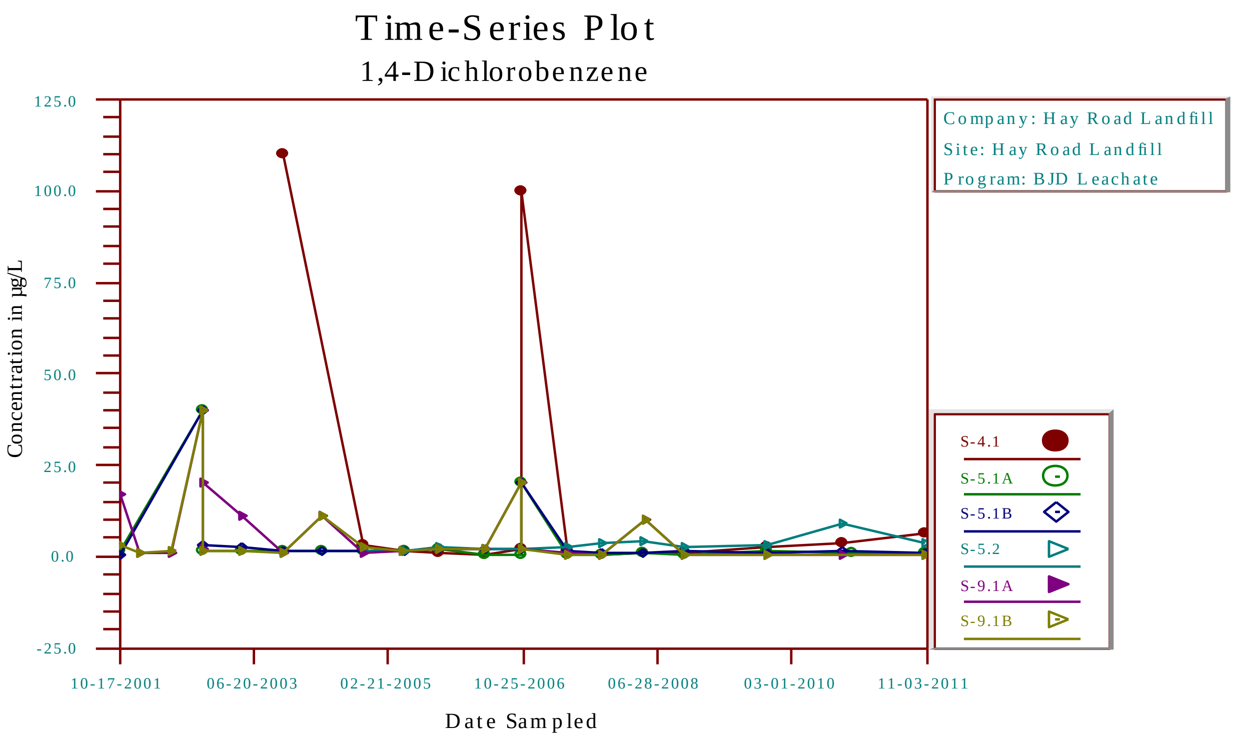
Time-Series Plot
4-Methyl-2-pentanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
1250.0
1000.0
750.0
500.0
250.0
0.0
-250.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



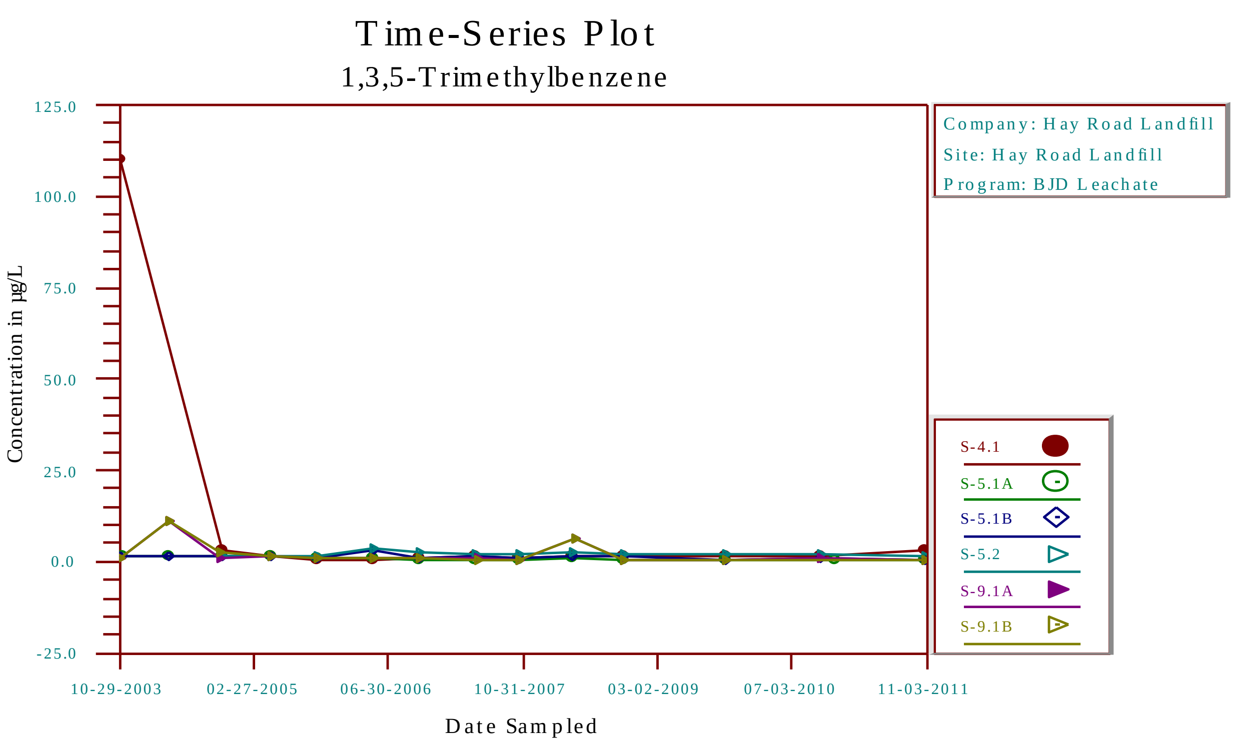
Time-Series Plot
2-Hexanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
1000.0
800.0
600.0
400.0
200.0
0.0
-200.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
2-Butanone
Concentration in µg/L
20000.0
16000.0
12000.0
8000.0
4000.0
0.0
-4000.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

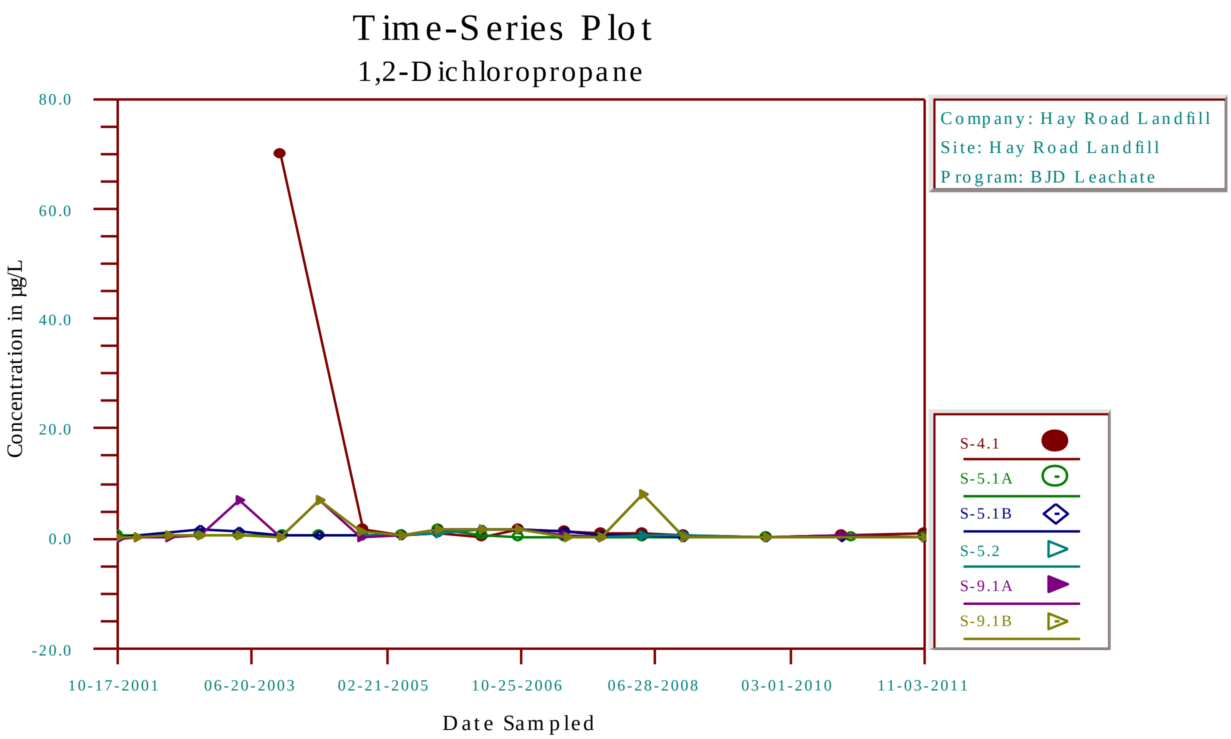

Time-Series Plot
1,4-dioxane
Concentration in µg/L
15000.0
12000.0
9000.0
6000.0
3000.0
0.0
-3000.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



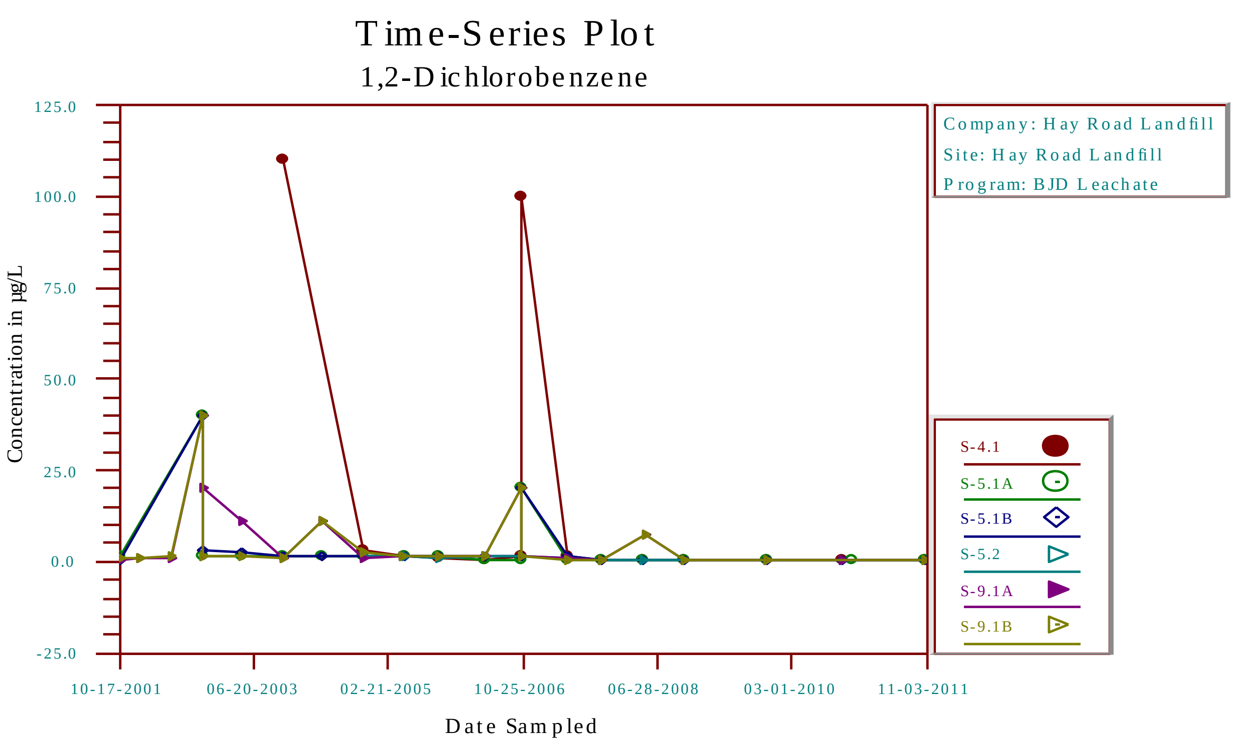
Time-Series Plot
1,4-Dichlorobenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



Time-Series Plot
1,3,5-Trimethylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
Concentration in µg/L
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



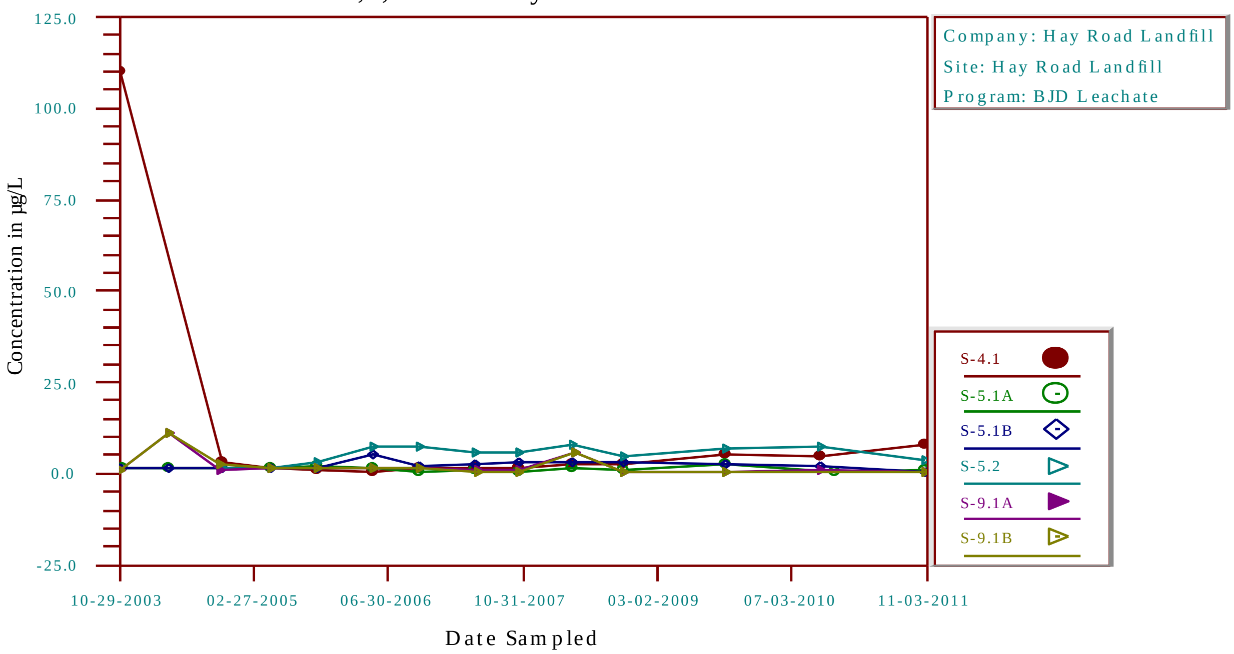
Time-Series Plot
1,2-Dichloropropane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B
80.0
60.0
40.0
20.0
0.0
-20.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled



Time-Series Plot
1,2-Dichlorobenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

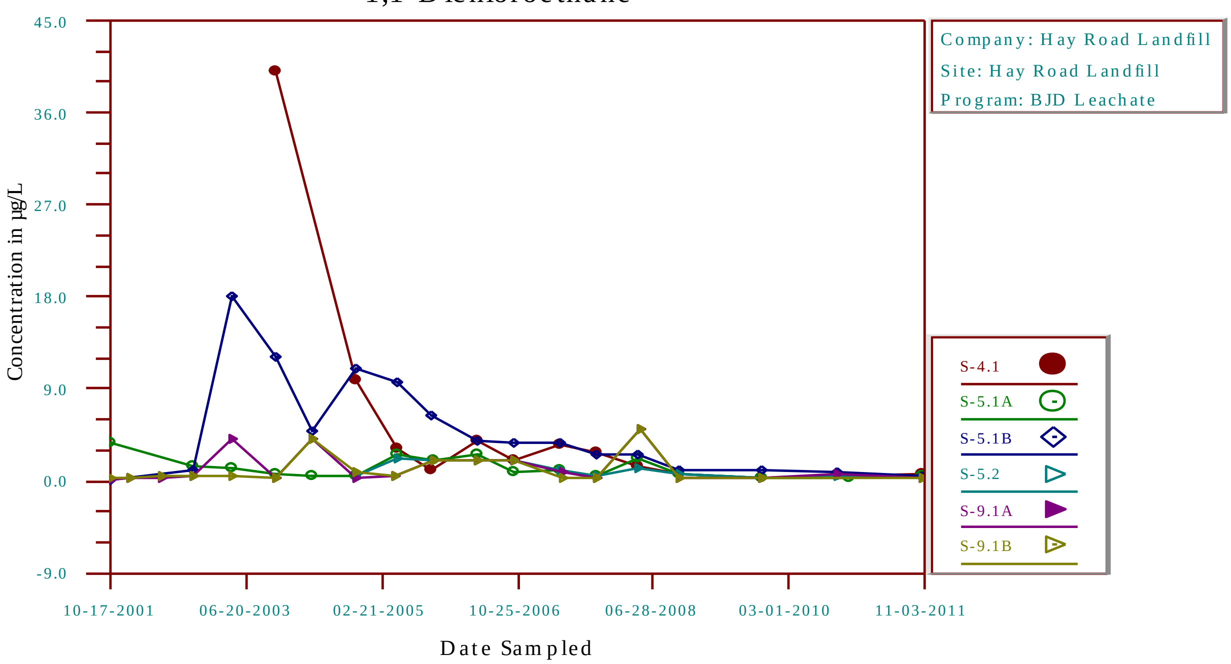
Time-Series Plot

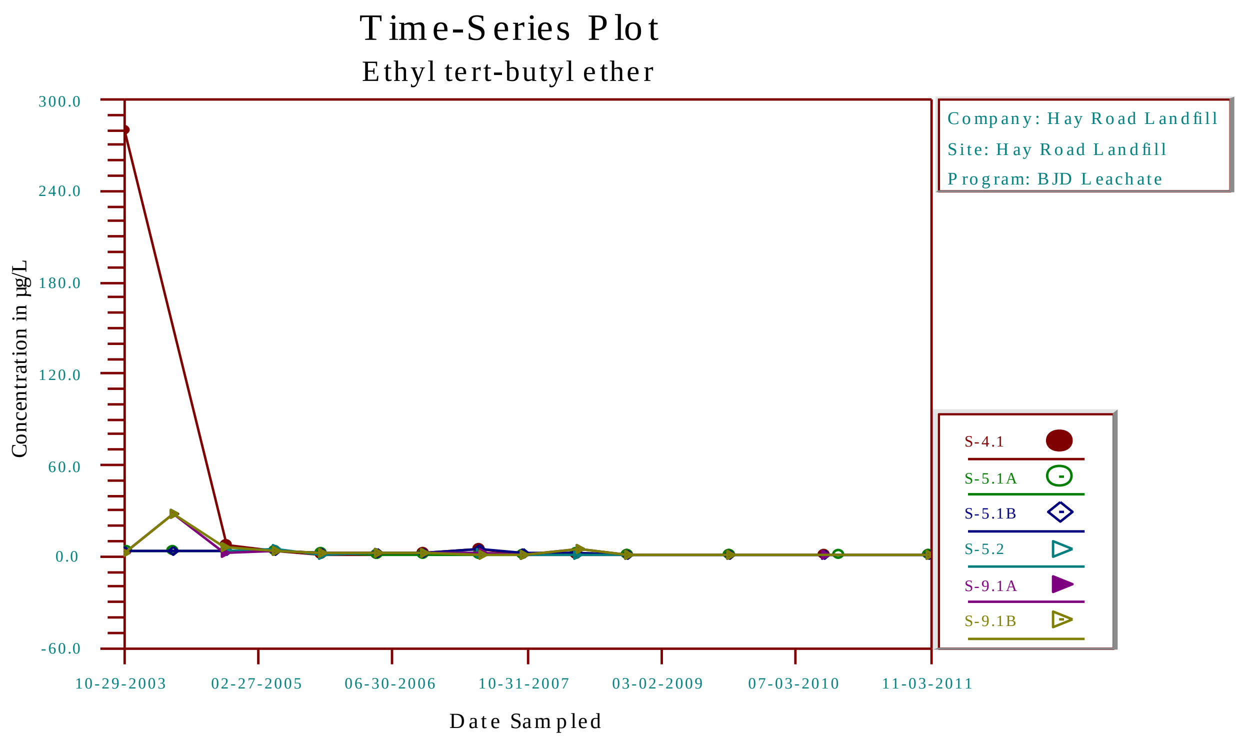
1,2,4-Trimethylbenzene

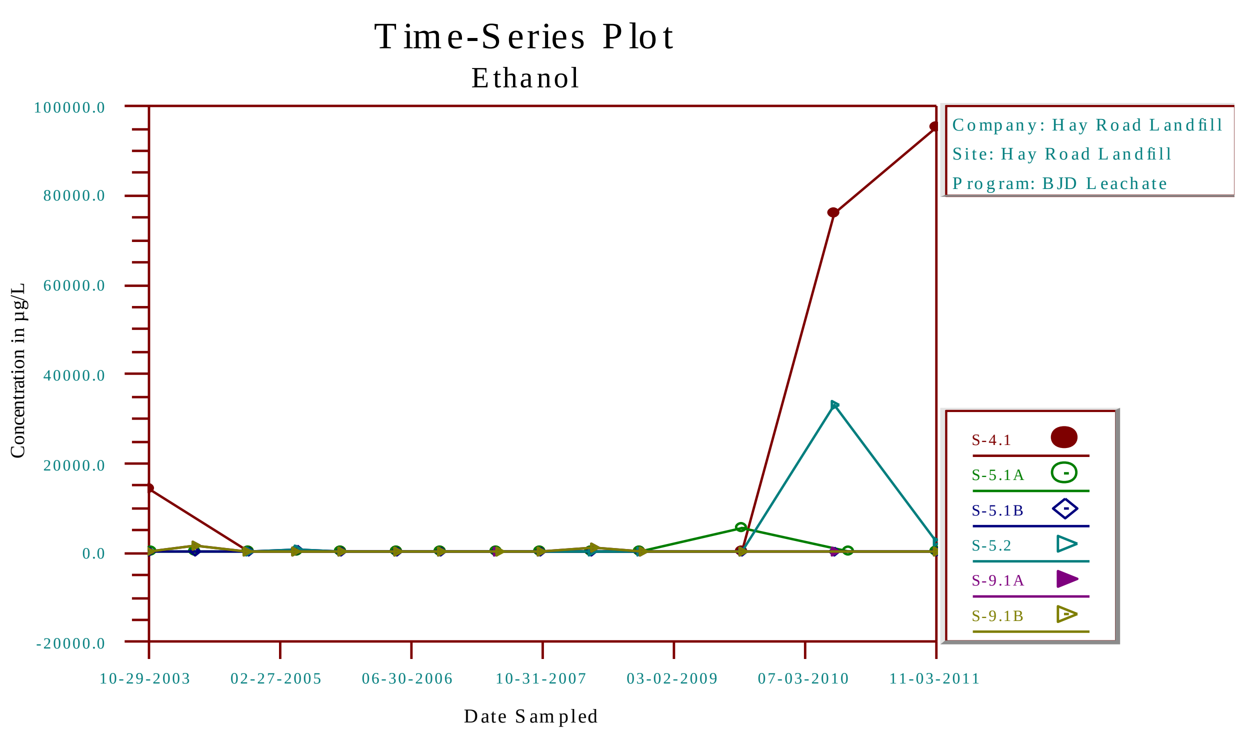


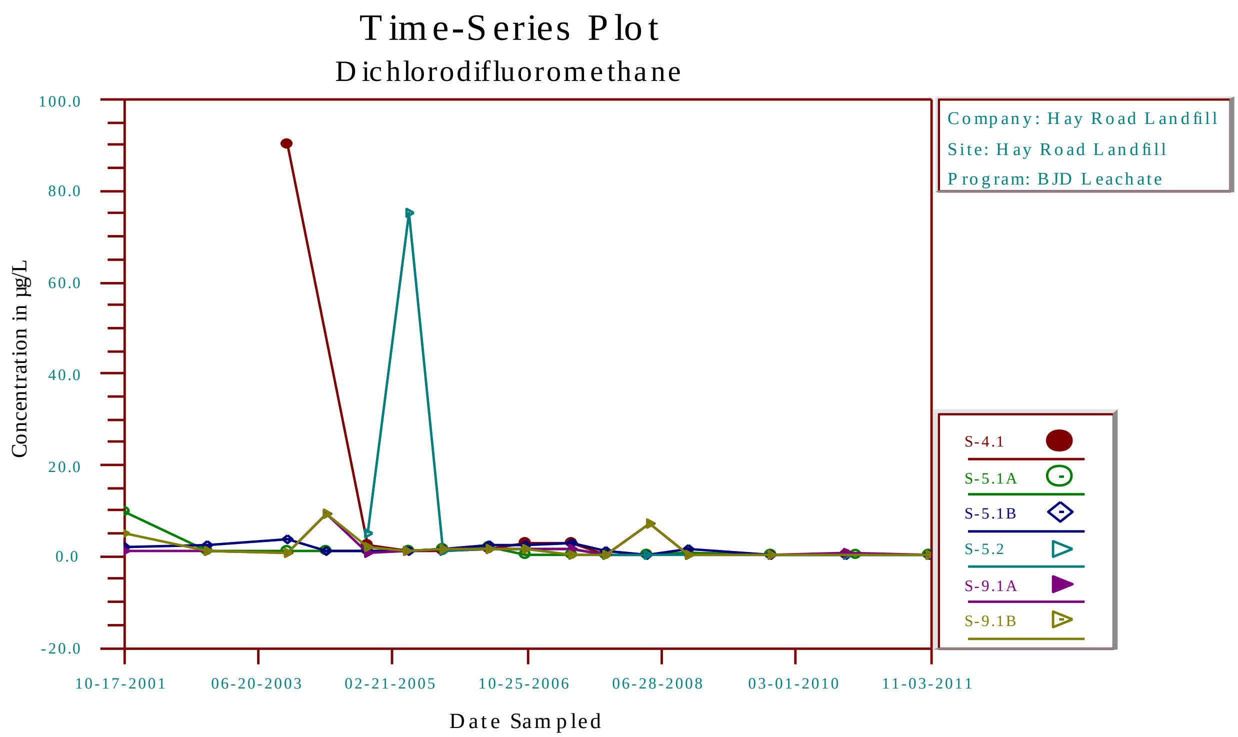
Time-Series Plot

1,1-Dichloroethane

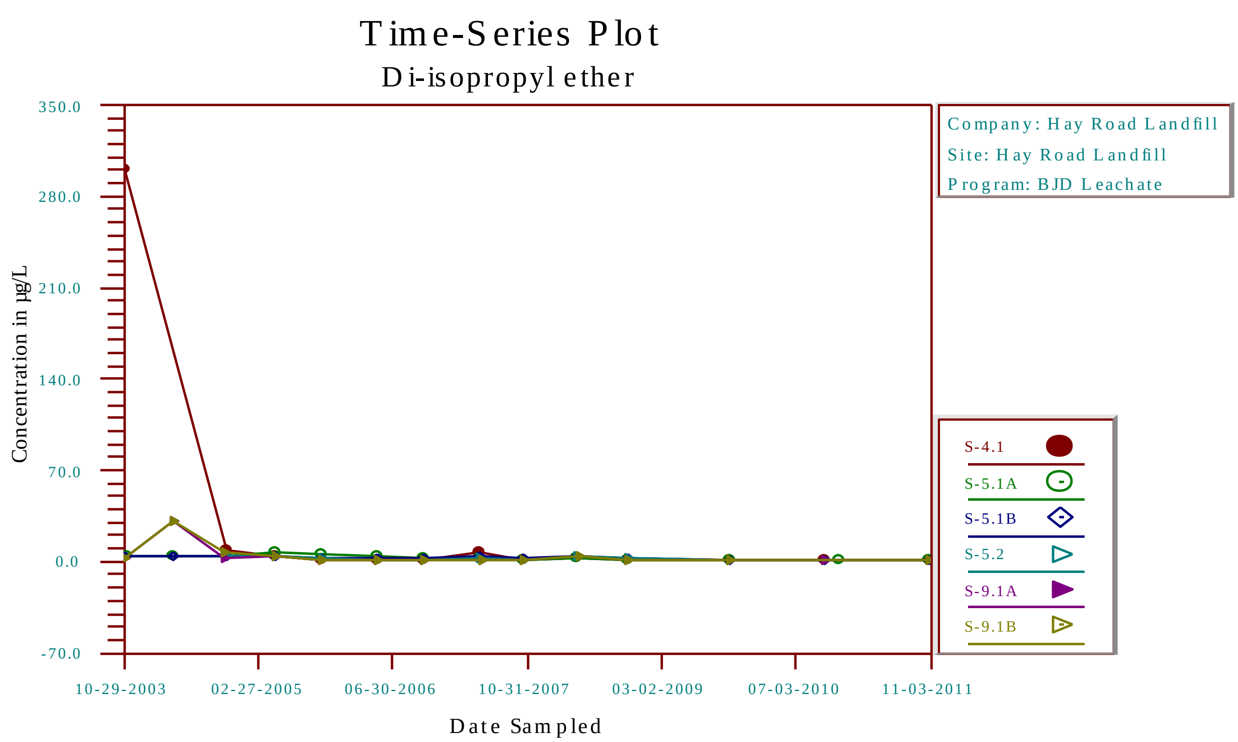



Time-Series Plot
Ethyl tert-butyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

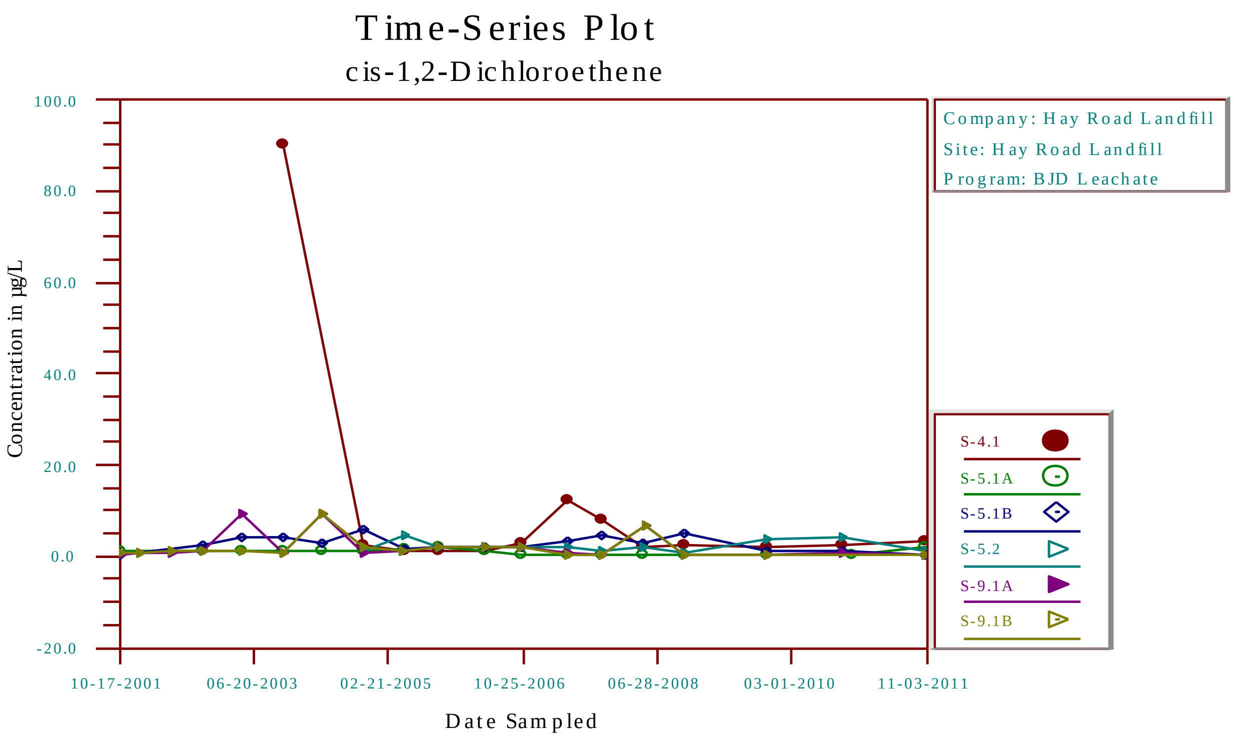

Time-Series Plot
Ethanol
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
100000.0
80000.0
60000.0
40000.0
20000.0
0.0
-20000.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



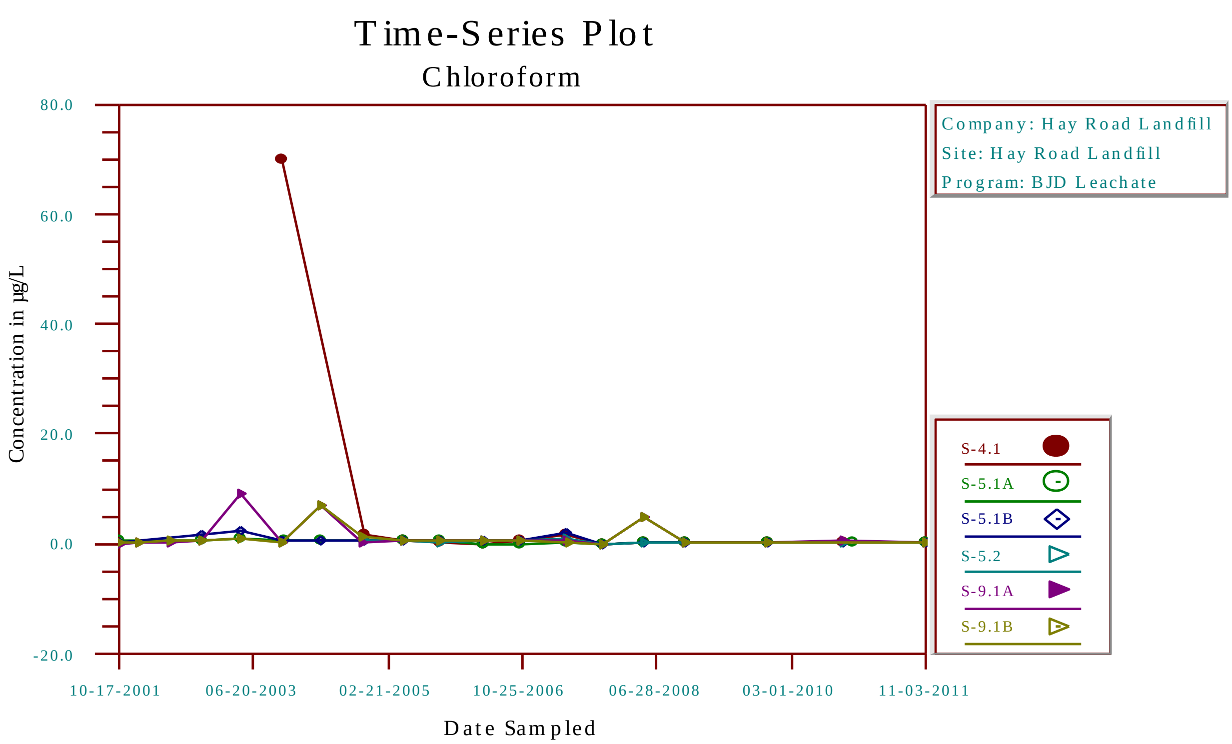
Time-Series Plot
Dichlorodifluoromethane
Concentration in µg/L
100.0
80.0
60.0
40.0
20.0
0.0
-20.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



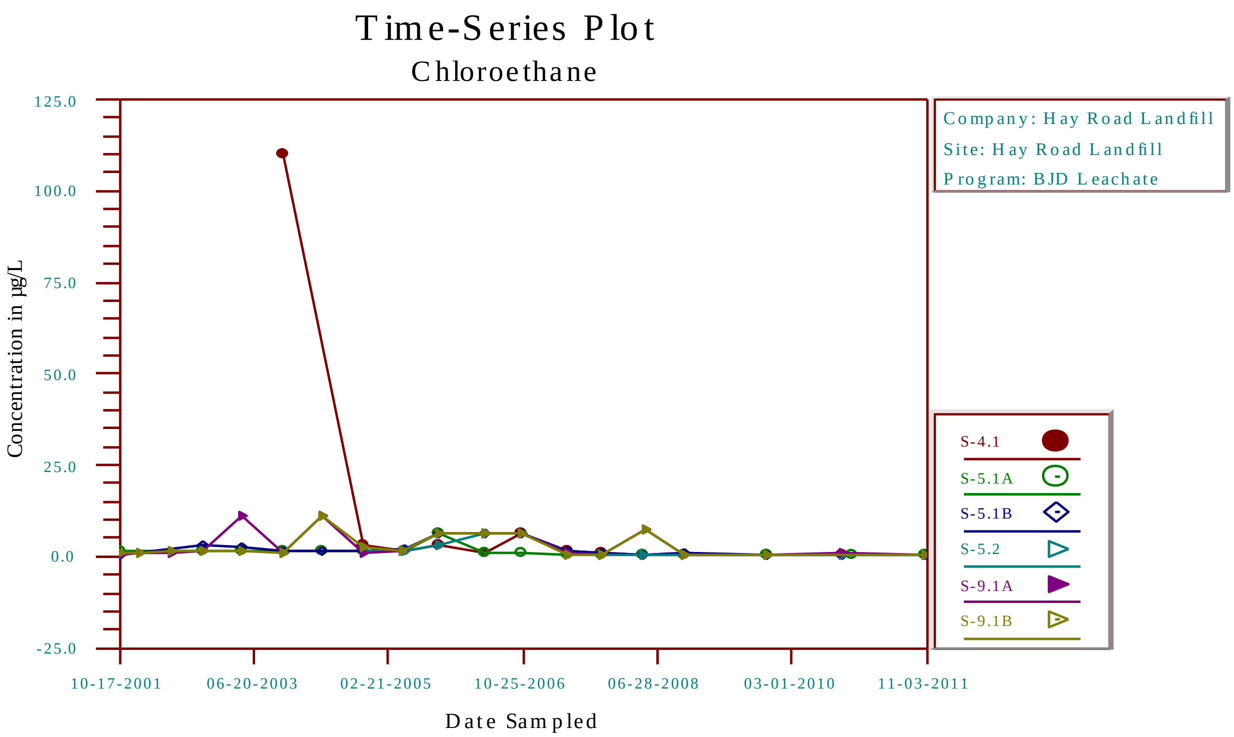
Time-Series Plot
Di-isopropyl ether
Concentration in µg/L
350.0
280.0
210.0
140.0
70.0
0.0
-70.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



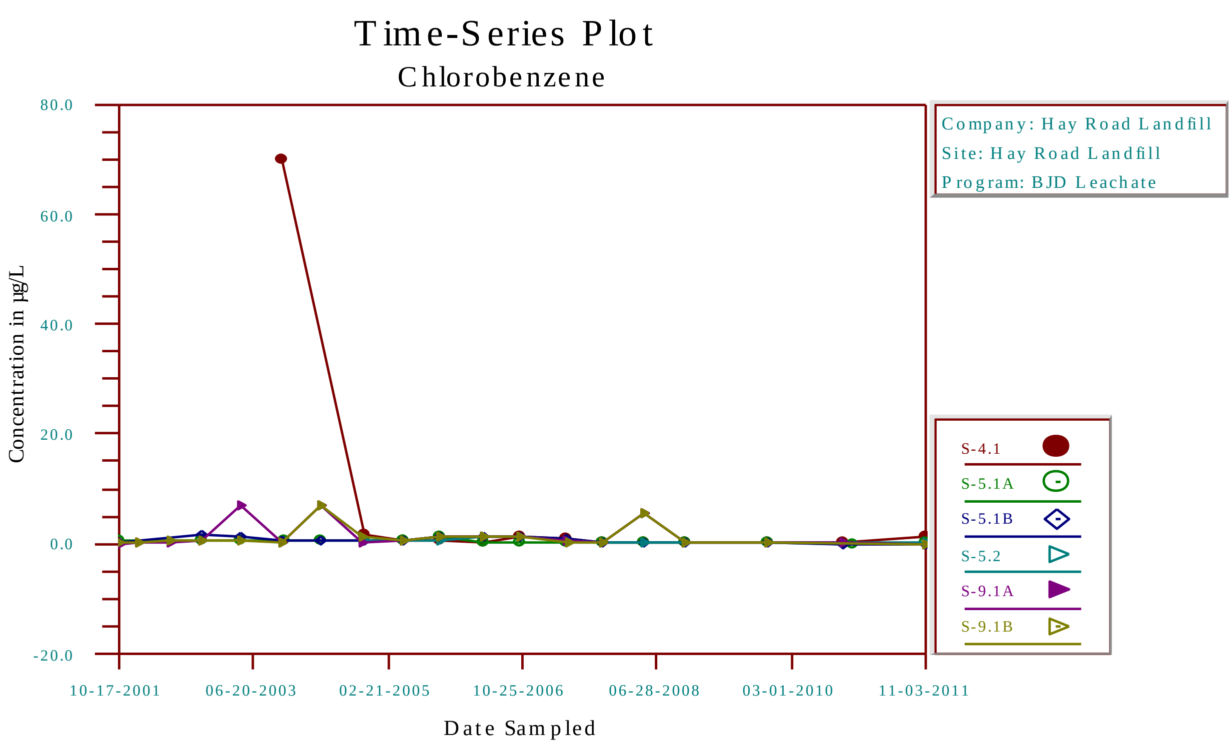
Time-Series Plot
cis-1,2-Dichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
100.0
80.0
60.0
40.0
20.0
0.0
-20.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



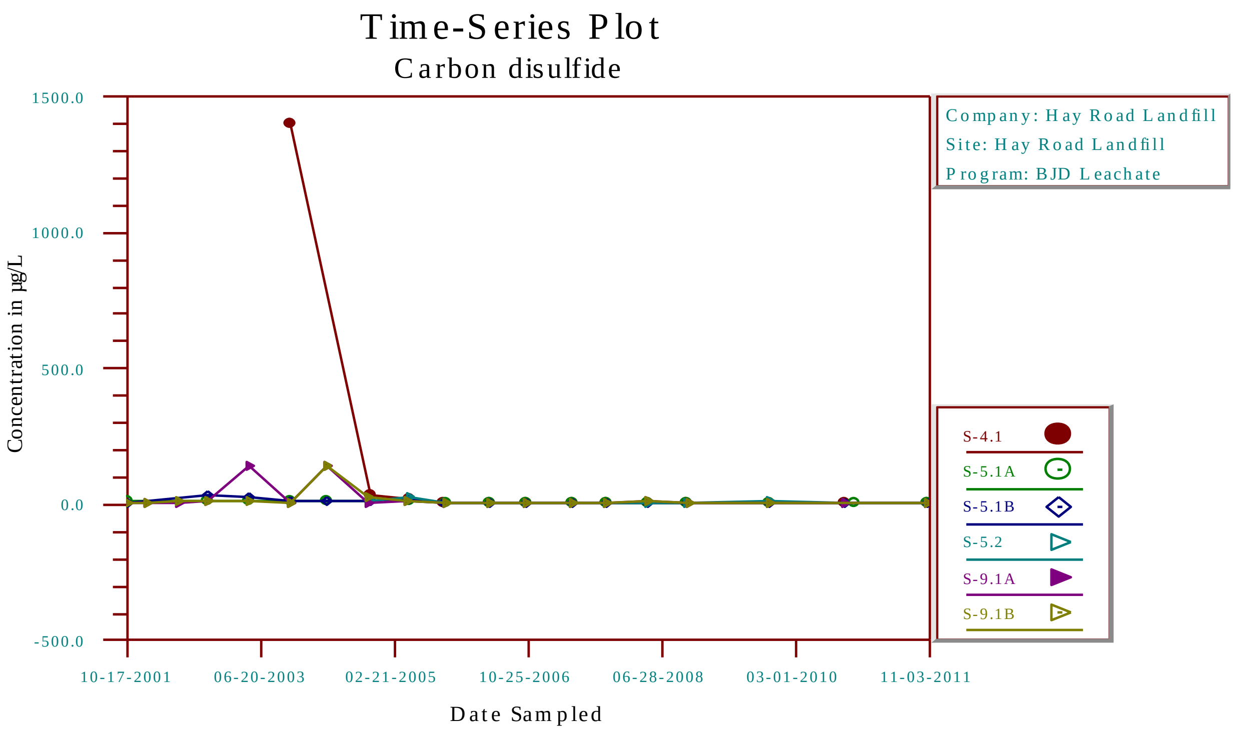
Time-Series Plot
Chloroform
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
80.0
60.0
40.0
20.0
0.0
-20.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

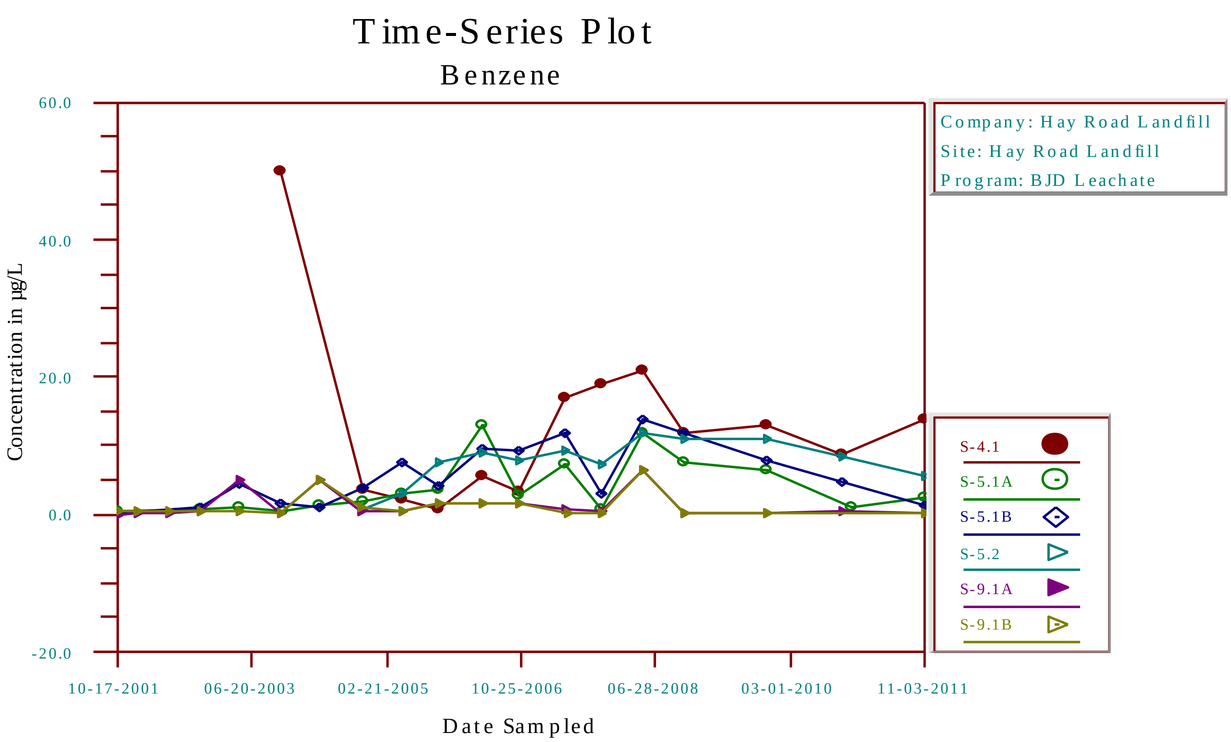


Time-Series Plot
Chloroethane
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

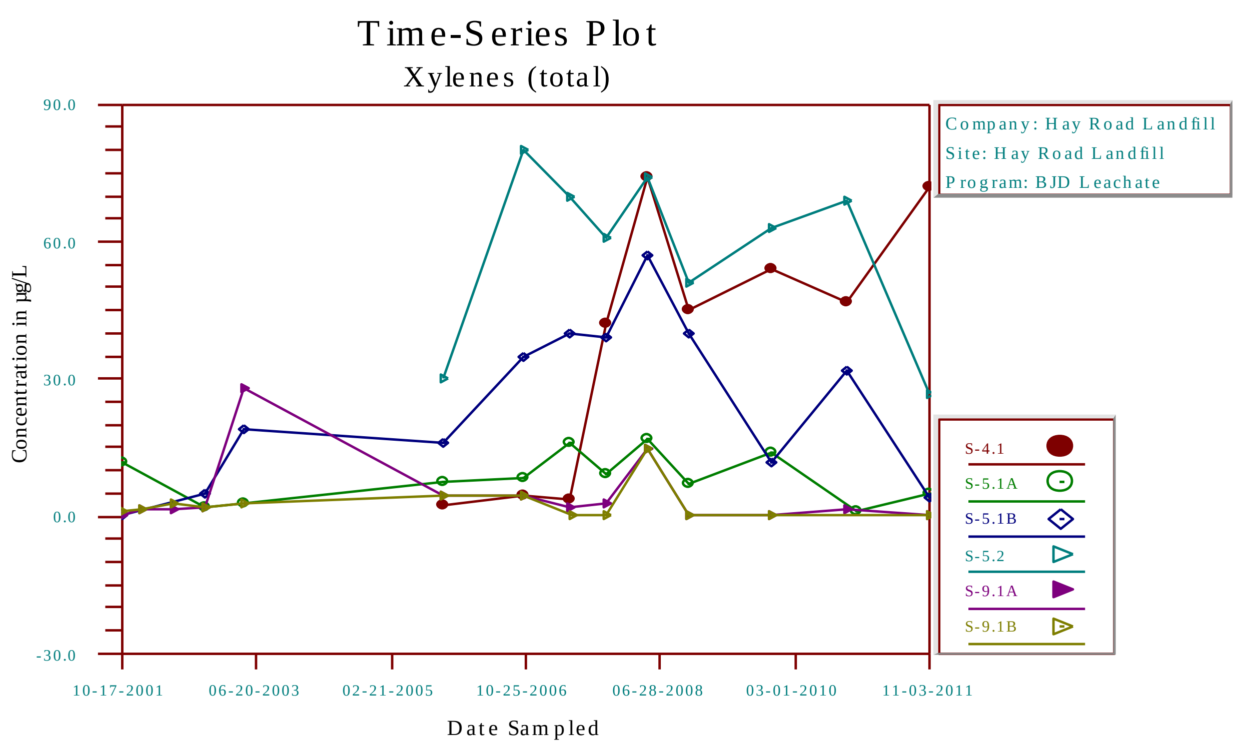


Time-Series Plot
Chlorobenzene
80.0
60.0
40.0
20.0
0.0
-20.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

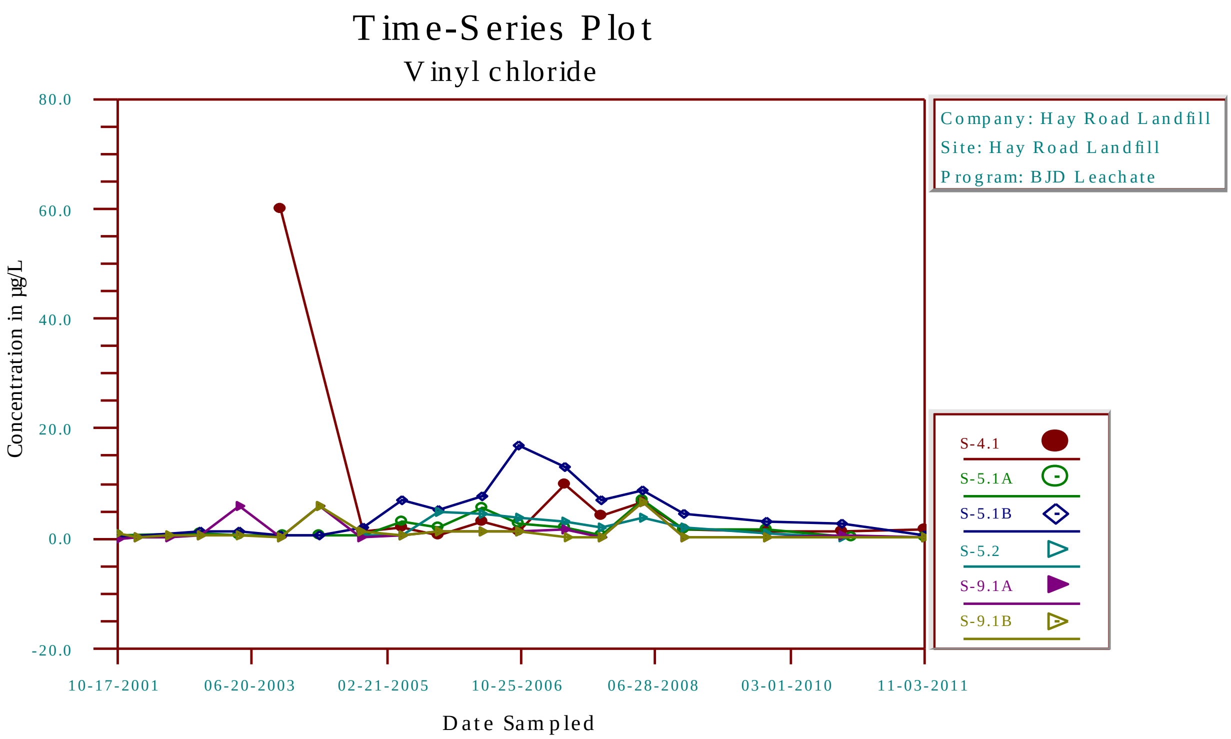

Time-Series Plot
Carbon disulfide
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
1500.0
1000.0
500.0
0.0
-500.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

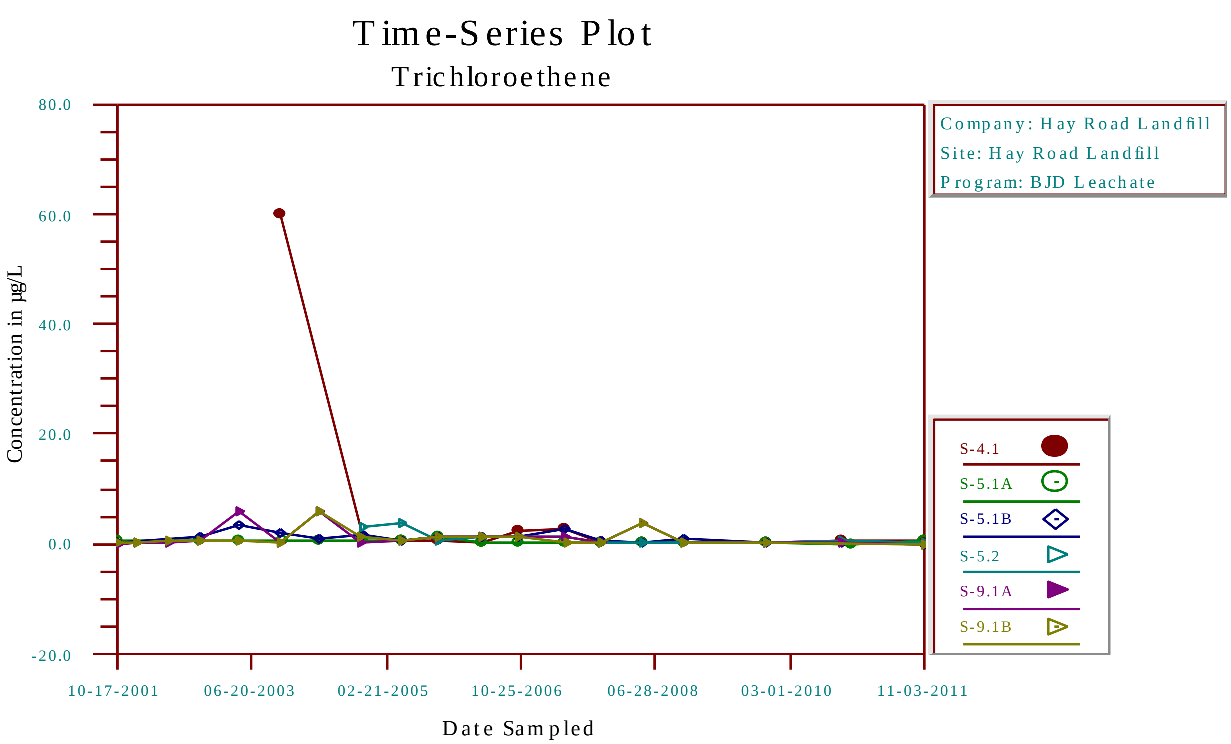

Time-Series Plot
Benzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
60.0
40.0
20.0
0.0
-20.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

Time-Series Plot
Acetone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
30000.0
24000.0
18000.0
12000.0
6000.0
0.0
-6000.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



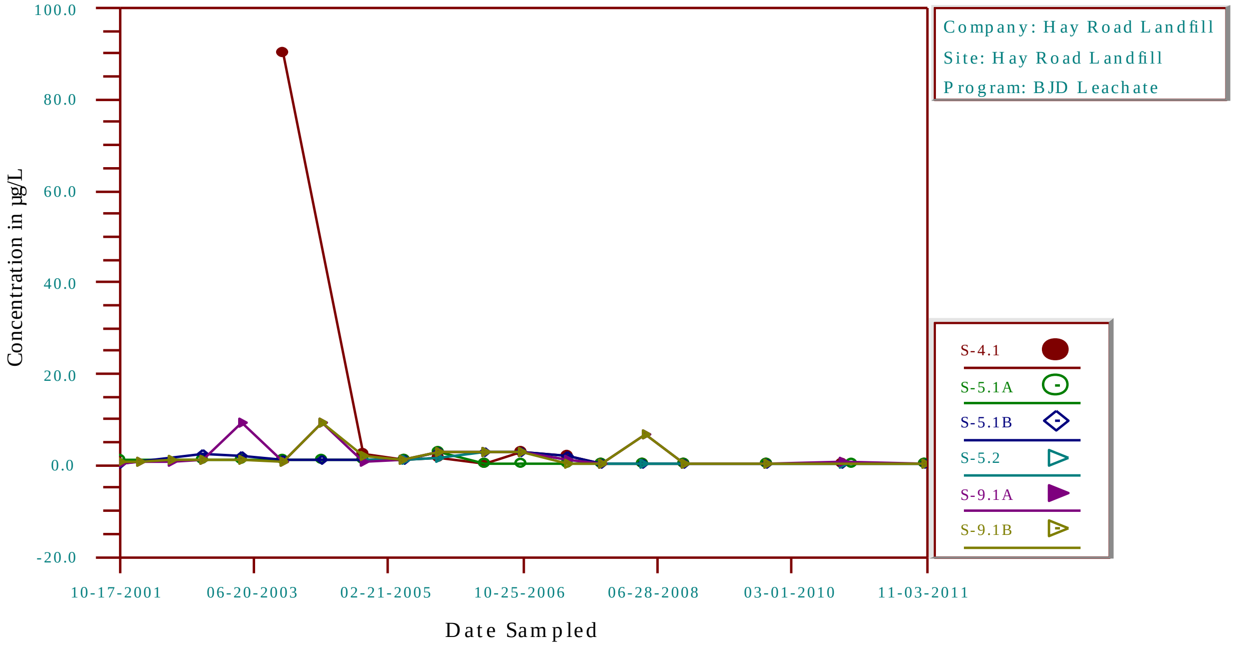
Time-Series Plot
Xylenes (total)
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
90.0
60.0
30.0
0.0
-30.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
Vinyl chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
80.0
60.0
40.0
20.0
0.0
-20.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
Trichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
80.0
60.0
40.0
20.0
0.0
-20.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

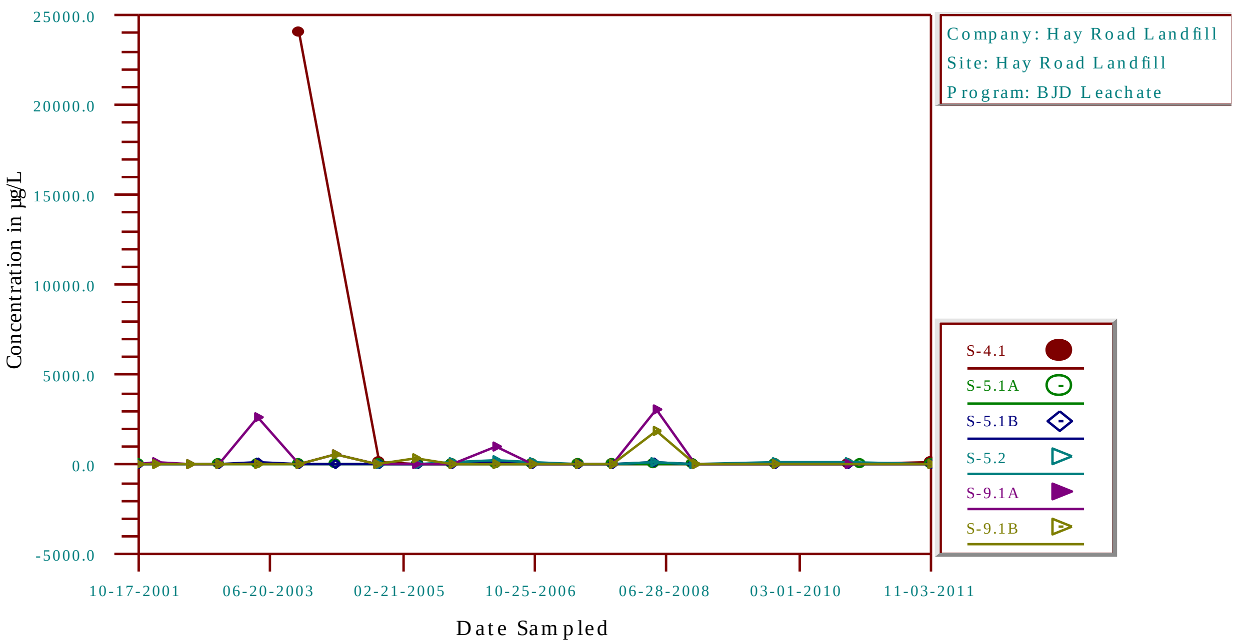
Time-Series Plot

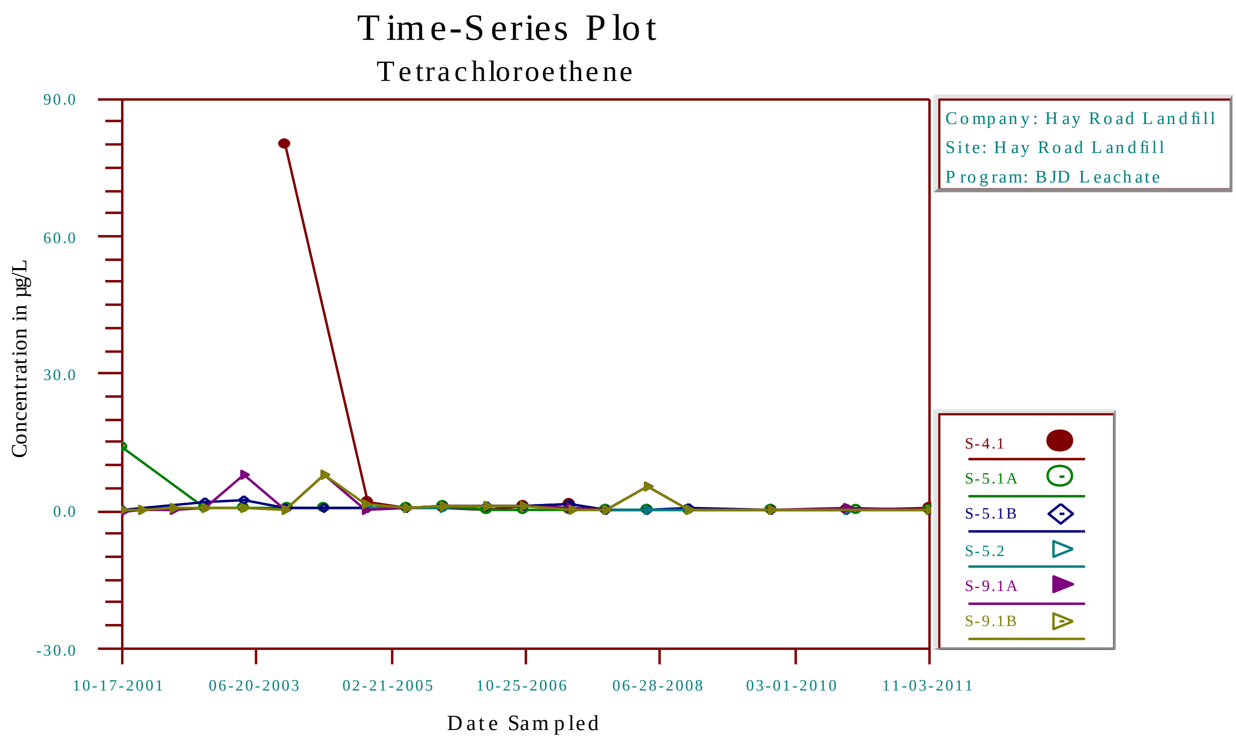
trans-1,2-Dichloroethene

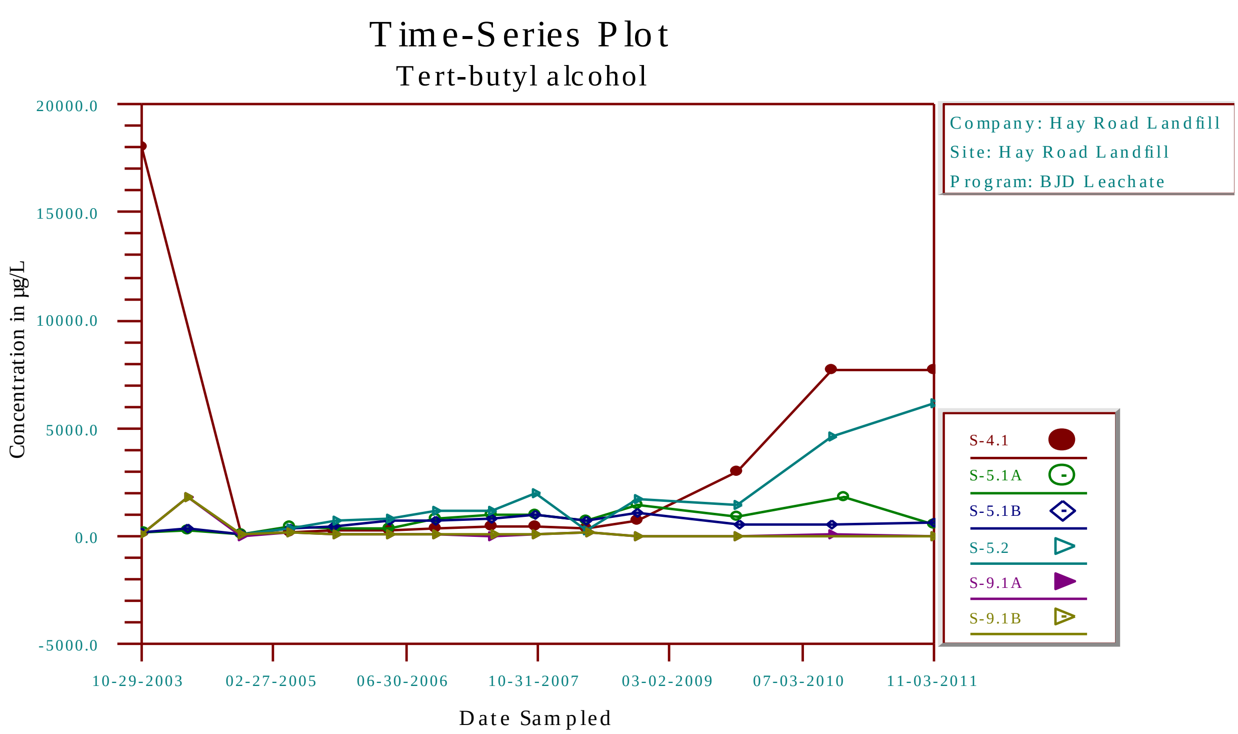


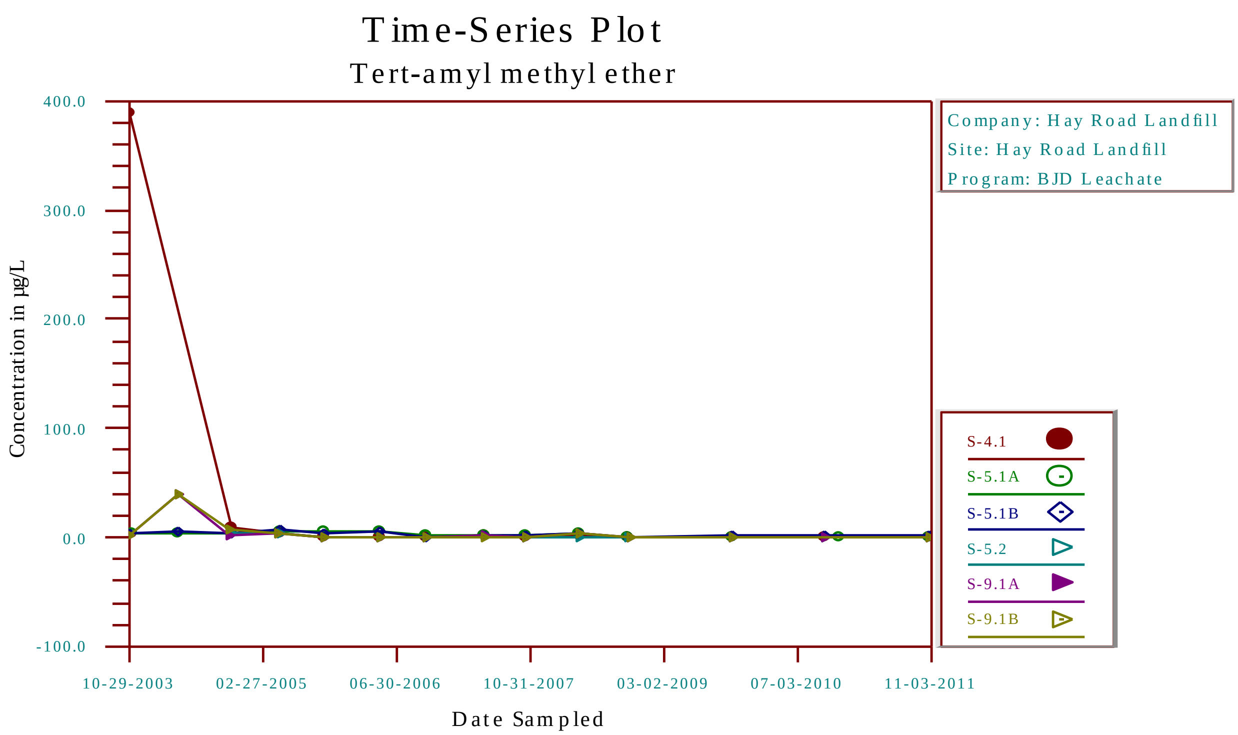
Time-Series Plot

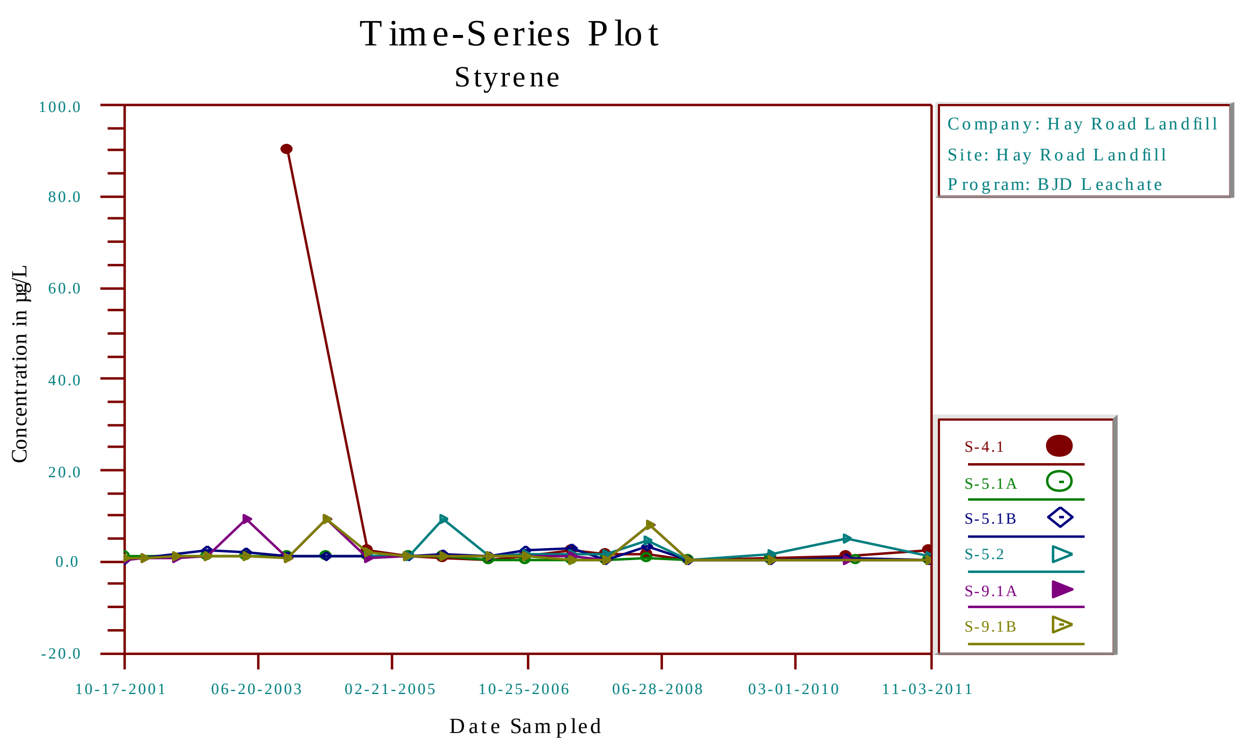
Toluene

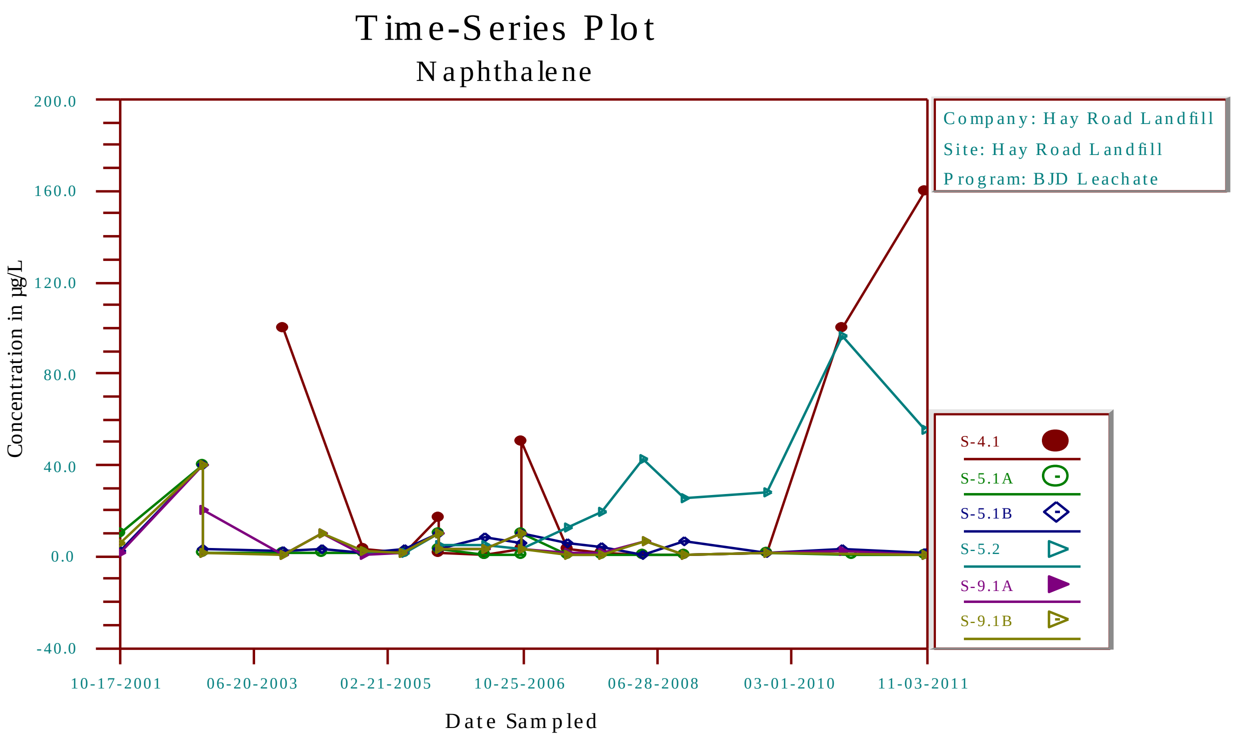


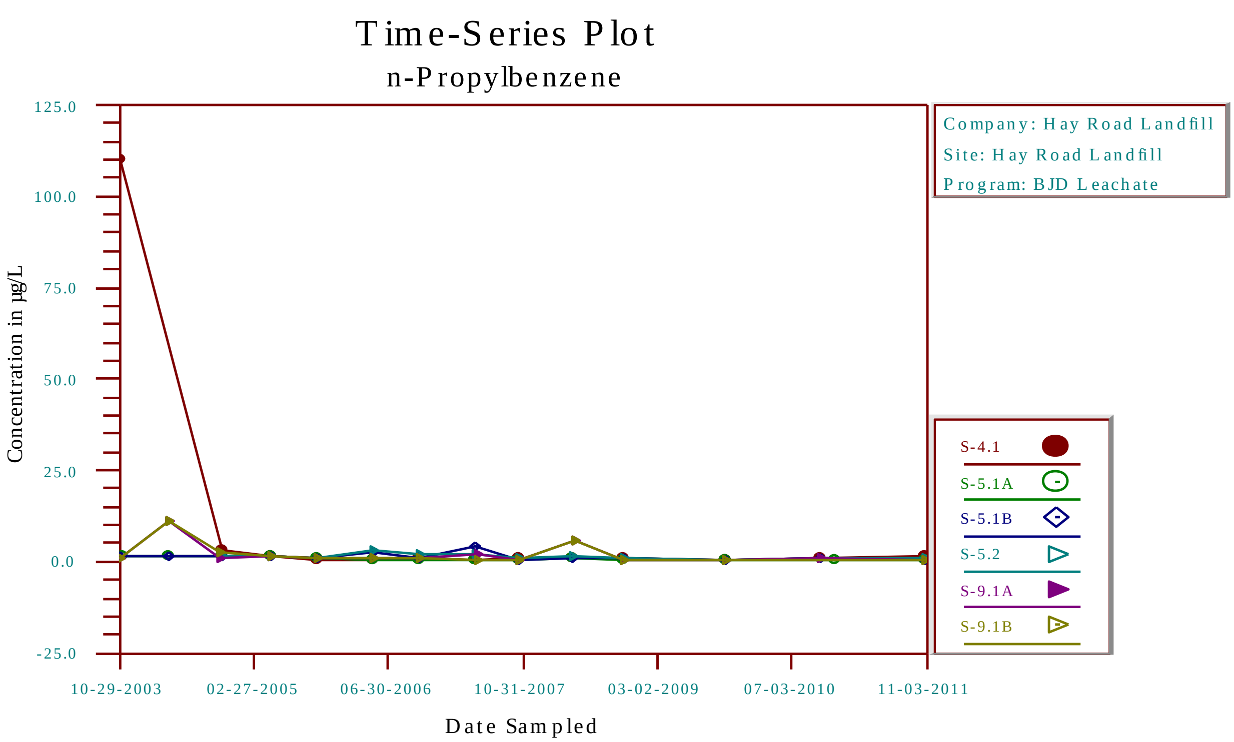

Time-Series Plot
Tetrachloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
90.0
60.0
30.0
0.0
-30.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

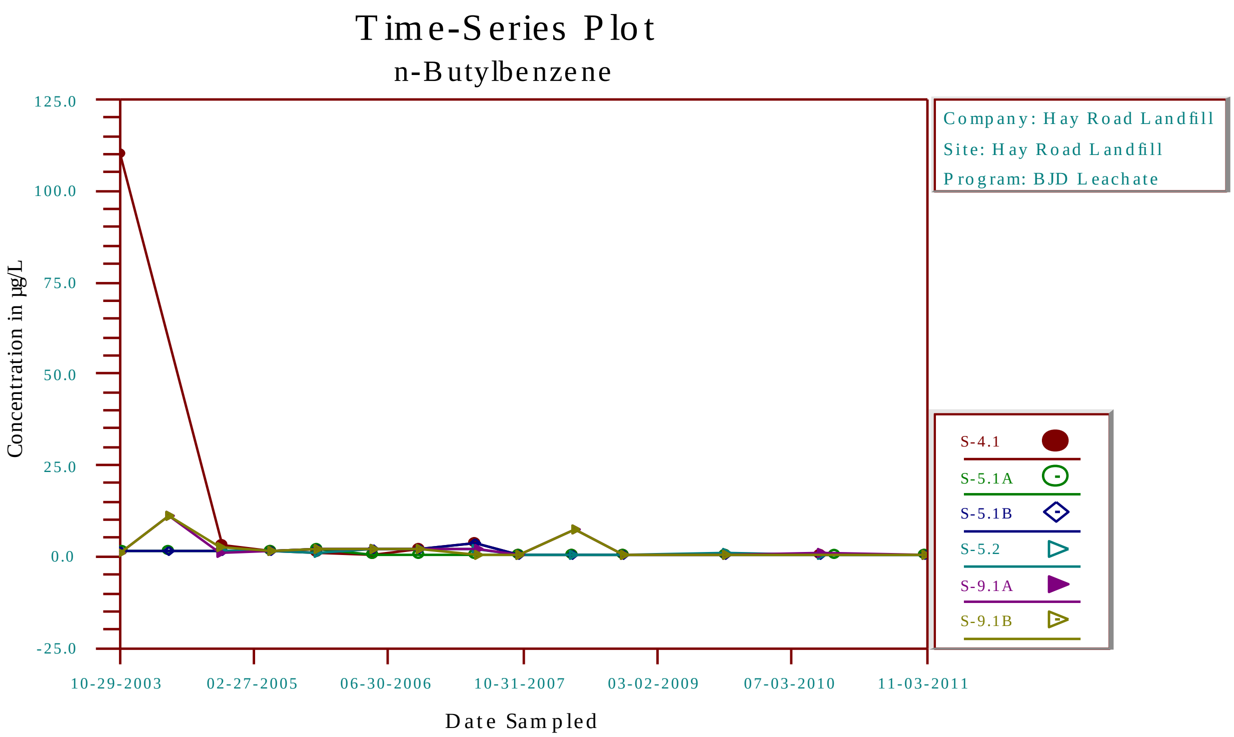

Time-Series Plot
Tert-butyl alcohol
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
20000.0
15000.0
10000.0
5000.0
0.0
-5000.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

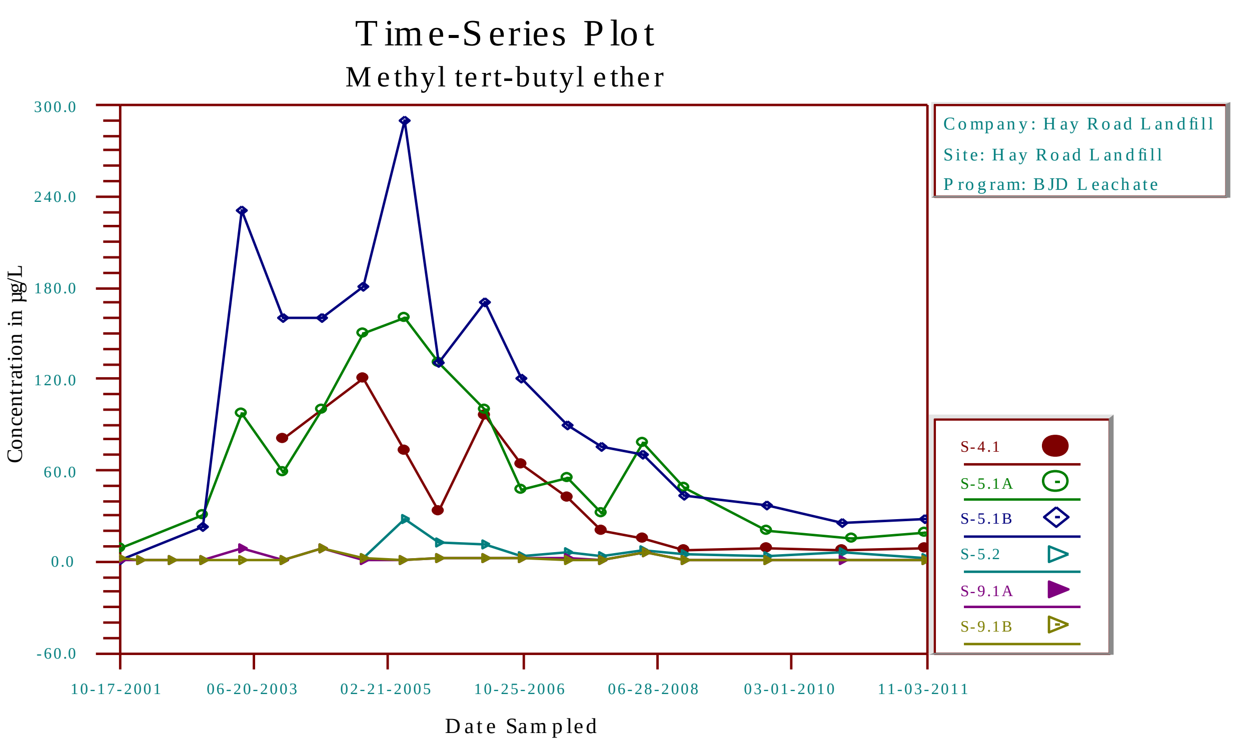

Time-Series Plot
Tert-amyl methyl ether
400.0
300.0
200.0
100.0
0.0
-100.0
Concentration in µg/L
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

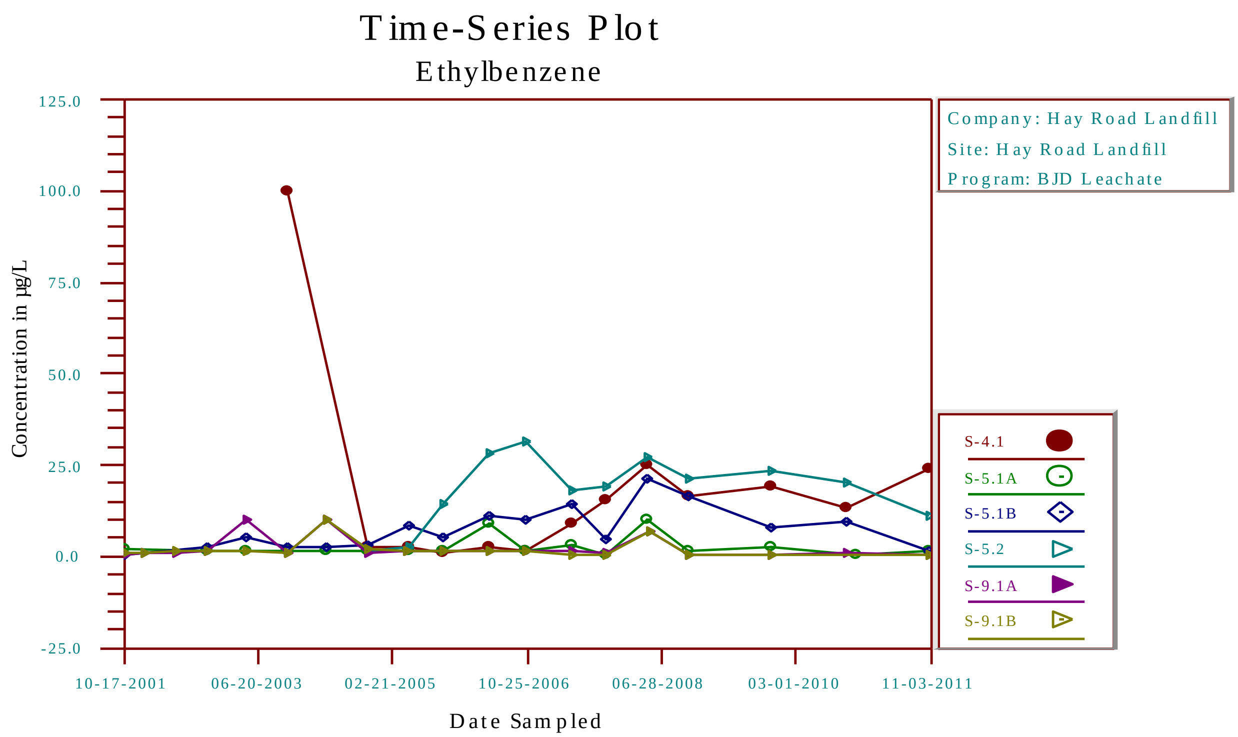

Time-Series Plot
Styrene
100.0
80.0
60.0
40.0
20.0
0.0
-20.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
Naphthalene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
200.0
160.0
120.0
80.0
40.0
0.0
-40.0
Concentration in µg/L
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

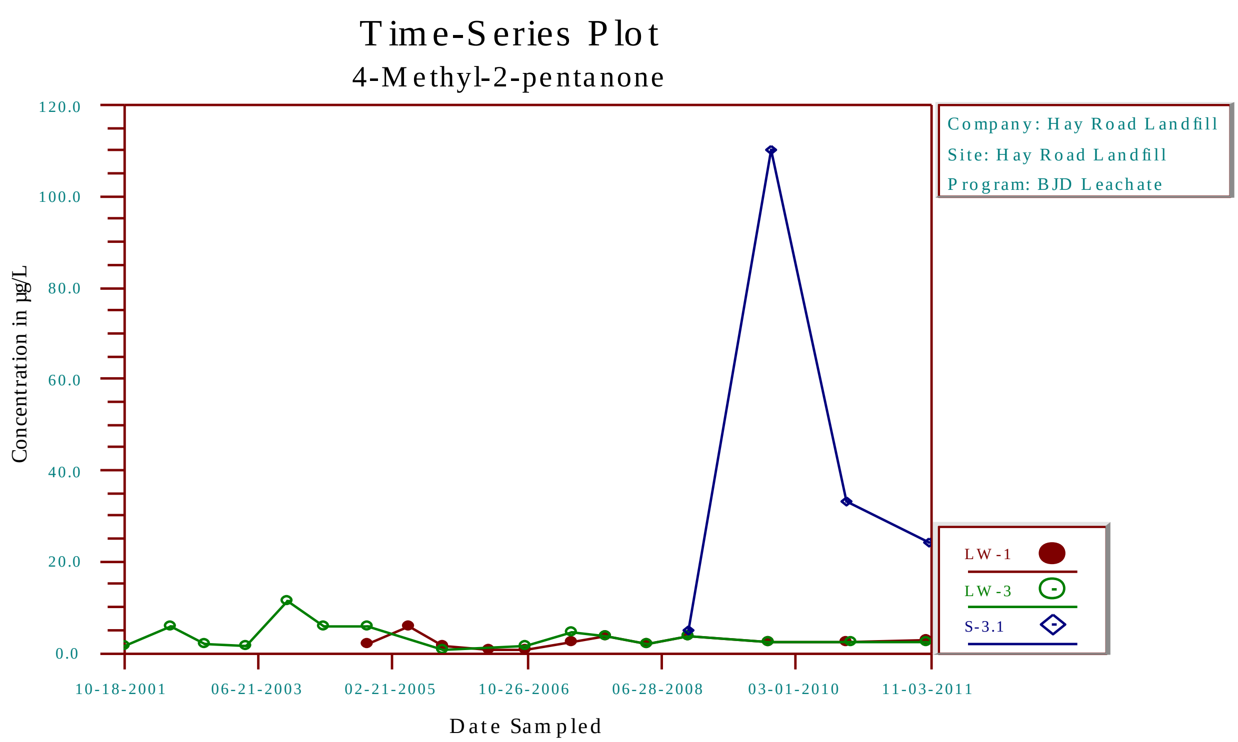

Time-Series Plot
n-Propylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
Concentration in µg/L
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B


Time-Series Plot
n-Butylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
10-29-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

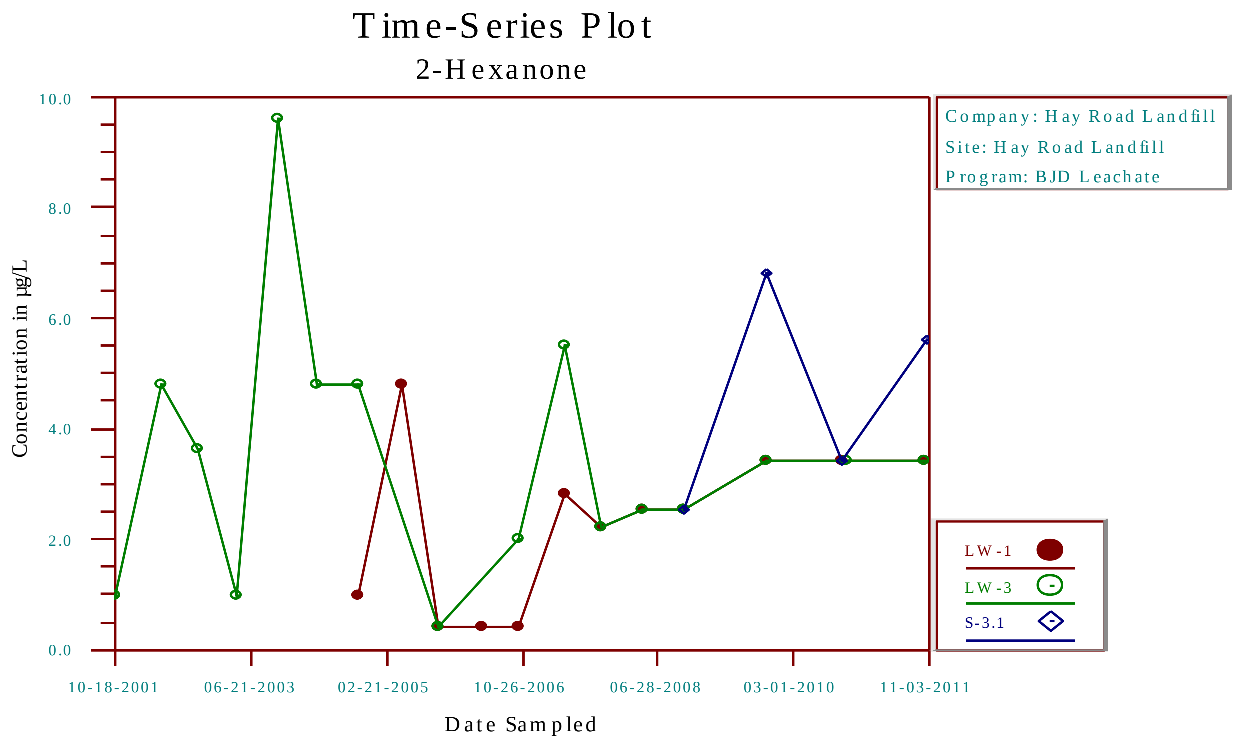

Time-Series Plot
Methyl tert-butyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
300.0
240.0
180.0
120.0
60.0
0.0
-60.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B

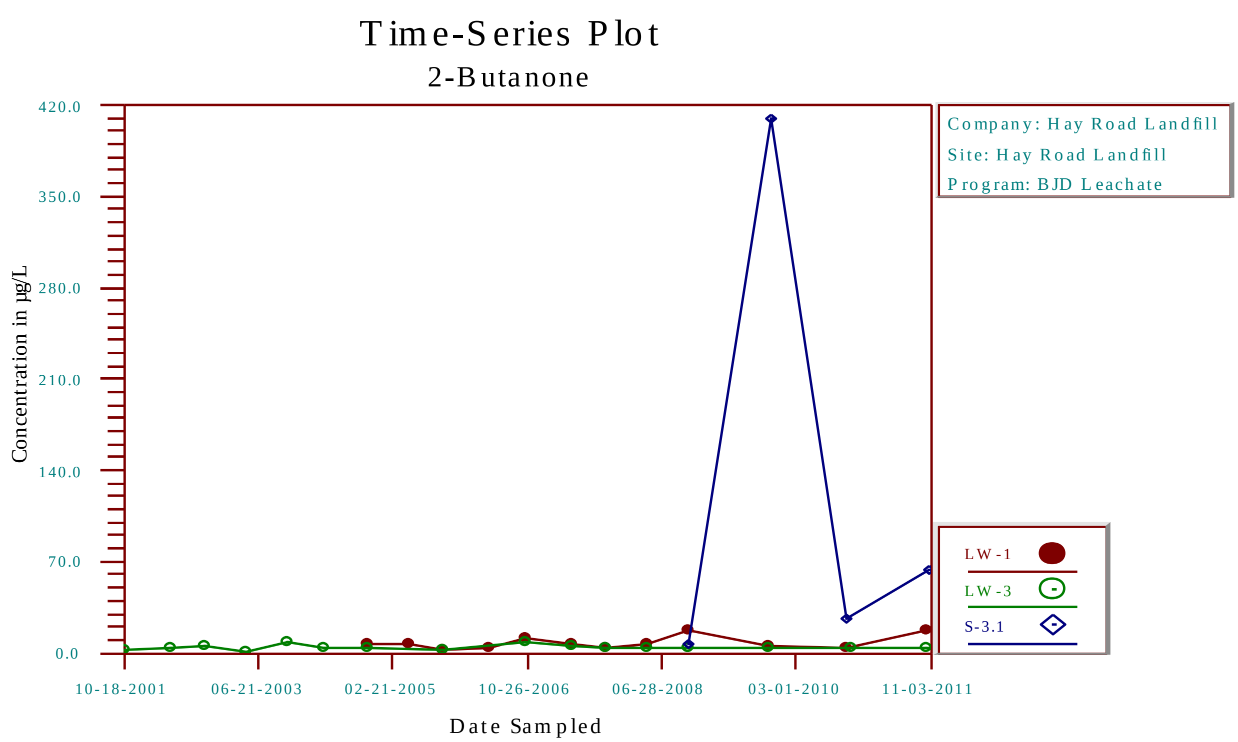


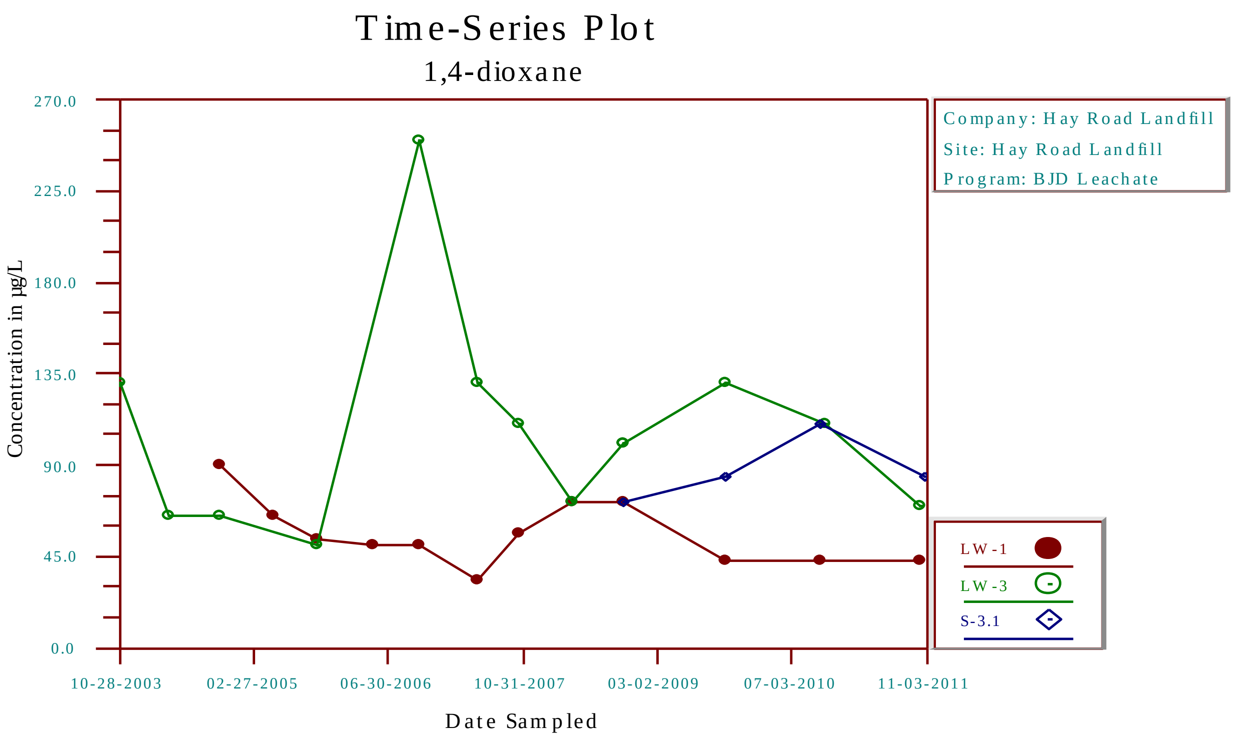
Time-Series Plot
Ethylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
125.0
100.0
75.0
50.0
25.0
0.0
-25.0
10-17-2001
06-20-2003
02-21-2005
10-25-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
S-4.1
S-5.1A
S-5.1B
S-5.2
S-9.1A
S-9.1B



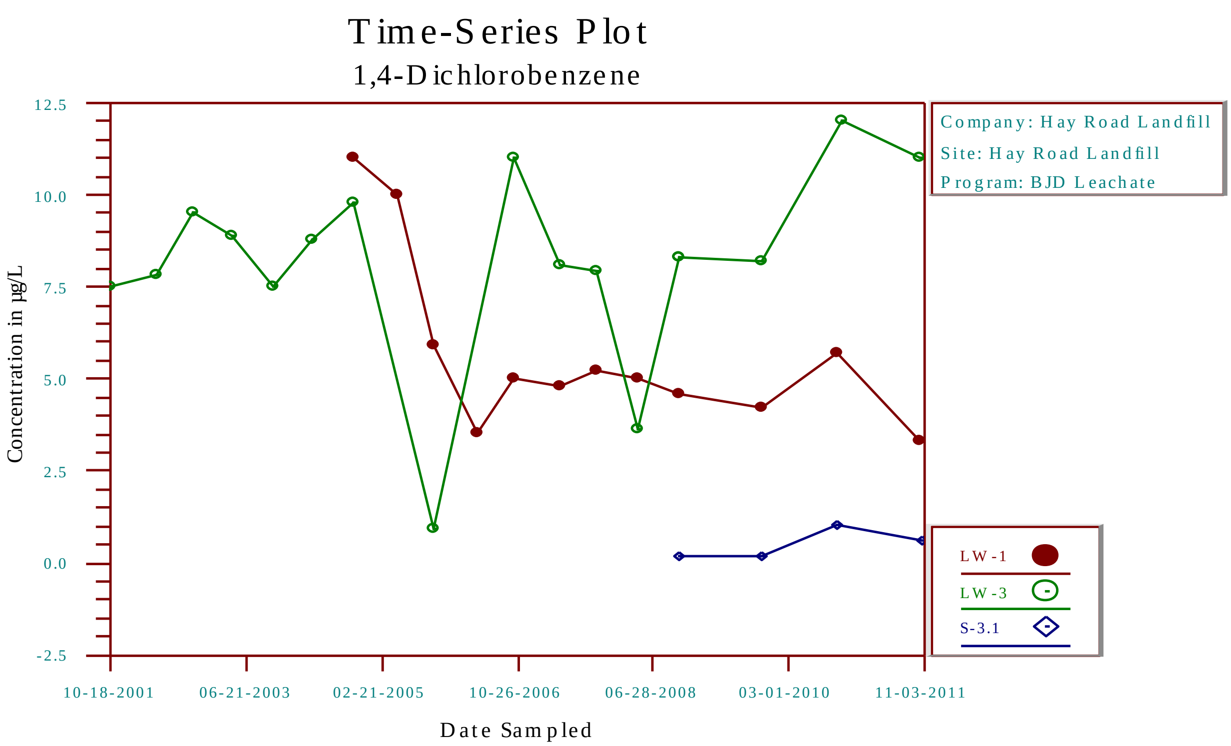
Time-Series Plot
4-Methyl-2-pentanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
120.0
100.0
80.0
60.0
40.0
20.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1


Time-Series Plot
2-Hexanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
10.0
8.0
6.0
4.0
2.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

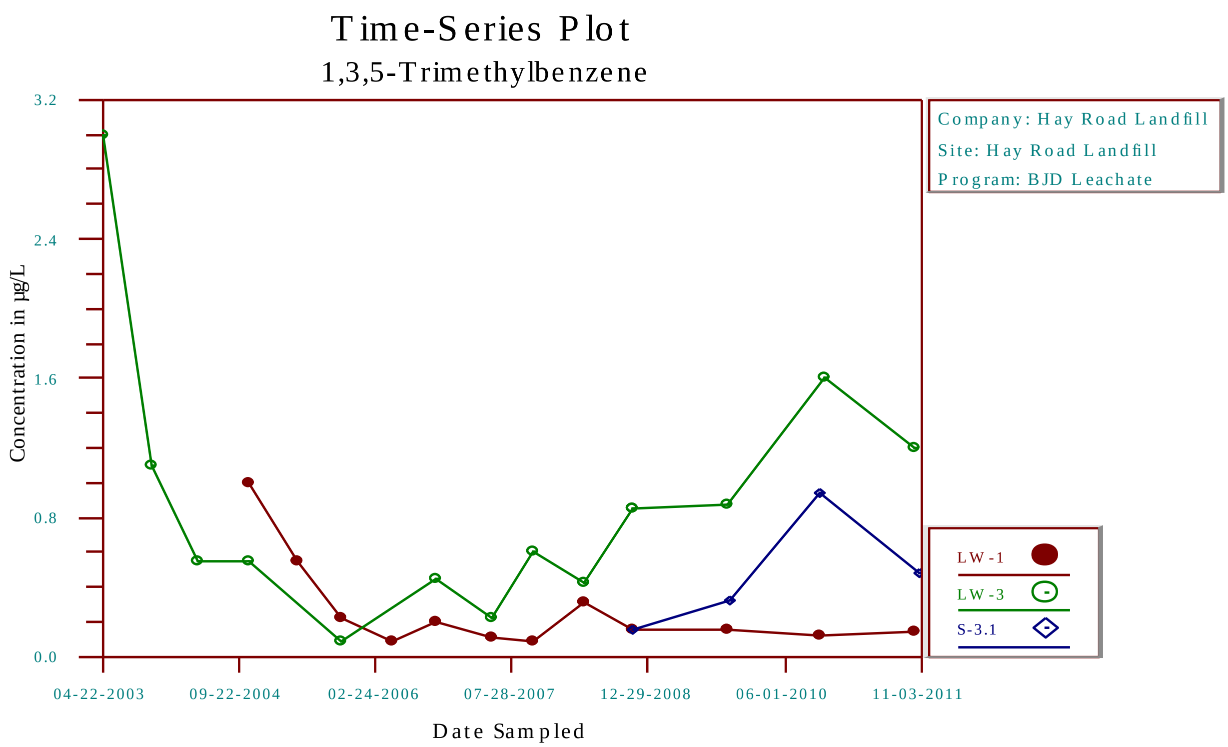

Time-Series Plot
2-Butanone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
420.0
350.0
280.0
210.0
140.0
70.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

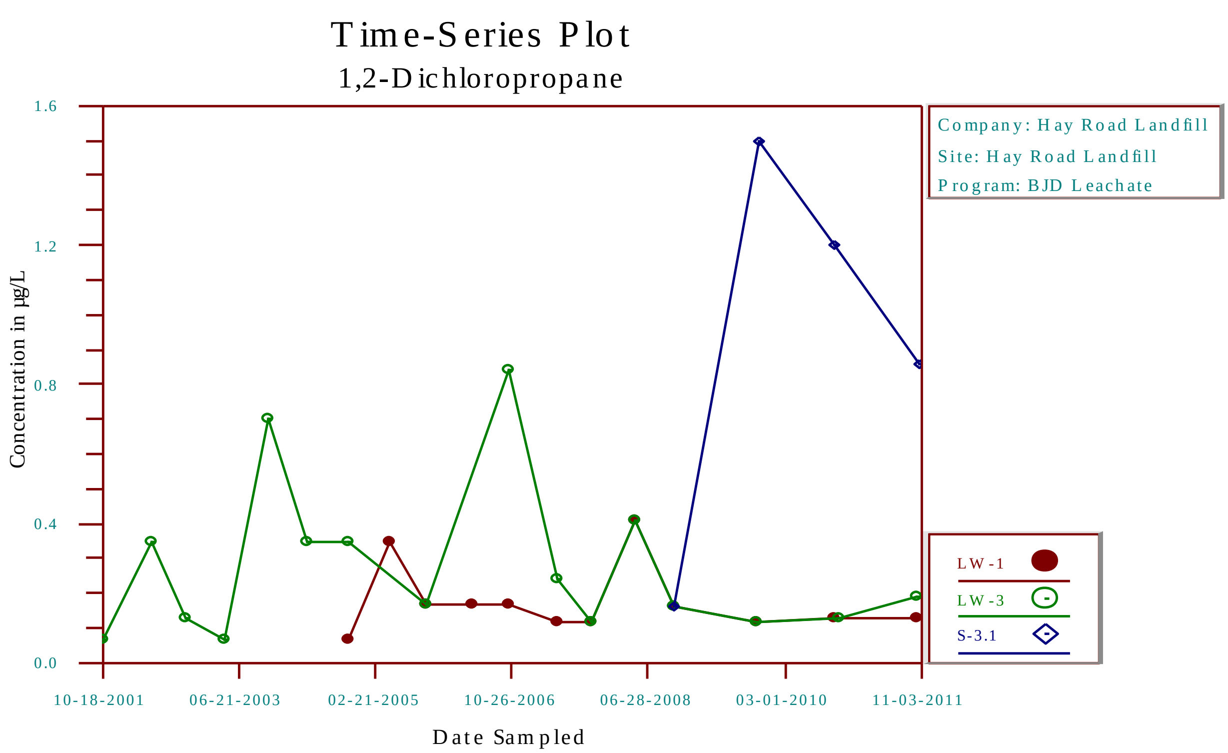


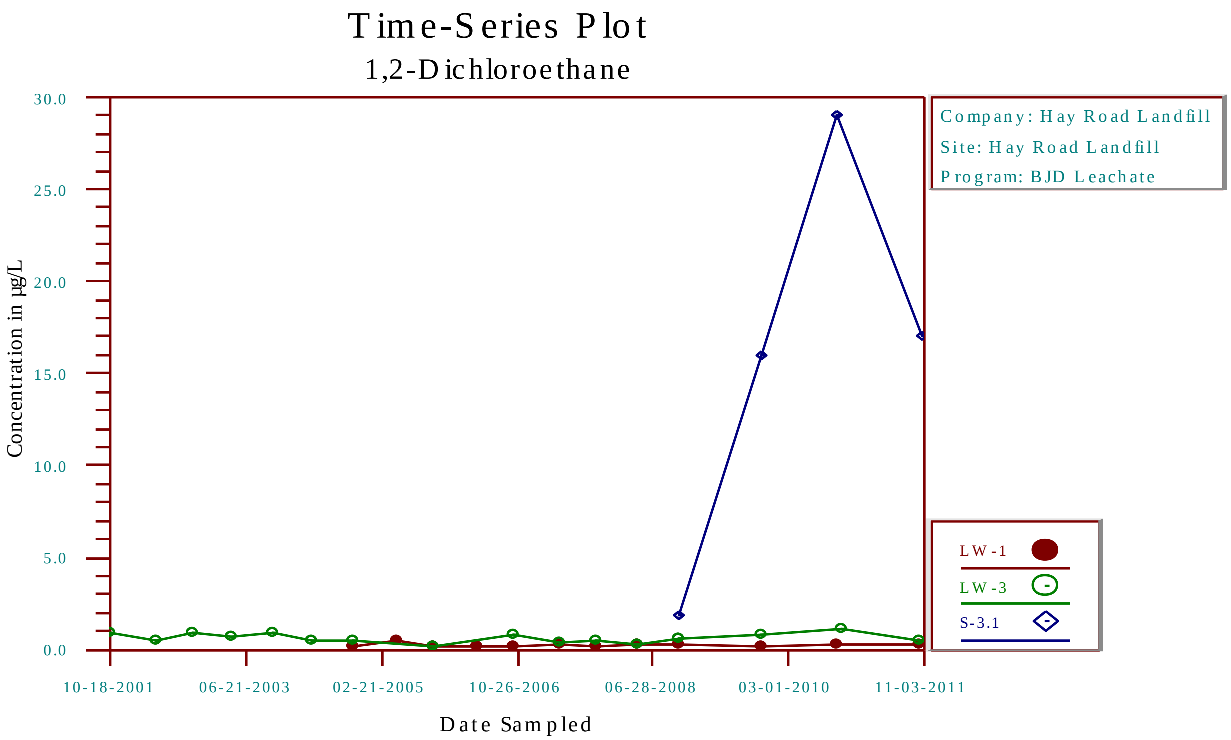
Time-Series Plot
1,4-dioxane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
270.0
225.0
180.0
135.0
90.0
45.0
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

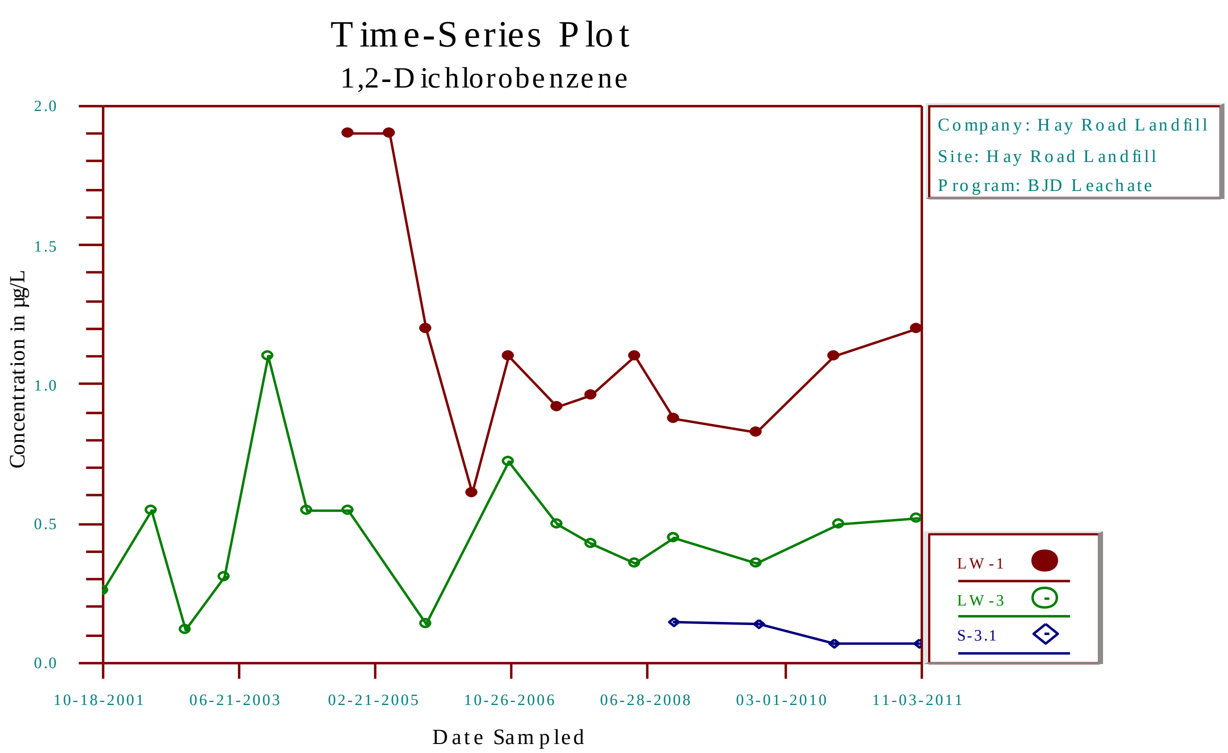


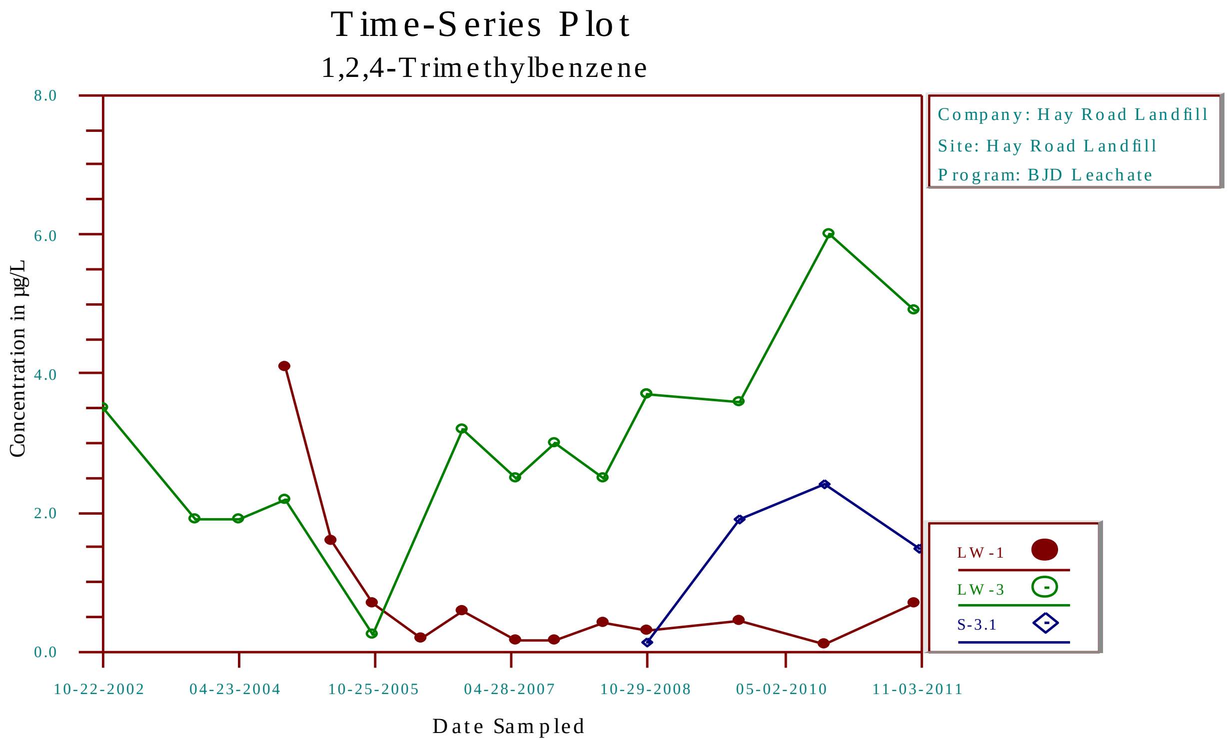
Time-Series Plot
1,4-Dichlorobenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1


Time-Series Plot
1,3,5-Trimethylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
3.2
2.4
1.6
0.8
0.0
04-22-2003
09-22-2004
02-24-2006
07-28-2007
12-29-2008
06-01-2010
11-03-2011
Date Sampled

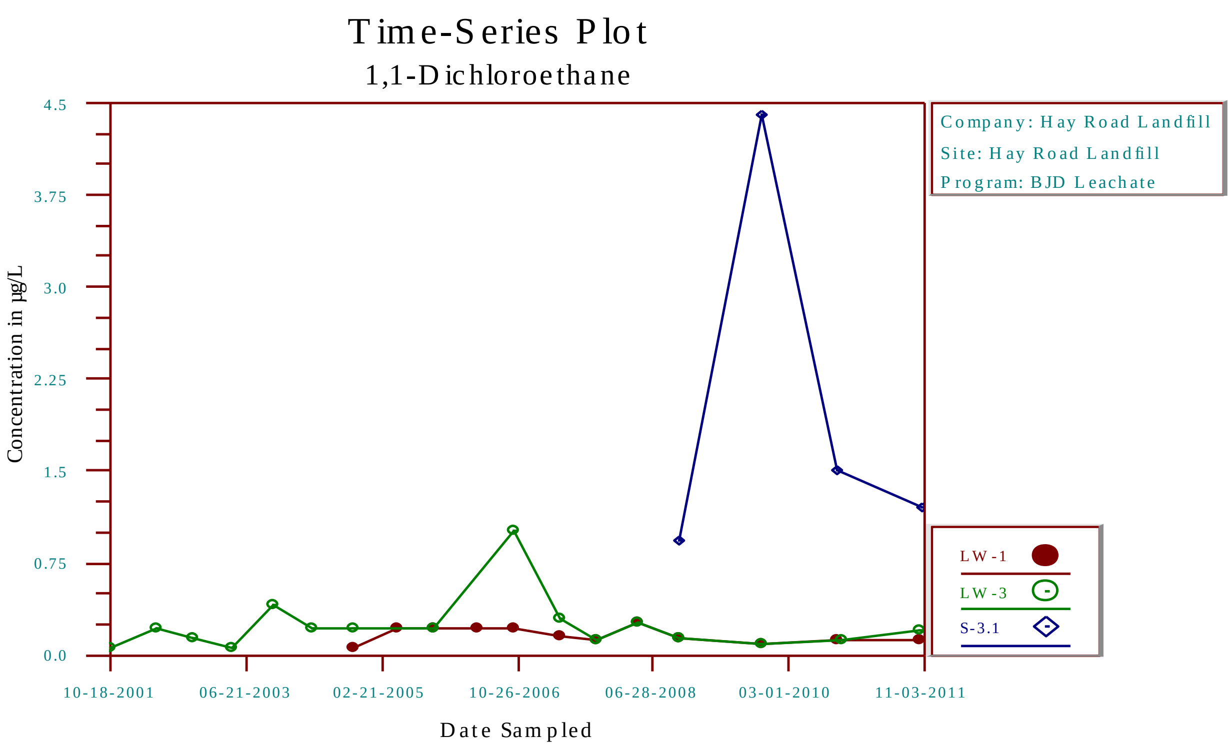

Time-Series Plot
1,2-Dichloropropane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
1.6
1.2
0.8
0.4
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled


Time-Series Plot
1,2-Dichloroethane
Concentration in µg/L
30.0
25.0
20.0
15.0
10.0
5.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

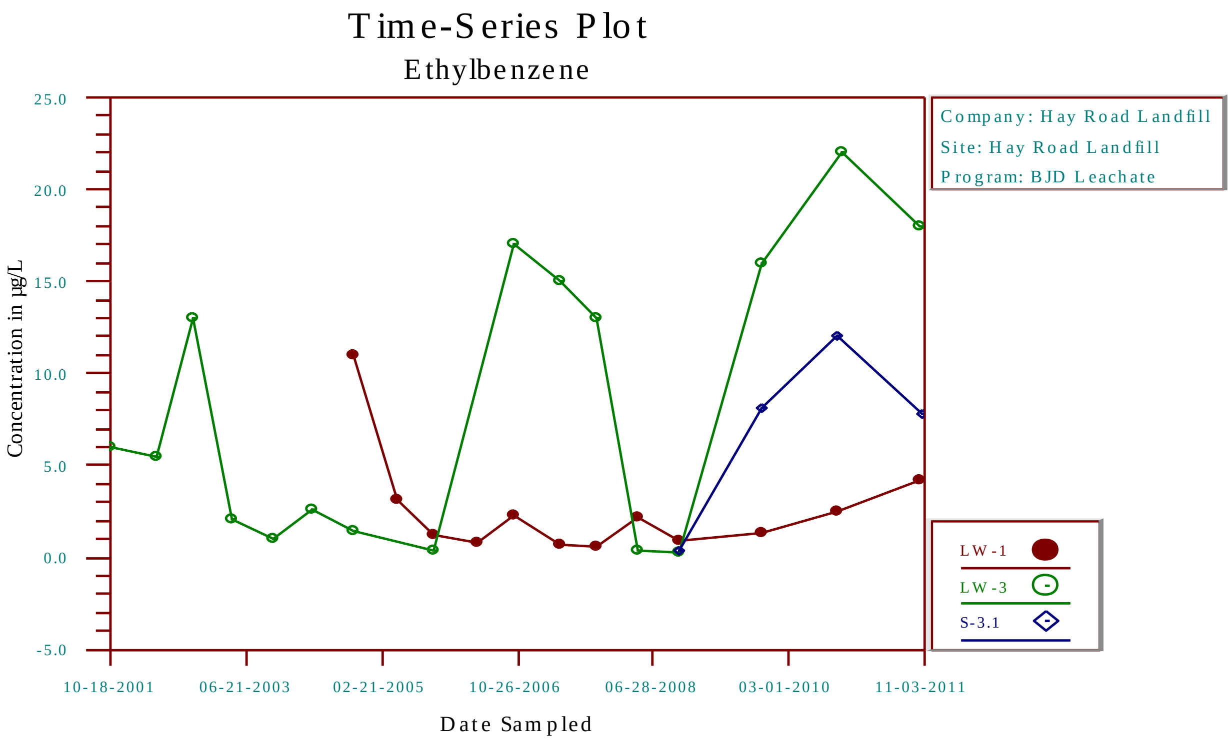

Time-Series Plot
1,2-Dichlorobenzene
Concentration in µg/L
2.0
1.5
1.0
0.5
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



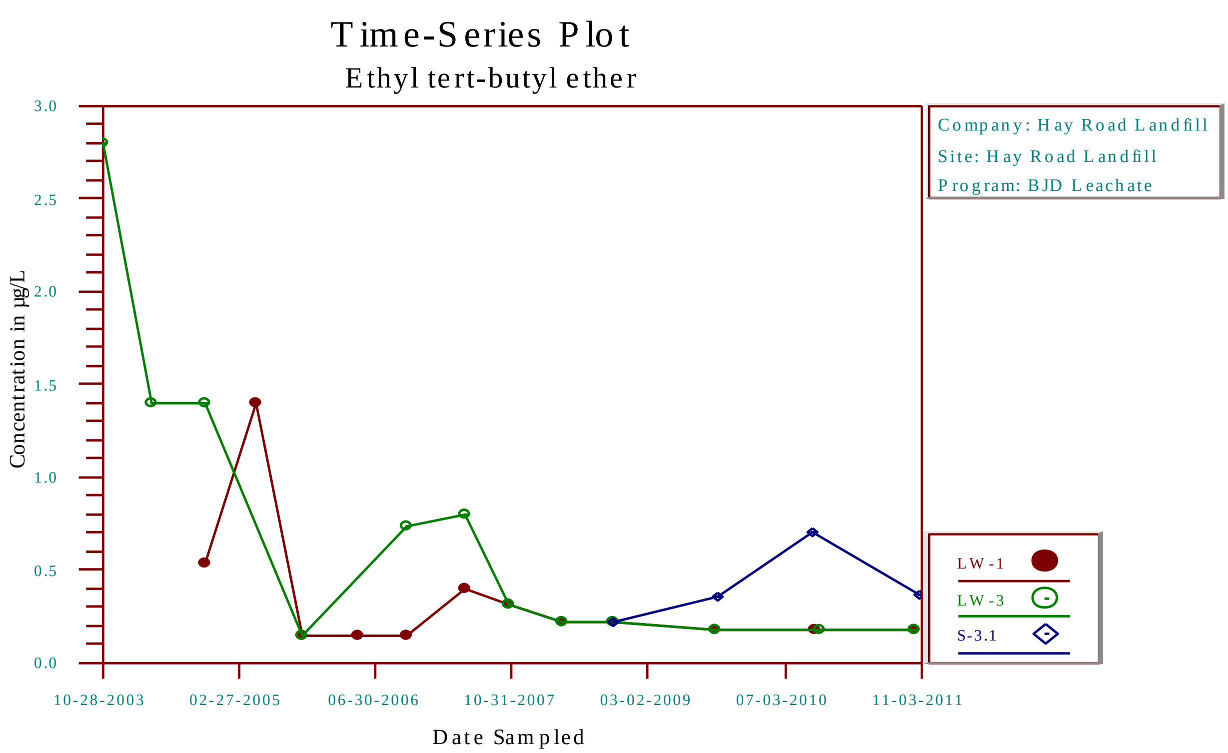
Time-Series Plot
1,2,4-Trimethylbenzene
8.0
6.0
4.0
2.0
0.0
Concentration in µg/L
10-22-2002
04-23-2004
10-25-2005
04-28-2007
10-29-2008
05-02-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



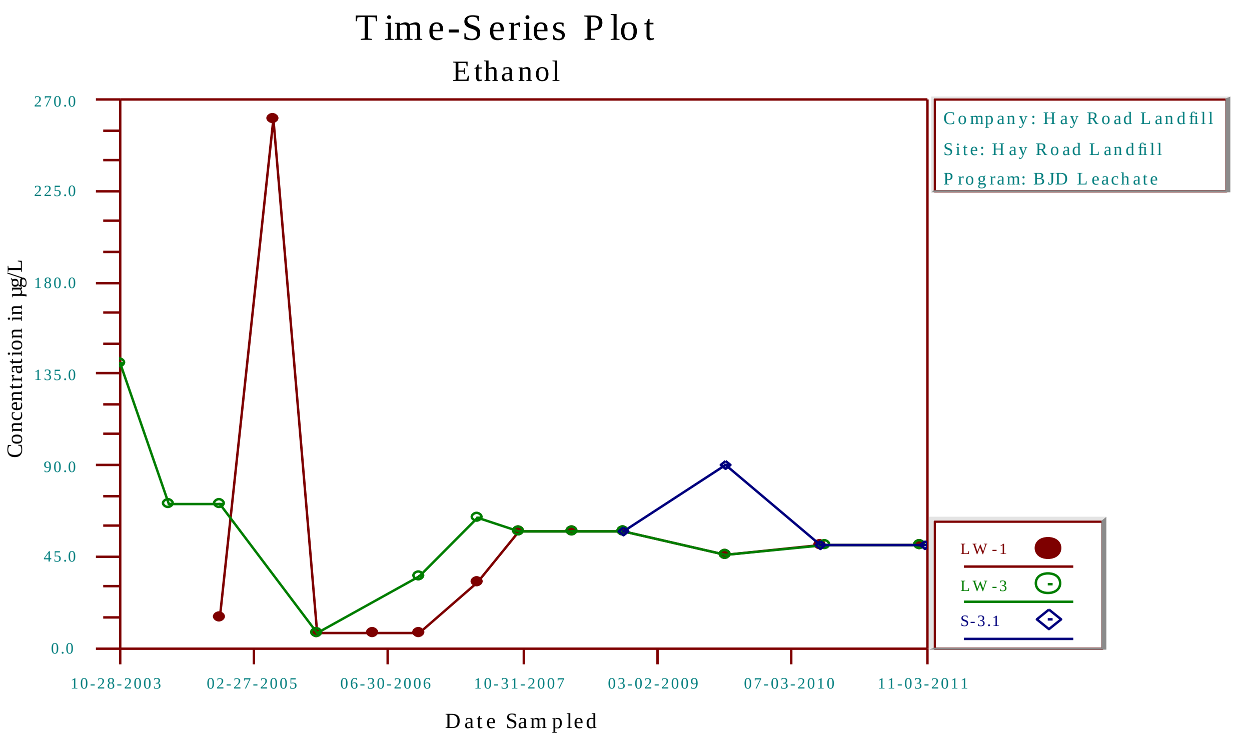
Time-Series Plot
1,1-Dichloroethane
4.5
3.75
3.0
2.25
1.5
0.75
0.0
Concentration in µg/L
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



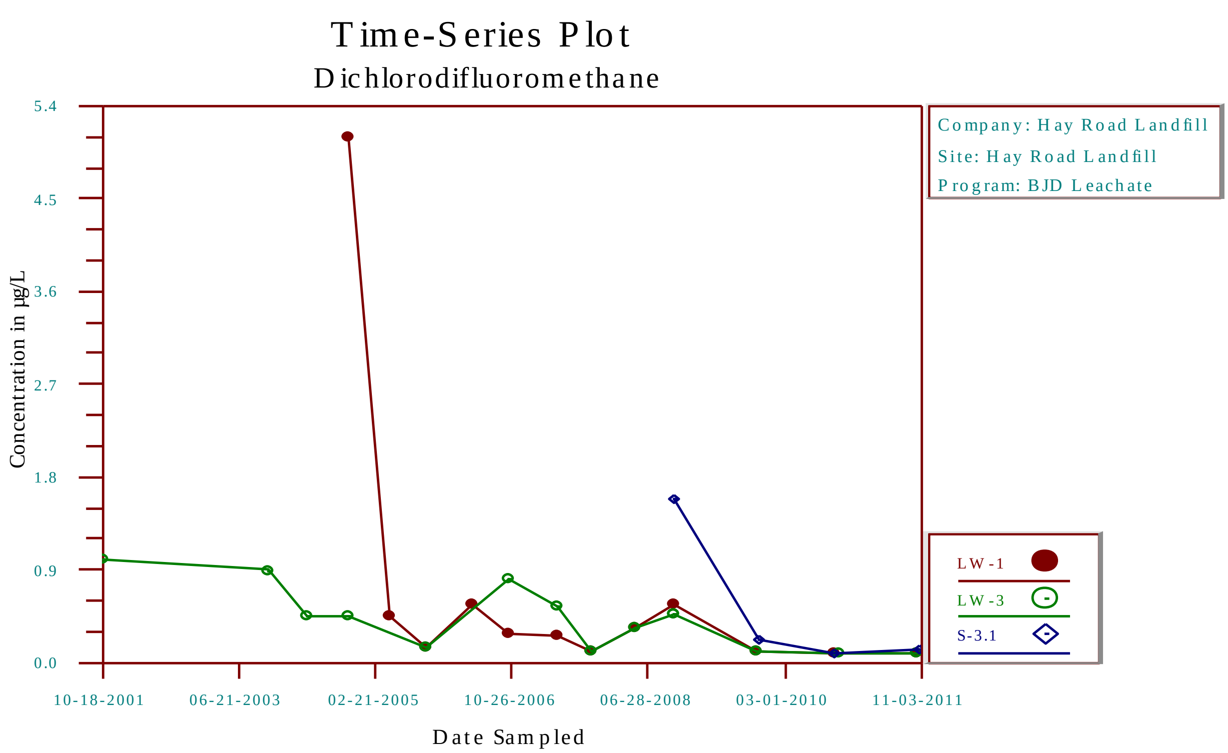
Time-Series Plot
Ethylbenzene
Concentration in µg/L
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



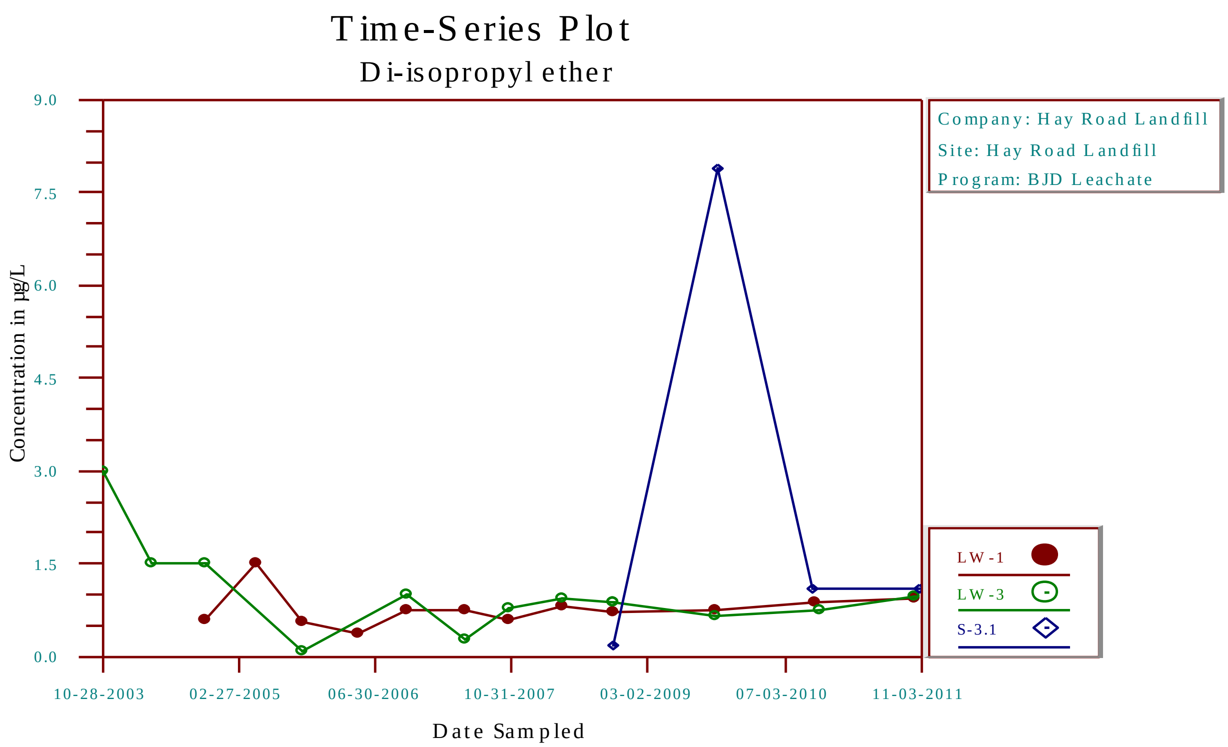
Time-Series Plot
Ethyl tert-butyl ether
Concentration in µg/L
3.0
2.5
2.0
1.5
1.0
0.5
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

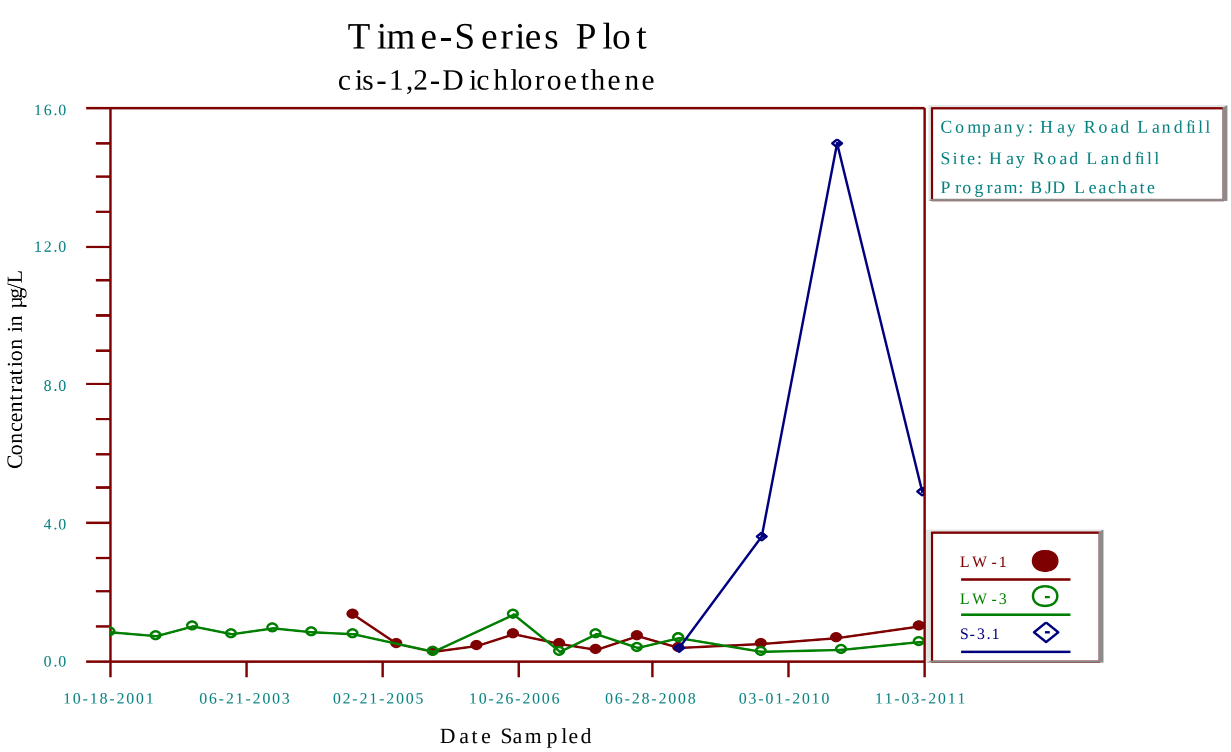


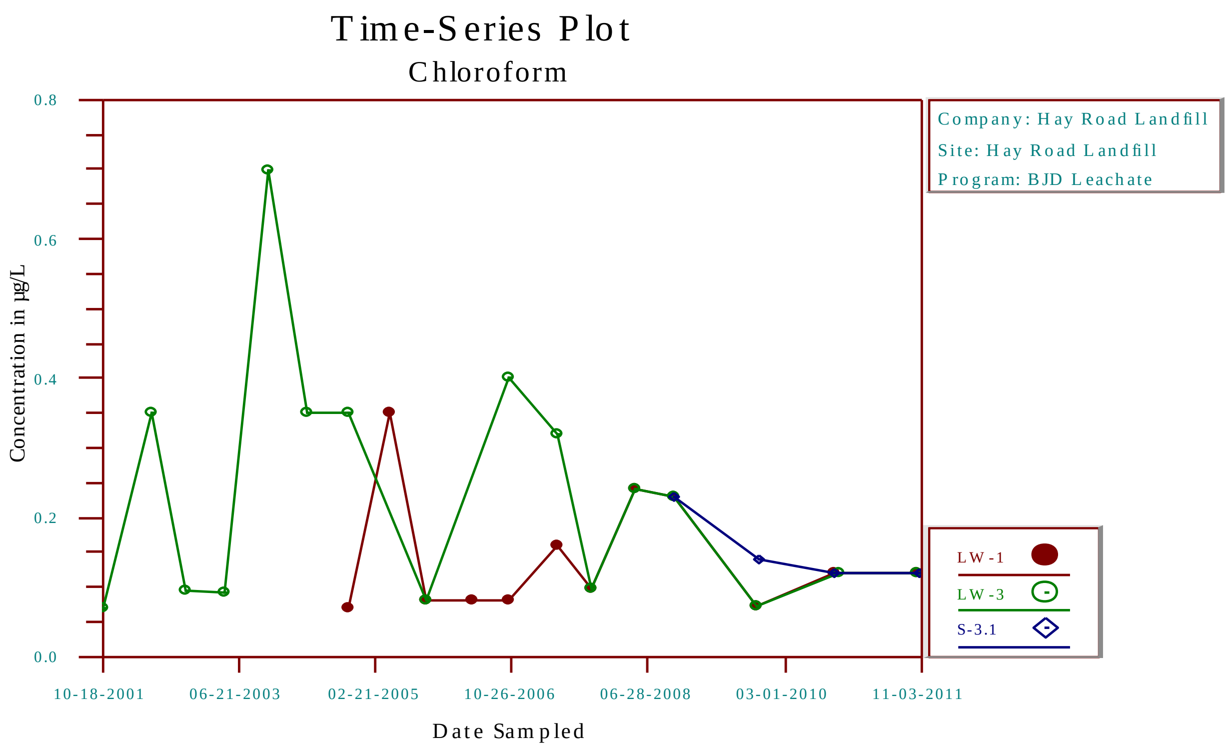
Time-Series Plot
Ethanol
Concentration in µg/L
270.0
225.0
180.0
135.0
90.0
45.0
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

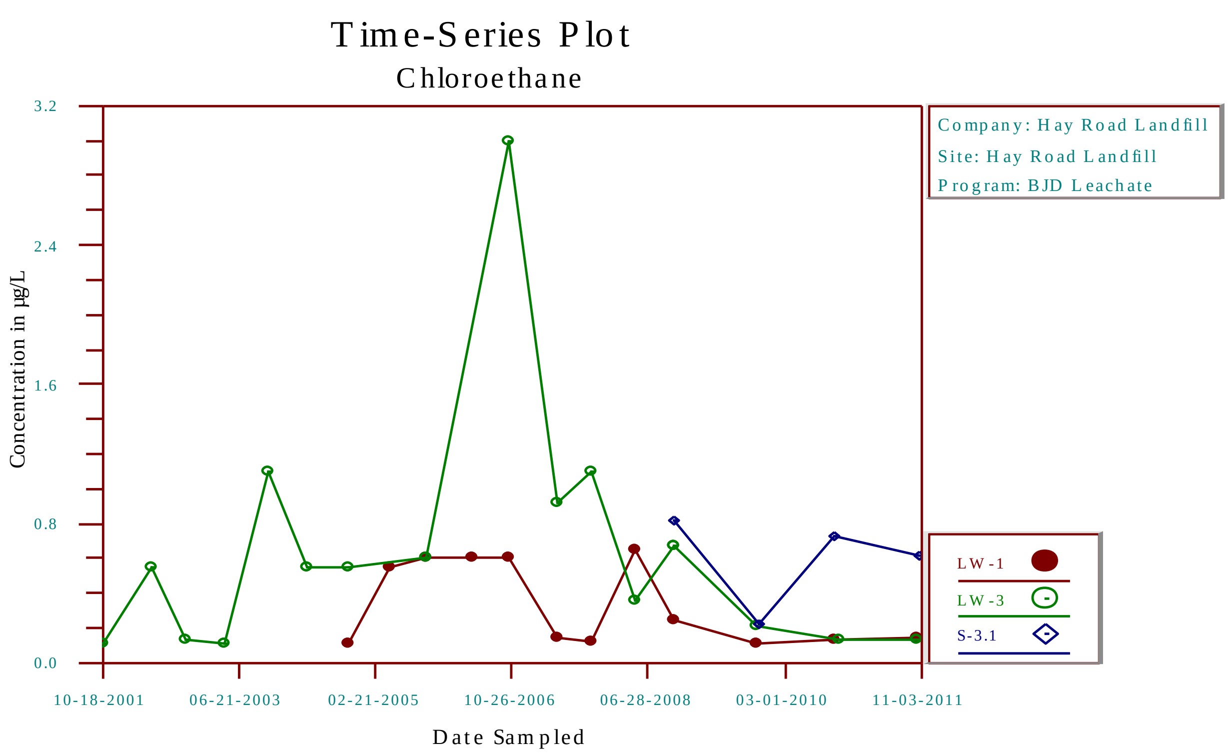


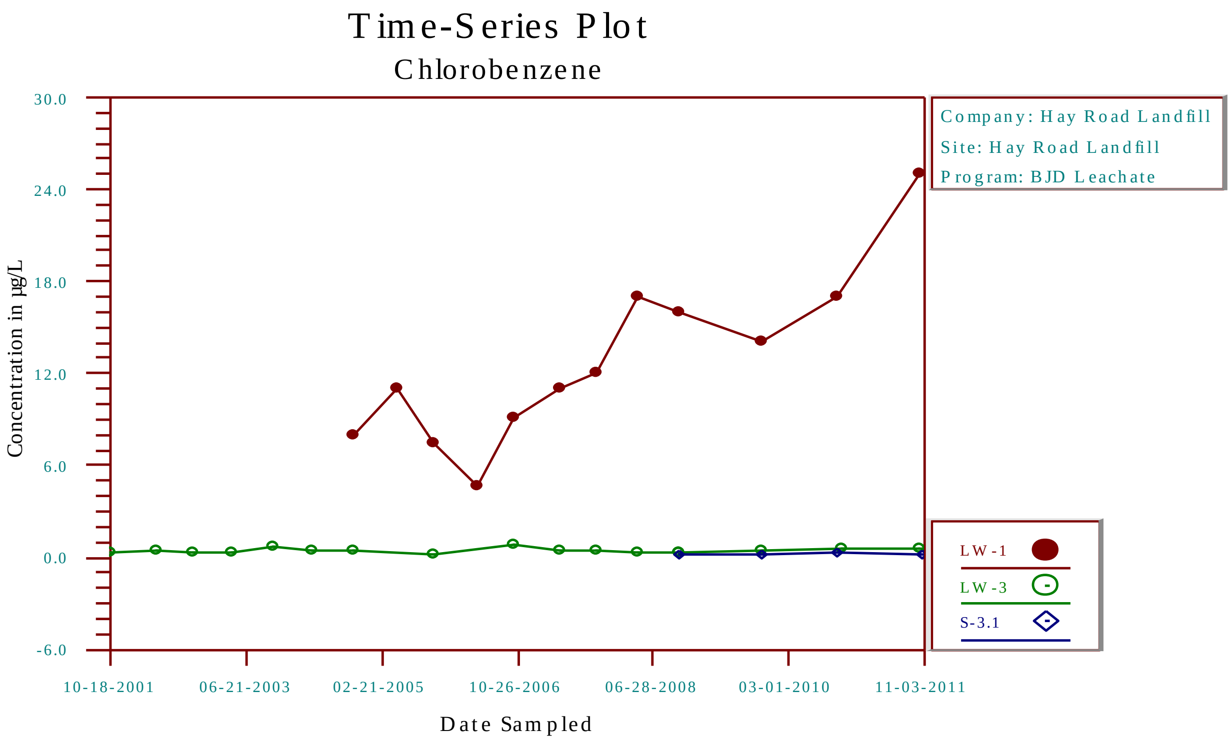
Time-Series Plot
Dichlorodifluoromethane
Concentration in µg/L
5.4
4.5
3.6
2.7
1.8
0.9
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

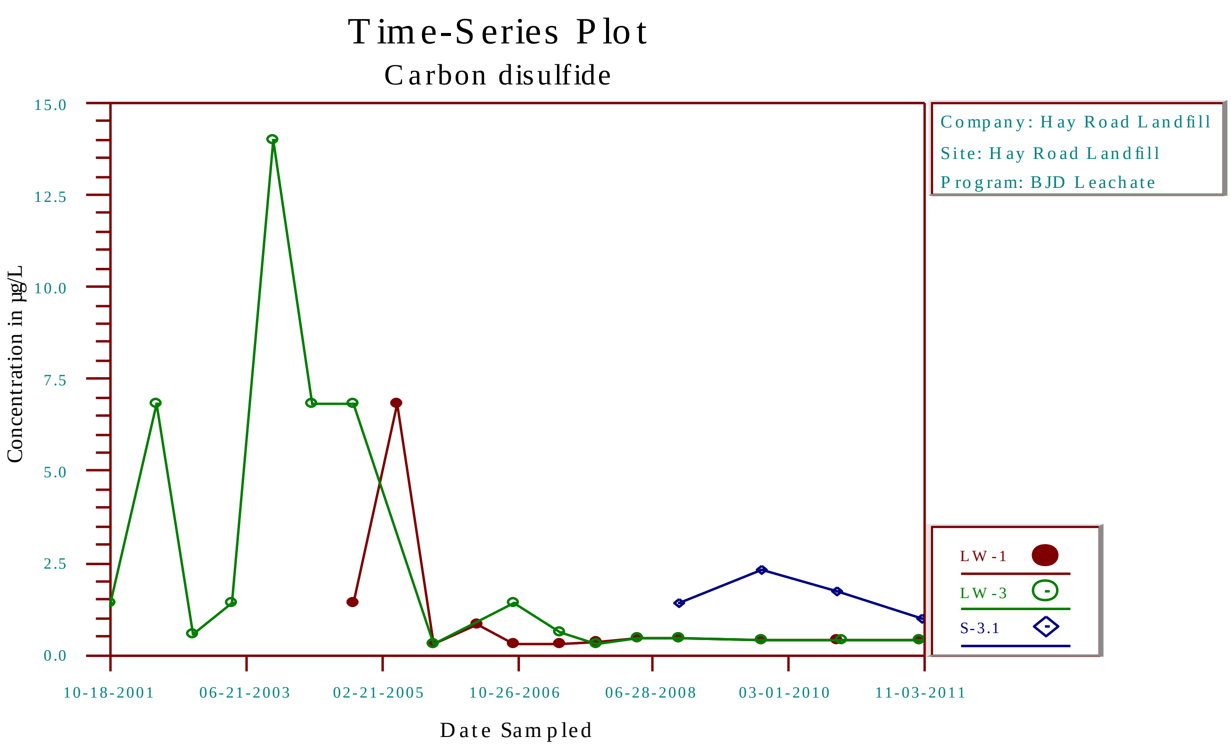

Time-Series Plot
Di-isopropyl ether
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
9.0
7.5
6.0
4.5
3.0
1.5
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled

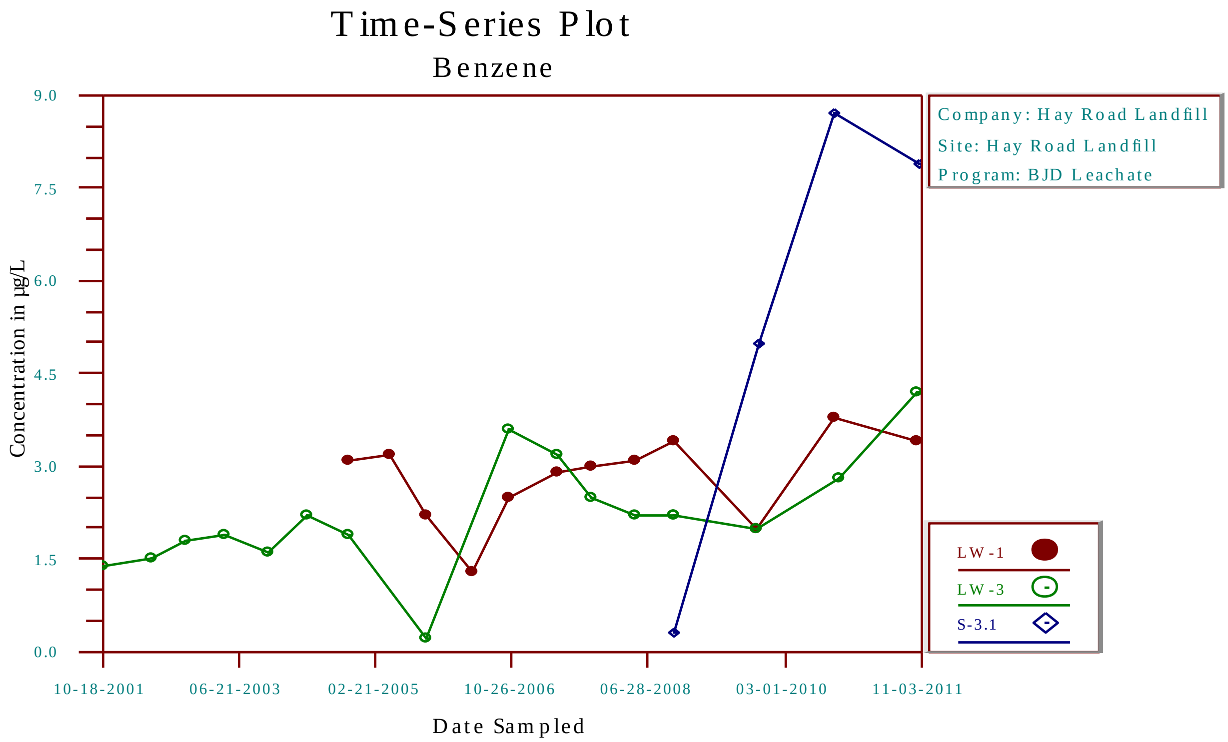

Time-Series Plot
cis-1,2-Dichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
16.0
12.0
8.0
4.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

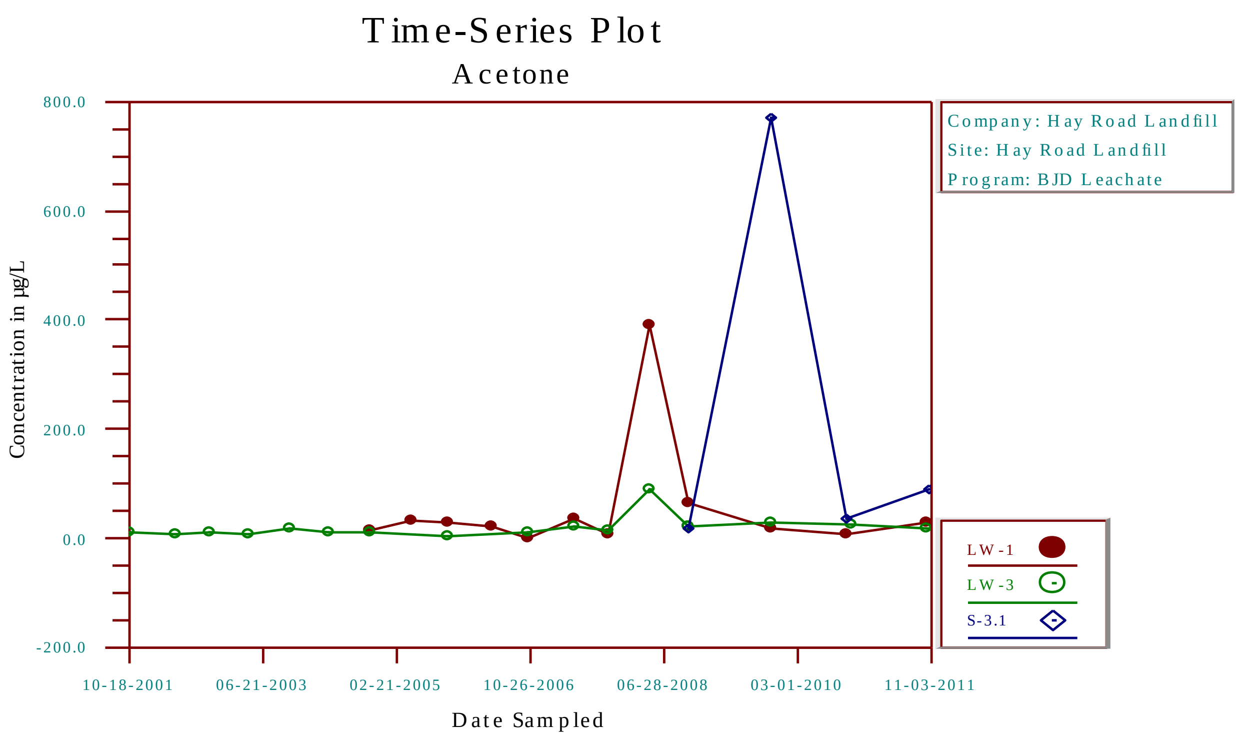

Time-Series Plot
Chloroform
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
0.0
0.2
0.4
0.6
0.8
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

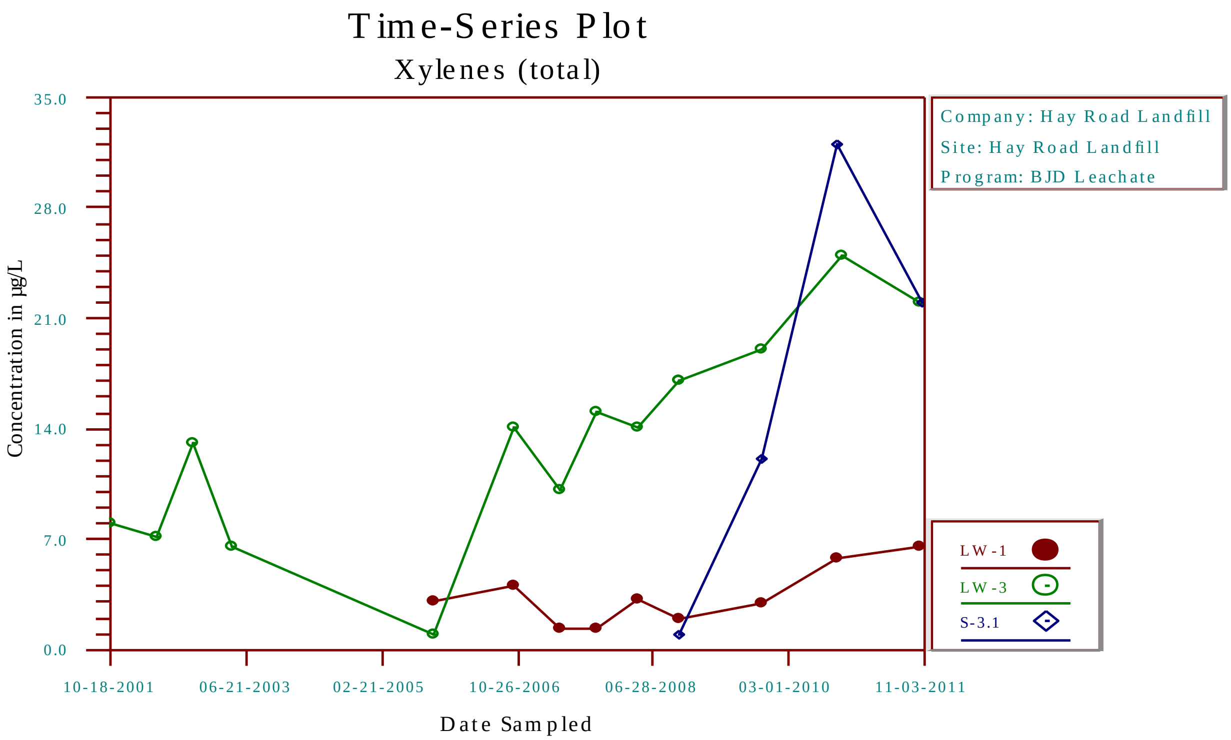

Time-Series Plot
Chloroethane
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
0.0
0.8
1.6
2.4
3.2
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

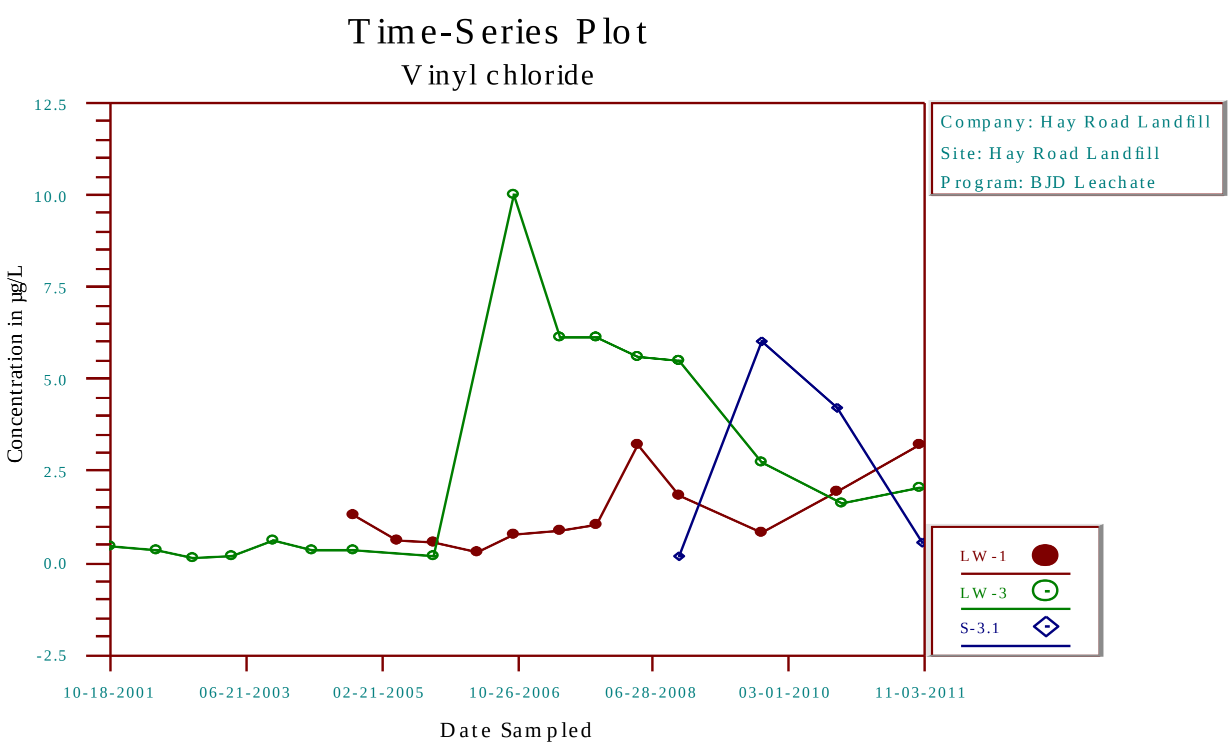

Time-Series Plot
Chlorobenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
30.0
24.0
18.0
12.0
6.0
0.0
-6.0
Concentration in µg/L
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

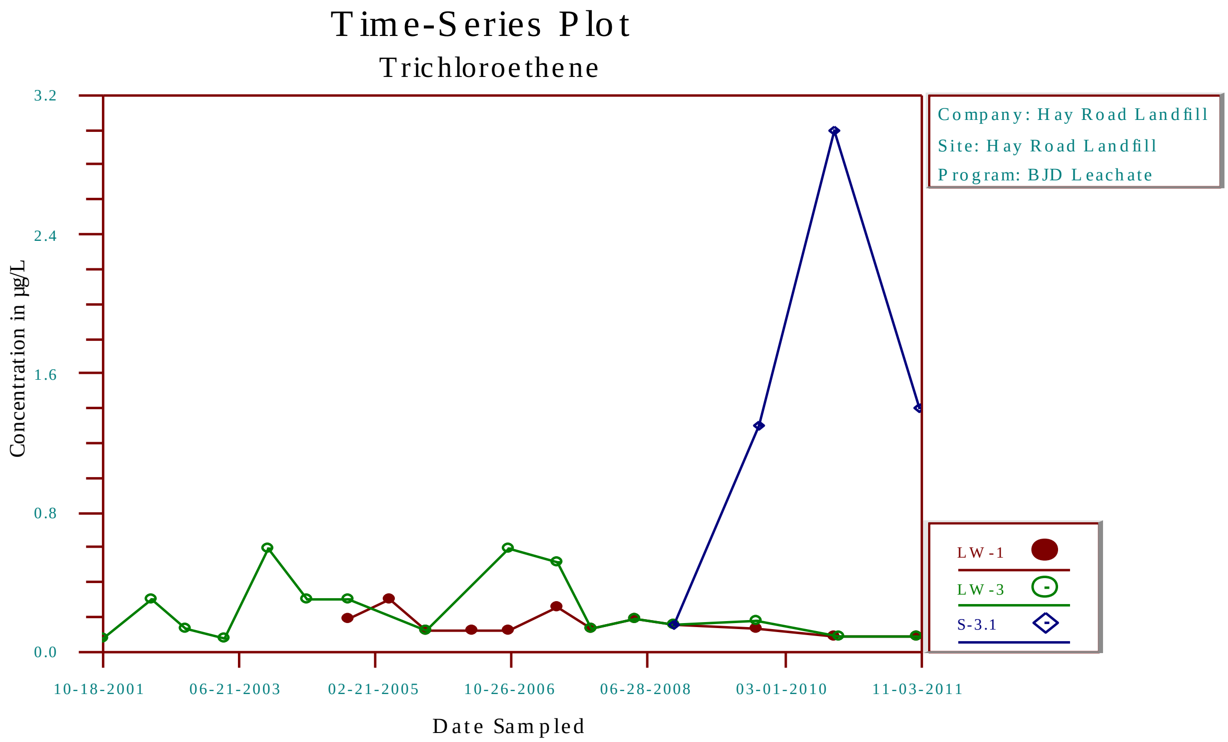

Time-Series Plot
Carbon disulfide
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
15.0
12.5
10.0
7.5
5.0
2.5
0.0
Concentration in µg/L
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
LW-1
LW-3
S-3.1

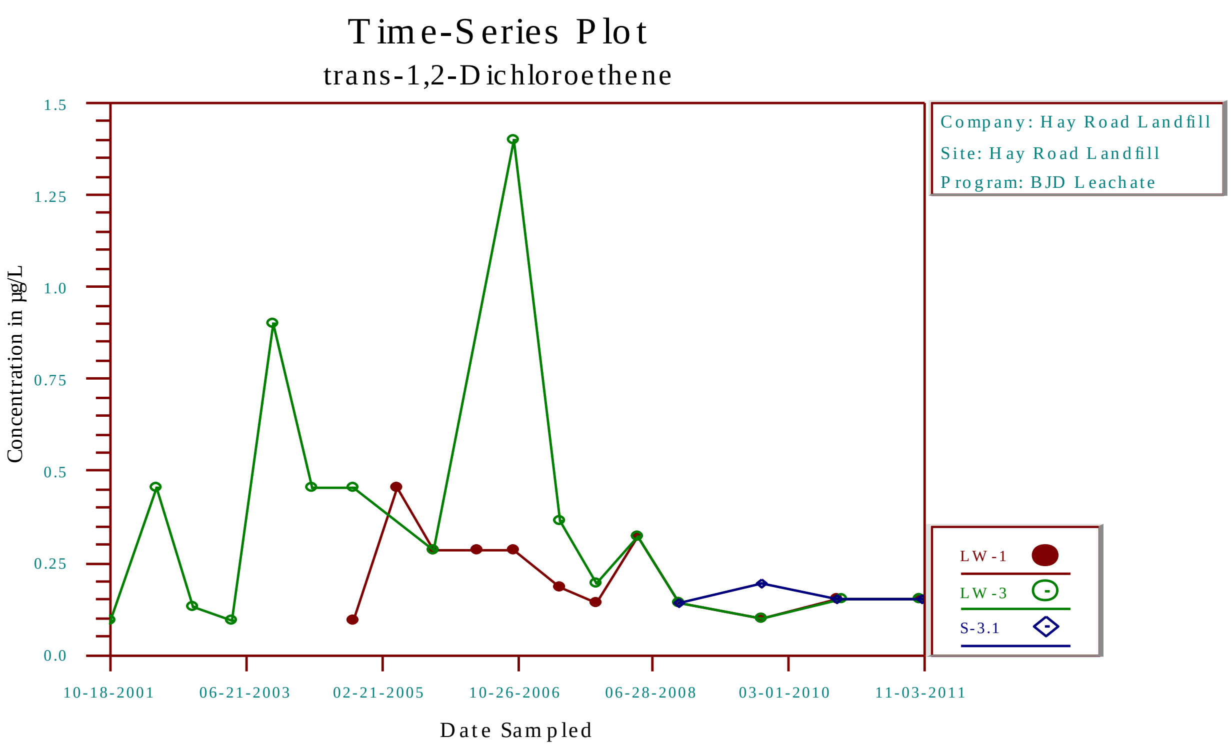

Time-Series Plot
Benzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
9.0
7.5
6.0
4.5
3.0
1.5
0.0
LW-1
LW-3
S-3.1
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

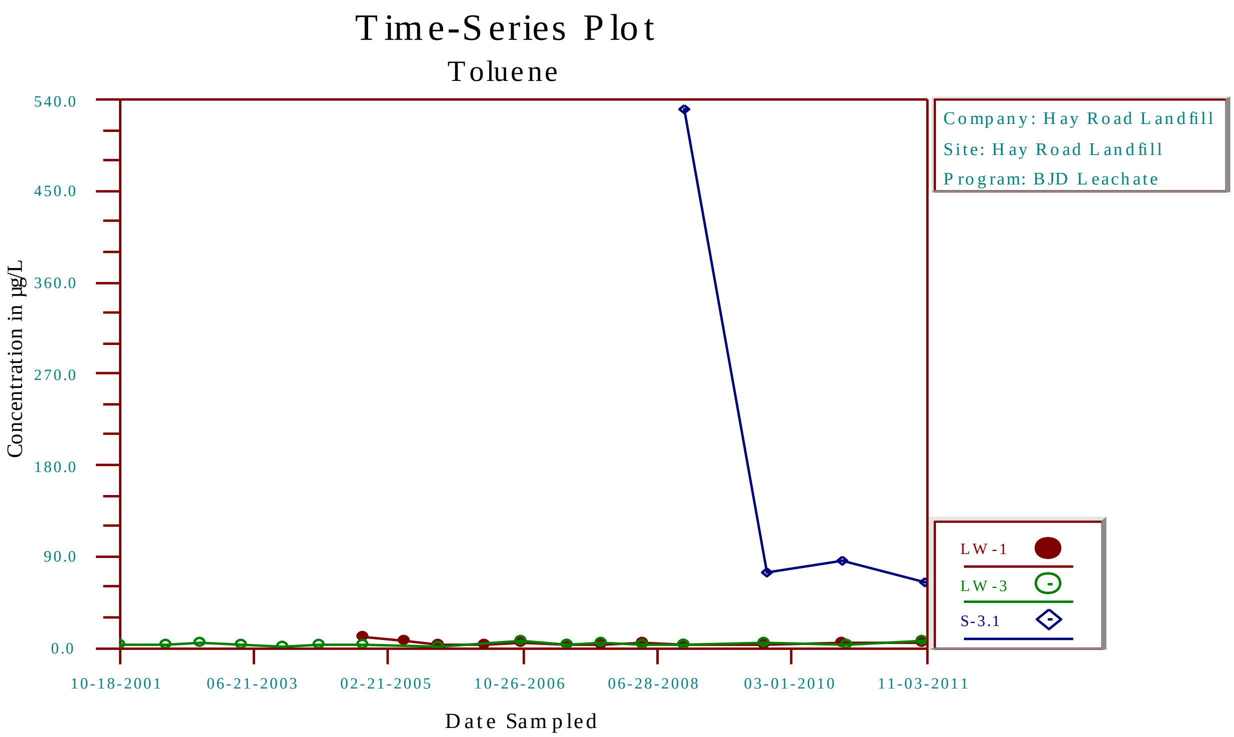

Time-Series Plot
Acetone
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
Concentration in µg/L
800.0
600.0
400.0
200.0
0.0
-200.0
LW-1
LW-3
S-3.1
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

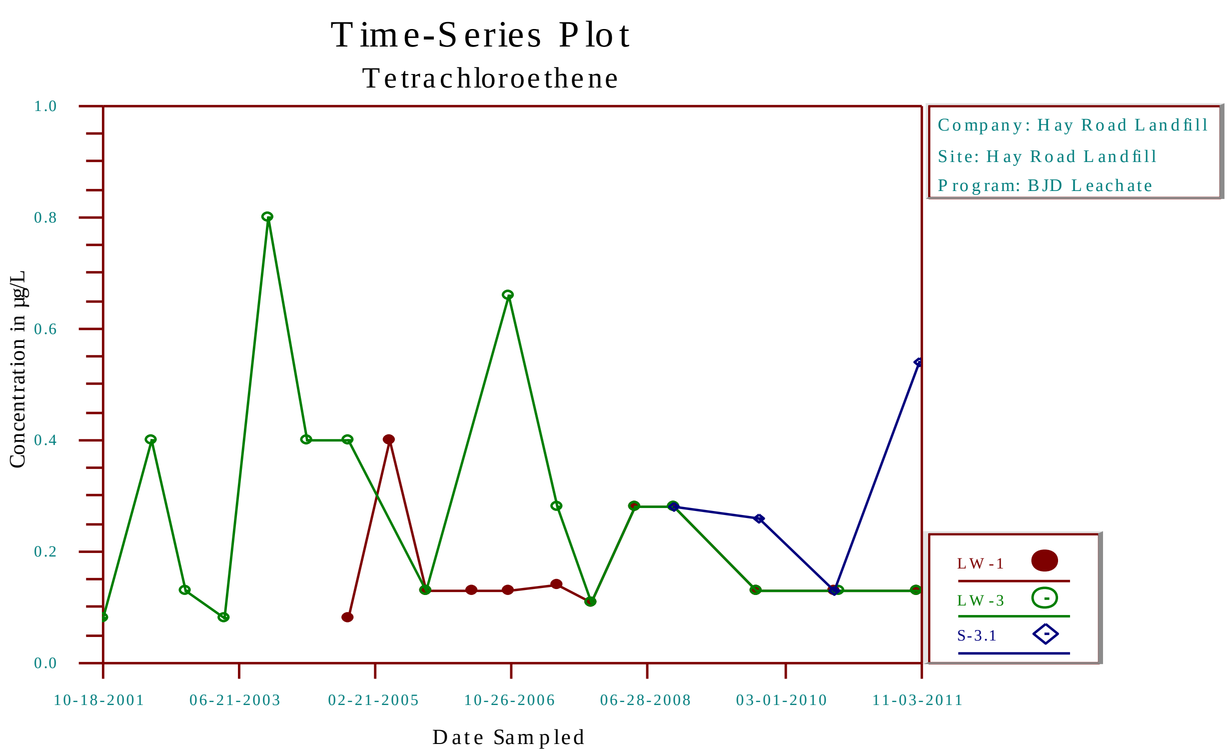

Time-Series Plot
Xylenes (total)
Concentration in µg/L
35.0
28.0
21.0
14.0
7.0
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

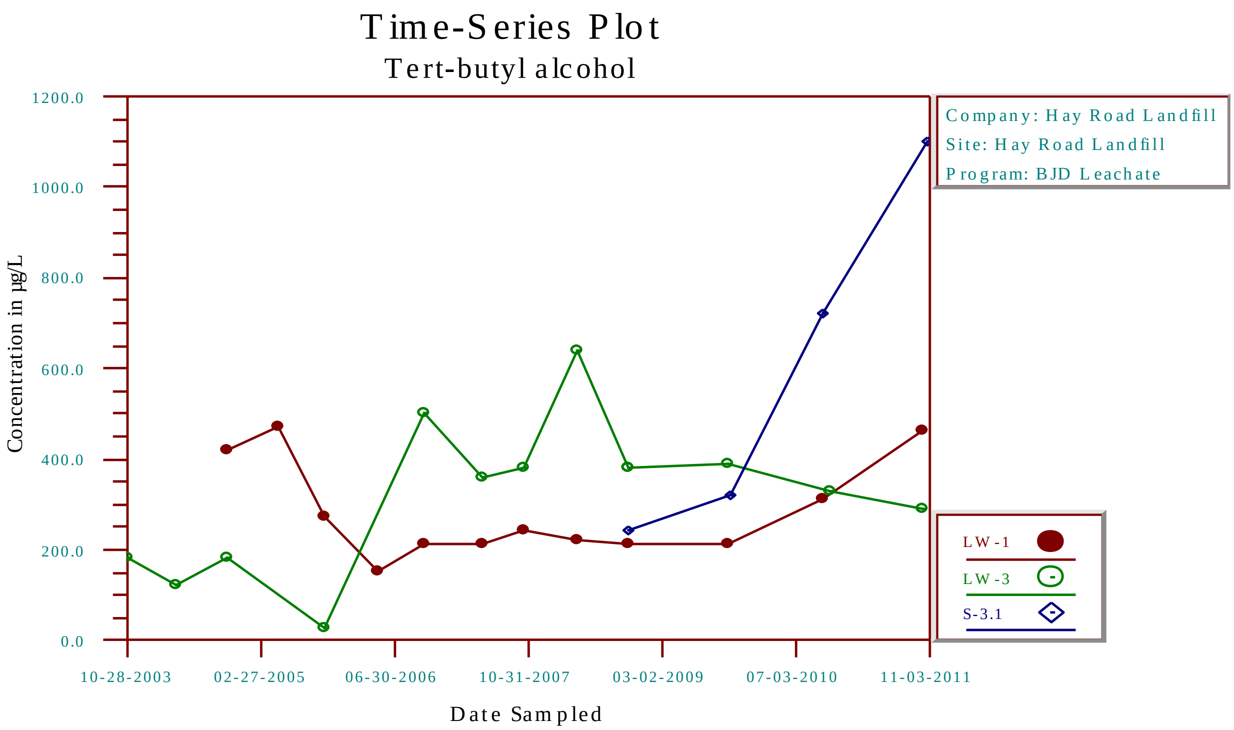

Time-Series Plot
Vinyl chloride
Concentration in µg/L
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1


Time-Series Plot
Trichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
3.2
2.4
1.6
0.8
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled

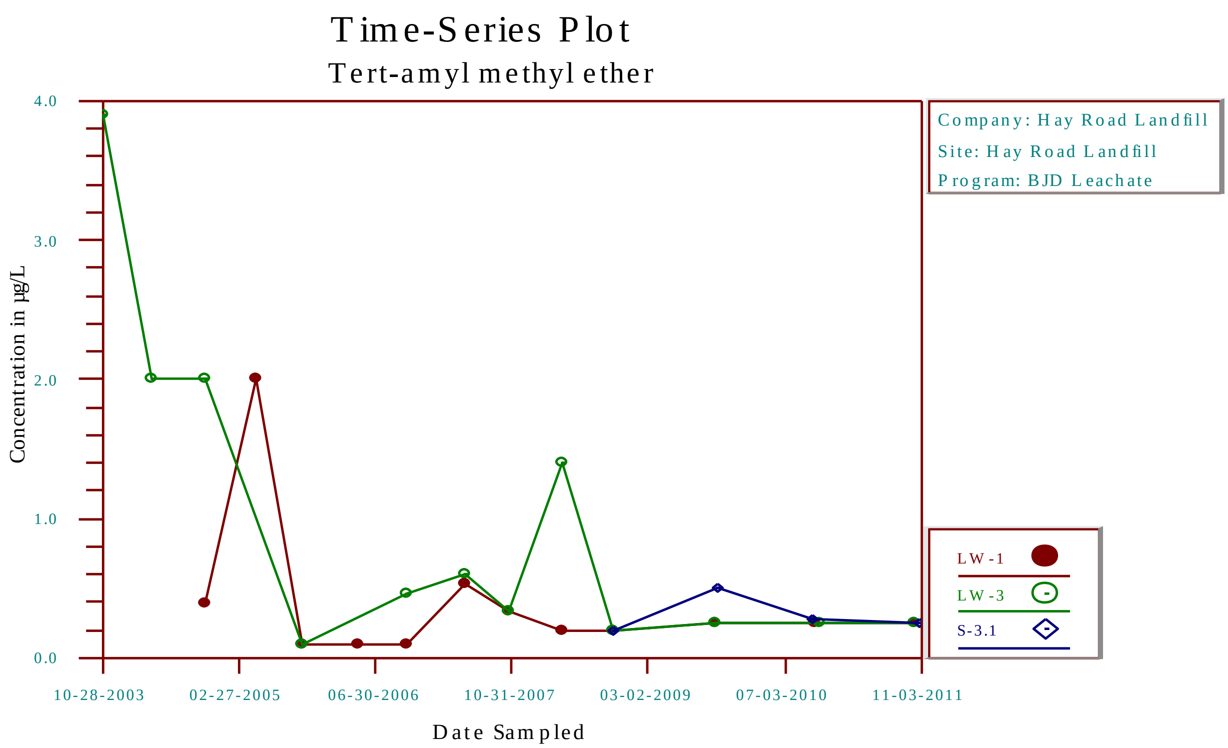

Time-Series Plot
trans-1,2-Dichloroethene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
1.5
1.25
1.0
0.75
0.5
0.25
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled


Time-Series Plot
Toluene
540.0
450.0
360.0
270.0
180.0
90.0
0.0
Concentration in µg/L
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

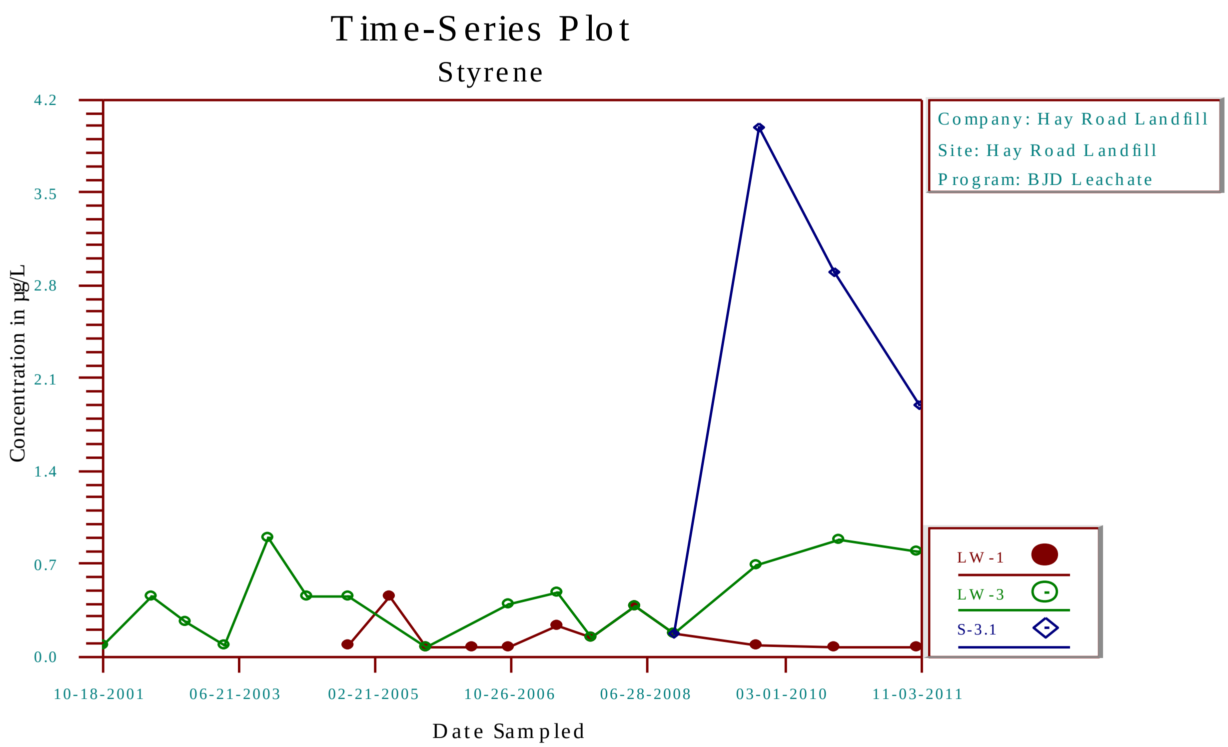

Time-Series Plot
Tetrachloroethene
1.0
0.8
0.6
0.4
0.2
0.0
Concentration in µg/L
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



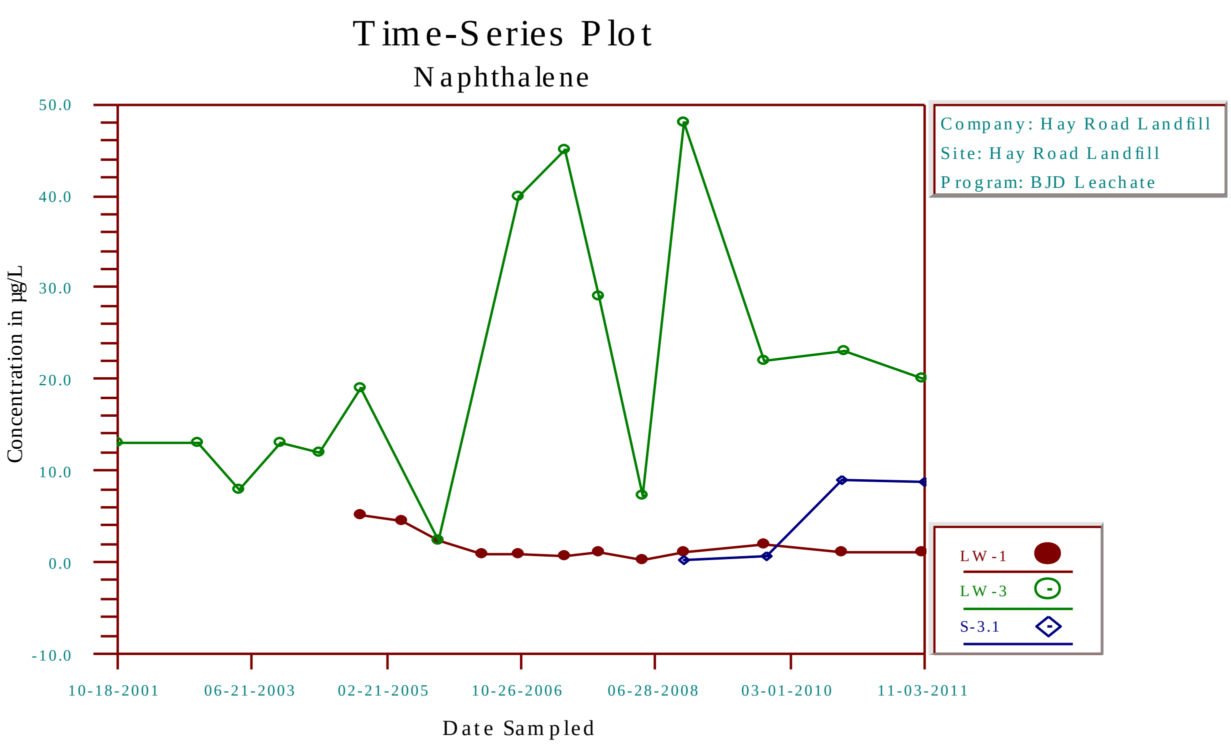
Time-Series Plot
Tert-butyl alcohol
Concentration in µg/L
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



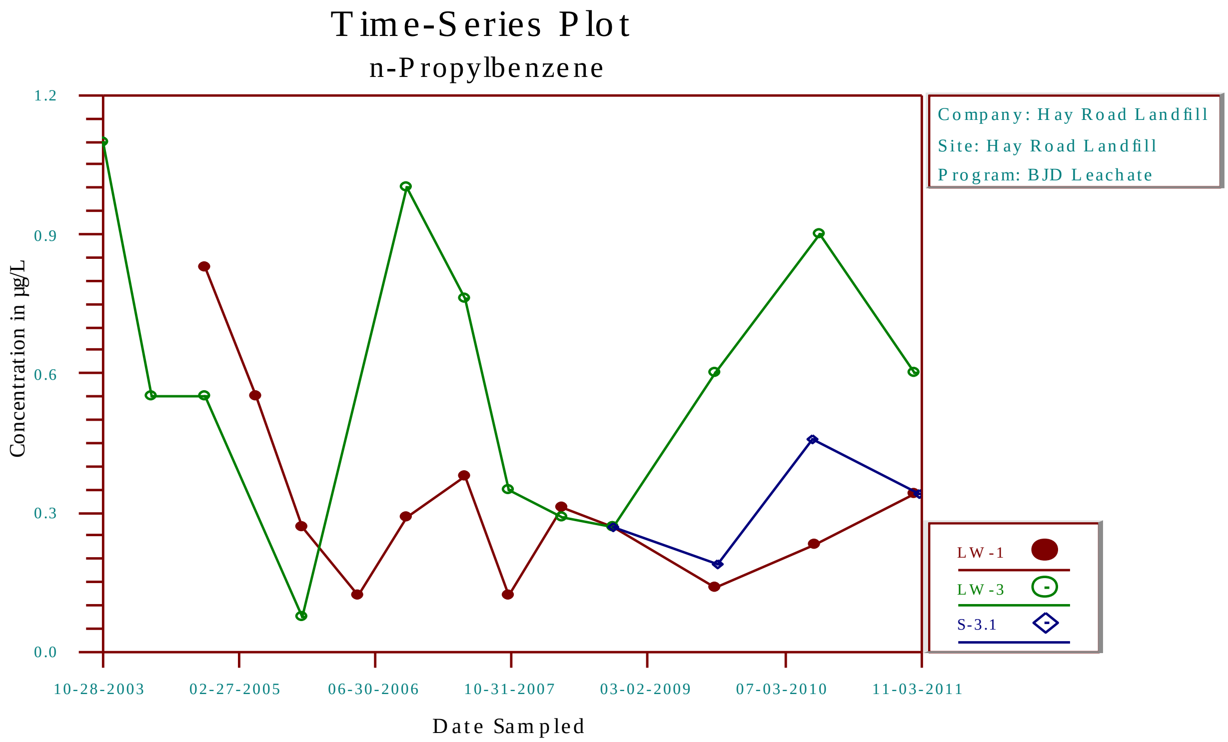
Time-Series Plot
Tert-amyl methyl ether
Concentration in µg/L
4.0
3.0
2.0
1.0
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1



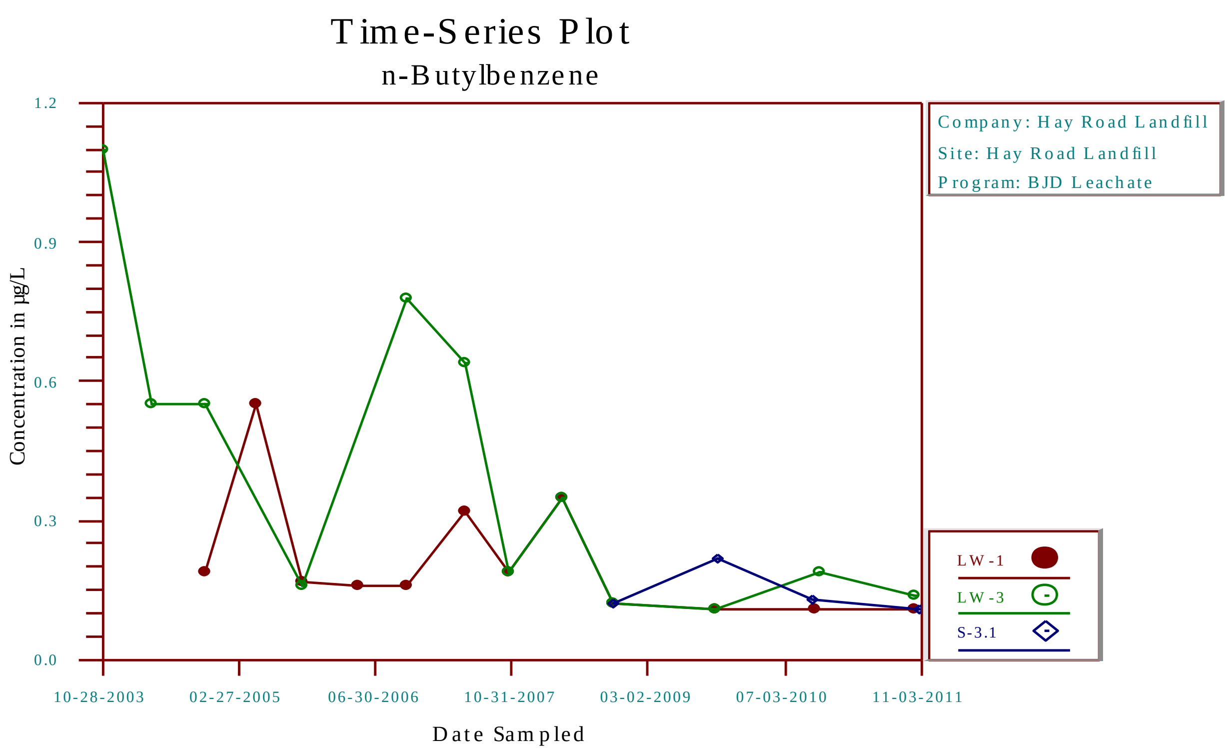
Time-Series Plot
Styrene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
4.2
3.5
2.8
2.1
1.4
0.7
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled



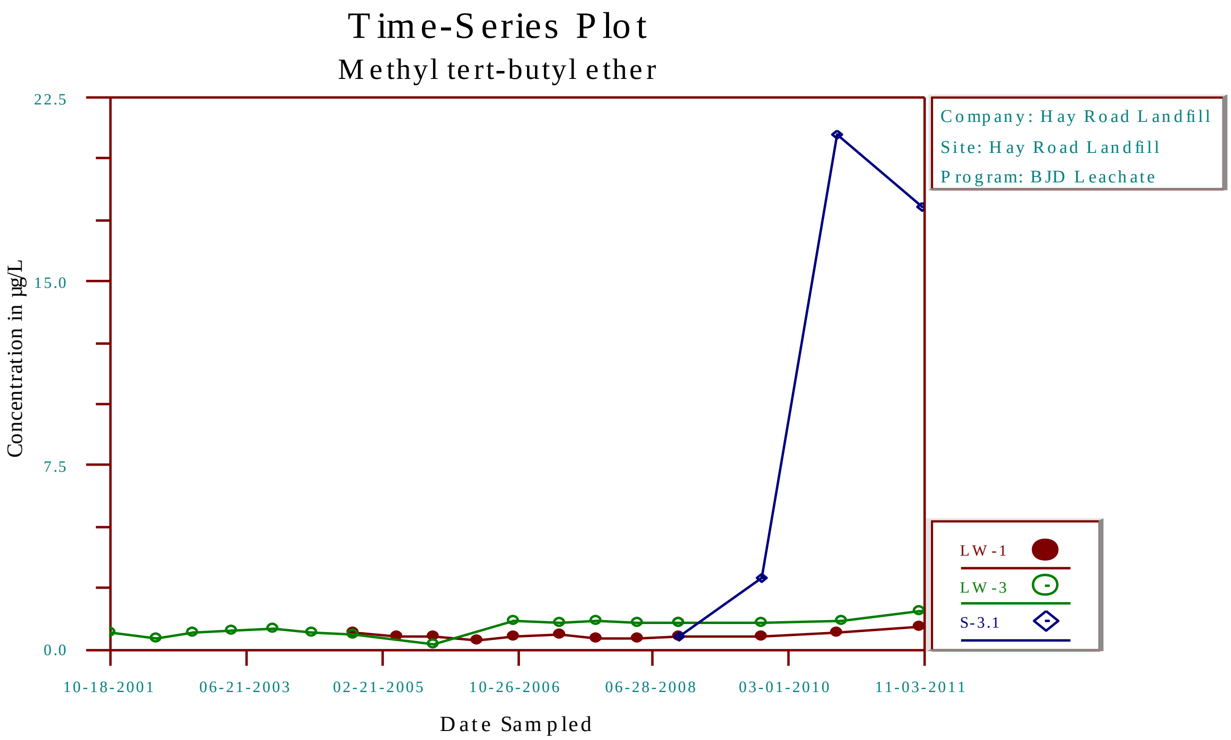
Time-Series Plot
Naphthalene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled



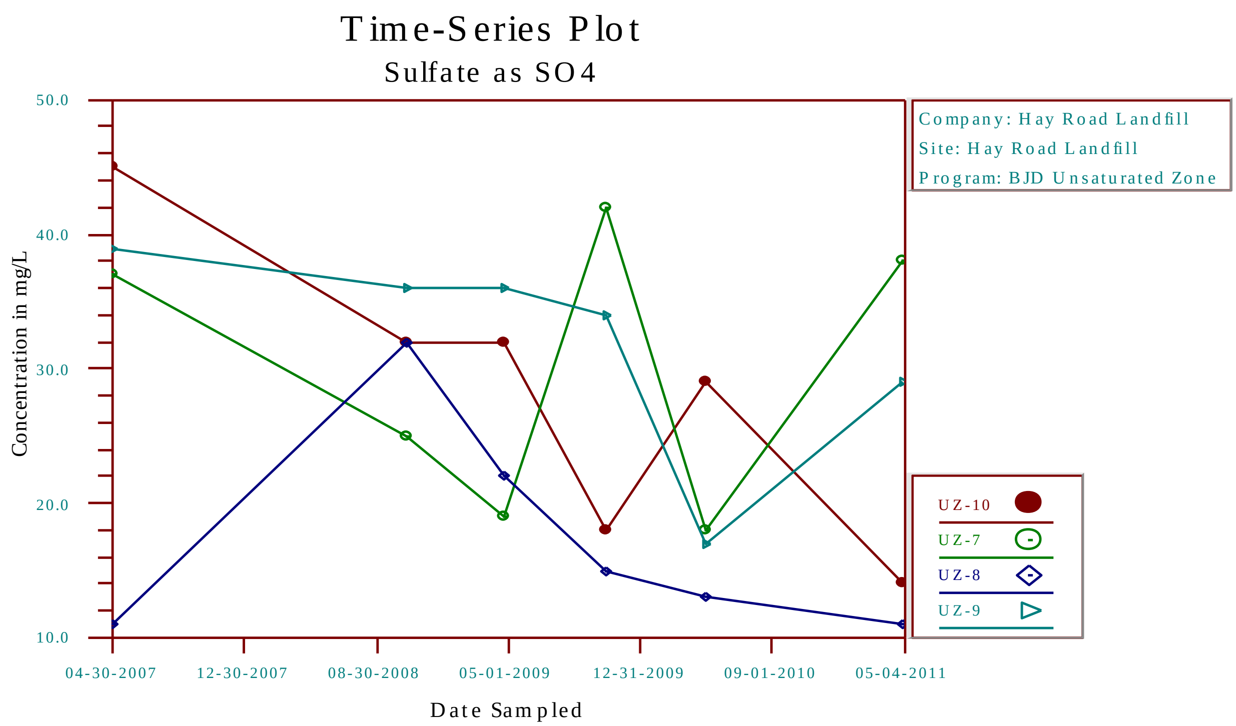
Time-Series Plot
n-Propylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
1.2
0.9
0.6
0.3
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled



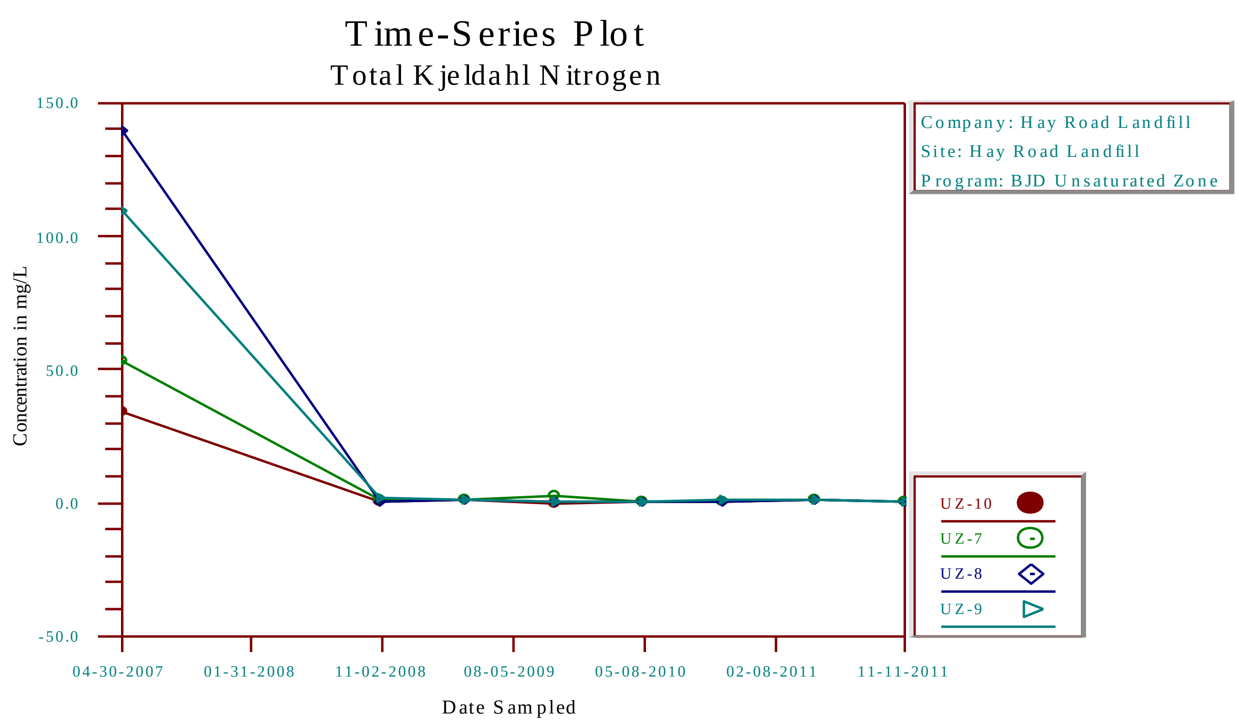
Time-Series Plot
n-Butylbenzene
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1
Concentration in µg/L
1.2
0.9
0.6
0.3
0.0
10-28-2003
02-27-2005
06-30-2006
10-31-2007
03-02-2009
07-03-2010
11-03-2011
Date Sampled



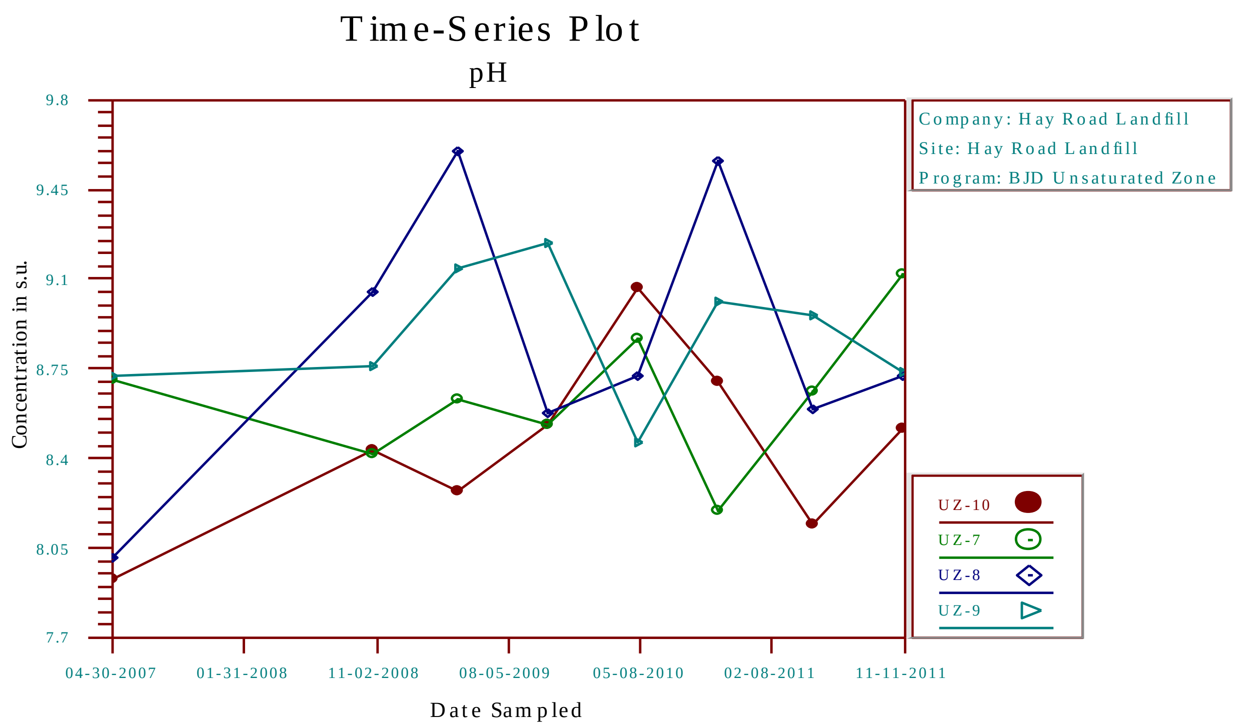
Time-Series Plot
Methyl tert-butyl ether
Concentration in µg/L
22.5
15.0
7.5
0.0
10-18-2001
06-21-2003
02-21-2005
10-26-2006
06-28-2008
03-01-2010
11-03-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Leachate
LW-1
LW-3
S-3.1

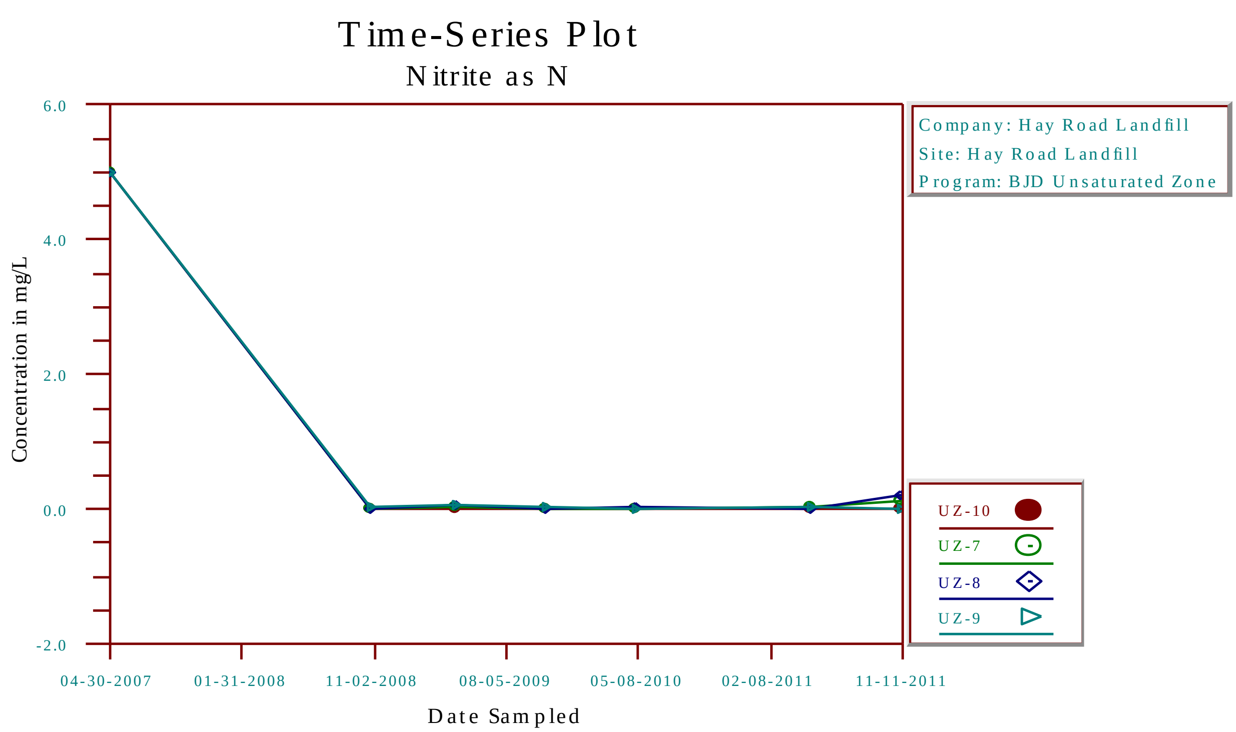


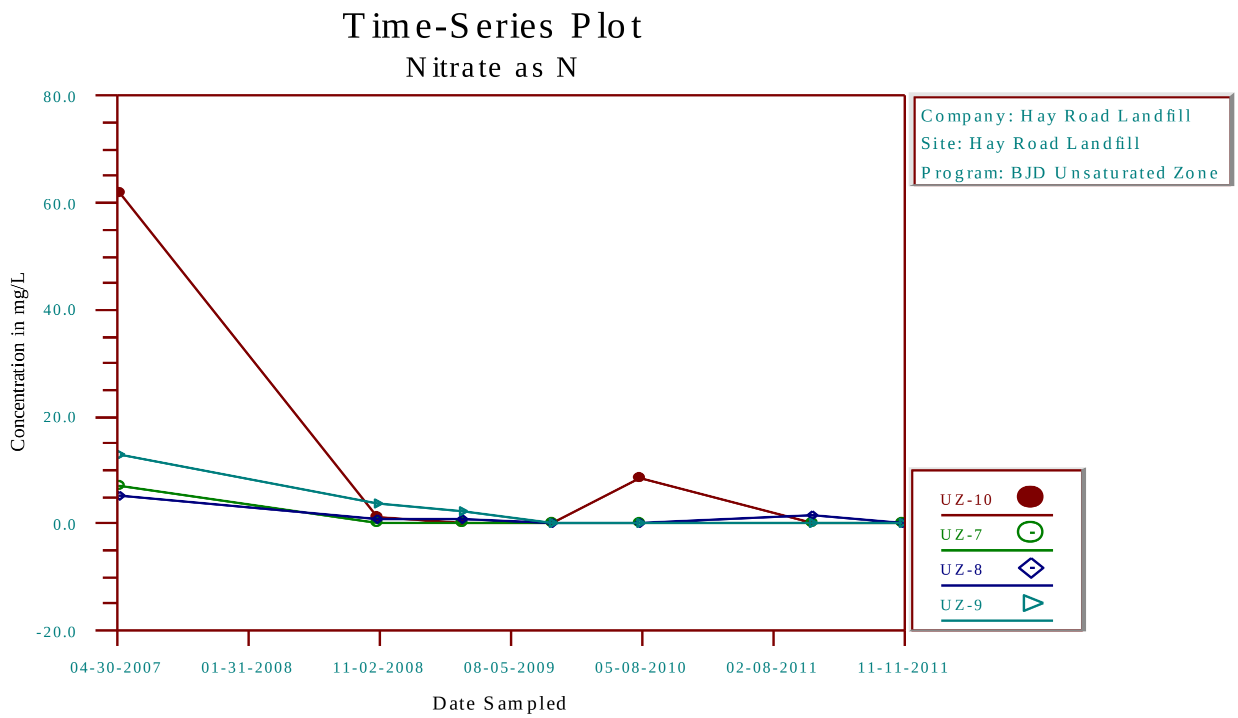
Time-Series Plot
Sulfate as SO4
50.0
40.0
30.0
20.0
10.0
Concentration in mg/L
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
04-30-2007
12-30-2007
08-30-2008
05-01-2009
12-31-2009
09-01-2010
05-04-2011
Date Sampled



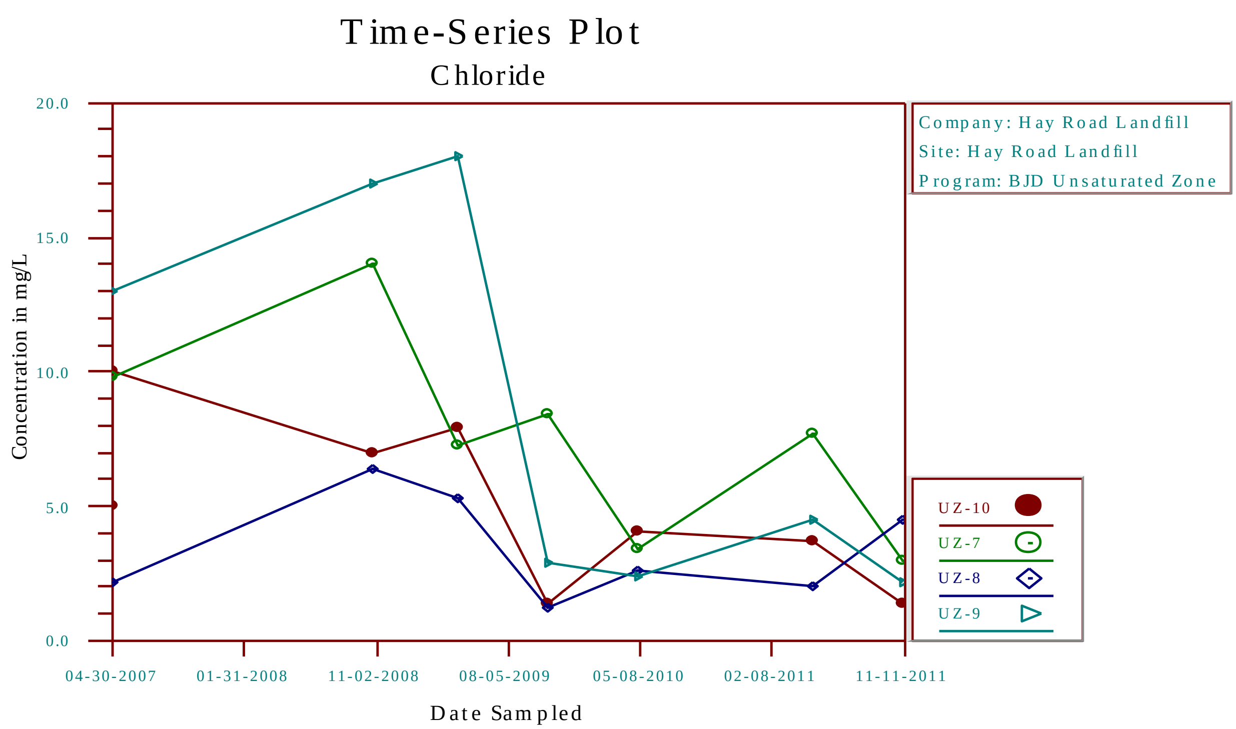
Time-Series Plot
Total Kjeldahl Nitrogen
150.0
100.0
50.0
0.0
-50.0
Concentration in mg/L
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled


Time-Series Plot
pH
9.8
9.45
9.1
8.75
8.4
8.05
7.7
Concentration in s.u.
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled

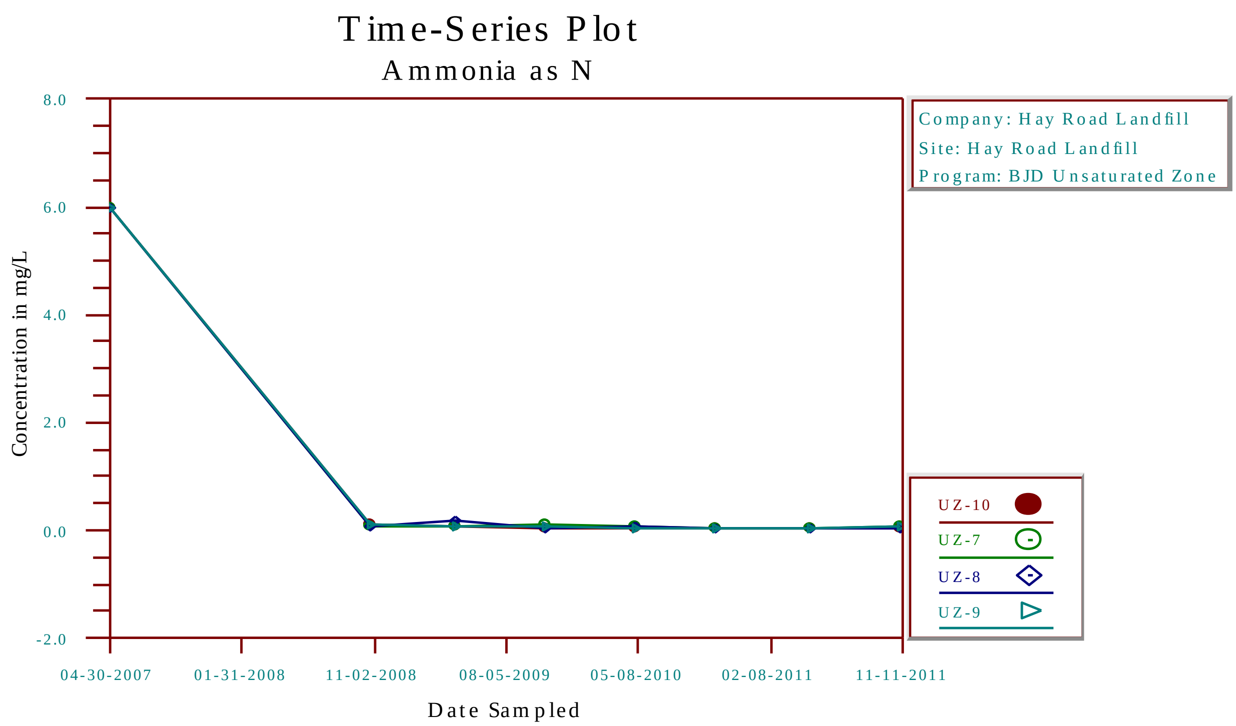

Time-Series Plot
Nitrite as N
6.0
4.0
2.0
0.0
-2.0
Concentration in mg/L
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled

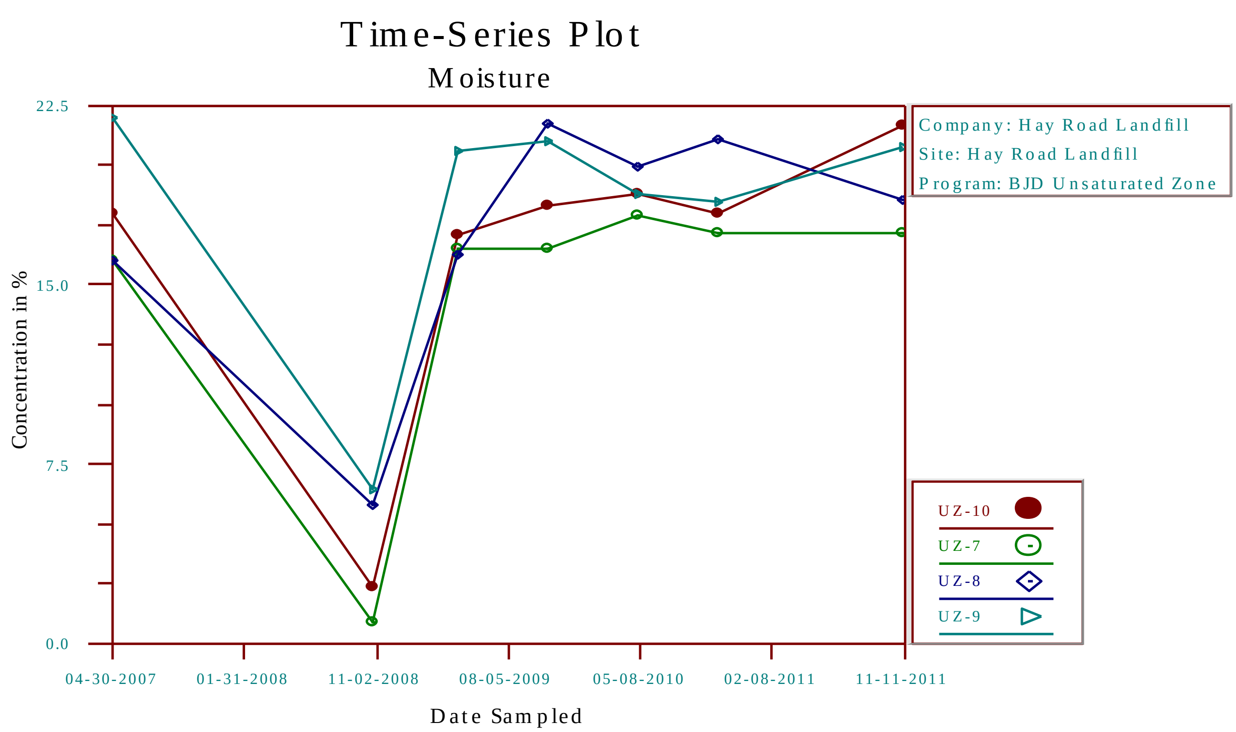


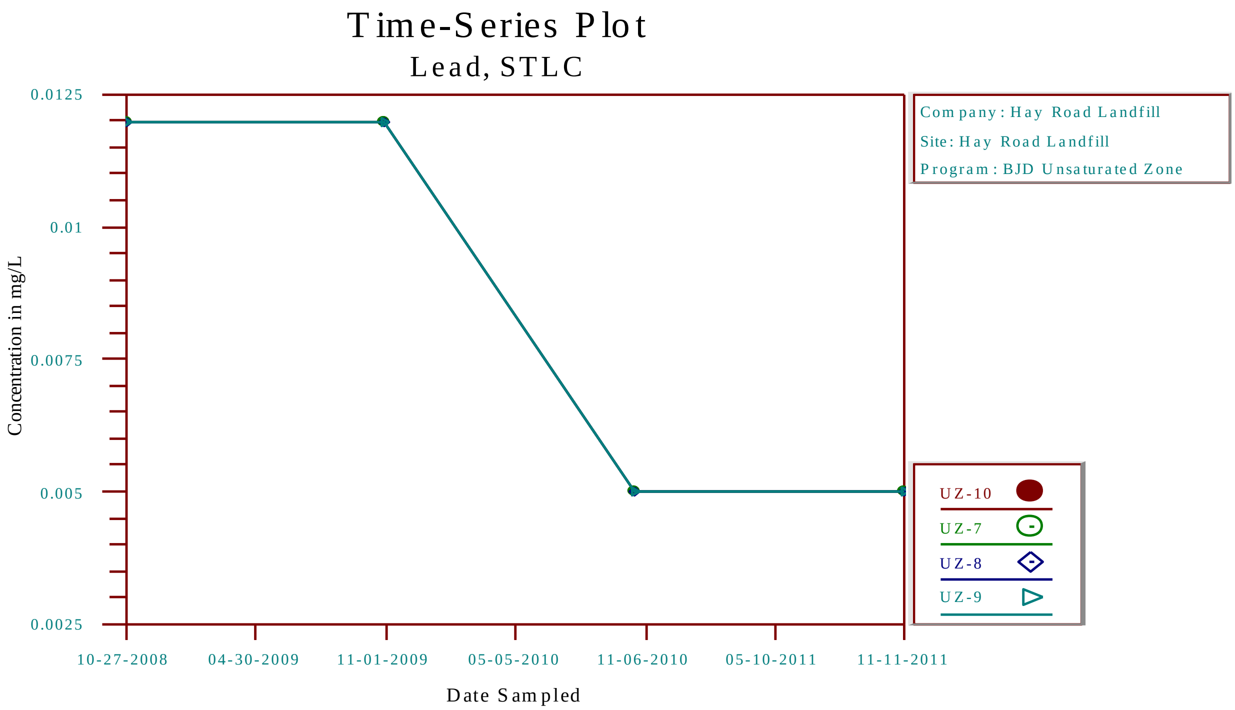
Time-Series Plot
Nitrate as N
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
Concentration in mg/L
80.0
60.0
40.0
20.0
0.0
-20.0
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled
UZ-10
UZ-7
UZ-8
UZ-9

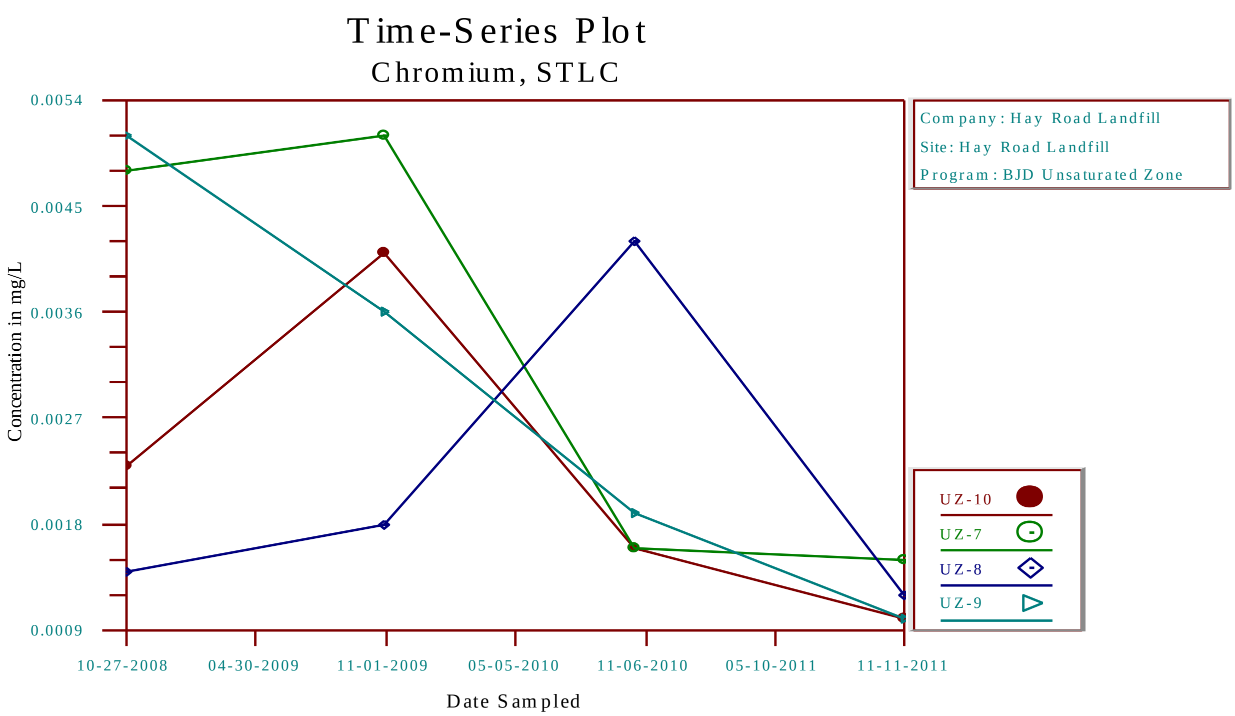


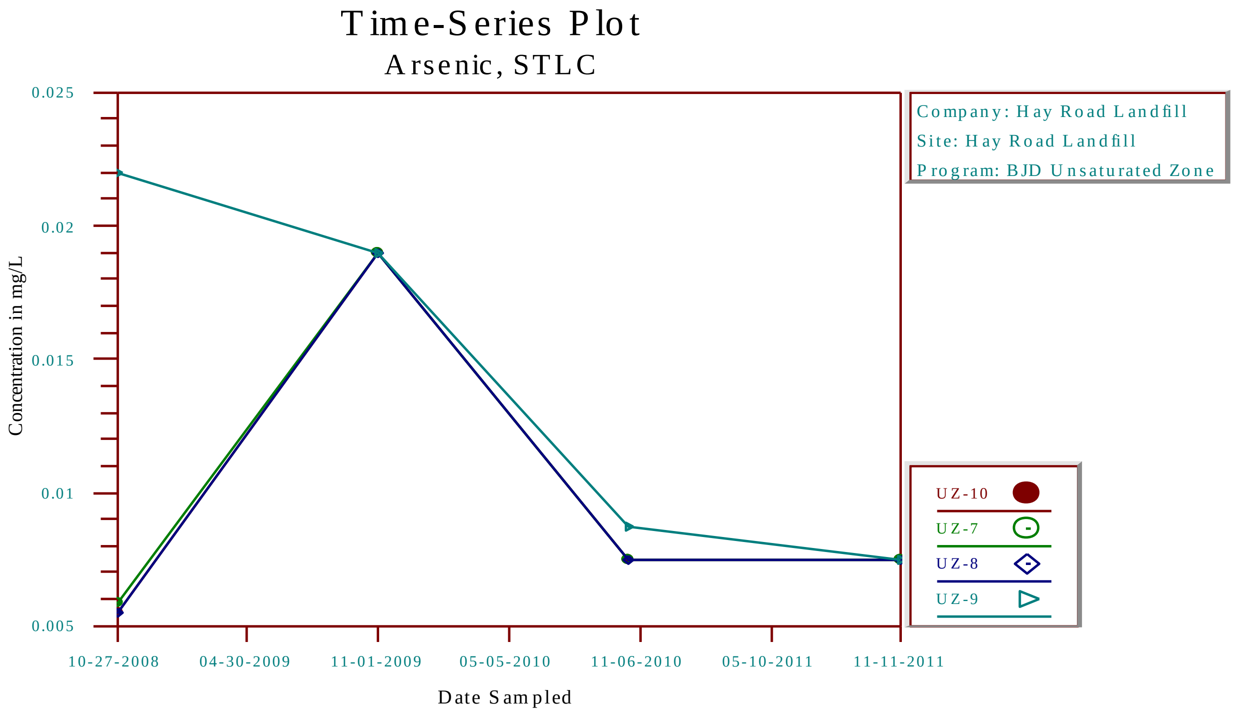
Time-Series Plot
Chloride
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
Concentration in mg/L
20.0
15.0
10.0
5.0
0.0
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled
UZ-10
UZ-7
UZ-8
UZ-9


Time-Series Plot
Ammonia as N
Concentration in mg/L
8.0
6.0
4.0
2.0
0.0
-2.0
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9


Time-Series Plot
Moisture
Concentration in %
22.5
15.0
7.5
0.0
04-30-2007
01-31-2008
11-02-2008
08-05-2009
05-08-2010
02-08-2011
11-11-2011
Date Sampled
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9


Time-Series Plot
Lead, STLC
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
0.0125
0.01
0.0075
0.005
0.0025
Concentration in mg/L
10-27-2008
04-30-2009
11-01-2009
05-05-2010
11-06-2010
05-10-2011
11-11-2011
Date Sampled


Time-Series Plot
Chromium, STLC
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
UZ-10
UZ-7
UZ-8
UZ-9
0.0054
0.0045
0.0036
0.0027
0.0018
0.0009
Concentration in mg/L
10-27-2008
04-30-2009
11-01-2009
05-05-2010
11-06-2010
05-10-2011
11-11-2011
Date Sampled



Time-Series Plot
Arsenic, STLC
Company: Hay Road Landfill
Site: Hay Road Landfill
Program: BJD Unsaturated Zone
Concentration in mg/L
0.025
0.02
0.015
0.01
0.005
10-27-2008
04-30-2009
11-01-2009
05-05-2010
11-06-2010
05-10-2011
11-11-2011
Date Sampled
UZ-10
UZ-7
UZ-8
UZ-9

APPENDIX D

TABULAR SUMMARY OF 2011 HISTORICAL ANALYTICAL DATA

Groundwater Analytical Results Western Detection Wells
2011
Recology Hay Road

Sample Designation		G-1	G-1	*Conc.*	G-2	G-2	*Conc.*	G-6	G-6	*Conc.*	G-8	G-8	G-8	*Conc.*	G-9	G-9	G-9	*Conc.*	G-27	G-27	*Conc.*	G-10M	Conc.	G-10R	Conc.
Sampling Date		6/6/11	10/21/11	*Limits*	6/6/11	10/21/11	*Limits*	6/25/10	10/21/11	*Limits*	3/4/11	10/19/11	10/19/11	*Limits*	3/4/11	6/8/11	10/20/11	*Limits*	6/8/11	10/20/10	*Limits*	6/6/11	Limits	10/20/11	Limits
Field Parameters	*Units*																								
pH	std. units	7.51	7.74	-	7.65	-	-	7.32	7.43	-	7.31	7.45	7.16	-	6.97	6.45	7.02	-	7.12	7.01	-	7.17	-	7.48	-
Specific Conductance	µmhos/cm	1320	1449	-	3581	-	-	1,672	1665	-	1875	1777	1908	-	1876	1751	1707	-	1482	1485	-	1720	-	1021	-
Temperature	°C	16.9	19.1	-	19.6	-	-	18.4	22.1	-	18.1	18.7	19.3	-	20.1	23.0	21.1	-	19.1	19.4	-	17.2	-	18.9	-
Turbidity	NTU	3	1	-	1	-	-	3	2	-	1	2	2	-	1	7	1	-	2	1	-	2	-	1	-
Monitoring Parameters																									
Arsenic, dissolved	mg/L	<0.0075	<0.0075	*NE*	<0.0075	*NE*	*ND*	<0.093	0.0079 t	*NE*	-	<0.0075	<0.0075	*0.07*	-	<0.0075	<0.0075	*NE*	<0.0075	<0.093	*ND*	<0.0075	*NE*	<0.0075	ND
Barium, dissolved	mg/L	NR	NA		NA		*ND*	<0.12	NA		0.48	0.46	0.48		0.56	0.54	0.53		NR	<0.12	*ND*	NR	-	NA	
Bicarbonate Alkalinity	mg/L	360	410	-	880	-			590	-	-	630	650	-	-	720	630	-	330			460	-	350	-
Calcium, dissolved			49	-	30	-			43	-			95	-			83	-						44	-
Carbonate Alkalinity	mg/L	<8.2	<8.2	-	<8.2	-			<8.2	-	-	<8.2	<8.2	-	-	<8.2	<8.2	-	<8.2			<8.2	-	<4.1	-
Chloride	mg/L	180	190	-	400	-	*ND*	-	120	-	-	220	200	-	-	190	180	-	280	<0.33	*ND*	280	-	110	-
Chromium, dissolved	mg/L	0.0014 t	0.0011 t	*0.02*	<0.0010	*ND*	*ND*	-	<0.0010	*NE*	-	NA	0.0012 t	*NE*	-	NA	<0.0010	*ND*	NA	<0.26	*ND*	<0.0010	*NE*	<0.0010	NE
Lead, dissolved	mg/L	0.0056 t									-	0.0068 t			-	0.0051 t			0.0078 t			0.0055 t	-		
Magnesium, dissolved			60	-	89	-			68	-			110	-			100	-						56	-
Nitrate/Nitrite as N	mg/L	1.0	0.87	*24*	<0.010	*0.7*			0.53	*3.2*	-	0.42	0.42	*5.6*	-	0.023 t	<0.010	*3.9*	3.3			1.1	*2.0*	0.12	1.7
Potassium, dissolved			0.73 t	-	0.94 t	-			0.82 t	-			0.84 t	-			1.1	-						0.75 t	-
Sodium, dissolved			160	-	640	-			230	-			160	-			120	-						82	-
Sulfate as SO_4	mg/L	50	49	-	460	-			120	-	-	84	83	-	-	7.0	18	-	36			49	-	31	-
Total Dissolved Solids	mg/L	780	840	-	2300	-			1000	-	-	1,100	1200	-	-	1100	1000	-	1,000			1100	-	600	-
							ND	-												ND	*ND*				
Volatile Organic Compounds																									
Acetone	µg/l	<4.6	<4.6		<4.6				<4.6		NA	<4.6	<4.6		NA	<4.6	<4.6		<4.6			<4.6	*ND*	<4.6	
Toluene	µg/l	<0.093	<0.093		<0.093		*ND*	-	<0.093		NA	<0.093	<0.093		NA	<0.093	<0.093		<0.093	ND	*ND*	<0.093	*ND*	<0.093	
2-butanone	µg/l	<2.5	<2.5		<2.5				<2.5		NA	<2.5	<2.5		NA	<2.5	<2.5		<2.5			<2.5	*ND*	<2.5	
Vinyl chloride	µg/l	<0.12	<0.12	*ND*	<0.12	*ND*		<0.12	<0.12	*ND*		<0.12	<0.12	*ND*		<0.12	<0.12	*ND*	<0.12			<0.12		<0.12	*ND*
All other VOCs 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.
NE - None established; insufficient data or too few detections.
ND - Non-detect; there have been no previous detections of this parameter.
Concentration limits calculated using historical data through second quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Groundwater Analytical Results Western Detection Wells
2011
Recology Hay Road

Sample Designation		G-11	Conc.	G-11M	G-11M	Conc.	G-11R	Conc.	G-12	G-12	Conc.	G-13	G-13	Conc.	P-1	P-1	Conc.	Conc.	MW-4	MW-4	Conc.	4B		4B	Conc.
Sampling Date		6/8/11	Limits	10/20/11	6/6/11	Limits	10/20/11	Limits	6/6/11	10/21/11	Limits	6/6/11	10/21/11	Limits	6/8/11	10/21/11	Limits	Limits	6/8/11	10/19/11	Limits	6/7/11	8/9/11	10/20/11	Limits
Field Parameters	*Units*																								
pH	std. units	7.23	-	6.71	7.29	-	7.34	-	7.53	7.86	-	7.47	7.62	-	6.77	7.31	-	-	7.37	7.30	-	7.39	7.45	7.77	-
Specific Conductance	µmhos/cm	1579	-	1125	1077	-	950	-	1010	1068	-	1307	1132	-	2501	2622	-	-	2303	2408	-	5190	4300	4521	-
Temperature	°C	19.0	-	20.3	17.9	-	19.9	-	16.8	19.7	-	16.8	21.0	-	19.5	21.2	-	-	19.4	20	-	17.9	19.9	21.9	-
Turbidity	NTU	7	-	92	9	-	1	-	3	1	-	4	1	-	1	1	-	-	1	2	-	9	21	7	-
Monitoring Parameters																									
Arsenic, dissolved		<0.0075	NE	<0.0075	<0.0075	NE	<0.0075	NE	<0.0075	<0.0075	0.1	<0.0075	<0.0075	NE	<0.0075	<0.0075	NE	ND	<0.0075	<0.0075	0.06	<0.0075	-	<0.0075	0.06
Barium, dissolved		NR	-	NA	NR		NA		NR	NA		NR	NA		NR	NA		ND	NR	NA		NR	-	NA	
Bicarbonate Alkalinity		520	-	400	390	-	320	-	310	330	-	320	360	-	580	580	-		490	490	-	790	-	800	-
Calcium, dissolved				59		-	40	-		35	-		38	-		58	-			76	-		-	100	-
Carbonate Alkalinity		<8.2	-	<8.2	<8.2	-	<4.1	-	<8.2	<8.2	-	<8.2	<8.2	-	<8.2	<8.2	-		<8.2	<8.2	-	<8.2	-	<8.2	-
Chloride	µg/l	210	-	110	110	-	100	-	130	120	-	180	120	-	400	380	-	ND	440	450	-	900	-	680	-
Chromium, dissolved	µg/l	NA	-	<0.0010	0.0016 t	ND	<0.0010	ND	<0.0010	<0.0010	0.02	<0.0010	<0.0010	0.02	NA	0.0014 t	NE	ND	NA	<0.0010	NE	<0.0010	-	0.0015 t	NE
Lead, dissolved		0.0075 t	NE		<0.0050				<0.0050			0.0050 t			<0.0050				<0.0050			0.0082 t			
Magnesium, dissolved				57		-	52	-		47	-		46	-		130	-			140	-		-	220	-
Nitrate/Nitrite as N		2.2	24	1.6	1.7	28	1.9	2.3	0.67	0.18	5.0	**5.6**	0.28	4.5	0.86	0.49	1.5		0.82	0.88	8.3	**7.8**	**7.3**	**4.8**	4.4
Potassium, dissolved				0.72 t		-	0.71 t	-		0.65 t	-		0.56 t	-		0.94 t	-			0.87 t	-		-	0.76 t	-
Sodium, dissolved				96		-	79	-		120	-		140	-		310	-			210	-		-	570	-
Sulfate as SO_4		57	-	29	29	-	26	-	31	30	-	91	46	-	260	230	-		120	120	-	800	-	760	-
Total Dissolved Solids		1,000	-	670	680	-	560	-	600	600	-	850	650	-	1,700	1600	-		1700	1600	-	3700	-	3100	-
																		ND							
Volatile Organic Compounds																									
Acetone		<4.6	ND	<4.6	<4.6		<4.6		<4.6	<4.6		<4.6	<4.6		<4.6	<4.6			<4.6	<4.6		5.4*t (<4.6,<4.6)[1]		<4.6	
Toluene		<0.093	ND	<0.093	<0.093		<0.093		<0.093	<0.093		<0.093	<0.093		<0.093	<0.093		ND	<0.093	<0.093		0.33 t (0.12t, 0.12t)		<0.093	
2-butanone		<2.5	ND	<2.5	<2.5		<2.5		<2.5	<2.5		<2.5	<2.5		<2.5	<2.5			<2.5	<2.5		15 (<2.5, <2.5)		<2.5	
Vinyl chloride	µg/l	<0.12		<0.12	<0.12	ND	<0.12	ND	<0.12	<0.12	ND	<0.12	<0.12	ND	<0.12	<0.12	ND		<0.12	<0.12	ND	<0.12	-	0.44 t	ND

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.
NE - None established; insufficient data or too few detections.
ND - Non-detect; there have been no previous detections of this parameter.
Concentration limits calculated using historical data through second quarter 2011 with intrawell tolerance limits at 95% confidence and 95% coverage.

Groundwater Analytical Results Eastern Background Wells
2011
Recology Hay Road

Sample Designation		G-4R	G-4R		G-6	G-6	G-17	G-17	G-18		G-18		*Concentration*
Sampling Date		6/2/11	9/15/11	10/21/11	6/2/11	10/21/11	6/1/11	10/19/11	3/22/11	6/1/11	9/15/11	10/18/11	*Limit*
Field Parameters	***Units***												
pH	std. units	7.33	7.51	7.39	7.40	7.43	7.16	7.29	7.11	7.35	7.39	7.25	-
Specific Conductance	µmhos/cm	3856	3542	3835	1670	1665	2760	2662	2942	2857	2596	2837	-
Temperature	°C	19.6	20.1	22.8	18.9	22.1	16.6	17.8	16.7	17.1	19.4	20.1	-
Turbidity	NTU	4	1	2	3	2	2	2	1	1	1	2	-
Biosolids Parameters													
Ammonia as N	mg/l	<0.025	-	0.050	<0.025	0.025 t	0.030 t	<0.025	-	<0.025	-	<0.025	*0.9*
Arsenic, dissolved	mg/l	<0.0075	-	<0.0075	<0.0075	0.0079 t	<0.0075	<0.0075	-	<0.0075	-	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	630	-	620	600	590	460	450	-	410	-	400	-
Calcium, dissolved	mg/l		-	70		43		90			-	72	-
Carbonate Alkalinity	mg/l	<8.2	-	<8.2	<8.2	<8.2	<8.2	<8.2	-	<8.2	-	<8.2	-
Chloride	mg/l	620	-	610	120	120	500	490	-	590	-	620	-
Chromium, dissolved	mg/l	<0.0010	-	<0.0010	<0.0010	<0.0010	0.0011 t	0.0015 t	-	0.0033 t	-	0.0035 t	*0.014*
Lead, dissolved	mg/l	0.0055 t	-	0.0057 t	0.0081 t	<0.0050	0.0093 t	<0.0050	-	0.0053 t	-	<0.0050	*0.047*
Magnesium, dissolved	mg/l		-	160		68		150			-	150	-
Nitrate/Nitrite as N	mg/l	**7.8**	**9.9**	**10**	3.2	0.53	3.3	3.4	**9.6**	**8.4**	**8.1**	**8.3**	*5*
Potassium, dissolved	mg/l		-	1.3		0.82 t		0.86 t			-	1.1	-
Sodium, dissolved	mg/l		-	550		230		220			-	250	-
Sulfate as SO_4	mg/l	500	-	520	140	120	280	250	-	160	-	140	-
Total Dissolved Solids	mg/l	2600	-	2500	1100	1000	1700	1600	-	1600	-	1700	-
Total Kjeldahl Nitrogen	mg/l	0.21	-	0.38	0.16 t	0.089 t	<0.056	0.11 t	-	<0.11	-	0.16 t	*5.5*
Volatile Organic Compounds													
All VOCs below method detection lim		ND	ND	ND	ND	ND	ND	ND	NA	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˚C
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 2000 - 2011.
Elevated nitrate/nitrite as N concentrations in background wells excluded from concentration limit calculation.

Groundwater Analytical Results Eastern Detection Wells
2011
Recology Hay Road

Sample Designation		G-14*		G-16	G-16	G-19R	G-19R	G-20	G-20	G-21*		G-21		G-25	G-25	G-26	G-26	G-28	G-28	G-29	G-29		G-30	G-30	*Concentration*
Sampling Date		3/22/11	5/31/11	6/1/11	10/18/11	6/2/11	10/21/11	6/1/11	10/18/11	3/22/11	5/31/11	9/15/11	10/21/11	6/1/11	10/18/11	6/1/11	10/19/11	6/1/11	10/18/11	6/2/11	9/15/11	10/19/11	6/2/11	10/19/11	*Limit*
Field Parameters	*Units*																								
pH	std. units	7.48	6.80	7.28	7.33	7.43	7.47	7.41	7.45	7.22	7.17	7.38	7.30	7.41	7.41	7.41	7.5	7.40	7.29	7.91	8.02	7.90	7.59	7.63	-
Specific Conductance	µmhos/cm	4170	4124	3854	3664	3945	3768	1961	1665	2391	2424	2221	2455	2598	2610	2361	2267	3782	3238	2064	1905	2135	2039	2074	-
Temperature	°C	19.0	16.9	16.5	21.3	18.7	20	16.4	22.7	17.4	17.1	19.3	19.9	16.3	20.8	17.3	19.3	17.1	19.9	17.2	19.3	19.3	17.7	19.6	-
Turbidity	NTU	1	1	1	2	5	1	1	2	1	1	2	1	1	1	1	2	1	1	2	7	2	2	2	-
Monitoring Parameters																									
Ammonia as N	mg/l	NA	<0.025	<0.025	<0.025	<0.025	<0.025	0.050	<0.025	NA	<0.025	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NA	<0.025	0.025 t	<0.025	*0.9*
Arsenic, dissolved	mg/l	NA	<0.0075	<0.0075	<0.0075	0.0083 t	0.0080 t	<0.0075	<0.0075	NA	<0.0075	NA	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	<0.0075	NA	<0.0075	<0.0075	<0.0075	*0.05*
Bicarbonate Alkalinity	mg/l	NA	430	330	390	440	420	330	340	NA	410	NA	420	340	350	480	460	460	640	670	NA	680	580	600	-
Calcium, dissolved	mg/l				86		60		48			NA	89		71		57		54		NA	13		21	-
Carbonate Alkalinity	mg/l	NA	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	NA	<8.2	NA	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	NA	<8.2	<8.2	<8.2	-
Chloride	mg/l	NA	490	960	820	740	730	360	280	NA	440	NA	450	560	560	350	320	740	470	240	NA	240	220	220	-
Chromium, dissolved	mg/l	NA	<0.0010	0.0041 t	0.0061 t	<0.0010	0.0013 t	<0.0010	0.0011 t	NA	<0.0010	NA	0.0020 t	<0.0010	<0.0010	<0.0010	<0.0010	0.0021 t	0.0019 t	<0.0010	NA	<0.0010	0.0019 t	0.0014 t	*0.014*
Lead, dissolved	mg/l	NA	0.0072 t	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	0.0084 t	NA	0.0058 t	<0.0050	<0.0050	0.0088 t	<0.0050	0.0084 t	<0.0050	<0.0050	NA	<0.0050	<0.0050	<0.0050	*0.047*
Magnesium, dissolved	mg/l				220		150		88			NA	120		150		120		140		NA	46		59	-
Nitrate/Nitrite as N	mg/l	**210**	**150**	3.2	4.5	3.1	3.0	0.43	0.18	**7.1**	5.0	3.0	2.8	2.7	3.0	3.9	4.5	2.1	1.6	<0.010	NA	0.085 t	0.041 t	0.023 t	*5*
Potassium, dissolved	mg/l				1.1		1.4		1.4			NA	0.96 t		1.1		1.0		0.95 t		NA	0.80 t		0.90 t	-
Sodium, dissolved	mg/l				340		520		170			NA	240		230		220		450		NA	370		320	-
Sulfate as SO_4	mg/l	NA	440	320	360	520	470	110	88	NA	220	NA	200	190	190	240	230	460	410	79	NA	78	170	150	-
Total Dissolved Solids	mg/l	NA	2700	2200	2200	2500	2400	1100	930	NA	1600	NA	1400	1600	1500	1600[1]	1400	2500	2100	1200	NA	1300	1200	1200	-
Total Kjeldahl Nitrogen	mg/l	NA	1.3	<0.11	0.11 t	<0.056	0.084 t	<0.11	<0.056	NA	<0.056	NA	0.062 t	<0.056	<0.056	<0.11	0.068 t	<0.11	0.37	<0.056	NA	0.12 t	<0.056	<0.056	*5.5*
Volatile Organic Compounds																									
t-Butyl alcohol	µg/l	NA	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	NA	<9.4	NA	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	<9.4	6 (38/25	<9.4	<9.4	<9.4	<9.4	
Trichloroethene	µg/l	NA	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085	0.09 t	*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
NA - not analyzed
NE - None established; insufficient data or too few detections.
Concentration limits calculated using pooled data from background wells obtained during 2000 - 2011.
* Wells G-14 and G-21 sampled quarterly for evaluation of nitrate concentrations.

NA - not analyzed
t - trace, estimated value between the method detection limit and the reporting limit.
Bold values exceed calculated concentration limit.

Groundwater Analytical Results Corrective Action Wells
2011
Recology Hay Road

						Extraction Well		Extraction Well		Deep Well		Deep Well		Downgradient Well		
Sample Designation		G-21		G-21		G-22		G-22		G-23		G-23		G-24		*Conc.*
Sampling Date		3/22/11	5/31/11	9/15/11	10/21/11	3/22/11	5/31/11	9/15/11	10/21/11	3/22/11	5/31/11	9/15/11	10/21/11	3/22/11	5/31/11	*Limit*
Field Parameters	*Units*															
pH	std. units	7.22	7.17	7.38	7.3	7.30	7.47	7.23	7.58	7.22	7.04	7.43	7.37	7.24	7.22	-
Specific Conductance	µmhos/cm	2391	2424	2221	2455	2226	2406	2376	2645	2294	2327	2116	2328	2844	2742	-
Temperature	°C	17.4	17.1	19.3	19.9	16.2	16.5	19.6	22	17.0	17.2	19.2	20.4	16.8	16.1	-
Turbidity	NTU	1	1	2	1	1	5	12	2	1	2	3	2	2	1	-
Corrective Action Monitoring Parameter																
Nitrate/Nitrite as N	mg/l	**7.1**	5.0	3.0	2.8	**64**	**23**	**21**	**19**	2.0	1.8	1.9	1.9	**34**	**19**	*5*

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)
Bold values exceed concentration limits.

Unsaturated Zone Analytical Results
2011
Recology Hay Road

Sample Designation		VZ-2.1	VZ-2.1	PL-2.2A	PL-2.2A	PL-2.2B	PL-2.2B	PL-3.1	PL-3.1	LD-3.1	LD-3.1	PL-3.2	PL-3.2	LD-3.2	LD-3.2	PL-3.3	PL-3.3	LD-3.3	LD-3.3	PL-4.1
Sampling Date		6/8/11	11/3/11	6/6/11	11/3/11	6/6/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11
	Units																			
General Water Quality Parameters																				
pH	std. units	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	_dry_	7.37	_dry_	_dry_	_dry_	_dry_	_dry_
Specific Conductance	µmhos/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	1440	-	-	-	-	-
Temperature	°C	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-	99	-	-	-	-	-
Monitoring Parameters																				
Ammonia as N	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Arsenic, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Bicarbonate Alkalinity	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	580	-	-	-	-	-
Calcium, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Carbonate Alkalinity	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Chloride	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	94	-	-	-	-	-
Chromium, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Lead, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Magnesium, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Nitrate/Nitrite as N	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Potassium, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Sodium, dissolved	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Sulfate as SO_4	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Total Dissolved Solids	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	800	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
VOCs by EPA Method 8260																				
Benzene	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
1,1-Dichloroethane	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
cis-1,2-Dichloroethene	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Methyl tert-butyl ether	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Tetrachloroethene	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Vinyl chloride	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
Trichloroethene	µg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	NR	-	-	-	-	-
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

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

Unsaturated Zone Analytical Results
2011
Recology Hay Road

Sample Designation		PL-4.1	PL-4.1	LD-4.1	LD-4.1	PL-5.1A	PL-5.1A	PL-5.1B	PL-5.1B	PL-5.2	PL-5.2	LD-5.2	LD-5.2	PL-9.1A	PL-9.1A	PL-9.1B	PL-9.1B	PL-11.1	PL-11.1	PL-11.2	PL-11.2
Sampling Date		11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/2/11	6/8/11	11/3/11	6/2/11	11/3/11	6/2/11	11/3/11	6/8/11	11/3/11	6/8/11	11/3/11	6/8/11	11/3/11	6/8/11	11/3/11
	<u>Units</u>																				
<u>*General Water Quality Parameters*</u>																					
pH	std. units	*dry*	*dry*	*dry*	*dry*	*dry*	*dry*	7.09	6.73	*dry*	*dry*	*dry*	*dry*	7.25	7.78	*dry*	*dry*	*NM*	*dry*	*7.06*	*dry*
Specific Conductance	µmhos/cm	-	-	-	-	-	-	2120	2510	-	-	-	-	1,130	1,930	-	-	2,160	-	4,190	-
Temperature	°C	-	-	-	-	-	-	26.1	26	-	-	-	-	19.1	20	-	-	25.0	-	24.7	-
Turbidity	NTU	-	-	-	-	-	-	12	12	-	-	-	-	18	0	-	-	682	-	16	-
<u>*Monitoring Parameters*</u>																					
Ammonia as N	mg/l	-	-	-	-	-	-	NR	NR	-	-	-	-	<0.025	0.031 t	-	-	NR	-	NR	-
Arsenic, dissolved	mg/l	-	-	-	-	-	-	NR	NR	-	-	-	-	<0.0075	<0.0075	-	-	NR	-	NR	-
Bicarbonate Alkalinity	mg/l	-	-	-	-	-	-	510	650	-	-	-	-	460	510	-	-	670	-	1300	-
Calcium, dissolved	mg/l	-	-	-	-	-	-		140	-	-	-	-		69	-	-		-		-
Carbonate Alkalinity	mg/l	-	-	-	-	-	-	<8.2	<8.2	-	-	-	-	<8.2	<8.2	-	-	36	-	<8.2	-
Chloride	mg/l	-	-	-	-	-	-	170	190	-	-	-	-	47	68	-	-	200	-	440	-
Chromium, dissolved	mg/l	-	-	-	-	-	-	NR	NR	-	-	-	-	0.0047 t	0.0035 t	-	-	NR	-	NR	-
Lead, dissolved	mg/l	-	-	-	-	-	-	NR	NR	-	-	-	-	<0.0050	0.0050 t	-	-	NR	-	NR	-
Magnesium, dissolved	mg/l	-	-	-	-	-	-		170	-	-	-	-		56	-	-		-		-
Nitrate/Nitrite as N	mg/l	-	-	-	-	-	-	1.9	0.069 t	-	-	-	-	5.8	5.5	-	-	0.26	-	<0.010	-
Potassium, dissolved	mg/l	-	-	-	-	-	-	NR	5.2	-	-	-	-	<0.0081	4.3	-	-	NR	-	NR	-
Sodium, dissolved	mg/l	-	-	-	-	-	-		220	-	-	-	-		170	-	-		-		-
Sulfate as SO_4	mg/l	-	-	-	-	-	-	400	510	-	-	-	-	62	87	-	-	140	-	460	-
Total Dissolved Solids	mg/l	-	-	-	-	-	-	1500	1700	-	-	-	-	750	800	-	-	1400	-	2900	-
Total Kjeldahl Nitrogen	mg/l	-	-	-	-	-	-	NR	NR	-	-	-	-	0.54	0.53	-	-	NR	-	NR	-
<u>*VOCs by EPA Method 8260*</u>																					
Benzene	µg/l	-	-	-	-	-	-	<0.083	<0.083	-	-	-	-	<0.083	<0.083	-	-	<0.083	-	0.34 t	-
1,1-Dichloroethane	µg/l	-	-	-	-	-	-	<0.11	<0.11	-	-	-	-	<0.11	<0.11	-	-	<0.11	-	0.31 t	-
cis-1,2-Dichloroethene	µg/l	-	-	-	-	-	-	<0.085	<0.085	-	-	-	-	<0.085	<0.085	-	-	<0.085	-	0.20 t	-
Methyl tert-butyl ether	µg/l	-	-	-	-	-	-	<0.11	<0.11	-	-	-	-	<0.11	<0.11	-	-	<0.11	-	1.8	-
Tetrachloroethene	µg/l	-	-	-	-	-	-	0.16 t	0.68 t	-	-	-	-	<0.13	<0.13	-	-	<0.13	-	0.13 t	-
Vinyl chloride	µg/l	-	-	-	-	-	-	<0.12	<0.12	-	-	-	-	<0.12	<0.12	-	-	<0.12	-	0.39 t	-
Trichloroethene	µg/l	-	-	-	-	-	-	<0.085	0.11 t	-	-	-	-	<0.085	<0.085	-	-	<0.085	-	<0.085	-
Acetone	µg/l	-	-	-	-	-	-	<4.6	8.6 t	-	-	-	-	<4.6	<4.6	-	-	<4.6	-	<4.6	-
All other compounds below metho																					

t - Trace concentrations detected betw
NA - Not analyzed; insufficient sample
mg/l - milligrams per liter (parts per mil
µg/l - micrograms per liter (parts per bi
µmhos/cm - micromhos per centimeter
NTU - Nephelometric Turbidity Units

LTU Sludge Drying Area Soil Sample Analytical Results
2011
Recology Hay Road

Sample Designation		UZ-1	UZ-1	UZ-2	UZ-2	UZ-3	UZ-3	UZ-4	UZ-4	UZ-5	UZ-5	UZ-6	UZ-6	UZ-7	UZ-7	UZ-8	UZ-8	UZ-9	UZ-9	UZ-10	UZ-10	*Conc.*
Sampling Date		5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	5/4/11	11/11/11	*Limit*
Monitoring																						
Parameters	*Units*																					
pH	std. units	8.70	NA	9.12	NA	8.76	NA	8.63	NA	8.74	NA	8.56	1.2	8.66	9.12	8.59	8.72	8.96	8.74	8.14	8.52	*7.6 - 10.0*
% Moisture	%	26.6	NA	21.6	NA	27.5	NA	25.0	NA	28.2	NA	23.5	0.026	21.9	17.2	26.4	18.6	32.0	20.8	22.3	21.7	-
Chloride	mg/l	4.3	NA	4.1	NA	3.4	NA	7.9	NA	7.6	NA	16	<0.010	7.7	3.0	2.0	4.5	4.5	2.2	3.7	1.4	*28*
Sulfate as SO_4	mg/l	14	NA	5.9	NA	5.1	NA	13	NA	18	NA	17	<0.0075	38	19	11	16	29	8.5	14	5.2	*62*
Ammonia	mg/l	0.12	NA	0.085	NA	<0.025	NA	<0.025	NA	<0.025	NA	<0.025	0.0041	<0.025	0.060	<0.025	<0.025	<0.025	0.058 t	<0.025	0.036 t	*0.22*
Nitrate	mg/l	0.17	NA	0.22	NA	0.70	NA	0.70	NA	0.43	NA	0.24	<0.0010	0.15	0.067 t	1.6	0.062 t	0.040 t	0.030 t	0.056 t	<0.021	*3.0*
Nitrite	mg/l	0.016 t	NA	0.022 t	NA	0.012 t	NA	0.018 t	NA	0.034 t	NA	0.021 t	18	0.039 t	0.11 t	0.015 t	0.20 t	0.033 t	<0.015	0.018 t	<0.015	*0.11*
TKN	mg/l	1.2	NA	0.91	NA	1.0	NA	1.1	NA	1.1	NA	1.0	<0.0010	1.2	0.53	1.2	0.46	1.1	0.48	1.1	0.44	*1.7*
Arsenic	mg/l	NR	NA	NR	NA	NR	NA	NR	NA	NR	NA	NR	0.18	NR	<0.0075	NR	<0.0075	NR	<0.0075	NR	<0.0075	*2.2 (max)*
Chromium	mg/l	NR	NA	NR	NA	NR	NA	NR	NA	NR	NA	NR	<4.1	NR	0.0015 t	NR	0.0012 t	NR	<0.0010	NR	<0.0010	*0.22 (max)*
Lead	mg/l	NR	NA	NR	NA	NR	NA	NR	NA	NR	NA	NR	5.8	NR	<0.0050	NR	<0.0050	NR	<0.0050	NR	<0.0050	*0.39 (max)*

Landfill Gas Monitoring
2011
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
GP-1	3/10/11	0.0	2.1	9.0	NR	NR
GP-1	6/14/11	0.1	1.9	18.2	0.0	NA
GP-1	9/6/11	0.0	0.5	20.1	NR	NR
GP-1	12/2/11	0.0	0.6	19.8	0.0	NA
GP-2	3/10/11	NM	NM	NM	NR	NR
GP-2	6/14/11	0.3	1.5	12.1	NR	NA
GP-2	9/6/11	0.0	5.4	0.3	NR	NR
GP-2	12/2/11	0.0	4.0	8.6	NA	NA
GP-3A	2/1/11	2.2	7.2	0.0	NR	NR
GP-3A	6/14/11	1.1	2.9	8.6	NR	NA
GP-3A	9/6/11	1.5	5.9	0.6	NR	NR
GP-3A	12/2/11	0.4	3.8	9.9	NA	NA
GP-3B	2/1/11	0.0	0.0	20.6	NR	NR
GP-3B	6/14/11	0.0	7.0	6.2	NR	NA
GP-3B	9/6/11	0.0	4.5	17.1	NR	NR
GP-3B	12/2/11	0.0	2.0	19.4	NA	NA
GP-4A	2/1/11	0.0	3.9	5.4	NR	NR
GP-4A	6/14/11	0.1	0.5	13.6	NR	NA
GP-4A	9/6/11	0.0	3.6	1.6	NR	NR
GP-4A	12/2/11	0.0	3.2	12.7	NA	NA
GP-4B	2/1/11	0.0	3.5	18.7	NR	NR
GP-4B	6/14/11	0.1	0.3	16.9	NR	NA
GP-4B	9/6/11	0.0	6.7	13.9	NR	NR
GP-4B	12/2/11	0.0	4.8	15.6	NA	NA
GP-5A	2/1/11	0.2	9.0	0.0	NR	NR
GP-5A	6/14/11	0.2	3.5	8.3	NR	NA
GP-5A	9/6/11	0.0	8.4	0.2	NR	NR
GP-5A	12/2/11	0.0	2.9	13.6	NA	NA
GP-5B	2/1/11	0.0	0.3	10.9	NR	NR
GP-5B	6/14/11	0.0	0.0	14.5	NR	NA
GP-5B	9/6/11	0.0	0.2	19.3	NR	NR
GP-5B	12/2/11	0.0	0.4	19.9	NA	NA
GP-6	3/10/11	0.0	0.0	20.6	NR	NR
GP-6	6/14/11	0.0	0.0	16.4	0.0	NA
GP-6	9/6/11	0.0	0.0	20.1	NR	NR
GP-6	12/2/11	0.0	0.0	20.9	0.0	NA
GP-7	3/10/11	0.0	0.3	21.3	NR	NR
GP-7	6/14/11	0.0	1.6	17.0	0.0	NA
GP-7	9/6/11	0.0	4.3	12.4	NR	NR
GP-7	12/2/11	0.0	1.9	19.1	0.0	NA
GP-9	3/10/11	0.0	0.6	17.1	NR	NR
GP-9	6/14/11	0.0	0.3	19.9	0.0	NA
GP-9	9/6/11	0.0	1.6	19.3	NR	NR
GP-9	12/2/11	0.0	0.9	19.6	0.0	NA
GP-10	3/10/11	0.0	1.1	17.5	NR	NR
GP-10	6/14/11	0.2	1.0	16.3	0.0	NA
GP-10	9/6/11	0.0	2.6	17.2	NR	NR
GP-10	12/2/11	0.0	1.2	19.7	0.0	NA
GP-11	3/10/11	0.0	0.3	17.7	NR	NR
GP-11	6/14/11	0.1	0.2	17.0	0.0	NA
GP-11	9/6/11	0.0	0.5	19.4	NR	NR
GP-11	12/2/11	0.0	0.5	20.5	0.0	NA
GP-12	3/10/11	0.3	0.7	20.1	NR	NR
GP-12	6/14/11	0.0	0.0	20.4	0.0	NA
GP-12	9/6/11	0.0	0.1	20.8	NR	NR
GP-12	12/2/11	0.0	0.6	20.9	0.0	NA

Landfill Gas Monitoring
2011
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
GP-13	3/10/11	0.0	0.7	20.1	NR	NR
GP-13	6/14/11	0.0	0.1	20.7	0.0	NA
GP-13	9/6/11	0.0	0.1	20.3	NR	NR
GP-13	12/2/11	0.0	0.6	20.2	0.0	NA
GP-14	3/10/11	0.0	0.5	17.8	NR	NR
GP-14	6/14/11	0.0	0.6	18.0	0.0	NA
GP-14	9/6/11	0.0	0.8	17.4	NR	NR
GP-14	12/2/11	0.0	0.9	17.8	0.0	NA
GP-15	3/10/11	0.0	0.3	14.8	NR	NR
GP-15	6/14/11	0.1	0.4	15.7	0.0	NA
GP-15	9/6/11	0.0	0.4	20.5	NR	NR
GP-15	12/2/11	0.0	0.4	20.4	0.0	NA
GP-16	3/10/11	0.0	0.4	20.6	NR	NR
GP-16	6/14/11	0.0	0.0	16.2	0.0	NA
GP-16	9/6/11	0.0	0.0	20.5	NR	NR
GP-16	12/2/11	0.0	0.6	20.1	0.0	NA
GP-17	3/10/11	0.0	0.8	20.7	NR	NR
GP-17	6/14/11	0.0	0.0	16.1	0.0	NA
GP-17	9/6/11	0.0	0.2	20.2	NR	NR
GP-17	12/2/11	0.0	1.4	20.3	0.0	NA
GP-18	3/10/11	0.0	0.9	17.0	NR	NR
GP-18	6/14/11	0.1	0.6	13.9	0.0	NA
GP-18	9/6/11	0.0	1.2	13.0	NR	NR
GP-18	12/2/11	0.0	0.2	19.9	0.0	NA
GP-19	3/10/11	0.0	2.3	13.2	NR	NR
GP-19	6/14/11	0.0	1.8	8.7	0.0	NA
GP-19	9/6/11	0.0	2.7	13.4	NR	NR
GP-19	12/2/11	0.0	2.9	15.8	0.0	NA
GP-20D	3/10/11	0.0	4.3	3.2	NR	NR
GP-20D	6/14/11	0.0	3.2	4.4	0.0	NA
GP-20D	9/6/11	0.0	4.6	0.9	NR	NR
GP-20D	12/2/11	0.0	4.3	6.3	0.0	NA
GP-20S	3/10/11	0.0	2.8	13.1	NR	NR
GP-20S	6/14/11	0.0	3.2	14.5	0.0	NA
GP-20S	9/6/11	0.0	2.5	18.1	NR	NR
GP-20S	12/2/11	0.0	1.9	18.5	0.0	NA
GP-21D	3/10/11	0.3	4.1	2.5	NR	NR
GP-21D	6/14/11	0.0	2.7	3.6	0.2	NA
GP-21D	9/6/11	0.0	4.2	3.3	NR	NR
GP-21D	12/2/11	0.0	3.8	5.1	0.4	NA
GP-21S	3/10/11	14.2	3.5	0.0	NR	NR
GP-21S	6/14/11	0.0	4.2	6.7	0.0	NR
GP-21S	9/6/11	0.0	3.8	17.0	NR	NR
GP-21S	12/2/11	0.0	2.1	18.9	0.0	NA
LD-3.1	6/16/11	4.3	3.0	16.4	0.0	see below
LD-3.1	12/2/11	3.8	8.2	7.2	0.0	see below
LD-3.2	6/16/11	0.7	0.6	15.2	0.0	NA
LD-3.2	12/2/11	0.0	1.6	14.1	0.0	NA
LD-3.3	6/16/11	0.0	0.0	20.5	0.0	NA
LD-3.3	12/2/11	0.8	8.1	4.2	0.0	NA
LD-4.1	6/16/11	0.0	0.0	20.4	0.0	NA
LD-4.1	12/2/11	0.0	7.1	8.9	0.0	NA
LD-5.2	6/16/11	0.0	0.0	20.6	0.0	NA
LD-5.2	12/2/11	0.0	8.7	7.5	0.0	NA

Landfill Gas Monitoring
2011
Recology Hay Road

Sample Designation	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Organic Vapors (ppm)	EPA TO-15 Analysis
PL-11.1	6/16/11	0.0	0.0	20.6	0.0	NA
PL-11.1	12/2/11	0.0	13.1	2.1	1.0	NA
PL-11.2	6/16/11	2.5	11.3	5.4	0.0	see below
PL-11.2	12/2/11	0.0	7.3	13.2	0.0	NA
PL-2.2A	6/16/11	0.0	0.0	20.8	0.0	NA
PL-2.2A	12/2/11	0.0	0.8	19.7	5.0	see below
PL-2.2B	6/16/11	0.0	0.0	20.7	0.0	NA
PL-2.2B	12/2/11	0.0	3.8	15.7	0.0	NA
PL-3.1	6/16/11	0.0	0.0	20.6	0.0	NA
PL-3.1	12/2/11	0.0	0.1	20.5	0.0	NA
PL-3.2	6/16/11	0.0	0.0	20.2	0.0	NA
PL-3.2	12/2/11	0.9	9.2	9.5	0.0	NA
PL-3.3	6/16/11	0.0	0.0	20.5	0.0	NA
PL-3.3	12/2/11	5.7	10.2	12.1	0.0	see below
PL-4.1	6/16/11	0.0	0.1	20.3	0.0	NA
PL-4.1	12/2/11	0.0	0.8	20.2	0.0	NA
PL-5.1A	6/16/11	0.0	0.0	20.6	0.0	NA
PL-5.1A	12/2/11	3.8	17.8	0.3	0.0	see below
PL-5.1B	6/16/11	0.0	0.0	20.5	0.0	NA
PL-5.1B	12/2/11	0.0	10.8	5.8	0.0	NA
PL-5.2	6/16/11	0.1	0.0	20.5	0.0	NA
PL-5.2	12/2/11	0.0	0.2	20.6	0.0	NA
PL-9.1A	6/16/11	0.0	3.1	15.0	0.7	NA
PL-9.1A	12/2/11	0.0	0.0	20.8	0.0	NA
PL-9.1B	6/16/11	0.0	3.3	13.1	0.5	NA
PL-9.1B	12/2/11	0.0	0.0	20.8	0.0	NA

* = location re-sampled on 12/27/10 and no organic vapors were detected

Volatile Organic Compounds by EPA Method TO-15

Sample Designation	units	LD-3.1 6/24/11	PL-11.2 6/24/11	LD-3.1 12/2/11	PL-3.3 12/2/11	PL-5.1A 12/2/11	PL-2.2A 12/2/11
1,1-Dichloroethane	ppbv	0.84	26	<0.66	<0.68	0.86	<0.68
1,1-Dichloroethene	ppbv	<0.74	2.4	<0.74	<0.74	<0.74	<0.74
1,2,4-Trimethylbenzene	ppbv	<0.67	<0.67	2.0	1.6	<0.67	2.1
2,2,4-Trimethylpentane	ppbv	8.3	130	3.8	1.2	17	<0.68
2-Butanone (MEK)	ppbv	5.1	5.1	<2.7	3.7	<2.7	<2.7
4-Ethyltoluene	ppbv	<0.68	<0.68	<0.66	<0.68	<0.67	0.75
Acetone	ppbv	24	57	23	40	11	10
Benzene	ppbv	0.82	4.8	<0.66	0.79	0.71	<0.68
Chloroethane	ppbv	<3.0	26	<2.7	5.4	<2.7	<2.7
cis-1,2-Dichloroethene	ppbv	<0.74	13	<0.74	<0.74	<0.74	<0.74
Cyclohexane	ppbv	11	39	1.6	1.7	36	<0.68
Ethanol	ppbv	<2.7	<2.7	<2.7	4.3	<2.7	<2.7
Ethyl Benzene	ppbv	<0.67	<0.67	0.80	<0.68	<0.67	<0.68
Freon® 11	ppbv	8.8	<0.72	24	130	<0.67	<0.68
Freon® 114	ppbv	<0.74	5.5	2.0	1.2	3.5	1.9
Freon® 12	ppbv	8.9	<0.72	16	26	18	8.5
Heptane	ppbv	8.6	<0.72	2.1	0.68	1.1	<0.68
Hexane	ppbv	8.6	62	2.0	3.6	3.7	<0.68
m,p-Xylene	ppbv	1.8	<0.72	4.2	2.6	<0.67	4.2
Methylene Chloride	ppbv	<0.67	<0.67	<0.66	3.7	<0.67	<0.68
Methyl tert-butyl ether	ppbv	<0.74	20	<0.74	<0.74	<0.74	<0.74
o-Xylene	ppbv	0.88	<0.72	1.6	1.0	<0.67	1.4
Tetrachloroethene	ppbv	6.7	12	7.2	<0.68	15	<0.68
Tetrahydrofuran	ppbv	15	9.7	2.3	1.1	<0.67	2.0
Toluene	ppbv	2.6	0.84	3.4	3.0	<0.67	3.4
trans-1,2-Dichloroethene	ppbv	<0.74	3.0	<0.74	<0.74	<0.74	<0.74
Trichloroethene	ppbv	0.90	4.7	<0.66	<0.68	1.6	<0.68
Vinyl chloride	ppbv	2.5	160	<0.66	<0.68	9.4	<0.68

Surface Water Analytical Results
2011
Recology Hay Road

Sample Designation Sampling Date		SW-3 6/13/11	SW-3 10/24/11	SW-4 6/13/11	SW-4 10/24/11	SW-5 6/13/11	SW-5 10/24/11	SW-7 6/13/11	SW-7 10/24/11	*Surface Water Concentration Limit*	Compost Area Pond	Compost Area Pond 10/24/11
Field Parameters	***Units***											
pH	std. units	7.92	8.09	7.22	7.79	7.76	8.80	7.87	8.41	*6.7 / 9.3*	NA	7.60
Specific Conductance	µmhos/cm	2486	2,401	2470	2,691	977	1,084	1101	2,374	*3,385*	NA	2,462
Temperature	°C	22.8	21.5	29.7	22.8	23.7	19.8	24.2	22.7	-	NA	19.4
Turbidity	NTU	48	6	62	12	14	5	21	7	-	NA	26
Monitoring Parameters												
Ammonia as N	mg/l	0.033 t	0.23	0.18	0.049 t	<0.025	0.034 t	0.026 t	0.11	*0.76*	NA	0.14
Arsenic	mg/l	0.011 t	<0.0098	0.012 t	<0.0098	<0.0098	<0.0098	<0.0098	0.011 t	*0.075*	NA	NA
Bicarbonate Alkalinity	mg/l	NA	560	NA	380	NA	260	NA	420	-	NA	NA
Calcium	mg/l	NA	77	NA	83	NA	34	NA	64	-	NA	NA
Chloride	mg/l	430	400	490	520	130	140	140	410	*748*	NA	320
Chromium	mg/l	0.0018 t	0.0029 t	0.015	0.0078 t	0.0032 t	0.0017 t	0.0016 t	0.0025 t	*0.014*	NA	NA
Lead	mg/l	0.0072 t	<0.0050	0.010 t	0.0058 t	0.0061 t	<0.0050	<0.0050	<0.0050	*0.065*	NA	NA
Magnesium	mg/l	NA	120	NA	150	NA	60	NA	120	-	NA	NA
Nitrate/Nitrite as N	mg/l	0.24	0.11	0.063 t	0.053 t	0.012 t	<0.010	0.011 t	0.046 t	*12*	NA	3.6
Nitrite as N	mg/l	0.0095 t	0.013 t	0.036 t	0.019 t	<0.0081	0.0068 t	0.0090 t	0.011 t	*2.1*	NA	NA
Potassium	mg/l	NA	5.4	NA	4.2	NA	2.1	NA	3.6	-	NA	NA
Sodium	mg/l	NA	290	NA	340	NA	130	NA	300	-	NA	NA
Sulfate as SO_4	mg/l	180	150	200	230	23	38	33	180	*273*	NA	71
Total Dissolved Solids	mg/l	1600	1,500	1400	1,700	560	620	640	1,400	*2,065*	NA	1,600
Total Kjeldahl Nitrogen	mg/l	1.4	0.95	2.3	0.83	0.47	0.59	1.0	0.92	*4.5*	NA	12
Total Suspended Solids	mg/l	30	16	99	130	6.7	8.5	29	100	*350*	NA	NA
Fixed Dissolved Solids	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	*NA*	NA	1,100
Total Phosphorous	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	*NA*	NA	6.4
Volatile Organic Compounds by EPA Method 8260B												
All compounds below method reporting limit.		ND	ND	ND	ND	ND	ND	ND	ND	*ND*	-	NA

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 fourth quarter 2010.
NE - None established; insufficient data or too few detections.
ND - Non-detect

NA = not applicable

Table 14
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		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
Sampling Date		11/2/11	12/14/11	12/14/11	11/2/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11	11/3/11
Field Parameters	*Unit*										
pH	std. units	6.58	7.24	dry	7.05	7.8	7.25	6.79	7.00	7.04	7.4
Specific Conductance	µmhos/cm	3990	7910	-	6460	30800	13500	3490	10200	8,140	15000
Temperature	°C	22.3	18.5	-	29.9	20.2	20.5	17.5	25.4	27.3	27.5
Monitoring Parameters											
Ammonia as N	mg/l	13	22	-	50	3700	810	99	760	310	1200
Bicarbonate Alkalinity	mg/l	1,200	1,700	-	1,200	13,000	5,400	1,400	2,300	1,900	4,900
Carbonate Alkalinity	mg/l	<8.2	<8.2	-	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2
Chloride	mg/l	820	3,100	-	1,500	6,400	2,200	470	1300	1,500	2,600
Nitrate/Nitrite as N	mg/l	0.057 t	0.034 t	-	0.013 t	0.27 t	0.044 t	0.050 t	0.16	36	0.020 t
Sulfate as SO_4	mg/l	9.6	17 t	-	21	11 t	4.7 t	1.4 t	130	240	7.2 t
Total Alkalinity	mg/l	1,200	NA	-	1,200	13,000	5,400	1,400	2,300	1,900	4,900
Total Kjeldahl Nitrogen	mg/l	15	27	-	53	4100	860	150	940	310	1200
Total Dissolved Solids	mg/l	2,700	7,700	-	3,900	18,000	8,200	2,600	5,700	4,400	6,200
Metals, dissolved	*Unit*										
Arsenic, dissolved	mg/l	NS	NS	-	NS	NS	NS	NS	NS	NS	NS
Calcium, dissolved	mg/l	160	210	-	140	43	93	150	15	200	200
Chromium, dissolved	mg/l	NS	NS	-	NS	NS	NS	NS	NS	NS	NS
Lead, dissolved	mg/l	NS	NS	-	NS	NS	<0.010	NS	NS	NS	NS
Magnesium, dissolved	mg/l	220	450	-	280	280	420	170	53	290	310
Potassium, dissolved	mg/l	13	22	-	70	740	520	31	51	29	91
Sodium, dissolved	mg/l	490	1,400	-	760	3,500	1,400	300	750	660	1200

No samples collected from leachate well LW-2, S-2.2A; insufficient liquid for sampling.

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

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

NA - not analyzed due to sampling error

- = insuffcient water for all requested analyses

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		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
VOCs by EPA Method 8260, Low Level, Appendix II				dry							
1,1-Dichloroethane	µg/l	0.48 t	<0.11	-	0.23 t	1.2	0.58 t	0.86 t	0.55 t	0.41 t	0.30 t
1,2,4-Trimethylbenzene	µg/l	<0.12	0.17 t	-	0.15 t	1.5	0.58 t	1.2	7.6	0.58 t	<0.12
1,2-Dichlorobenzene	µg/l	0.39 t	0.13 t	-	<0.072	<0.072	<0.072	<0.072	<0.072	<0.072	<0.072
1,2-Dichloroethane	µg/l	0.36 t	<0.17	-	<0.17	17	18	2.2	5.3	<0.17	0.43 t
1,2-Dichloropropane	µg/l	<0.13	<0.13	-	<0.13	0.86 t	0.46 t	0.94 t	1	0.15 t	0.18 t
1,3,5-Trimethylbenzene	µg/l	<0.12	<0.12	-	<0.12	0.48 t	0.24 t	0.38 t	2.6	0.31 t	0.35 t
1,4-Dichlorobenzene	µg/l	3.3	2	-	0.61 t	0.57 t	0.24 t	0.42 t	5.9	0.92 t	0.67 t
1,4-Dioxane	µg/l	<42	92 t	-	<42	84 t	<42	<42	500	<42	<42
2-Butanone (MEK)	µg/l	<2.5	<2.5	-	69	63	12	43	8400	<2.5	2.8 t
2-Hexanone	µg/l	<3.4	<3.4	-	<3.4	5.6 t	<3.4	<3.4	87	<3.4	<3.4
4-methyl-2-pentanone	µg/l	<2.1	<2.1	-	<2.1	24	40	27	570	<2.1	<2.1
Acetone	µg/l	4.8 t	6.6 t	-	390	92	23	50	11000	11	20
Benzene	µg/l	1.4	<0.083	-	0.27 t	7.9	5.6	8.4	14	2.4	1.4
Carbon disulfide	µg/l	<0.38	<0.38	-	0.4 t	0.95 t	1.4	1.7	<0.38	<0.38	<0.38
Chlorobenzene	µg/l	1.8	0.39 t	-	<0.093	0.10 t	<0.093	0.16 t	1.3	0.11 t	<0.093
Chloroethane	µg/l	0.44 t	<0.14	-	<0.14	0.62 t	0.66 t	1.1	0.38 t	<0.14	<0.14
Chloroform	µg/l	<0.12	<0.12	-	0.27 t	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
cis-1,2-Dichloroethene	µg/l	<0.085	0.19 t	-	0.24 t	4.9	16	15	3.3	1.8	<0.085
Dichlorodifluoromethane	µg/l	<0.099	0.12 t	-	<0.099	0.13 t	<0.099	<0.099	0.19 t	0.31 t	<0.099
Di-isopropyl ether	µg/l	0.25 t	<0.23	-	<0.23	1.10	2.70	1.8	0.86	0.41 t	0.31 t
Ethyl t-butyl ether	µg/l	<0.18	<0.18	-	<0.18	0.37 t	0.6	0.58	<0.18	0.22 t	0.42 t
Ethanol	µg/l	<50	<50	-	<50	<50	<50	<50	95000	<50	<50
Ethylbenzene	µg/l	<0.098	0.58 t	-	0.99 t	7.8	4.7	7.2	24	1.1	1.3
Methyl tert-butyl ether	µg/l	1	1.4	-	3.2	18	2.8	3	8.7	18	28
Naphthalene	µg/l	<0.36	1.6	-	<0.36	8.8	1.2	0.67 t	160	<0.36	0.81 t
n-Butylbenzene	µg/l	<0.11	0.13 t	-	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
n-Propylbenzene	µg/l	0.16 t	0.16 t	-	<0.11	0.34 t	0.15 t	0.32 t	1.1	0.13 t	<0.11
Styrene	µg/l	<0.068	<0.068	-	<0.068	1.9	2.7	2.4	2.2	<0.068	0.14 t
tert-Amyl methyl ether	µg/l	<0.25	<0.25	-	<0.25	<0.25	<0.25	<0.25	<0.25	1.1	2
tert-Butyl alcohol	µg/l	95	540	-	99	1100	240	410	7700	520	590
Tetrachloroethene	µg/l	<0.13	<0.13	-	<0.13	0.54 t	<0.13	<0.13	0.56 t	0.19 t	<0.13
Toluene	µg/l	0.25 t	0.27 t	-	1.8	63	50	55	61	1.7	0.65 t
Trichloroethene	µg/l	<0.085	<0.085	-	<0.085	1.4	1	0.24 t	0.69 t	0.59 t	<0.085
trans-1,2-Dichloroethene	µg/l	<0.15	<0.15	-	<0.15	<0.15	<0.15	0.25 t	<0.15	<0.15	<0.15
Vinyl chloride	µg/l	<0.12	0.34 t	-	<0.12	0.52 t	<0.12	<0.12	1.6	<0.12	0.72 t
Xylenes (total)	µg/l	0.58 t	1.2	-	2.4	22	12	22	72	5.2	4.2

All other compounds below method detection limit.

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

Bold values exceed the reporting limit.

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		S-5.2	S-9.1A	S-9.1B	S-11.1	S-11.2	LW-1	LW-2	LW-3
Sampling Date		11/3/11	11/3/11	11/3/11	11/2/11	11/3/11	10/19/11	10/19/11	10/19/11
Field Parameters	*Unit*								
pH	std. units	7.36	7	7.03	6.63	6.89	7.36	dry	7.53
Specific Conductance	µmhos/cm	13500	5500	6680	7390	7490	3310	-	16200
Temperature	°C	26.2	18.2	19.6	26.2	23.2	26.1	-	25.1
Monitoring Parameters									
Ammonia as N	mg/l	1500	230	140	11	97	430	-	720
Bicarbonate Alkalinity	mg/l	4,900	1,200	2,700	870	1,800	2,400	-	4,100
Carbonate Alkalinity	mg/l	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2	-	<8.2
Chloride	mg/l	1,600	810	1,300	3,000	2,200	190	-	6,100
Nitrate/Nitrite as N	mg/l	0.14	33	0.063 t	170	0.045 t	0.12	-	0.045 t
Sulfate as SO_4	mg/l	5.1 t	1,100	780	230	220	0.92 t	-	24 t
Total Alkalinity	mg/l	4,900	1,200	2,700	870	1,800	NA	-	NA
Total Kjeldahl Nitrogen	mg/l	1700	230	180	22	97	420	-	660
Total Dissolved Solids	mg/l	5,000	4,300	5,900	7,200	6,200	1,400	-	14,000
Metals, dissolved	*Unit*								
Arsenic, dissolved	mg/l	NS	0.026 t	0.034 t	NS	NS	NS	-	NS
Calcium, dissolved	mg/l	30	350	530	290	280	74	-	55
Chromium, dissolved	mg/l	NS	0.0054 t	0.012 t	NS	NS	NS	-	NS
Lead, dissolved	mg/l	NS	0.012 t	0.018 t	NS	NS	NS	-	NS
Magnesium, dissolved	mg/l	80	260	480	290	300	110	-	230
Potassium, dissolved	mg/l	100	67	76	100	48	15	-	610
Sodium, dissolved	mg/l	720	430	760	1,800	1,100	270	-	3,300

No samples collected from leachate well LW-2, S-2.2A; insufficient liquid for sampling.

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

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

NA - not analyzed due to sampling error

- = insuffcient water for all requested analyses

Table 14 (continued)
Leachate Analytical Results
Third and Fourth Quarter 2011
Recology Hay Road

Sample Designation		S-5.2	S-9.1A	S-9.1B	S-11.1	S-11.2	LW-1	LW-2	LW-3
VOCs by EPA Method 8260, Low Lev								dry	
1,1-Dichloroethane	µg/l	0.15 t	<0.11	<0.11	0.41 t	2.1	<0.11	-	0.19 t
1,2,4-Trimethylbenzene	µg/l	3.5	<0.12	<0.12	<0.12	<0.12	0.71 t	-	4.9
1,2-Dichlorobenzene	µg/l	0.22 t	<0.072	<0.072	<0.072	<0.072	1.2	-	0.52 t
1,2-Dichloroethane	µg/l	1.4	<0.17	<0.17	<0.17	<0.17	<0.17	-	0.40 t
1,2-Dichloropropane	µg/l	0.37 t	<0.13	<0.13	<0.13	<0.13	<0.13	-	0.19 t
1,3,5-Trimethylbenzene	µg/l	1.1	<0.12	<0.12	<0.12	<0.12	0.15 t	-	1.2
1,4-Dichlorobenzene	µg/l	3.2	<0.062	<0.062	2.3	1.2	3.3	-	11
1,4-Dioxane	µg/l	200	<42	<42	<42	73 t	<42	-	69 t
2-Butanone (MEK)	µg/l	9100	<2.5	<2.5	<2.5	860	17	-	2.6 t
2-Hexanone	µg/l	65	<3.4	<3.4	<3.4	5.3 t	<3.4	-	<3.4
4-methyl-2-pentanone	µg/l	330	<2.1	<2.1	<2.1	48	2.6 t	-	<2.1
Acetone	µg/l	9300	15	16	5.1 t	750	30	-	17
Benzene	µg/l	5.6	0.10 t	0.21 t	1.7	1.3	3.4	-	4.2
Carbon disulfide	µg/l	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	-	<0.38
Chlorobenzene	µg/l	0.23 t	<0.093	<0.093	0.19 t	0.41 t	25	-	0.56 t
Chloroethane	µg/l	<0.14	<0.14	<0.14	0.32 t	0.86 t	0.15 t	-	<0.14
Chloroform	µg/l	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	-	<0.12
cis-1,2-Dichloroethene	µg/l	1.2	<0.085	<0.085	0.55 t	0.53 t	0.95 t	-	0.52 t
Dichlorodifluoromethane	µg/l	<0.099	<0.099	<0.099	0.57 t	<0.099	<0.099	-	<0.099
Di-isopropyl ether	µg/l	0.77	<0.23	<0.23	0.43 t	1.50	0.96	-	0.98
Ethyl t-butyl ether	µg/l	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	-	<0.18
Ethanol	µg/l	2300	<50	<50	<50	2400	<50	-	<50
Ethylbenzene	µg/l	11	<0.098	<0.098	<0.098	0.36 t	4.1	-	18
Methyl tert-butyl ether	µg/l	1.7	<0.11	<0.11	17	46	0.86 t	-	1.5
Naphthalene	µg/l	55	<0.36	<0.36	<0.36	20	1.1	-	20
n-Butylbenzene	µg/l	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	-	0.14 t
n-Propylbenzene	µg/l	0.45 t	<0.11	<0.11	<0.11	<0.11	0.34 t	-	0.60 t
Styrene	µg/l	1.2	<0.068	<0.068	<0.068	<0.068	<0.068	-	0.80 t
tert-Amyl methyl ether	µg/l	<0.25	<0.25	<0.25	0.94	2.9	<0.25	-	<0.25
tert-Butyl alcohol	µg/l	6100	12	19	69	890	460	-	290
Tetrachloroethene	µg/l	<0.13	<0.13	<0.13	0.14 t	<0.13	<0.13	-	<0.13
Toluene	µg/l	20	<0.093	0.10 t	0.10 t	0.75 t	3.2	-	5.3
Trichloroethene	µg/l	0.19 t	<0.085	<0.085	0.14 t	<0.085	<0.085	-	0.090 t
trans-1,2-Dichloroethene	µg/l	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	-	0.15 t
Vinyl chloride	µg/l	<0.12	<0.12	<0.12	<0.12	<0.12	3.2	-	2
Xylenes (total)	µg/l	27	<0.36	<0.36	<0.36	0.90 t	6.5	-	22

All other compounds below method detection lin

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

Bold values exceed the reporting limit.

APPENDIX E
WINTERIZATION REPORT

Recology
Hay Road
WASTE ZERO

January 27, 2012

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

Re: Recology Hay Road, 2011/2012 Winterization Report

Dear Ms. Boyd:

This letter is transmitted as a follow-up report to the winterization plan you received in September highlighting tasks that the facility planned to complete in preparation for the upcoming rainy season. The plan included seeding bare slopes, installation of down drains to convey storm water down slopes, the installation of straw waddles to further protect un-vegetated slopes and the construction of winter tipping pads for wet weather operations. The plan also included the soil capping, seeding , and placement of straw wattles on the slopes of the sludge stockpiles on disposal modules 5 and 11.

All pertinent tasks were completed within the timeline of October 15, 2011. Attached please find the photos documenting the new growth on recently seeded slopes and down drains associated with storm water run off.

If you have any questions, please call me at 707.678.3257.

Sincerely,

Greg Pryor
General Manager
Recology Hay Road

Attachments


Drainage Ditch West of DM-4

Downdrain


Downdrain and Wattles DM-5 Sludge

Winter Pad